

NOTICE OF REGULAR CITY COUNCIL MEETING CITY OF TOMBALL, TEXAS



**Monday, December 18, 2023
6:00 PM**

Notice is hereby given of a Regular meeting of the Tomball City Council, to be held on Monday, December 18, 2023 at 6:00 PM, City Hall, 401 Market Street, Tomball, Texas 77375, for the purpose of considering the following agenda items. All agenda items are subject to action. The Tomball City Council reserves the right to meet in a closed session for consultation with attorney on any agenda item should the need arise and if applicable pursuant to authorization by Title 5, Chapter 551, of the Texas Government Code.

The public toll-free dial-in numbers to participate in the telephonic meeting are any one of the following (dial by your location): +1 312 626 6799 US (Chicago); +1 646 876 9923 US (New York); +1 301 715 8592 US; +1 346 248 7799 US (Houston); +1 408 638 0968 US (San Jose); +1 669 900 6833 US (San Jose); or +1 253 215 8782 US (Tahoma) - Meeting ID: 871 2890 4632 Passcode: 131837. The public will be permitted to offer public comments telephonically, as provided by the agenda and as permitted by the presiding officer during the meeting.

- A. Call to Order
- B. Invocation - Led by Pastor Terry Clemons - The Church of God of the Union Assembly Inc.
- C. Pledges to U.S. and Texas Flags
- D. Public Comments and Receipt of Petitions; *[At this time, anyone will be allowed to speak on any matter other than personnel matters or matters under litigation, for length of time not to exceed three minutes. No Council/Board discussion or action may take place on a matter until such matter has been placed on an agenda and posted in accordance with law - GC, 551.042.]*
- E. Presentations
 - 1. Proclamation - “Greater Tomball Area Chamber of Commerce Day”

F. Reports and Announcements

1. Announcements

I. Upcoming Events:

December 20 – Polar Express Sunset Market 4:00 p.m. – 7:00 p.m.
@ Information Center Parking Lot

January 13, 2024 – Tomball Fire Station IV Grand Opening 10:00
am – 1:00 pm

2. Reports by City staff and members of council about items of community
interest on which no action will be taken:

I. Katherine Tapscott – Quarterly Financial Update for Period Ending
September 30, 2023.

G. Old Business Consent Agenda: *[All matters listed under Consent Agenda are considered to be routine and will be enacted by one motion. There will be no separate discussion of these items. If discussion is desired, the item in question will be removed from the Consent Agenda and will be considered separately. Information concerning Consent Agenda items is available for public review.]*

1. Adopt, on Second Reading, Ordinance 2023-52, an Ordinance of the City of Tomball, Texas, extending the city limits of said City to include all of the territory within certain limits and boundaries and annexing to the City of Tomball all of the territory within such limits and boundaries; approving a service plan for all of the area within such limits and boundaries; containing other provisions relating to the subject; and providing a savings and severability clause (*being a tract or parcel, containing 12.114 acres (527,706 square feet) of land situated in the Elizabeth Smith Survey, Abstract Number 70 and in the C.M. Pilot Survey, Abstract 632, Harris County, Texas [11701 Holderrieth Rd, HCAD 0410260020004]*)

2. Adopt, on Second Reading, Ordinance No. 2023-49, an Ordinance of the City of Tomball, Texas, amending Chapter 50 (Zoning) of the Tomball Code of Ordinances by rezoning approximately 12.11 acres of land legally described as being a portion of the Elizabeth Smith Survey, Abstract No. 70 and the C.N. Pilot Survey, Abstract 632 from Agricultural (AG) to Light Industrial (LI). The property is located at 11701 Holderrieth Road, within Harris County, Texas; providing for the amendment of the Official Zoning Map of the City; providing for severability; providing for a penalty of an amount not to exceed \$2,000 for each day of violation of any provision hereof, making findings of fact; and providing for other related matters.

3. Approve, on Second Reading, Resolution No. 2023-46-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and The Garza Agency to make direct incentives to, or expenditures for, rental assistance for new or expanded business enterprise to be located at 28427 SH 249, Tomball, Texas 77375. The estimated amount of expenditures for such Project is an amount not to exceed \$10,000.00.
4. Approve, on Second Reading, Resolution No. 2023-50-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and T & R Harmon, LLC DBA Craving Kernels to make direct incentives to, or expenditures for, rental assistance for new or expanded business enterprise to be located at 702 South Persimmon Street, Unit 3A, Tomball, Texas 77375. The estimated amount of expenditures for such Project is an amount not to exceed \$8,820.00.
5. Approve, on Second Reading, Resolution No. 2023-53-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and Headquarters TOO, LLC to make direct incentives to, or expenditures for, assistance with infrastructure costs required or suitable for the promotion of new or expanded business enterprise related to the development and construction of a 15,500 square foot commercial facility to be located at 1417 Graham Drive, Tomball, Texas 77375. The estimated amount of expenditures for such Project is an amount not to exceed \$102,459.00.
6. Approve, on Second Reading, Resolution No. 2023-54-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and First Community Credit Union to make direct incentives to, or expenditures for, assistance with infrastructure costs required or suitable for the promotion of new or expanded business enterprise related to the development and construction of a Banking and Financial Services office building to be located at 26902 TX-249 in the City of Tomball, Texas. The estimated amount of expenditures for such Project is an amount not to exceed \$64,721.00.

H. New Business Consent Agenda: *[All matters listed under Consent Agenda are considered to be routine and will be enacted by one motion. There will be no separate discussion of these items. If discussion is desired, the item in question will be removed from the Consent Agenda and will be considered separately. Information concerning Consent Agenda items is available for public review.]*

1. Approve the Minutes of the December 4, 2023, Regular City Council meeting.
2. Approve an agreement with Bull-G Construction, LLC for Project Number 2023-10015, Rudolph Road water line extension for the City of Tomball, for a not-to-exceed amount of \$333,198 (Bid No. 2024-02), approve the expenditure of funds therefor, and authorize the City Manager to execute any and all documents related to the purchases. These expenditures are included in the fiscal year 2023-2024 capital budget.
3. Approve an agreement with Bull-G Construction, LLC. for Project Number 2017-10012, Rudolph Road sanitary sewer extension for the City of Tomball, for a not-to-exceed amount of \$217,885 (Bid No. 2024-03), approve the expenditure of funds therefor, and authorize the City Manager to execute any and all documents related to the purchases. These expenditures are included in the fiscal year 2023-2024 capital budget.
4. Approve an agreement with MC Sandblasting and Painting, Inc. for Project Number 2023-10004, Pine Street elevated storage tank rehabilitation for the City of Tomball, for a not-to-exceed amount of \$229,400 (Bid No. 2024-05), approve the expenditure of funds therefor, and authorize the City Manager to execute any and all documents related to the purchases. These expenditures are included in the Fiscal Year 2023-2024 Capital Improvement Program budget

I. New Business

1. Consideration, discussion, and possible action regarding January 2, 2023, Regular City Council
2. Approve Request from Tomball Rotary Club for City Support and In-Kind Services for the Tomball Rotary Club Fish Fry at Juergens Park, on Friday, April 12, 2024 from 4:00-8:00 p.m.

- [3.](#) Consideration to Approve **Zoning Case Z23-19**: Request by William G. Hightower to amend Chapter 50 (*Zoning*) of the Tomball Code of Ordinances, by rezoning approximately 0.24 acres of land legally described as being Lot 1, Block 1 of Elim from Single Family Residential – 6 (SF-6) to Old Town & Mixed Use (OT & MU). The property is located within the 300 block (north side) of Mechanic Street, within the City of Tomball, Harris County, Texas.

Conduct Public Hearing on **Zoning Case Z23-19**

Adopt, on First Reading, Ordinance No. 2023-54, an Ordinance of the City of Tomball, Texas, amending Chapter 50 (*Zoning*) of the Tomball Code of Ordinances by rezoning approximately 0.24 acres of land legally described as being Lot 1, Block 1 of Elim from Single Family Residential – 6 (SF-6) to Old Town & Mixed Use (OT & MU). The property is located within the 300 block (north side) of Mechanic Street, within the City of Tomball, Harris County, Texas; providing for severability; providing for a penalty of an amount not to exceed \$2,000 for each day of violation of any provision hereof, making findings of fact; and providing for other related matters.

- [4.](#) Approve a Professional Services Agreement with Freese & Nichols, Inc. for the design of the expansion for the South Wastewater Treatment Plant, Project Number 2023-10003, for a not-to-exceed amount of \$4,933,000, authorize the expenditure of funds therefor, and authorize the City Manager to execute the agreement. This amount is included in the fiscal year 2023-2024 budget as a Capital Improvement Project.
- [5.](#) Approve a Professional Services Agreement with PLW Waterworks, LLC to provide design phase services for the South Wastewater Treatment Plant expansion, Project Number 2023-10003, for a not-to-exceed amount of \$595,699, authorize the expenditure of funds therefor, and authorize the City Manager to execute the agreement. This amount is included in the Fiscal Year 2023-2024 budget as a Capital Improvement Project.
- [6.](#) Resolution No. 2023-56, a Resolution of the City Council of the City of Tomball, Texas, calling for a public hearing on January 15, 2024, for the creation of Tomball Public Improvement District No. 15 (Graylou Grove) and being located within the City of Tomball.

7. Executive Session: The City Council will meet in Executive Session as Authorized by Title 5, Chapter 551, Government Code, the Texas Open Meetings Act, for the Following Purpose(s):

Sec. 551.071 – Consultation with the City Attorney regarding a matter which the Attorney’s duty requires to be discussed in closed session.

Sec. 551.072 – Deliberations regarding Real Property

Sec. 551.074 – Personnel Matters; Deliberation of the Appointment, Employment, and Duties of a Public Officer or Employee-IT Director

J. Adjournment

C E R T I F I C A T I O N

I hereby certify that the above notice of meeting was posted on the bulletin board of City Hall, City of Tomball, Texas, a place readily accessible to the general public at all times, on the 14th day of December 14, 2023, by 6:00 PM, and remained posted for at least 72 continuous hours preceding the scheduled time of said meeting.

Tracylynn Garcia, TRMC, CMC, CPM
City Secretary

This facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodation or interpretive services must be made 48 hours prior to this meeting. Please contact the City Secretary’s office at (281) 290-1019 for further information.

City Council Meeting Agenda Item Data Sheet

Meeting Date: 12/18/2023

Topic:

- Proclamation - “Greater Tomball Area Chamber of Commerce Day”

Background:

Origination: Mayor

Recommendation:

Party(ies) responsible for placing this item on agenda: Tracylynn Garcia, City Secretary

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: # _____

If no, funds will be transferred from account # _____ To account # _____

Signed	_____	Approved by	_____
	Staff Member		City Manager
	Date		Date

City Council Meeting

Agenda Item

Data Sheet

Meeting Date: December 18, 2023

Topic:

- **Upcoming Events:**
December 20 – Polar Express Sunset Market 4:00 p.m. – 7:00 p.m. @ Information Center
Parking Lot

January 13, 2024 – Tomball Fire Station IV Grand Opening 10:00 am – 1:00 pm

Background:

Origination:

Recommendation:

Party(ies) responsible for placing this item on agenda: Sasha Luna, Assistant City Secretary

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: # _____

If no, funds will be transferred from account # _____ To account # _____

City Council Meeting Agenda Item Data Sheet

Meeting Date: December 18, 2023

Topic:

Katherine Tapscott – Quarterly Financial Update for Period Ending September 30, 2023.

Background:

Origination: Finance Director

Recommendation:

Party(ies) responsible for placing this item on agenda: Katherine Tapscott, Finance Director

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: # _____

If no, funds will be transferred from account # _____ To account # _____

Signed	Katherine Tapscott	12/11/2023	Approved by		
	Staff Member	Date		City Manager	Date

ORDINANCE NO. 2023-52

AN ORDINANCE OF THE CITY OF TOMBALL, TEXAS, EXTENDING THE CITY LIMITS OF SAID CITY TO INCLUDE ALL OF THE TERRITORY WITHIN CERTAIN LIMITS AND BOUNDARIES AND ANNEXING TO THE CITY OF TOMBALL ALL OF THE TERRITORY WITHIN SUCH LIMITS AND BOUNDARIES; APPROVING A SERVICE PLAN FOR ALL OF THE AREA WITHIN SUCH LIMITS AND BOUNDARIES; CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT; AND PROVIDING A SAVINGS AND SEVERABILITY CLAUSE (BEING A TRACT OR PARCEL, CONTAINING 12.114 ACRES (527,706 SQUARE FEET) OF LAND SITUATED IN THE ELIZABETH SMITH SURVEY, ABSTRACT NUMBER 70 AND IN THE C.M. PILOT SURVEY, ABSTRACT 632, HARRIS COUNTY, TEXAS; SAID 12.114 ACRE TRACT OF RECORD IN THE NAME OF CSV HOLDERRIETH, LLC IN HARRIS COUNTY CLERK'S FILE (H.C.C.F.) NUMBER 20140017182; SAID 12.114 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS (BEARING REFERENCED HEREIN ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE NAD83)[11701 HOLDERRIETH RD, HCAD 0410260020004]

* * * * *

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS:

Section 1. The boundaries and limits of the City of Tomball, Texas, are hereby extended to embrace and include all of the territory described in **Exhibit "A"** attached hereto and made a part hereof and such territory hereby annexed to and made a part of the city.

Section 2. The plan for extension of municipal services into the territory annexed to the City of Tomball by the provisions of this ordinance is set forth in the "Municipal Service Plan" attached hereto as **Exhibit "B"** and made a part hereof for all purposes. Such Municipal Service Plan is hereby approved.

Section 3. If any section or part of this Ordinance be held unconstitutional, illegal, or invalid, or the application thereof ineffective or inapplicable as to any territory, such unconstitutionality, illegality, invalidity, or ineffectiveness of such section or part shall in no wise affect, impair, or invalidate the remaining portion or portions thereof, but as to such remaining

portion or portions, the same shall be and remain in full force and effect; and should this Ordinance for any reason be ineffective as to any part of the territory hereby annexed to the City of Tomball, such ineffectiveness of this Ordinance as to any such part or parts of any such territory shall not affect the effectiveness of this ordinance as to all of the remainder of such territory or area, and the City Council hereby declares it to be its purpose to annex to the City of Tomball every part of the territory described in Section 1 of this ordinance, regardless of whether any other part of such described territory is hereby effectively annexed to the City. Provided, further, that if there is included in the general description of territory set out in Section 1 of this Ordinance to be hereby annexed to the City of Tomball any territory which is already a part of and included within the general limits of the City of Tomball, or which is presently part of and included in the limits or extraterritorial jurisdiction of any other city, town, or village, or which is not within the City of Tomball's jurisdiction to annex, the same is hereby excluded and excepted from the territory to be annexed hereby as fully as if such excluded and excepted territory were especially and specifically described herein.

Section 4. Severability. In the event any section, paragraph, subdivision, clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstance shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part of provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Tomball, Texas declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, or whether there be one or more parts.

FIRST READING:

READ, PASSED AND APPROVED AS SET OUT BELOW AT THE MEETING OF
THE CITY COUNCIL OF THE CITY OF TOMBALL HELD ON THE 4TH DAY OF
DECEMBER 2023.

COUNCILMAN FORD	_____
COUNCILMAN STOLL	_____
COUNCILMAN DUNAGIN	_____
COUNCILMAN TOWNSEND	_____
COUNCILMAN PARR	_____

SECOND READING:

READ, PASSED AND APPROVED AS SET OUT BELOW AT THE MEETING OF
THE CITY COUNCIL OF THE CITY OF TOMBALL HELD ON THE ____ DAY OF
_____ 202____. .

COUNCILMAN FORD	_____
COUNCILMAN STOLL	_____
COUNCILMAN DUNAGIN	_____
COUNCILMAN TOWNSEND	_____
COUNCILMAN PARR	_____

LORI KLEIN QUINN, Mayor

ATTEST:

TRACYLYNN GARCIA, City Secretary

Exhibit “A” – Page 1

METES AND BOUNDS DESCRIPTION 12.114 ACRES (527,706 SQUARE FEET) LOCATED IN THE ELIZABETH SMITH SURVEY, ABSTRACT 70 & THE C.M. PILOT SURVEY, ABSTRACT 632, HARRIS COUNTY, TEXAS

Being a tract or parcel, containing 12.114 acres (527,706 square feet) of land situated in the Elizabeth Smith Survey, Abstract Number 70 and in the C.M. Pilot Survey, Abstract 632, Harris County, Texas; Said 12.114 acre tract of record in the name of CSV Holderrieth, LLC in Harris County Clerk’s File (H.C.C.F.) Number 20140017182; Said 12.114 acre tract being more particularly described by metes and bounds as follows (bearing referenced herein are based on the Texas Coordinate System, South Central Zone NAD83):

BEGINNING at a 5/8 inch iron rod with “Gorrdanda” cap found for the northeast corner of the herein described tract and the northwest corner of a called 29.707 acre tract of record in the name of Bernard C. Holderrieth and Alvina Holderrieth in H.C.C.F. Number B402171, and being on the south Right-of-Way (R.O.W.) line of Holderrieth Road (width varies);

THENCE, coincident the east line of the herein described tract and the west line of aforesaid 29.707 acre tract, South 14 Degrees 21 Minutes 24 Seconds East, a distance of 1,023.87 feet to a 1/2 inch iron rod with “Villa 6751” cap set for the southeast corner of the herein described tract and the northeast corner of a called 16.4724 acre tract of record in the name of 11311 Holderreith Limited, L.P., in H.C.C.F. Number W840420, and being on the west line of said 29.707 acre tract;

THENCE, coincident the south line of the herein described tract and the north line of aforesaid 16.4724 acre tract, South 82 Degrees 00 Minutes 26 Seconds West, a distance of 522.80 feet to the southwest corner of the herein described tract and the northwest corner of said 16.4724 acre tract, and being on the east line of a called 7.3995 acre tract of record in the name of the City of Tomball in H.C.C.F. Number V109876;

THENCE, coincident the west line of the herein described tract and the east line of aforesaid 7.3995-acre tract the following five (5) courses:

1. North 23 Degrees 31 Minutes 10 Seconds West, a distance of 477.72 feet to the beginning of a curve to the right;
2. Coincident aforesaid curve to the right, an arc length of 71.37 feet, having a radius of 325.00 feet, a central angle of 12 Degrees 34 Minutes 58 Seconds and a chord bearing of North 11 Degrees 33 Minutes 44 Seconds East, a distance of 71.23 feet;
3. North 17 Degrees 51 Minutes 14 Seconds East, 113.68 feet to the beginning of a curve to the left;

EXHIBIT “A” – Page 2

4. Coincident aforesaid curve to the left, an arc length of 373.07 feet, having a radius of 475.00 feet, a central angle of 45 Degrees 00 Minutes 02 Seconds and a chord bearing of North 04 Degrees 38 Minutes 58 Seconds West, a distance of 363.55 feet;
5. North 27 Degrees 08 Minutes 46 Seconds West, a distance of 26.50 feet to the northwest corner of the herein described tract and the northeast corner of aforesaid 7.3995-acre tract, and being on the south R.O.W. line of aforesaid Holderrieth Road;

THENCE, coincident the north line of the herein described tract and the south R.O.W. line of aforesaid Holderrieth Road, North 82 Degrees 01 Minutes 22 Seconds East, a distance of 451.28 feet to the **POINT OF BEGINNING** and containing 12.114 acres (527,706 square feet) of land.

Compiled by: Chris Garcia
Checked by: Daniel Villa, Jr.
DVJ Land Surveying
8118 Fry Road, Ste. 402
Cypress, Texas 77433
September 27, 2023
Project Number 23-0836

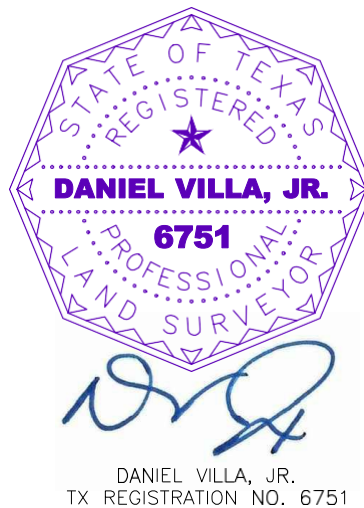


EXHIBIT "B"

CITY OF TOMBALL, TEXAS

MUNICIPAL SERVICE PLAN

I. INTRODUCTION

This Municipal Service Plan (the "Plan") is made by the City of Tomball, Texas (the "City"), pursuant to Chapter 43 of the Texas Local Government Code. This Plan relates to the annexation by the City of the tract of land ("Tract") described by metes and bounds in "Exhibit A," which is attached to this Plan and to the annexation ordinance of which this Plan is a part.

II. EFFECTIVE TERM

This Plan shall be in effect for a period of ten (10) years commencing on the effective date of the annexation of the Tract, unless otherwise stated in this Plan. Renewal of the Plan shall be at the option of the City. Such option may be exercised by the adoption of an ordinance by the City Council, which refers to this Plan and specifically renews this Plan for a stated period of time.

III. INTENT

It is the intent of the City that services under this Plan shall equal the number of services and the level of services in existence within the Tract prior to annexation and which are available in other parts of the City with land uses and population densities similar to those reasonably contemplated or projected within the Tract. However, it is not the intent of this Plan to require that a uniform level of service be provided to all areas of the City, including the Tract, where differing characteristics of topography, land utilization, and population density are considered as a sufficient basis for providing differing service levels.

The City reserves the right, granted to it by Section 43.056(k), Texas Local Government Code, to amend this Plan, if the City Council determines that changed conditions or subsequent occurrences or any other legally sufficient circumstances exist under the Texas Local Government Code, or other Texas laws to make this Plan unworkable, obsolete, or unlawful.

IV. SERVICE PROGRAMS

A. In General.

1. This Plan includes the following service programs: a General Services Program and a Capital Improvement Program.

2. As used in this Plan, “providing services” shall include having services provided by any method or means by which the City may extend municipal services to any other area of the City. The City shall provide the area, or cause the area to be provided, with services in accordance with the Plan. This may include, but is not limited to, causing or allowing private utilities, governmental entities, and other public service organizations to provide such services, in whole or in part.

As used in this Plan, the phrase "standard policies and procedures" shall mean those policies and procedures of the City applicable to a particular service, which are in effect either at the time that the service is requested or at the time the service is made available or provided. Such policies and procedures may require a specific type of request be made, such as an application or a petition, may require that fees or charges be paid, and may include eligibility requirements or other similar provisions.

- B. General Services Program. The following services will be provided within the Tract within the period required by State law: police protection, fire protection, solid waste collection, operation and maintenance of water, wastewater, and gas facilities, operation and maintenance of roads and streets, including lighting, operation and maintenance of parks, playgrounds, and swimming pools, and maintenance of any other publicly owned facility, building or service. The General Services Program plan is as follows:

1. Police Protection. The Police Department of the City will provide protection and law enforcement within the Tract. These activities will include routine patrols and responses, handling of complaints and incident reports, and, as appropriate, support by special units. In order to provide the above services, the Police Department will operate from a City facility.
2. Fire Protection. The Fire Department of the City currently provides fire protection to the Tract. Fire protection will be provided from either the southside or central fire stations. Fire protection will remain at the current level of service.
3. Solid Waste Collection. All eligible residences and businesses will be provided solid waste collection service, either by City personnel or by contract.
4. Maintenance of Water, Wastewater, and Gas Facilities. There are no City water, wastewater, or gas facilities currently located within the Tract. If any such facilities are constructed or acquired by the City within the Tract, the City’s Department of Public Works will operate and maintain such facilities at levels of service and maintenance comparable to those available for other such facilities in other parts of the City with similar topography, load use, and population density as those reasonably contemplated or projected within the Tract.

5. Operation and Maintenance of Roads and Streets (including lighting). The City's Department of Public Works will provide for the maintenance of roads and streets over which the City will have jurisdiction. Such Department will also provide services relating to traffic control devices and will provide street lighting for such roads and streets through an electric utility company or by other means. The operation and maintenance of roads and streets, including street lighting and traffic control devices, shall be provided at levels of service and maintenance comparable to those available for other roads and streets in other parts of the City with similar topography, load use, and population density as those reasonably contemplated or projected within the Tract.
6. Operation and Maintenance of Parks, Playground and Swimming Pools. There are no public parks, playgrounds, or swimming pools currently located within the Tract. If, as a result of acquisition of park land, any such facilities are constructed by the City within the Tract, the City's Department of Parks and Recreation will operate and maintain such facilities at levels of service and maintenance comparable to those available for other such facilities in other parts of the City with similar topography, load use, and population density as those reasonably contemplated or projected within the Tract.
7. Operation and Maintenance of Any Other Publicly-Owned Facility, Building, or Service. Those drainage facilities associated with City-maintained public streets will be maintained by the City's Department of Public Works, as needed. Any other facility, building, or service existing or which may be constructed or located by the City within the Tract, will be operated and maintained by an appropriate City department at levels of service and maintenance comparable to those available to other such facilities in other parts of the City with similar topography, load use, and population density as those reasonably contemplated or projected within the Tract.

- C. Capital Improvement Program. It is the intent of the City to provide full City services within the Tract not less than four and one-half (4-1/2) years after the effective date of annexation of the Tract, in accordance with the Texas Local Government Code, § 43.056(e).

The City will initiate the acquisition and construction of the capital improvements necessary to provide municipal services adequate to serve the Tract. Any necessary construction or acquisition is indicated below, and any such construction or acquisition shall begin within two (2) years of the effective date of this Plan and shall be substantially completed within 4-1/2 years, except as otherwise indicated:

1. Police Protection. No capital improvements are necessary at this time to provide police protection services within the Tract. The Tract will be included with other City territory in connection with planning for new, revised, or expanded police facilities.

2. Fire Protection. No capital improvements are necessary at this time to provide fire protection services within the Tract. The Tract will be included with other City territory in connection with planning for new, revised, or expanded fire facilities.
3. Solid Waste Collection. No capital improvements are necessary at this time to provide solid waste collection services within the Tract. The Tract will be included with other City territory in connection with planning for new, revised, or expanded solid waste facilities and/or services.
4. Wastewater Facilities. The Tract will be included with other City territory in connection with planning for new, revised, or expanded public wastewater facilities. Wastewater services will be provided according to the standard policies and procedures of the City's Department of Public Works. A summary of the City's policies with regard to the extension of wastewater services is attached to and made a part of this Plan.
5. Water Distribution. The Tract will be included with other City territory in connection with planning for new, revised, or expanded public water facilities. Water services will be provided according to the standard policies and procedures of the City's Department of Public Works. A summary of the City's policies with regard to the extension of water services is attached to and made a part of this Plan.
6. Gas Distribution. The Tract will be included with other City territory in connection with planning for new, revised, or expanded public gas facilities. Gas services will be provided according to the standard policies and procedures of the City's Department of Public Works. A summary of the City's policies with regard to the extension of gas services is attached to and made a part of this Plan.
7. Roads and Streets (including lighting). The City will acquire jurisdiction in and over all public roads and streets within the Tract upon annexation, pursuant to Section 311.001 of the Texas Transportation Code and other similar provisions, except for public roads and streets subject to the jurisdiction of other governmental entities. Additional roads, streets, or related facilities are not necessary at this time to service the Tract. Future extensions of roads or streets and future installation of related facilities, such as traffic control devices or street lights, within the Tract will be governed by standard policies and procedures of the City. The Tract will be included with other City territory in connection with planning for new, improved, revised, widened, or enlarged roads, streets, or related facilities.
8. Parks, Playgrounds, and Swimming Pools. No capital improvements are necessary at this time to provide park and recreational services to the Tract. The Tract will be included with other City territory in connection with

planning for new, revised, or expanded parks, playgrounds, and/or swimming pools.

9. Other Publicly-Owned Facilities, Buildings or Services: Additional Services. In general, other City functions and services can be provided to the Tract by using existing capital improvements. At this time, additional capital improvements are not necessary to provide City services. However, the Tract will be included with other City territory in connection with planning for new, revised, or expanded facilities, functions, and services.

V. AMENDMENT: GOVERNING LAW

This Plan may not be amended or repealed, except as provided by the Texas Local Government Code or other controlling law. Neither changes in the methods or means of implementing any part of the service programs nor changes in the responsibilities of the various departments of the City shall constitute amendments to this Plan, and the City reserves the right to make such changes at any time. This Plan is subject to, and shall be interpreted in accordance with, the Constitution and laws of the United States of America and the State of Texas, the Texas Local Government Code, and any orders, rules, or regulations of any other governmental body having jurisdiction.

VI. FORCE MAJEURE

In the event the City is rendered unable, wholly or in part, by force majeure to carry out its obligations under this Plan, notice shall be given with full particulars of such force majeure, in writing, as soon as reasonably possible after the occurrence of the cause relied on, and the City's obligations, so far as effected by such force majeure, shall be suspended during the continuance of such inability so caused but for no longer period, and such cause shall, so far as possible, be remedied with all reasonable dispatch; provided, however, City shall not be required to settle a strike or dispute with workmen when such settlement is against the will of the City. The term "force majeure" shall mean acts of God, strikes, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rulers and people, explosions, breakage or accident to machinery or lines of pipe, droughts, hurricanes and tornadoes, and any other inability of either party, whether similar to those enumerated or otherwise, not within the control of the City, which, by the exercise of reasonable diligence, the City shall not have been able to avoid.

VIII. ENTIRE PLAN

This document contains the entire and integrated Plan relating to the Tract and supersedes all other negotiations, representations, plans, and agreements, whether written or oral.

If one or more provisions of this Plan is held to be invalid, unenforceable, or illegal in any respect, the remainder the Plan shall remain valid and in full force and effect.

SUMMARY OF EXTENSION POLICY FOR WATER, WASTEWATER, AND GAS SERVICE

The following information is a summary of the City of Tomball's ("City") policies respecting water, wastewater and gas service extensions. This summary is made in compliance with the Texas Local Government Code, which requires that each annexation plan include a summary of the service extension policy. Nothing herein shall repeal any provision of the Code of Ordinances of the City of Tomball, as amended, or any of the uncodified ordinances that contain the City's policies and procedures.

The City extends water, wastewater, and gas services to existing unserved development as follows:

Construction of such service lines is based on a priority schedule that considers potential health hazards, population density, the number of existing buildings, the reasonable cost of providing service, and the desires of the residents of the unserved areas.

Extensions built by the City at its cost are included in its Capital Improvements Plan, which is updated annually. Placement of an extension or enlargement of any water and/or wastewater lines into the Capital Improvement Plan is based primarily on the following requirements: (1) to provide service to unserved areas, (2) and to provide adequate capacity for projected service requirements.

Persons or entities desiring to develop land within unserved areas must construct water, wastewater, and gas service lines and extensions to connect to City trunk lines to serve the new development.

Annexation Request



The City of Tomball requires annexation as a condition of extending municipal water, wastewater and/or other utility services to property located outside of the City's full-purpose jurisdiction. Following annexation, available utility services will be provided to the annexed property under the same terms and conditions as for other property located within the City of Tomball.

The undersigned property owner requests full-purpose annexation of the subject tract into the City of Tomball's full purpose jurisdiction in accordance with Chapter 43 of the Texas Local Government Code.

Requesting annexation does not change the City's obligation to provide municipal services in accordance with Chapter 43 of the Texas Local Government Code.

For information regarding the City's annexation process, please contact the City Secretary at 281-290-1002 or the Community Development Department at 281-290-1405.

Annexation must be completed prior to extension of water, wastewater, and/or other utilities.

I/We, the undersigned, am/are the current owner(s) of the tract described above and I/we request annexation into the City of Tomball for full-purposes in accordance with Chapter 43 of the Texas Local Government Code.

HA 11701 PROPERTIES LLC
Name of Owner(s) (Type or Print)

LAWRENCE J. BARAS 8/30/23
Owner's Signature Date

Received by City Secretary Date

Received by Community Development Department Date

CITY OF TOMBALL
ANNEXATION REQUEST APPLICATION
Part A: Statement of Request

City Secretary
City of Tomball
401 Market Street
Tomball, TX 77375

Mayor and Council:

1. I (we) the undersigned being the owner(s) of the property legally described as:

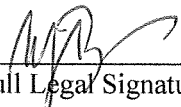
12.114 AC. SITUATED IN THE CLAUDE N. PILLOT SURVEY, A-632
& ELIZABETH SMITH LEAGUE, A-70 HARRIS COUNTY, TEXAS

hereby request the annexation of described property into the City of Tomball. Included with this request for annexation are all pertinent property Harris County Appraisal District Account Numbers:

0410260020004

(Obtainable through the County Clerk's Office)

2. The described property is contiguous to the City of Tomball's corporate city limits - X Yes ____ No.
3. Attached is proof of ownership of the property by the undersigned - X Yes ____ No.


Full Legal Signature

LAWRENCE J. BARRIS
Name (print)

HH 11701 PROPERTIES LLC
Company Name (if applicable)

9103 EMPLOYER RD, STE 21
Mailing Address (print)

Houston TX 77040
City, State, Zip

0713-466-3282
Phone Number

LJBARRIS@GMAIL.COM
E-mail Address (print)

8/30/23
Date

Full Legal Signature

Name (print)

Company Name (if applicable)

Mailing Address (print)

City, State, Zip

Phone Number

E-mail Address (print)

Date

Part B: Annexation Property Evaluation & Anticipated Development Information

(Please print or type.)

1. Agent's Contact Information:

Please list any agents acting on behalf of the annexation property owner that should be notified of information pertaining to this annexation request.

(Attach a list of additional agents, if necessary.) _____

Name: AUSTIN HAYNES

Company Name: ALTAR GROUP, PLLC

Mailing Address: PO BOX 1305 , CYPRESS, TX 770410
City/State/Zip

Phone Number: 281-794-3015

E-mail Address: AUSTIN@ALTARGRP.COM

2. Property Addresses: 11701 Holderrieth Road, Tomball, Texas 77375

Please list all property addresses associated with the proposed annexation property.

(Attach a list of additional property addresses, if necessary.)

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____
- h. _____
- i. _____
- j. _____
- k. _____

3. Nature of Existing Property:

Property Location: 11701 HOLDERRIETH ROAD Number of Acres: 12.114

Existing Zoning: no zoning, not within city limits at current.

Is development in conformance with existing zoning districts?

Yes ☒ No ☐ Don't know

Current Assessed Valuation of Land: 1,319,216

Improvements: 118,832

Total: 1,438,148

☒ Check if this property does not currently contain any structures, then proceed to #4.

a.) **Residential (existing)**

_____ Check here if there are no residential structures on the property.

No. of Units _____

No. of Lots _____

or Acres _____

Single-Family _____

Duplexes _____

Four-Plex _____

Patio Homes _____

Townhouses _____

Apartments _____

b.) **Office and Commercial (existing)**

_____ Check here if there are no office or commercial structures on the property.

Size (Sq. Ft.) _____

Structure _____

Exterior Site Improvements _____

Total Site Coverage _____

c.) **Institutional (existing)**

_____ Check here if there are no institutional structures on the property.

Size (Sq. Ft.) _____

Structure _____

Exterior Site Improvements _____

Total Site Coverage _____

d.) **Industrial (existing)**

_____ Check here if there are no industrial structures on the property.

Size (Sq. Ft.) _____

Structure _____

Exterior Site Improvements _____

Total Site Coverage _____

4. **Anticipated Development**

a.) **Platting Status** *(Please check the applicable box below)*

_____ **A plat pertaining to this property has been submitted to the Community Development Department for review**

 x A plat pertaining to this property will be submitted to the Community

Development Department in the near future

Will be submitted after annexation

_____ A plat will not be submitted within the next 6 months

b.) **Zoning Status** - Please note that properties are annexed as Agricultural "AG", unless zoning reclassification is requested by the property owner in conjunction with annexation.

 x If a zoning reclassification is desired in conjunction with the annexation process, please check this box and contact the Community Development Department.

Will zoning changes be required and requested in the future to accommodate anticipated development?

☐ Yes If yes, please describe: _____ acres of _____
☐ No

c.) Residential (anticipated)

☒ Check here if no residential structures are anticipated on the proposed property.

No. of Units _____ Value of Units _____
No. of Lots or Acres _____ Total Estimated Value _____

Single-Family _____
Duplexes _____
Four-Plex _____
Patio Homes _____
Townhouses _____
Apartments _____
Total _____

d.) Office and Commercial (anticipated)

☐ Check here if no office and/or commercial structures are anticipated on the proposed property.

Size (Sq. Ft.) 33,740
Unit Value (\$/Sq. Ft.) \$140
Total Estimated Value \$4,723,600
Structure Metal buildings with office and warehouse space
Exterior Site Improvements Pavement and landscaping to accommodate development
Total Site Coverage 16%

e.) Institutional (anticipated)

☒ Check here if no institutional structures are anticipated on the proposed property.

Size (Sq. Ft.) _____
Unit Value (\$/Sq. Ft.) _____
Total Estimated Value _____
Structure _____
Exterior Site Improvements _____
Total Site Coverage _____

f.) Industrial (anticipated)

☒ Check here if no industrial structures are anticipated on the proposed property.

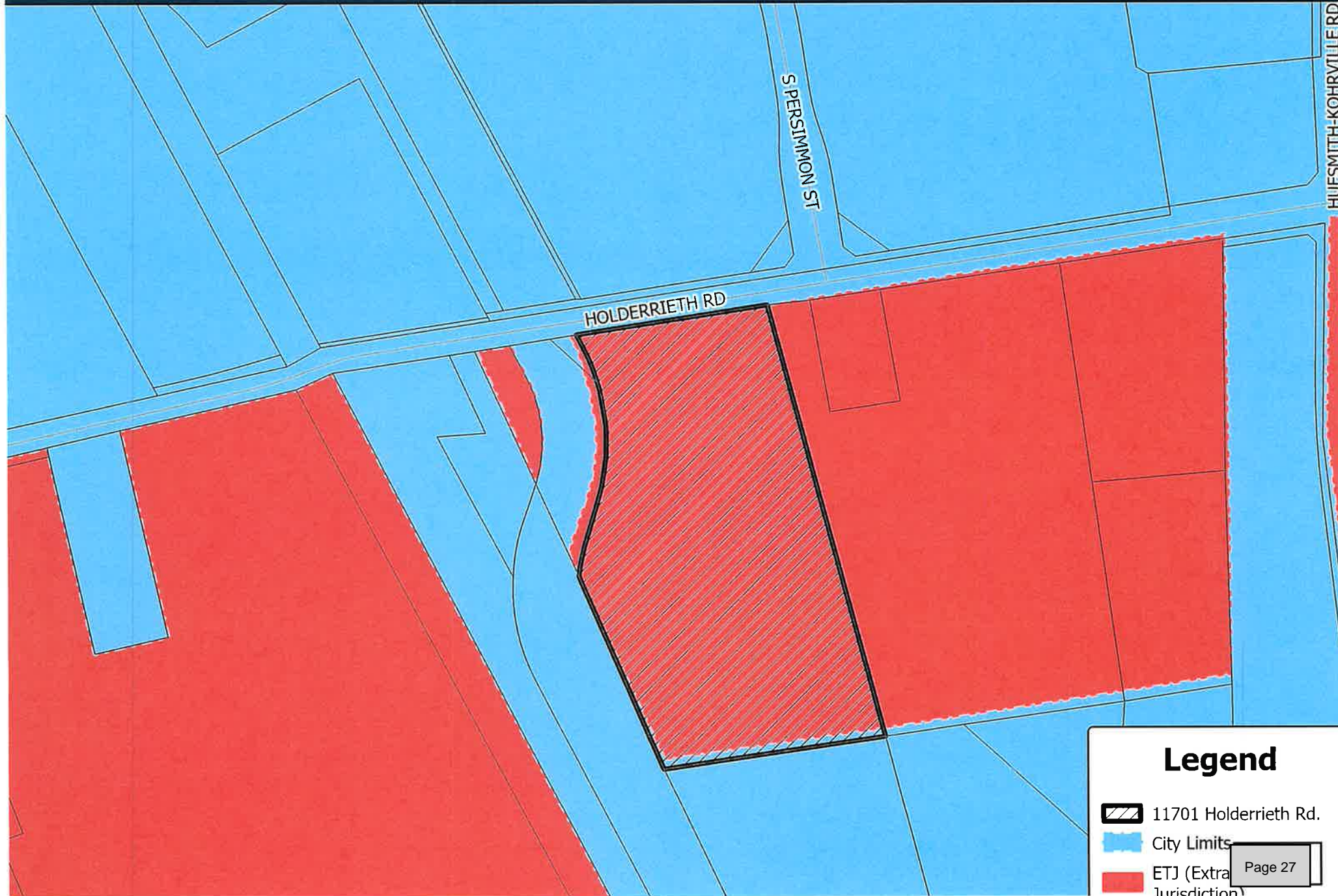
Size (Sq. Ft.) 134,965
Unit Value (\$/Sq. Ft.) \$140
Total Estimated Value \$18,865,100
Structure Metal buildings with office and warehouse space
Exterior Site Improvements Pavement and landscaping to accommodate development
Total Site Coverage 64%
Estimated Number of Employees 280

g.) Staging of Anticipated Development (In %)

	Current						
	Yr	Yr2	Yr3	Yr4	Yr5	Yr10	Yr20
Residential	<u>0</u>	_____	_____	_____	_____	_____	_____
Office / Commercial	<u>100</u>	_____	_____	_____	_____	_____	_____
Institutional	<u>0</u>	_____	_____	_____	_____	_____	_____
Industrial	<u>100</u>	_____	_____	_____	_____	_____	_____



Municipal Boundaries





**METES AND BOUNDS DESCRIPTION
12.114 ACRES (527,706 SQUARE FEET)
LOCATED IN THE
ELIZABETH SMITH SURVEY, ABSTRACT 70
& THE C.M. PILOT SURVEY, ABSTRACT 632,
HARRIS COUNTY, TEXAS**

Being a tract or parcel, containing 12.114 acres (527,706 square feet) of land situated in the Elizabeth Smith Survey, Abstract Number 70 and in the C.M. Pilot Survey, Abstract 632, Harris County, Texas; Said 12.114 acre tract of record in the name of CSV Holderrieth, LLC in Harris County Clerk's File (H.C.C.F.) Number 20140017182; Said 12.114 acre tract being more particularly described by metes and bounds as follows (bearing referenced herein are based on the Texas Coordinate System, South Central Zone NAD83):

BEGINNING at a 5/8 inch iron rod with "Gorrdanda" cap found for the northeast corner of the herein described tract and the northwest corner of a called 29.707 acre tract of record in the name of Bernard C. Holderrieth and Alvina Holderrieth in H.C.C.F. Number B402171, and being on the south Right-of-Way (R.O.W.) line of Holderrieth Road (width varies);

THENCE, coincident the east line of the herein described tract and the west line of aforesaid 29.707 acre tract, South 14 Degrees 21 Minutes 24 Seconds East, a distance of 1,023.87 feet to a 1/2 inch iron rod with "Villa 6751" cap set for the southeast corner of the herein described tract and the northeast corner of a called 16.4724 acre tract of record in the name of 11311 Holderreith Limited, L.P., in H.C.C.F. Number W840420, and being on the west line of said 29.707 acre tract;

THENCE, coincident the south line of the herein described tract and the north line of aforesaid 16.4724 acre tract, South 82 Degrees 00 Minutes 26 Seconds West, a distance of 522.80 feet to the southwest corner of the herein described tract and the northwest corner of said 16.4724 acre tract, and being on the east line of a called 7.3995 acre tract of record in the name of the City of Tomball in H.C.C.F. Number V109876;

THENCE, coincident the west line of the herein described tract and the east line of aforesaid 7.3995 acre tract the following five (5) courses:

1. North 23 Degrees 31 Minutes 10 Seconds West, a distance of 477.72 feet to the beginning of a curve to the right;
2. Coincident aforesaid curve to the right, an arc length of 71.37 feet, having a radius of 325.00 feet, a central angle of 12 Degrees 34 Minutes 58 Seconds and a chord bearing of North 11 Degrees 33 Minutes 44 Seconds East, a distance of 71.23 feet;
3. North 17 Degrees 51 Minutes 14 Seconds East, a distance of 113.68 feet to the beginning of a curve to the left;
4. Coincident aforesaid curve to the left, an arc length of 373.07 feet, having a radius of 475.00 feet, a central angle of 45 Degrees 00 Minutes 02 Seconds and a chord bearing of North 04 Degrees 38 Minutes 58 Seconds West, a distance of 363.55 feet;
5. North 27 Degrees 08 Minutes 46 Seconds West, a distance of 26.50 feet to the northwest corner of the herein described tract and the northeast corner of aforesaid 7.3995 acre tract, and being on the south R.O.W. line of aforesaid Holderrieth Road;

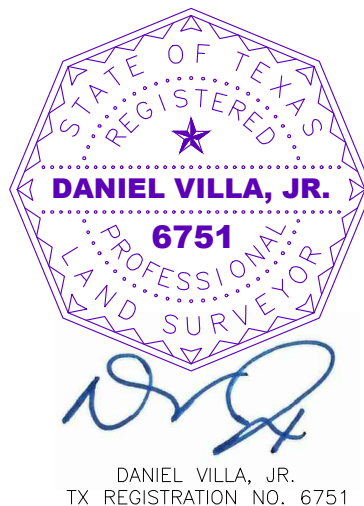
THENCE, coincident the north line of the herein described tract and the south R.O.W. line of aforesaid Holderrieth Road, North 82 Degrees 01 Minutes 22 Seconds East, a distance of 451.28 feet to the **POINT OF BEGINNING** and containing 12.114 acres (527,706 square feet) of land.



DVJ
CIVIL ENGINEERING &
LAND SURVEYING

8118 Fry Road, Ste. 402, Cypress, Texas 77433 * (281) 213-2517
www.dvjlandsurveying.com * TBPELS Reg. No. 10194609

Compiled by: Chris Garcia
Checked by: Daniel Villa, Jr.
DVJ Land Surveying
8118 Fry Road, Ste. 402
Cypress, Texas 77433
September 27, 2023
Project Number 23-0836



City Council Meeting

Agenda Item

Data Sheet

Meeting Date: December 18, 2023

Topic:

Adopt, on Second Reading, Ordinance 2023-52, an Ordinance of the City of Tomball, Texas, extending the city limits of said City to include all of the territory within certain limits and boundaries and annexing to the City of Tomball all of the territory within such limits and boundaries; approving a service plan for all of the area within such limits and boundaries; containing other provisions relating to the subject; and providing a savings and severability clause (*being a tract or parcel, containing 12.114 acres (527,706 square feet) of land situated in the Elizabeth Smith Survey, Abstract Number 70 and in the C.M. Pilot Survey, Abstract 632, Harris County, Texas [11701 Holderrieth Rd, HCAD 0410260020004]*)

Background:

Public Hearing was held on December 4, 2023, along the First Reading of Ordinance No. 2023-52.

The applicants are requesting annexation into the City of Tomball. Proposed rezoning of 12.114 acres (527,706 square feet) of land from Agricultural (AG) to Light Industrial (LI) after initial annexation with intentions to develop a business park which will include office-warehouse space, according to the applicant.

Origination: HH 11701 Properties LLC

Recommendation:

Adopt, on First Reading, Ordinance No. 2023-52.

Party(ies) responsible for placing this item on agenda: Tracylynn Garcia, City Secretary

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: # _____
If no, funds will be transferred from account # _____ To account # _____

Signed Sasha Luna Approved by _____
Staff Member Date City Manager Date

City Council Agenda Item Data Sheet

Meeting Date: December 18, 2023

Topic:

Adopt, on Second Reading, Ordinance No. 2023-49, an Ordinance of the City of Tomball, Texas, amending Chapter 50 (Zoning) of the Tomball Code of Ordinances by rezoning approximately 12.11 acres of land legally described as being a portion of the Elizabeth Smith Survey, Abstract No. 70 and the C.N. Pilot Survey, Abstract 632 from Agricultural (AG) to Light Industrial (LI). The property is located at 11701 Holderrieth Road, within Harris County, Texas; providing for the amendment of the Official Zoning Map of the City; providing for severability; providing for a penalty of an amount not to exceed \$2,000 for each day of violation of any provision hereof, making findings of fact; and providing for other related matters.

Background:

Public Hearing and First Reading was conducted on 11/20/2023.

The subject property currently falls outside the city limits of Tomball. The applicants are requesting annexation into the City of Tomball. The request is to rezone the subject property from the default Agricultural (AG) zoning which is applied when property is initially annexed to Light Industrial (LI). According to the applicant the intent of this rezoning request is to develop a business park which will include office-warehouse space.

Origination: HH 11701 Properties LLC

Recommendation:

City staff recommends approval of **Zoning Case Z23-16**. Planning and Zoning Commission recommends approval (5 Votes Aye, 0 Votes Nay).

Party(ies) responsible for placing this item on agenda: Craig T. Meyers, P.E., Community Development Director

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____

If yes, specify Account Number: # _____

If no, funds will be transferred from account: # _____ To Account: # _____

Signed: _____ **Approved by:** _____
Staff Member Date City Manager Date

ORDINANCE NO. 2023-49

AN ORDINANCE OF THE CITY OF TOMBALL, TEXAS, AMENDING CHAPTER 50 (ZONING) OF THE TOMBALL CODE OF ORDINANCES BY CHANGING THE ZONING DISTRICT CLASSIFICATION OF APPROXIMATELY 12.11 ACRES OF LAND LEGALLY DESCRIBED AS BEING A PORTION OF THE ELIZABETH SMITH SURVEY, ABSTRACT NO. 70 AND THE C.N. PILOT SURVEY, ABSTRACT 632 FROM AGRICULTURAL (AG) TO LIGHT INDUSTRIAL (LI). THE PROPERTY IS GENERALLY LOCATED AT 11701 HOLDERRIETH ROAD, WITHIN HARRIS COUNTY, TEXAS; PROVIDING FOR A PENALTY OF AN AMOUNT NOT TO EXCEED \$2,000 FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF, MAKING FINDINGS OF FACT; AND PROVIDING FOR OTHER RELATED MATTERS.

Whereas, HH 11701 Properties LLC has requested changing the zoning district classification of approximately 12.11 acres of land being a portion of the Elizabeth Smith Survey, Abstract No. 70 and the C.N. Pilot Survey, Abstract 632 from Agricultural (AG) to Light Industrial (LI). The property is located at 11701 Holderrieth Road, within the City of Tomball, Harris County, Texas; and

Whereas, at least fifteen (15) days after publication in the official newspaper of the City of the time and place of a public hearing and at least ten (10) days after written notice of that hearing was mailed to the owners of land within three hundred feet of the Property in the manner required by law, the Planning & Zoning Commission held a public hearing on the requested rezoning; and

Whereas, the public hearing was held before the Planning & Zoning Commission at least forty (40) calendar days after the City's receipt of the requested rezoning; and

Whereas, the Planning & Zoning Commission recommended in its final report that City Council approve the requested rezoning; and

Whereas, the City Council deems it appropriate to grant the requested rezoning.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS, THAT:

Section 1. The facts and matters set forth in the preamble of this Ordinance are hereby found to be true and correct.

Section 2. The rezoning classification of the Property is hereby changed and is subject to the regulations, restrictions, and conditions hereafter set forth.

Section 3. The Official Zoning Map of the City of Tomball, Texas shall be revised and amended to show the designation of the Property as hereby stated, with the appropriate reference thereon to the number and effective date of this Ordinance and a brief description of the nature of the change.

Section 4. This Ordinance shall in no manner amend, change, supplement or revise any provision of any ordinance of the City of Tomball, save and except the change in zoning classification for the Property as described above.

Section 5. In the event any section, paragraph, subdivision, clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstance shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision hereof other any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of Tomball, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, or whether there be one or more parts.

Section 6. Any person who shall violate any provision of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction, shall be fined in an amount not to exceed \$2,000. Each day of violation shall constitute a separate offense.

FIRST READING:

READ, PASSED AND APPROVED AS SET OUT BELOW AT THE MEETING OF THE CITY COUNCIL OF THE CITY OF TOMBALL HELD ON THE _____ DAY OF _____ 2023.

COUNCILMAN FORD	_____
COUNCILMAN STOLL	_____
COUNCILMAN DUNAGIN	_____
COUNCILMAN TOWNSEND	_____
COUNCILMAN PARR	_____

SECOND READING:

READ, PASSED AND APPROVED AS SET OUT BELOW AT THE MEETING OF THE CITY COUNCIL OF THE CITY OF TOMBALL HELD ON THE _____ DAY OF _____ 2023.

COUNCILMAN FORD	_____
COUNCILMAN STOLL	_____
COUNCILMAN DUNAGIN	_____
COUNCILMAN TOWNSEND	_____
COUNCILMAN PARR	_____

LORI KLEIN QUINN, Mayor

ATTEST:

TRACYLYNN GARCIA, City Secretary

**METES AND BOUNDS DESCRIPTION
12.114 ACRES (527,706 SQUARE FEET)
LOCATED IN THE
ELIZABETH SMITH SURVEY, ABSTRACT 70
& THE C.M. PILOT SURVEY, ABSTRACT 632,
HARRIS COUNTY, TEXAS**

Being a tract or parcel, containing 12.114 acres (527,706 square feet) of land situated in the Elizabeth Smith Survey, Abstract Number 70 and in the C.M. Pilot Survey, Abstract 632, Harris County, Texas; Said 12.114 acre tract of record in the name of CSV Holderrieth, LLC in Harris County Clerk's File (H.C.C.F.) Number 20140017182; Said 12.114 acre tract being more particularly described by metes and bounds as follows (bearing referenced herein are based on the Texas Coordinate System, South Central Zone NAD83):

BEGINNING at a 5/8 inch iron rod with "Gorrdanda" cap found for the northeast corner of the herein described tract and the northwest corner of a called 29.707 acre tract of record in the name of Bernard C. Holderrieth and Alvina Holderrieth in H.C.C.F. Number B402171, and being on the south Right-of-Way (R.O.W.) line of Holderrieth Road (width varies);

THENCE, coincident the east line of the herein described tract and the west line of aforesaid 29.707 acre tract, South 14 Degrees 21 Minutes 24 Seconds East, a distance of 1,023.87 feet to a 1/2 inch iron rod with "Villa 6751" cap set for the southeast corner of the herein described tract and the northeast corner of a called 16.4724 acre tract of record in the name of 11311 Holderrieth Limited, L.P., in H.C.C.F. Number W840420, and being on the west line of said 29.707 acre tract;

THENCE, coincident the south line of the herein described tract and the north line of aforesaid 16.4724 acre tract, South 82 Degrees 00 Minutes 26 Seconds West, a distance of 522.80 feet to the southwest corner of the herein described tract and the northwest corner of said 16.4724 acre tract, and being on the east line of a called 7.3995 acre tract of record in the name of the City of Tomball in H.C.C.F. Number V109876;

THENCE, coincident the west line of the herein described tract and the east line of aforesaid 7.3995 acre tract the following five (5) courses:

1. North 23 Degrees 31 Minutes 10 Seconds West, a distance of 477.72 feet to the beginning of a curve to the right;
2. Coincident aforesaid curve to the right, an arc length of 71.37 feet, having a radius of 325.00 feet, a central angle of 12 Degrees 34 Minutes 58 Seconds and a chord bearing of North 11 Degrees 33 Minutes 44 Seconds East, a distance of 71.23 feet;
3. North 17 Degrees 51 Minutes 14 Seconds East, a distance of 113.68 feet to the beginning of a curve to the left;
4. Coincident aforesaid curve to the left, an arc length of 373.07 feet, having a radius of 475.00 feet, a central angle of 45 Degrees 00 Minutes 02 Seconds and a chord bearing of North 04 Degrees 38 Minutes 58 Seconds West, a distance of 363.55 feet;
5. North 27 Degrees 08 Minutes 46 Seconds West, a distance of 26.50 feet to the northwest corner of the herein described tract and the northeast corner of aforesaid 7.3995 acre tract, and being on the south R.O.W. line of aforesaid Holderrieth Road;

THENCE, coincident the north line of the herein described tract and the south R.O.W. line of aforesaid Holderrieth Road, North 82 Degrees 01 Minutes 22 Seconds East, a distance of 451.28 feet to the **POINT OF BEGINNING** and containing 12.114 acres (527,706 square feet) of land.



**NOTICE OF PUBLIC HEARING
CITY OF TOMBALL
PLANNING & ZONING COMMISSION (P&Z)
NOVEMBER 13, 2023
&
CITY COUNCIL
NOVEMBER 20, 2023**



Notice is Hereby Given that a Public Hearing will be held by the P&Z of the City of Tomball on **Monday, November 13, 2023 at 6:00 P.M.** and by the City Council of the City of Tomball on **Monday, November 20, 2023 at 6:00 P.M.** at City Hall, 401 Market Street, Tomball Texas. On such dates, the P&Z and City Council will consider the following:

Zoning Case Z23-16: Request by HH 11701 Properties LLC., represented by Austin Haynes to amend Chapter 50 (Zoning) of the Tomball Code of Ordinances, by rezoning approximately 12.11 acres of land legally described as being a portion of the Elizabeth Smith Survey, Abstract No. 70 and the C.N. Pilot Survey, Abstract 632 from Agricultural (AG) to Light Industrial (LI). The property is located at 11701 Holderrieth Road, within Harris County, Texas.

Zoning Case Z23-17: Request by Daniel Rodano, represented by Sendero Ventures LLC., to amend Chapter 50 (Zoning) of the Tomball Code of Ordinances, by rezoning approximately 1.06 acres of land legally described as being a portion of the John Smith Survey, Abstract No. 730 from Single Family Estate Residential – 20 (SF-20-E) to Commercial (C). The property is generally located within the 1100 block (north side) of E. Hufsmith Road, within the City of Tomball, Harris County, Texas.

Zoning Case Z23-18: Request by Brian Mai to amend Chapter 50 (Zoning) of the Tomball Code of Ordinances, by rezoning approximately 0.172 acres of land legally described as Lot 9, Block 1 of Main Street – Tomball from Single Family Residential – 6 (SF-6) to Commercial (C). The property is located within the 100 block (east side) of Holderrieth Boulevard, within the City of Tomball, Harris County, Texas.

At the public hearings, parties of interest and citizens will have the opportunity to be heard. All citizens of the City of Tomball, and any other interested parties, are invited to attend. Applications are available for public inspection Monday through Friday, except holidays, at the Administrative Services Building, located at 501 James Street, Tomball, TX 77375. Further information may be obtained by contacting the City Planner, Jared Smith, at (281) 290-1491 or at jasmith@tomballtx.gov.

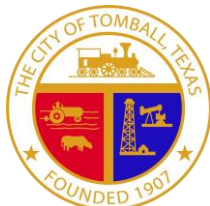
CERTIFICATION

I hereby certify that the above notice of meeting was posted on the bulletin board of City Hall; City of Tomball, Texas, a place readily accessible to the general public at all times, on the 10th day of November 2023 by 5:00 p.m., and remained posted for at least 72 continuous hours preceding the scheduled time of said meeting.

Jared Smith

Jared Smith
City Planner

This facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpretive services must be made 48 hours prior to this meeting. Please feel free to contact the City Secretary's office at (281) 290-1002 or FAX (281) 351-6256 for further information. AGENDAS MAY ALSO BE VIEWED ONLINE AT www.tomballtx.gov.



City of Tomball
Community Development Department

NOTICE OF PUBLIC HEARING

RE: Zone Change Case Number Z23-16

10/26/23

The Planning & Zoning Commission will hold a public hearing on **November 13, 2023 at 6:00 PM**, in City Council Chambers at City Hall, 401 Market Street, Tomball, Texas to recommend approval or denial to City Council on a request by HH 11701 Properties LLC., represented by Austin Haynes to amend Chapter 50 (Zoning) of the Tomball Code of Ordinances, by rezoning approximately 12.11 acres of land legally described as being a portion of the Elizabeth Smith Survey, Abstract No. 70 and the C.N. Pilot Survey, Abstract 632 from Agricultural (AG) to Light Industrial (LI). The property is located at 11701 Holderrieth Road, within Harris County, Texas.

This hearing is open to any interested person. Opinions, objections and/or comments relative to this matter may be expressed in writing or in person at the hearing. At the bottom of this letter is a form that you may cut off, fill out, and mail. Comments are also accepted by email as listed below. All responses must be signed.

The attached map shows the area of this request. Only that area which is bounded by the cross-hatched line on the map is being considered for **rezoning**. The solid boundary line around the subject area is only a notification area. All owners of property within 300-feet of the subject property are required to be notified. Whether approved or denied by the Planning & Zoning Commission, this case will be heard by City Council for First Reading with public hearing on **November 20, 2023 at 6:00 PM** in City Council Chambers at City Hall, 401 Market Street, Tomball, Texas.

If you have any questions, please contact Jared Smith, City Planner at telephone 281-290-1491 or by email address jasmith@tomballtx.gov

For the PLANNING & ZONING COMMISSION
Please call (281) 290-1491 if you have any questions about this notice.

CASE #: Z23-16

You may indicate your position on the above request by detaching this sheet at the dotted line and returning it to the address below. You may attach additional sheets if needed. You may also email your position to the email address listed below. All correspondence must include your name and address.

Mailing To: Community Development Department
501 James St., Tomball TX 77375

I am in favor ☐

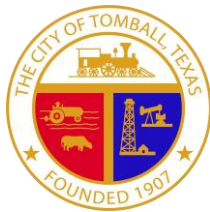
I am opposed ☐

Additional Comments:

Name:
Parcel I.D.:
Address:

Email: jasmith@tomballtx.gov

Signature: _____

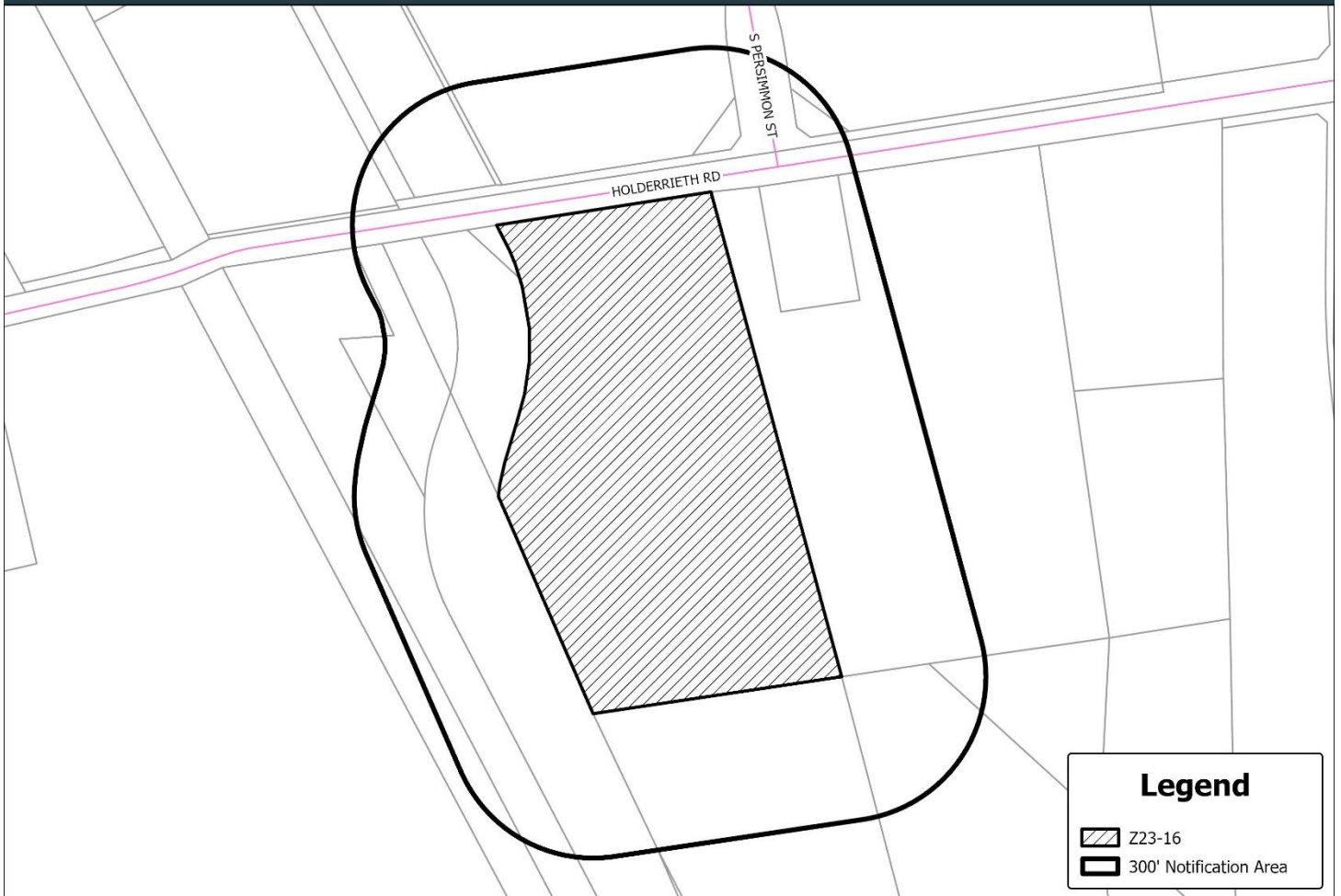


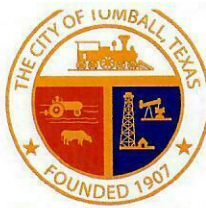
City of Tomball
Community Development Department

Z23-16



Notification Area





City of Tomball
Community Development Department

HOELSCHER EXCHANGE 2018 LLC % HOELSCHER PROPERTY MANAGEMENT LTD
2400 S PERSIMMON ST
TOMBALL, TX 77375-5741

NOTICE OF PUBLIC HEARING

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10/26/23

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For the PLANNING & ZONING COMMISSION
Please call (281) 290-1491 if you have any questions about this notice.

CASE #: Z23-16

You may indicate your position on the above request by detaching this sheet at the dotted line and returning it to the address below. You may attach additional sheets if needed. You may also email your position to the email address listed below. All correspondence must include your name and address.

Name: HOELSCHER EXCHANGE 2018 LLC % HOELSCHER
PROPERTY MANAGEMENT LTD
Parcel I.D.: 1342060040003
Address: 2400 S PERSIMMON ST

Mailing To: Community Development Department
501 James St., Tomball TX 77375

Email: jasmith@tomballtx.gov

I am in favor ☒

I am opposed ☐

Additional Comments:

Signature: Charles H. Hoelscher



City of Tomball
Community Development Department

HOELSCHER EXCHANGE 2018 LLC % HOELSCHER PROPERTY MANAGEMENT LTD
2400 S PERSIMMON ST
TOMBALL, TX 77375-5741

NOTICE OF PUBLIC HEARING

RE: Zone Change Case Number Z23-16

10/26/23

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For the PLANNING & ZONING COMMISSION
Please call (281) 290-1491 if you have any questions about this notice.

CASE #: Z23-16

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Name: HOELSCHER EXCHANGE 2018 LLC % HOELSCHER
PROPERTY MANAGEMENT LTD
Parcel I.D.: 1342060040001
Address: 2400 S PERSIMMON ST

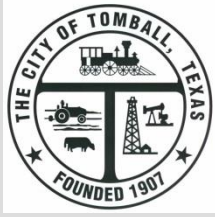
Mailing To: Community Development Department
501 James St., Tomball TX 77375

Email: jasmith@tomballtxgov

I am in favor ☒
Additional Comments:

I am opposed ☐

Signature: Charles H. Hoelscher



Rezoning Staff Report

Planning & Zoning Commission Public Hearing Date: November 13, 2023
City Council Public Hearing Date: November 20, 2023

Rezoning Case: Z23-16
Property Owner(s): HH 11701 Properties LLC.
Applicant(s): Austin Haynes
Legal Description: 12.11 acre being portions of the Elizabeth Smith Survey, Abstract No. 70 and the C.N. Pilot Survey, Abstract No. 632
Location: 11701 Holderrieth Road (Exhibit “A”)
Area: 12.11 acres
Comp Plan Designation: Business Park and Industrial (Exhibit “B”)
Present Zoning: N/A (Subject of Annexation Request) (Exhibit “C”)
Request: Rezone from the Agricultural (AG) to the Light Industrial (LI) district
Adjacent Zoning & Land Uses:
North: Light Industrial (LI)/ Tomball Business & Technology Park
South: Agricultural (AG)/ City of Tomball Regional Detention Facility
West: Agricultural (AG) / City of Tomball Drainage Channel (M118)
East: N/A (City of Tomball ETJ) / Single-family residence

BACKGROUND

The subject property currently falls outside the city limits of Tomball. The applicants are requesting annexation into the City of Tomball. The request is to rezone the subject property from the default Agricultural (AG) zoning which is applied when property is initially annexed to Light Industrial (LI). According to the applicant the intent of this rezoning request is to develop a business park which will include office-warehouse space.

ANALYSIS

Description: The subject property comprises approximately 12.11 acres, located 11701 Holderrieth Road. The property is subject to a request for annexation. Following annexation, the default base zoning of Agricultural (AG) will be applied to the property. The applicants are seeking Light Industrial (LI) to allow the establishment of “business park and office-warehouse” uses. Immediately north of the subject property, on the north side of Holderrieth Road is the Tomball Business & Technology Park. East of the subject property is an existing single-family residence

which falls outside the city limits of Tomball. South and East of the subject property is Agricultural (AG) zoning. South of the property is an existing City of Tomball regional detention facility and east of the property is the City of Tomball drainage channel (M118) which drains to said facility.

Comprehensive Plan Recommendation: The property is designated as “Business Park & Industrial” by the Comprehensive Plans Future Land Use Map. This Business Park & Industrial category is intended to create opportunities for employment. The uses that are to be promoted in this designated land use should be uses that benefit from proximity to major thoroughfares which provide convenient access for vehicle traffic, including freight traffic.

According to the Comprehensive Plan, land uses should consist of office, warehousing, light manufacturing (with indoor operations), breweries/distilleries, equipment sales, contractor services, and corporate campuses. Appropriate secondary uses may include things such as utility services, government facilities, and transportation/freight uses.

The Comprehensive Plan recommends the zoning districts of – Light Industrial (LI), Commercial (C), Office (O), or Planned Developments (PD) for the Business Park & Industrial land use category.

Staff Review Comments:

The request to rezone the subject property to Light Industrial (LI) is in direct alignment with the goals and objectives of the Comprehensive Plan. The Comprehensive Plan identifies the need to encourage continued growth of business parks and corporate campuses in Tomball. This rezoning request will continue the promotion of business park land uses within and immediately adjacent to the existing Tomball Business & Technology Park. Furthermore, the property falls within the Business Park & Industrial future land use category which identifies Light Industrial (LI) as a zoning district that will best promote the goals and objectives of this planned future land use category.

PUBLIC COMMENT

A Notice of Public Hearing was published in the paper and property owners within 300 feet of the project site were mailed notification of this proposal on October 26, 2023. Any public comment forms will be provided in the Planning & Zoning Commission and City Council packets or during the public hearing.

RECOMMENDATION

Based on the findings outlined in the analysis section of this staff report, City staff recommends approval of Zoning Case Z23-16.

EXHIBITS

- A. Aerial Location Map
- B. Future Land Use Plan Map
- C. Current Zoning Map
- D. Site Photo(s)
- E. Rezoning Application

Exhibit "A"
Aerial Location Map



Location



Legend

 Z23-16

Exhibit "B"
Future Land Use Plan



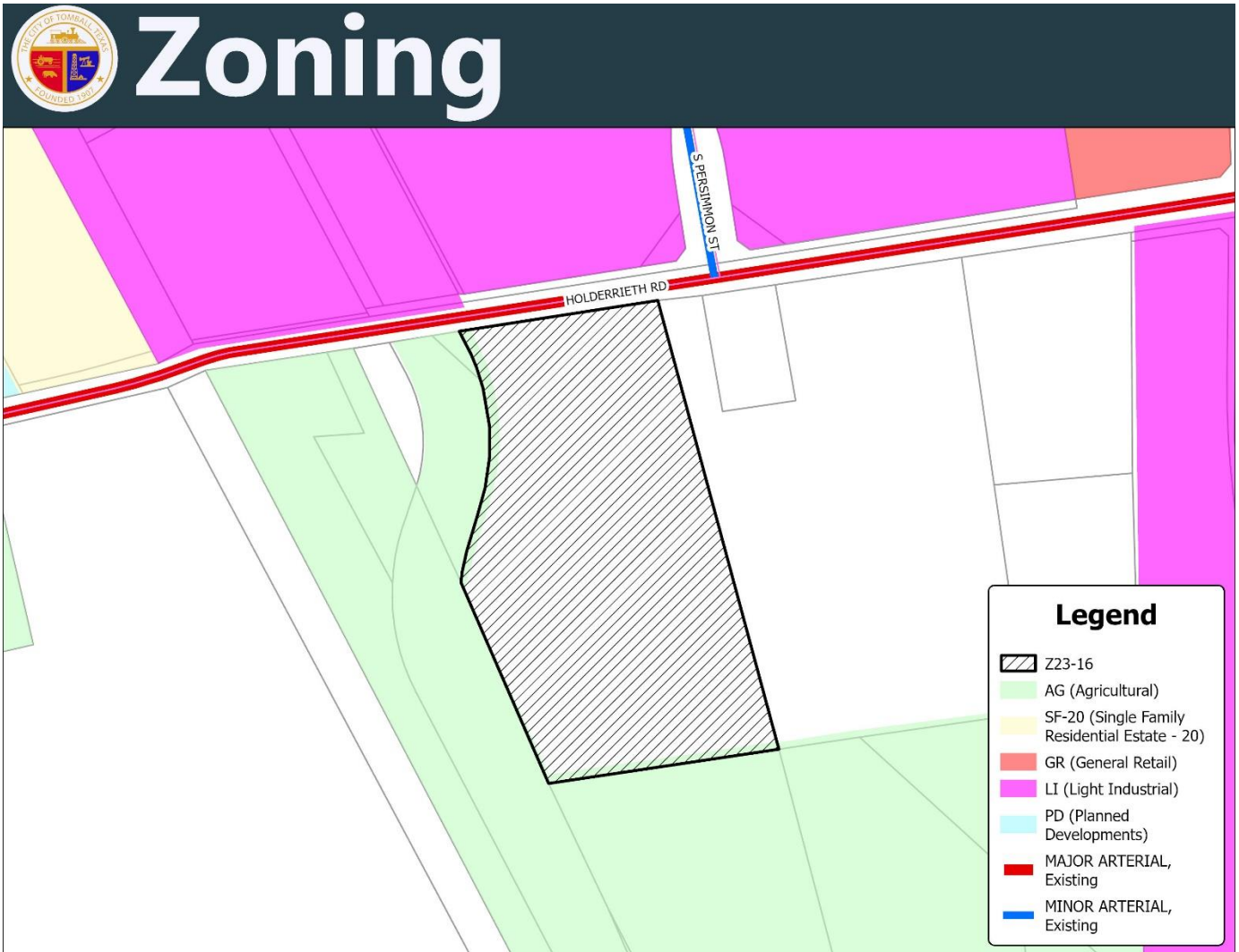
Future Land Use



Legend

- Z23-16
- Business Park and Industrial
- Corridor Commercial
- Parks & Open Space

Exhibit "C"
Zoning Map



**Exhibit “D”
Site Photo(s)**

Subject Site



Neighbor (West)



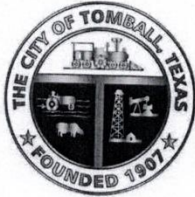
Neighbor (East)



Neighbor (North)



Exhibit "E"
Rezoning Application



Revised: 10/1/2022

APPLICATION FOR RE-ZONING

Community Development Department
Planning Division

APPLICATION REQUIREMENTS: Applications will be *conditionally* accepted on the presumption that the information, materials and signatures are complete and accurate. If the application is incomplete or inaccurate, your project may be delayed until corrections or additions are received.

There is a \$1,000.00 application fee that must be paid at time of submission or the application will not be processed.

DIGITAL PLAN SUBMITTALS:

PLEASE SUBMIT YOUR APPLICATIONS AND PLANS DIGITALLY IN A SINGLE PDF BY FOLLOWING THE WEBSITE BELOW:

WEBSITE: tomballtx.gov/securesend
USERNAME: tombalcedd
PASSWORD: Tomball1

Applicant

Name: AUSTIN HAYNES Title: CIVIL ENGINEER
Mailing Address: PO BOX 1305 City: CYPRESS State: TX
Zip: 77410 Contact: RHONDA CHILDS
Phone: (832)-657-3972 Email: RHONDA@ALTARGRP.COM

Owner

Name: HH 11701 Properties LLC Title: _____
Mailing Address: 9103 Emmott Road, Ste 21 City: Houston State: TX
Zip: 77040 Contact: _____
Phone: () Email: _____

Engineer/Surveyor (if applicable)

Name: AUSTIN HAYNES Title: CIVIL ENGINEER
Mailing Address: PO BOX 1305 City: CYPRESS State: TX
Zip: 77410 Contact: AUSTIN HAYNES
Phone: (281)-794-3015 Fax: () Email: AUSTIN@ALTARGRP.COM

Description of Proposed Project: BUSINESS PARK WITH OFFICE WAREHOUSE SPACE

Physical Location of Property: 11701 HOLDERRIETH ROAD

[General Location – approximate distance to nearest existing street corner]

Legal Description of Property: TR 3E & (5,415 SQ FT EASEMENT) TRS 13D-2 13E & 13J
ABST 632 C N PILOT ABST 70 E SMITH

[Survey/Abstract No. and Tracts; or platted Subdivision Name with Lots/Block]

Current Zoning District: NO ZONING - PROPERTY IS SEEKING ANNEXATION

City of Tomball, Texas 501 James Street, Tomball, Texas 77375 Phone: 281-290-1405 www.tomballtx.gov

Current Use of Property: VACANT

Proposed Zoning District: LID- LIGHT INDUSTRIAL DISTRICT

Proposed Use of Property: BUSINESS PARK WITH OFFICE WAREHOUSE SPACE

HCAD Identification Number: 0410260020004 Acreage: 12.114

Please note: A courtesy notification sign will be placed on the subject property during the public hearing process and will be removed when the case has been processed.

This is to certify that the information on this form is COMPLETE, TRUE, and CORRECT and the under signed is authorized to make this application. I understand that submitting this application does not constitute approval, and incomplete applications will result in delays and possible denial.

X Aust. Haynes 09/25/2023
Signature of Applicant Date

X [Signature] 9/25/23
Signature of Owner Date

From: noreply@incode.tylerhosting.cloud
To: [Kimberly Chandler](#)
Subject: Receipt #R01384980
Date: Wednesday, October 4, 2023 8:25:47 AM

Caution: This is an external email and may be malicious. Please take care when clicking links or opening attachments.

401 Market Street
401 Market Street
Tomball, TX 77375
(281) 351-5484

DATE : 10/4/2023 8:13 AM
OPER : AM
TKBY : Angelica Meza
TERM : 3
REC# : R01384980
130.0000 PLANNING AND ZONING
Holderrieth Business Park ReZoning 1000.00

Paid By:Holderrieth Business Park ReZoning
2-CK 1000.00 REF:w1065

Submittal Requirements

The following summary is provided for the applicant's benefit. However, fulfilling the requirements of this summary checklist does not relieve the applicant from the responsibility of meeting the regulations in the Zoning Ordinance, subdivision regulations, and other development related ordinances of the City of Tomball.

Applications must be received by the City of Tomball at least 40 calendar days prior to the City Planning and Zoning Commission hearing date.

- **Application Fee: \$1,000.00**
- **Completed application form**
- ***Copy of Recorded/Final Plat**
- **Letter stating reason for request and issues relating to request**
- **Conceptual Site Plan (if applicable)**
- **Metes & Bounds of property**
- **Payment of all indebtedness attributed to subject property must be paid with application or an arrangement in accordance with Section 50-36(a)(3) of the Code of Ordinances as cited below:**

(No person who owes delinquent taxes, delinquent paving assessments, or any other fees, delinquent debts or obligations or is otherwise indebted to the City of Tomball, and which are directly attributed to a piece of property shall be allowed to submit any application for any type of rezoning, building permit, or plan review until the taxes, assessments, debts, or obligations directly attributable to said property and owed by the owner or previous owner thereof to the City of Tomball shall have been first fully discharged by payment, or until an arrangement satisfactory to the City has been made for the payment of such debts or obligations. It shall be the applicant's responsibility to provide evidence of proof that all taxes, fees, etc.. have been paid, or that other arrangements satisfactory to the City have been made for payment of said taxes, fees, etc.)

The City's staff may require other information and data for specific required plans. Approval of a required plan may establish conditions for construction based upon such information.

***Legal Lot Information:** If property is not platted, a plat will be required to be filed with the Community Development Department unless evidence of a legal lot is provided. To be an unplatted legal lot, the applicant is required to demonstrate that the tract existed in the same shape and form (same metes and bounds description) as it currently is described prior to August 15, 1983, the date the City adopted a subdivision ordinance.

Application Process

1. The official filing date is the date the application and fee are received by the City.
2. The City will review the application for completeness and will notify the applicant in writing within 10 days if the application is deemed incomplete.
3. Property owners within two-hundred (300) feet of the project site will be notified by letter within 10 calendar days prior to the public hearing date and legal notice will appear in the official newspaper of the City before the eighth calendar day prior to the date of the hearing.
4. A public hearing will be held by the Planning and Zoning Commission at 6:00 p.m. in the City Council chambers, unless otherwise noted. The Planning and Zoning Commission meetings are scheduled on the second Monday of the month. The staff will review the request with the Commission and after staff presentations the chair will open the public hearing. The applicant will have ten (10) minutes to present the request. The chair will then allow those present in favor of the request and those in opposition to the request to speak. The Commission may then ask staff or anyone present additional questions, after which the Commission may close or table the public hearing. The Commission may then vote to recommend approval or denial to the City Council. The Commission may also table the request to a future date before a recommendation is sent to the City Council.
5. A second public hearing will be scheduled before the City Council after fifteen (15) days of legal notice. The Council meetings are held on the first (1st) and third (3rd) Mondays of the month at 6:00 p.m. in the City Council chambers (401 Market Street, Tomball, Texas, 77375).
6. The City Council will conduct a public hearing on the request in the same manner as the Planning and Zoning Commission. In the event that there has been a petition filed with the City Secretary with twenty percent (20%) of the adjoining property owners in opposition to the subject zoning request, it will require a three fourths (3/4) vote of the full Council to approve the request. Upon approval of the request by the City Council, an amended ordinance shall be prepared and adopted. The ordinance shall have two separate readings and will be effective at such time that it is adopted by City Council and signed by the Mayor and attested by the City Secretary.

FAILURE TO APPEAR: It is the applicant/property owner's responsibility to attend all Planning and Zoning Commission and City Council meetings regarding their case. Failure of the applicant or his/her authorized representative to appear before the Planning and Zoning Commission or the City Council for more than one (1) hearing without approved delay by the City Manager, or his/her designee, may constitute sufficient grounds for the Planning and Zoning Commission or the City Council to table or deny the application unless the City Manager or his/her designee is notified in writing by the applicant at least seventy-two (72) hours prior to the hearing. If the agenda item is tabled the Planning and Zoning Commission shall specify a specific date at which it will be reconsidered.



September 26, 2023

City of Tomball
401 Market Street
Tomball, Tx 77375

Re: 11701 Holderrieth Road Re-zoning Application

To whom it may concern,

The above mentioned property is seeking to be annexated into the City of Tomball and is thus requiring to pursue zoning. The requested Light Industrial District (LID) zoning is consistent with the surrounding developments as well as the future development plan.

Thank you for considering this application, we look forward to receiving any comments or questions you may have.

Property:
Address: 11701 Holderrieth Road, Tomball, Tx
HCAD Account 0410260020004

Respectfully,

Austin Haynes, PE
Altar Group, PLLC
Architecture | Engineering
Austin@altargrp.com
281-794-3015

Altar Group
11615 Spring Cypress Rd, Suite E
Tomball, TX 77377
P. 713-248-7752



8118 Fry Road, Ste. 402, Cypress, Texas 77433 * (281) 213-2517
www.dvjlansurveying.com * TBPELS Reg. No. 10194609

**METES AND BOUNDS DESCRIPTION
12.114 ACRES (527,706 SQUARE FEET)
LOCATED IN THE
ELIZABETH SMITH SURVEY, ABSTRACT 70
& THE C.M. PILOT SURVEY, ABSTRACT 632,
HARRIS COUNTY, TEXAS**

Being a tract or parcel, containing 12.114 acres (527,706 square feet) of land situated in the Elizabeth Smith Survey, Abstract Number 70 and in the C.M. Pilot Survey, Abstract 632, Harris County, Texas; Said 12.114 acre tract of record in the name of CSV Holderrieth, LLC in Harris County Clerk's File (H.C.C.F.) Number 20140017182; Said 12.114 acre tract being more particularly described by metes and bounds as follows (bearing referenced herein are based on the Texas Coordinate System, South Central Zone NAD83):

BEGINNING at a 5/8 inch iron rod with "Gorrdanda" cap found for the northeast corner of the herein described tract and the northwest corner of a called 29.707 acre tract of record in the name of Bernard C. Holderrieth and Alvina Holderrieth in H.C.C.F. Number B402171, and being on the south Right-of-Way (R.O.W.) line of Holderrieth Road (width varies);

THENCE, coincident the east line of the herein described tract and the west line of aforesaid 29.707 acre tract, South 14 Degrees 21 Minutes 24 Seconds East, a distance of 1,023.87 feet to a 1/2 inch iron rod with "Villa 6751" cap set for the southeast corner of the herein described tract and the northeast corner of a called 16.4724 acre tract of record in the name of 11311 Holderrieth Limited, L.P., in H.C.C.F. Number W840420, and being on the west line of said 29.707 acre tract;

THENCE, coincident the south line of the herein described tract and the north line of aforesaid 16.4724 acre tract, South 82 Degrees 00 Minutes 26 Seconds West, a distance of 522.80 feet to the southwest corner of the herein described tract and the northwest corner of said 16.4724 acre tract, and being on the east line of a called 7.3995 acre tract of record in the name of the City of Tomball in H.C.C.F. Number V109876;

THENCE, coincident the west line of the herein described tract and the east line of aforesaid 7.3995 acre tract the following five (5) courses:

1. North 23 Degrees 31 Minutes 10 Seconds West, a distance of 477.72 feet to the beginning of a curve to the right;
2. Coincident aforesaid curve to the right, an arc length of 71.37 feet, having a radius of 325.00 feet, a central angle of 12 Degrees 34 Minutes 58 Seconds and a chord bearing of North 11 Degrees 33 Minutes 44 Seconds East, a distance of 71.23 feet;
3. North 17 Degrees 51 Minutes 14 Seconds East, a distance of 113.68 feet to the beginning of a curve to the left;
4. Coincident aforesaid curve to the left, an arc length of 373.07 feet, having a radius of 475.00 feet, a central angle of 45 Degrees 00 Minutes 02 Seconds and a chord bearing of North 04 Degrees 38 Minutes 58 Seconds West, a distance of 363.55 feet;
5. North 27 Degrees 08 Minutes 46 Seconds West, a distance of 26.50 feet to the northwest corner of the herein described tract and the northeast corner of aforesaid 7.3995 acre tract, and being on the south R.O.W. line of aforesaid Holderrieth Road;

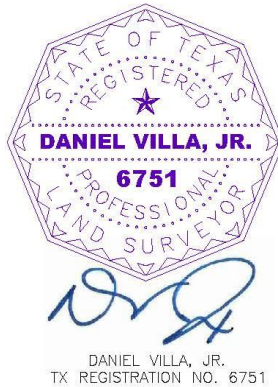
THENCE, coincident the north line of the herein described tract and the south R.O.W. line of aforesaid Holderrieth Road, North 82 Degrees 01 Minutes 22 Seconds East, a distance of 451.28 feet to the **POINT OF BEGINNING** and containing 12.114 acres (527,706 square feet) of land.



DVJ
CIVIL ENGINEERING &
LAND SURVEYING

8118 Fry Road, Ste. 402, Cypress, Texas 77433 * (281) 213-2517
www.dvilandsurveying.com * TBPELS Reg. No. 10194609

Compiled by: Chris Garcia
Checked by: Daniel Villa, Jr.
DVJ Land Surveying
8118 Fry Road, Ste. 402
Cypress, Texas 77433
September 27, 2023
Project Number 23-0836



DANIEL VILLA, JR.
TX REGISTRATION NO. 6751

Regular City Council

Agenda Item

Data Sheet

Meeting Date: December 18, 2023

Topic:

Approve, on Second Reading, Resolution No. 2023-46-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and The Garza Agency to make direct incentives to, or expenditures for, rental assistance for new or expanded business enterprise to be located at 28427 SH 249, Tomball, Texas 77375. The estimated amount of expenditures for such Project is an amount not to exceed \$10,000.00.

Background:

First Reading approved during the December 4, 2023, Regular City Council meeting.

On September 12, 2023, the Tomball Economic Development Corporation (TEDC) Board of Directors unanimously approved, as a Project of the Corporation, an economic development performance agreement with The Garza Agency for rental assistance for new or expanded business enterprise. The Tomball City Council has final approval authority over all programs and expenditures of the Corporation.

Origination: Tomball Economic Development Corporation Board of Directors

Recommendation: Approval of Resolution No. 2023-46-TEDC

Party(ies) responsible for placing this item on agenda: Kelly Violette

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: X No: _____ If yes, specify Account Number: #Project Grants

If no, funds will be transferred from account # _____ To account # _____

Signed _____

Staff Member-TEDC

Date _____

Approved by _____

Executive Director-TEDC

Date _____

Regular City Council Agenda Item Data Sheet

Meeting Date: December 4, 2023

Topic:

Approve, on First Reading, Resolution No. 2023-46-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and The Garza Agency to make direct incentives to, or expenditures for, rental assistance for new or expanded business enterprise to be located at 28427 SH 249, Tomball, Texas 77375. The estimated amount of expenditures for such Project is an amount not to exceed \$10,000.00.

Background:

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Origination: Tomball Economic Development Corporation Board of Directors

Recommendation: Approval of Resolution No. 2023-46-TEDC

Party(ies) responsible for placing this item on agenda: Kelly Violette

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: X No: _____ If yes, specify Account Number: #Project Grants

If no, funds will be transferred from account # _____ To account # _____

Signed _____	Approved by _____
Staff Member-TEDC _____	Executive Director-TEDC _____
Date _____	Date _____



TO: Honorable Mayor and City Council

FROM: Kelly Violette
Executive Director

MEETING DATE: December 4, 2023

SUBJECT: The Garza Agency

ITEM TYPE: Action

The Tomball Economic Development Corporation has received a request from Gabriel Garza, President of The Garza Agency, for funding assistance through the TEDC's Rental Incentive Program for an insurance and financial services firm.

The Garza Agency was established in 1996 and specializes in insurance and financial services to the public under the Farmers Insurance organization.

The proposed location is an 1800 square foot lease space located at 28427 SH 249.

The goal of the TEDC's Rental Incentive Program is to assist in the establishment of new businesses in existing vacant spaces and to stimulate commercial investment in the City of Tomball. In accordance with the Rental Incentive Program Policy, the proposed performance agreement is for 25% of the base monthly rent for the first year of operation only.

The lease agreement that was submitted in conjunction with the request letter shows a three-year lease commitment with a monthly rent amount of \$6,495.06. The proposed grant amount is \$10,000.00 payable after the first year of operation based on landlord verification of rents paid and meeting the performance agreement criteria.

Although this project does not create primary jobs, it does promote the development and expansion of business enterprise, which is considered a permissible project as outlined in Texas Economic Development Legislation. If this project is approved, it will go to the Tomball City Council for final approval by resolution at two separate readings.



Date: August 25, 2023

Tiffani Wooten
Tomball Economic Development

The Garza Agency is a Texas-based company founded in 1996 offering insurance and financial services to the public under the Farmers Insurance organization. Our offices have been centered around the northwest side of Houston for 23 years. We have chosen to open our second location in Tomball due to the expansive growth already taking place and projected to continue.

We are funding the move through our current operations and are requesting assistance from Tomball EDC's Business Rental Incentive Program as a means to allow us to expand our Tomball operations and staff quickly.

The rental incentive program will be very beneficial for us by helping us recoup some of our out of pocket expenses associated with leasing a space, moving to a new location, and marketing to help us expand our business to the City of Tomball and surrounding areas.

Thank you for your consideration,

Gabriel C. Garza

Gabriel Garza
President



NEW BUSINESS RENTAL INCENTIVE PROGRAM

PART A –BUSINESS OWNER APPLICATION

The New Business Rental Incentive Program seeks to reduce area vacancies and facilitate the establishment of new businesses in previously underutilized areas of the City. The intent of the program is to facilitate business growth and expansion by assisting businesses in leasing space. All grant award decisions of the Tomball Economic Development Corporation (TEDC) Board of Directors are discretionary and final. Through the Program, the TEDC will provide up to 25% of the base monthly rent for the first year of operation only, not to exceed \$10,000 per business.

Business Owner Applicant Information

Name of Business: The Garza Agency

Current Business Physical Address: 4600 HWY 6 N. Ste. 103

City, State & Zip Houston, Texas 77084

Mailing Address: Same

City, State & Zip _____

Business Phone: 281-656-8340

Business Website: www.thegarzaagency.com

Business Owner Name: Gabriel Garza

Applicant's Name (if different): _____

Position /Title: Owner

Phone and Email: 281-656-8340 gabriel@thegarzaagency.com

Nature of Business: Insurance and Financial Services

NAICS Code: 524126

Legal Form of Business:

- ☐ Sole Proprietor
- ☐ Partnership Number of Partners _____
- ☒ Corporation
- ☐ Limited Liability Corp
- ☐ Other _____

Business Start/Opening Date 9/2006

Days and Hours of Operation

Days Open: M-F

Hours Open: 9-5:30

Employees

Full Time Employees (40 hours per week): 13

Part Time Employees (less than 40 hours per week): 0

Does the Business Owner Have any Relationship to the Property Owner/Landlord?

No ☐ Yes ☒ (please explain)

Property is being purchased in the name of GP+3 LLC and will lease back to The Garza Agency

Moving and Space Improvement Cost and Funding Information

Investment Data

Tenant Space Improvement (finish) \$ 50,000

Landlord Space Improvement (finish) \$ _____

Equipment and Display \$ _____

Product Stock (for Opening) \$ _____

Marketing (First Year) \$ 20,000

Sources of Funding for Move/Expansion

Funds invested by owner \$ 100,000

Funds from other sources* \$ _____

Total estimated cost to move/expand \$ 170,000

* Source of Funding and Amounts Cash on hand and revenue

New Lease Property Information

Address of space to be leased: _____

Total amount of square feet to be leased and occupied: 1800

Term of lease (minimum 3 years): 5 years

Gross rental rate \$ _____ per month \$ _____ per s.f.

Additional lease terms and other monthly charges: _____

Indicate any rate increases: _____

FINANCIAL NEED DEMONSTRATION: Acceptance into the Rental Incentive Program requires an acceptable explanation of financial need. Use the lines below to explain why and how the rent subsidy is an important factor in opening your business.

The rental incentive will be very beneficial to us by helping us re coop some of our out of pocket expenses associated with moving and marketing to the new area to help expand our business to the City of Tomball.

Explain how your business will benefit and enhance the area in which you are locating and how your business will complement other businesses within the area:

We are an established professional Insurance and Financial Services company. We will serve the community of Tomball and surrounding areas including businesses to help provide them with fair and competitive products.

Certification

By signing below, the Business Owner of record (applicant) understands and agrees to the following:

1. All information contained in this application, the attached exhibits and other materials submitted in connection with this application are true and accurate to the best of the business owner's knowledge. Business owner understands and agrees that false or untruthful information may be grounds for the TEDC to stop processing this application or to withdraw any approval previously obtained based in whole or in part on such false or untruthful statements.
2. The TEDC is under no obligation to approve the request contained in the application. No promises of approval are conveyed with the acceptance of this application.
3. All tax obligations to the City of Tomball are current.
4. The business is currently in good standing with the City, and has no pending municipal code violations.
5. The business is not currently occupying the space with or without a lease in place.
6. The APPLICANT hereby certifies that the APPLICANT does not and will not knowingly employ an undocumented worker. An "undocumented worker" shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States; or (b) authorized under the law to be employed in that manner in the United States. APPLICANT understands and agrees that if, after receiving a Grant, APPLICANT is convicted of a violation under 8 U.S.C. Section 1324a(f), the APPLICANT shall be required to reimburse to the TEDC the grant amount received. Payments must be paid in full within thirty (30) days after the date of written notification by the TEDC. The form of such payment shall be a cashier's check or money order, made payable to the Tomball Economic Development Corporation. The TEDC has the right to recover court costs and reasonable attorney's fees as a result of any civil action required to recover such repayment.

Gabriel Garza

Printed Name of Principal Owner

Gabriel C. Garza

Signature

8.23.2023

Date

Please submit the completed application along with a copy of the Proposed Lease Agreement to:

Kelly Violette

Tomball Economic Development Corporation

29201 Quinn Road, Suite B

Tomball, TX 77375

For further questions about the Program, please contact Kelly Violette, Executive Director, at 281.401.4086 or kviolette@tomballtxedc.org.



NEW BUSINESS RENTAL INCENTIVE PROGRAM

PART B – PROPERTY OWNER/LANDLORD APPLICATION

Complete all items carefully and accurately to the best of your knowledge and return with a copy of Proof of Ownership to:

Kelly Violette
Tomball Economic Development Corporation
29201 Quinn Road, Suite B
Tomball, TX 77375

Property Address: 28427 SH 249, Tomball, Texas 77375

Property Owner of Record: _____

Mailing Address: 4600 HWY 6 N. Ste 103

City, State & Zip Houston, Texas 77084

Phone: 281-656-8340 Email: gabriel@thegarzaagency.com

Name(s) of Authorized Signatories: Gabriel Garza and Patricia Garza

Name of Management Company: _____

Name of Representative/Contact Person: _____

Management Company Address: _____

City, State & Zip _____

Phone: _____ Email: _____

Name of proposed business at site:

The Garza Agency

Name of business owner:

Gabriel Garza and Patricia Garza

DOES THE BUSINESS OWNER OR THE BUSINESS HAVE ANY RELATIONSHIP TO THE
PROPERTY OWNER/LANDLORD? NO ☐ YES ☒ Please explain

Property is being purchased in GP+3 LLC which I own and will then lease back to The Garza Agency

SITE & LEASE INFORMATION

Total amount of square feet to be leased and occupied by business: 1800

Term of lease: 5 years

Gross rental rate \$ _____ per month \$ _____ per s.f.

Additional lease terms and other monthly charges: _____

Indicate any rate increases: _____

Is the subject space currently vacant? Yes ☐ No ☒

If yes, how long has the space been vacant? _____ months

Name of previous tenant: Davis Chiropractor

Previous Rental Rate: \$ unknown Per Month \$ unknown Per Square Foot

CERTIFICATIONS

Are all real estate and personal property taxes due the City of Tomball paid in full?

Subject Property: YES ☒ NO ☐ (Please explain on supplemental sheet)

Other Properties: YES ☐ NO ☐ N/A ☒

Are all City of Tomball water and sewer bills due paid in full?

Subject Property: YES ☒ NO ☐ (Please explain on supplemental sheet)

Other Properties: YES ☐ NO ☐ N/A ☐

Have you been cited for any existing zoning, building or property maintenance code violations that remain uncorrected?

Subject Property: YES ☒ NO ☐ (Please explain on supplemental sheet)

Other Properties: YES ☐ NO ☐ N/A ☒

Are you involved in any litigation with the City of Tomball?

☐ YES (Please explain on supplemental sheet)

☒ NO

By signing below, the Landlord/Property Owner of record understands and agrees to the following:

1. All information contained in this application, the attached exhibits and other materials submitted in connection with this application are true and accurate to the best of the land owner's knowledge. Landowner understands and agrees that false or untruthful information may be grounds for the TEDC to stop processing this application or to withdraw any approval previously obtained based in whole or in part on such false or untruthful statements.
2. The TEDC is under no obligation to approve the request contained in the application. No promises of approval are conveyed with the acceptance of this application.
3. All tax obligations to the City of Tomball are current.
4. The property is currently in good standing with the City, and has no pending municipal code violations.
5. The business is not currently occupying the space with or without a lease in place.

Gabriel Garza

Printed Name of Property Owner/Landlord

Gabriel C. Garza

Signature

8.23.2023

Date



COMMERCIAL LEASE

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28427 SH 249

CONCERNING THE LEASED PREMISES AT Tomball, Tx 77375

between GP+3 LLC (Landlord)
and TGA Ventures LP dba The Garza Agency (Tenant).

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ADDENDA & EXHIBITS (check all that apply)

- ☐ Exhibit _____
- ☐ Exhibit _____
- ☐ Exhibit _____
- ☐ Commercial Property Condition Statement (TXR-1408)
- ☐ Commercial Lease Addendum for Broker's Fee (TXR-2102)
- ☐ Commercial Lease Addendum for Option to Extend Term (TXR-2104)
- ☐ Commercial Lease Addendum for Tenant's Right of First Refusal (TXR-2105)
- ☐ Commercial Lease Addendum for Percentage Rent (TXR-2106)
- ☐ Commercial Lease Addendum for Parking (TXR-2107)
- ☐ Commercial Landlord's Rules and Regulations (TXR-2108)
- ☐ Commercial Lease Guaranty (TXR-2109)
- ☐ Commercial Lease Addendum for Tenant's Option for Additional Space (TXR-2110)
- ☐ Commercial Lease Construction Addendum (TXR-2111) or (TXR-2112)
- ☐ Commercial Lease Addendum for Contingencies (TXR-2119)
- ☐ Information About Brokerage Services (TXR-2501)
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

(TXR-2101) 07-08-22 Initialed for Identification by Landlord: _____, _____, and Tenant: _____, _____

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COMMERCIAL LEASE

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1. PARTIES: The parties to this lease are:

Landlord: GP+3 LLC _____; and

Tenant: TGA Ventures LP dba The Garza Agency _____

2. LEASED PREMISES:

A. Landlord leases to Tenant the following described real property, known as the "leased premises," along with all its improvements (*Check only one box*):

☐ (1) Multiple-Tenant Property: Suite or Unit Number _____ containing approximately _____ square feet of rentable area ("rsf") in _____ (project name) at _____ (address) in _____ (city), _____ (county), Texas, which is legally described on attached Exhibit _____ or as follows: _____

☒ (2) Single-Tenant Property: The real property containing approximately 1800 square feet of rentable area ("rsf") at: 28427 SH 249 _____ (address) in Tomball (city), Harris (county), Texas, which is legally described on attached Exhibit RES B Tomball Park or as follows: _____

B. If Paragraph 2A(1) applies:

- (1) "Property" means the building or complex in which the leased premises are located, inclusive of any common areas, drives, parking areas, and walks; and
- (2) the parties agree that the rentable area of the leased premises may not equal the actual or useable area within the leased premises and may include an allocation of common areas in the Property. The rentable area ☐ will ☒ will not be adjusted if re-measured.

3. TERM:

A. Term: The term of this lease is 36 months and _____ days, commencing on: November 1, 2023 (Commencement Date) and ending on October 31, 2026 (Expiration Date).

B. Delay of Occupancy: If Tenant is unable to occupy the leased premises on the Commencement Date because of construction on the leased premises to be completed by Landlord that is not substantially complete or a prior tenant's holding over of the leased premises, Landlord will not be liable to Tenant

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for such delay and this lease will remain enforceable. In the event of such a delay, the Commencement Date will automatically be extended to the date Tenant is able to occupy the Property and the Expiration Date will also be extended by a like number of days, so that the length of this lease remains unchanged. If Tenant is unable to occupy the leased premises after the _____ day after the Commencement Date because of construction on the leased premises to be completed by Landlord that is not substantially complete or a prior tenant's holding over of the leased premises, Tenant may terminate this lease by giving written notice to Landlord before the leased premises become available to be occupied by Tenant and Landlord will refund to Tenant any amounts paid to Landlord by Tenant. This Paragraph 3B does not apply to any delay in occupancy caused by cleaning or repairs.

- C. Certificate of Occupancy: Unless the parties agree otherwise, Tenant is responsible for obtaining a certificate of occupancy for the leased premises if required by a governmental body.

4. RENT AND EXPENSES:

- A. Base Monthly Rent: On or before the first day of each month during this lease, Tenant will pay Landlord base monthly rent as described on attached Exhibit **6495.06** or as follows:

Dates		Rate per rentable square foot (<i>optional</i>)		Base Monthly Rent \$
From	To	\$ Monthly Rate	\$ Annual Rate	
		/ rsf / month	/ rsf / year	
		/ rsf / month	/ rsf / year	
		/ rsf / month	/ rsf / year	
		/ rsf / month	/ rsf / year	
		/ rsf / month	/ rsf / year	
		/ rsf / month	/ rsf / year	

- B. Additional Rent: In addition to the base monthly rent, Tenant will pay Landlord the expense reimbursement detailed in Paragraph 4J (if applicable) and all other amounts, as provided by the attached (*Check all that apply*):

- ☐ (1) Commercial Lease Addendum for Percentage Rent (TXR-2106)
☐ (2) Commercial Lease Addendum for Parking (TXR-2107)
☐ (3) _____

All amounts payable under the applicable addenda are deemed to be "rent" for the purposes of this lease.

- C. First Full Month's Rent: The first full monthly rent is due on or before **November 1, 2023**.
- D. Prorated Rent: If the Commencement Date is on a day other than the first day of a month, Tenant will pay Landlord as prorated rent, an amount equal to the base monthly rent multiplied by the following fraction: the number of days from the Commencement Date to the first day of the following month divided by the number of days in the month in which this lease commences. The prorated rent is due on or before the Commencement Date.
- E. Place of Payment: Tenant will remit all amounts due to Landlord under this lease to the following person at the place stated or to such other person or place as Landlord may later designate in writing:

Name: **Gabriel Garza**

Address: **28427 SH 249, Tomball, Texas 77375**

- F. Method of Payment: Tenant must pay all rent timely without demand, deduction, or offset, except as permitted by law or this lease. If Tenant fails to timely pay any amounts due under this lease or if any check of Tenant is returned to Landlord by the institution on which it was drawn, Landlord after providing written notice to Tenant may require Tenant to pay subsequent amounts that become due under this lease in certified funds. This paragraph does not limit Landlord from seeking other remedies under this lease for Tenant's failure to make timely payments with good funds.
- G. Late Charges: If Landlord does not actually receive a rent payment at the designated place of payment within 5 days after the date it is due, Tenant will pay Landlord a late charge equal to 10% of the amount due. In this paragraph, the mailbox is not the agent for receipt for Landlord. The late charge is a cost associated with the collection of rent and Landlord's acceptance of a late charge does not waive Landlord's right to exercise remedies under Paragraph 20.
- H. Returned Checks: Tenant will pay \$ _____ for each check Tenant tenders to Landlord which is returned by the institution on which it is drawn for any reason, plus any late charges until Landlord receives payment.
- I. Application of Funds: Regardless of any notation on a payment, Landlord may apply funds received from Tenant first to any non-rent obligations of Tenant, including but not limited to: late charges and returned check charges, repairs, brokerage fees, periodic utilities and thereafter to rent.

(Check box only if Tenant reimburses Landlord for some or all expenses. Do not check for "gross" leases.)

- ☐ J. Expense Reimbursement. In addition to base monthly rent stated in Paragraph 4A, Tenant will pay Landlord the expense reimbursement described in this Paragraph 4J. Tenant will pay the expense reimbursement as additional rent each month at the time the base-monthly rent is due. All amounts payable under this Paragraph 4J are deemed to be "rent" for the purposes of this lease.
- ☐ (1) Reimbursable Periods. Additional rent under this Paragraph 4J is due for all months listed in the chart in Paragraph 4A, even if the base monthly rent is zero.

(2) Definitions:

- (a) "Tenant's pro rata share" is _____%.
- (b) "CAM" means all of Landlord's expenses reasonably incurred to maintain, repair, operate, manage, and secure the Property (for example, security, lighting, painting, cleaning, decorations, utilities, trash removal, pest control, promotional expenses, and other expenses reasonably related the Property's operations); including all expenses incurred by Landlord under Paragraph 15, but not including expenses for structural components and roof replacement; CAM does not include capital expenditures, interest, depreciation, tenant improvements, insurance, taxes, or brokers' leasing fees. Notwithstanding the foregoing, CAM does include the amortized costs incurred by Landlord in making capital improvements or other modifications to the Property to the extent such improvements or modifications reduce CAM overall. These costs will be amortized over the useful life of the improvement or modification on a straight-line basis; however, in no event will the charge for such amortization included in CAM exceed the actual reduction in CAM achieved by the improvements and modifications.
- (c) "Insurance" means Landlord's costs to insure the leased premises and the Property including but not limited to insurance for casualty loss, general liability, and reasonable rent loss.
- (d) "Taxes" means the real property ad valorem taxes assessed against the leased premises and Property inclusive of all general and special assessments and surcharges.

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- (e) **"Structural"** means all of Landlord's expenses reasonably incurred to maintain, repair, and replace the roof, foundation, exterior walls, load bearing walls and other structural components of the Property.
- (f) **"Roof"** means all roofing components including, but not limited to decking, flashing, membrane, and skylights.
- (3) **Method:** The additional rent under this Paragraph 4J will be computed under the following method (Check only one box): Note: "CAM" does not include taxes and insurance costs.
- ☐ (a) **Base-year expenses:** Each month Tenant will pay Tenant's pro rata share of the projected monthly expenses for the Property that exceed the amount of the monthly base-year expenses for the calendar year ____ for: ☐ taxes; ☐ insurance; ☐ CAM; ☐ structural; and ☐ ____.
- ☐ (b) **Expense-stop:** Each month Tenant will pay Tenant's pro rata share of the projected monthly expenses for the Property that exceed \$ _____ per square foot per year for: ☐ taxes; ☐ insurance; ☐ CAM; ☐ structural; ☐ roof replacement; and ☐ ____.
- ☒ (c) **Net:** Each month Tenant will pay Tenant's pro rata share of the projected monthly expenses for the Property for: ☒ taxes; ☒ insurance; ☐ CAM; ☐ structural; ☐ roof replacement; and ☐ ____.
- (4) **Projected Monthly Expenses:** On or about December 31 of each calendar year, Landlord will project the applicable monthly expenses (those that Tenant is to pay under this lease) for the following calendar year and will notify Tenant of the projected expenses. The projected expenses are based on Landlord's estimates of such expenses. The actual expenses may vary.

Notice: The applicable projected expenses at the time the lease commences are shown in the table below. The total area of the Property presently used by Landlord for calculating expense reimbursements is _____ rentable square feet (including any add on factor for common areas).

Projected Expenses	
\$ Monthly Rate	\$ Annual Rate
/ rsf / month	/ rsf / year

- (5) **Reconciliation:** Within 120 days after the end of each calendar year, Landlord will notify Tenant of the actual costs of the applicable expenses (those that Tenant is to pay under this lease) for the previous year. If the actual costs of the applicable expenses exceed the amounts paid or owed by Tenant for the previous year, Tenant must pay the deficient amount to Landlord within 30 days after Landlord notifies Tenant of the deficient amount. If the actual costs of the applicable expenses are less than the amounts paid by Tenant for the previous year, Landlord will refund the excess to Tenant or will credit the excess to Tenant's next rent payment(s). Tenant may audit or examine those items in Landlord's records that relate to Tenant's obligations under this Paragraph 4J. Landlord will promptly refund to Tenant any overpayment revealed by an audit or examination. If the audit or examination reveals an error of more than 5% over the amounts Landlord collected in a calendar year from Tenant under this lease, Landlord will pay the reasonable cost of the audit or examination. Landlord may not seek a deficiency from Tenant under this paragraph if Landlord fails to timely provide the required notice.

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5. SECURITY DEPOSIT:

- A. Upon execution of this lease, Tenant will pay \$ _____ to Landlord as a security deposit.
- B. Landlord may apply the security deposit to any amounts owed by Tenant under this lease. If Landlord applies any part of the security deposit during any time this lease is in effect to amounts owed by Tenant, Tenant must, within 10 days after receipt of notice from Landlord, restore the security deposit to the amount stated.
- C. Within 60 days after Tenant surrenders the leased premises and provides Landlord written notice of Tenant's forwarding address, Landlord will refund the security deposit less any amounts applied toward amounts owed by Tenant or other charges authorized by this lease.

6. TAXES: Unless otherwise agreed by the parties, Landlord will pay all real property ad valorem taxes assessed against the leased premises. Tenant waives all rights to protest the appraised value of the leased premises and the Property, or appeal the same and all rights to receive notices of reappraisal set forth in sections 41.413 and 42.015 of the Texas Tax Code.

7. UTILITIES:

- A. The party designated below will pay for the following utility charges to the leased premises and any connection charges for the utilities. *(Check all that apply.)*

	N/A	Landlord	Tenant
(1) Water	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(2) Sewer	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(3) Electric	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(4) Gas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(5) Telephone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(6) Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(7) Cable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(8) Trash	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(9) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(10) All other utilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- B. The party responsible for the charges under Paragraph 7A will pay the charges directly to the utility service provider. The responsible party may select the utility service provider, except that if Tenant selects the provider, any access or alterations to the Property or leased premises necessary for the utilities may be made only with Landlord's prior consent, which Landlord will not unreasonably withhold. If Landlord incurs any liability for utility or connection charges for which Tenant is responsible to pay and Landlord pays such amount, Tenant will immediately upon written notice from Landlord reimburse Landlord such amount.

C. **Notice:** Tenant should determine if all necessary utilities are available to the leased premises and are adequate for Tenant's intended use.

D. **After-Hours HVAC Charges:** "HVAC services" means heating, ventilating, and air conditioning of the leased premises. *(Check one box only.)*

- ☐ (1) Landlord is obligated to provide the HVAC services to the leased premises only during the Property's operating hours specified under Paragraph 9C.

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- ☐ (2) Landlord will provide the HVAC services to the leased premises during the operating hours specified under Paragraph 9C for no additional charge and will, at Tenant's request, provide HVAC services to the leased premises during other hours for an additional charge of \$ _____ per hour. Tenant will pay Landlord the charges under this paragraph immediately upon receipt of Landlord's invoice. Hourly charges are charged on a half-hour basis. Any partial hour will be rounded up to the next half hour. Tenant will comply with Landlord's procedures to make a request to provide the additional HVAC services under this paragraph.
- ☒ (3) Tenant will pay for the HVAC services under this lease.

8. INSURANCE:

- A. During all times this lease is in effect, Tenant must, at Tenant's expense, maintain in full force and effect from an insurer authorized to operate in Texas:
- (1) commercial general liability insurance naming Landlord as an additional insured with policy limits on an occurrence basis in a minimum amount of: *(check only (a) or (b) below)*
- ☒ (a) \$1,000,000; or
- ☐ (b) \$2,000,000.
- If neither box is checked the minimum amount will be \$1,000,000.
- (2) personal property damage insurance for the business operations being conducted in the leased premises and contents in the leased premises in an amount sufficient to replace such contents after a casualty loss; and
- ☒ (3) business interruption insurance sufficient to pay 12 months of rent payments.
- B. Before the Commencement Date, Tenant must provide Landlord with a copy of insurance certificates evidencing the required coverage. If the insurance coverage is renewed or changes in any manner or degree at any time this lease is in effect, Tenant must, not later than 10 days after the renewal or change, provide Landlord a copy of an insurance certificate evidencing the renewal or change.
- C. If Tenant fails to maintain the required insurance in full force and effect at all times this lease is in effect, Landlord may:
- (1) purchase insurance that will provide Landlord the same coverage as the required insurance and Tenant must immediately reimburse Landlord for such expense; or
- (2) exercise Landlord's remedies under Paragraph 20.
- D. Unless the parties agree otherwise, Landlord will maintain in full force and effect insurance for: (1) fire and extended coverage in an amount to cover the reasonable replacement cost of the improvements of the Property; and (2) any commercial general liability insurance in an amount that Landlord determines reasonable and appropriate.
- E. If there is an increase in Landlord's insurance premiums for the leased premises or Property or its contents that is caused by Tenant, Tenant's use of the leased premises, or any improvements made by or for Tenant, Tenant will, for each year this lease is in effect, pay Landlord the increase immediately after Landlord notifies Tenant of the increase. Any charge to Tenant under this Paragraph 8E will be equal to the actual amount of the increase in Landlord's insurance premium.

9. USE AND HOURS:

- A. Tenant may use the leased premises for the following purpose and no other: _____
- _____
- _____
- _____.

- B. Unless otherwise specified in this lease, Tenant will operate and conduct its business in the leased premises during business hours that are typical of the industry in which Tenant represents it operates.
- C. The Property maintains operating hours of (*specify hours, days of week, and if inclusive or exclusive of weekends and holidays*): Monday - Thursday 9-5:30, Friday 9-5 and appointments on the weekends

10. LEGAL COMPLIANCE:

- A. Tenant may not use or permit any part of the leased premises or the Property to be used for:
- (1) any activity which is a nuisance or is offensive, noisy, or dangerous;
 - (2) any activity that interferes with any other tenant's normal business operations or Landlord's management of the Property;
 - (3) any activity that violates any applicable law, regulation, zoning ordinance, restrictive covenant, governmental order, owners' association rules, tenants' association rules, Landlord's rules or regulations, or this lease;
 - (4) any hazardous activity that would require any insurance premium on the Property or leased premises to increase or that would void any such insurance;
 - (5) any activity that violates any applicable federal, state, or local law, including but not limited to those laws related to air quality, water quality, hazardous materials, wastewater, waste disposal, air emissions, or other environmental matters;
 - (6) the permanent or temporary storage of any hazardous material; or
 - (7) _____
- B. "Hazardous material" means any pollutant, toxic substance, hazardous waste, hazardous material, hazardous substance, solvent, or oil as defined by any federal, state, or local environmental law, regulation, ordinance, or rule existing as of the date of this lease or later enacted.
- C. Landlord does not represent or warrant that the leased premises or Property conform to applicable restrictions, zoning ordinances, setback lines, parking requirements, impervious ground cover ratio requirements, and other matters that may relate to Tenant's intended use. Tenant must satisfy itself that the leased premises may be used as Tenant intends by independently investigating all matters related to the use of the leased premises or Property. Tenant agrees that it is not relying on any warranty or representation made by Landlord, Landlord's agent, or any broker concerning the use of the leased premises or Property.

11. SIGNS:

- A. Tenant may not post or paint any signs or place any decoration outside the leased premises or on the Property without Landlord's written consent. Landlord may remove any unauthorized sign or decorations, and Tenant will promptly reimburse Landlord for its cost to remove any unauthorized sign or decorations.
- B. Any authorized sign must comply with all laws, restrictions, zoning ordinances, and any governmental order relating to signs on the leased premises or Property. Landlord may temporarily remove any authorized sign to complete repairs or alterations to the leased premises or the Property.
- C. By providing written notice to Tenant before this lease ends, Landlord may require Tenant, upon move-out and at Tenant's expense, to remove, without damage to the Property or leased premises, any or all signs or decorations that were placed on the Property or leased premises by or at the request of Tenant. Any signs or decorations that Landlord does not require Tenant to remove and that are fixtures, become the property of the Landlord and must be surrendered to Landlord at the time this lease ends.

12. ACCESS BY LANDLORD:

- A. During Tenant's normal business hours Landlord may enter the leased premises for any reasonable purpose, including but not limited to purposes for repairs, maintenance, alterations, and showing the leased premises to prospective tenants or purchasers. Landlord may access the leased premises after Tenant's normal business hours if: (1) entry is made with Tenant's permission; or (2) entry is necessary to complete emergency repairs. Landlord will not unreasonably interfere with Tenant's business operations when accessing the leased premises.
- B. During the last 90 days of this lease, Landlord may place a "For Lease" or similarly worded sign on the leased premises.

13. MOVE-IN CONDITION: Tenant has inspected the leased premises and accepts it in its present (as-is) condition unless expressly noted otherwise in this lease or in an addendum. Landlord and any agent have made no express or implied warranties as to the condition or permitted use of the leased premises or Property.

14. MOVE-OUT CONDITION AND FORFEITURE OF TENANT'S PERSONAL PROPERTY:

- A. At the time this lease ends, Tenant will surrender the leased premises in the same condition as when received, except for normal wear and tear. Tenant will leave the leased premises in a clean condition free of all trash, debris, personal property, hazardous materials, and environmental contaminants.
- B. If Tenant leaves any personal property in the leased premises after Tenant surrenders possession of the leased premises, Landlord may: (1) require Tenant, at Tenant's expense, to remove the personal property by providing written notice to Tenant; or (2) retain such personal property as forfeited property to Landlord.
- C. "Surrender" means vacating the leased premises and returning all keys and access devices to Landlord. "Normal wear and tear" means deterioration that occurs without negligence, carelessness, accident, or abuse.
- D. By providing written notice to Tenant before this lease ends, Landlord may require Tenant, upon move-out and at Tenant's expense, to remove, without damage to the Property or leased premises, any or all fixtures that were placed on the Property or leased premises by or at the request of Tenant. Any fixtures that Landlord does not require Tenant to remove become the property of the Landlord and must be surrendered to Landlord at the time this lease ends.

15. MAINTENANCE AND REPAIRS:

- A. Cleaning: Tenant must keep the leased premises clean and sanitary and promptly dispose of all garbage in appropriate receptacles. ☐ Landlord ☒ Tenant will provide, at its expense, janitorial services to the leased premises that are customary and ordinary for the property type. Tenant will maintain any grease trap on the Property which Tenant uses, including but not limited to periodic emptying and cleaning, as well as making any modification to the grease trap that may be necessary to comply with any applicable law.
- B. Repairs of Conditions Caused by a Party: Each party must promptly repair a condition in need of repair that is caused, either intentionally or negligently, by that party or that party's guests, patrons, invitees, contractors or permitted subtenants.
- C. Repair and Maintenance Responsibility: Except as otherwise provided by this Paragraph 15, the party designated below, at its expense, is responsible to maintain and repair the following specified items in the leased premises (if any). The specified items must be maintained in clean and good operable

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condition. If a governmental regulation or order requires a modification to any of the specified items, the party designated to maintain the item must complete and pay the expense of the modification. The specified items include and relate only to real property in the leased premises. Tenant is responsible for the repair and maintenance of its personal property. (Check all that apply.)

	N/A	Landlord	Tenant
(1) Foundation, exterior walls and other structural components	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(2) Roof replacement	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(3) Roof repair	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(4) Glass and windows	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(5) Fire protection equipment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(6) Fire sprinkler systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(7) Exterior and overhead doors, including closure devices, molding, locks, and hardware	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(8) Grounds maintenance, including landscaping and irrigation systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(9) Interior doors, including closure devices, frames, molding, locks, and hardware	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(10) Parking areas and walks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(11) Plumbing systems, drainage systems and sump pumps	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(12) Electrical systems, mechanical systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(13) Ballast and lamp replacement	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(14) Heating, Ventilation and Air Conditioning (HVAC) systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(15) HVAC system replacement	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(16) Signs and lighting:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(a) Pylon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Fascia	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Monument	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Door/Suite	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) Directional	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f) Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(17) Extermination and pest control, excluding wood-destroying insects.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(18) Fences and Gates	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(19) Storage yards and storage buildings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(20) Wood-destroying insect treatment and repairs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(21) Cranes and related systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(22)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(23)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(24) All other items and systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D. Repair Persons: Repairs must be completed by trained, qualified, and insured repair persons.

E. HVAC Service Contract: If Tenant maintains the HVAC system under Paragraph 15C(14), Tenant ☐ is ☒ is not required to maintain, at its expense, a regularly scheduled maintenance and service contract for the HVAC system. The maintenance and service contract must be purchased from a HVAC maintenance company that regularly provides such contracts to similar properties. If Tenant fails to maintain a required HVAC maintenance and service contract in effect at all times during this lease, Landlord may do so and Tenant will reimburse Landlord for the expense of such maintenance and service contract or Landlord may exercise Landlord's remedies under Paragraph 20.

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- F. Common Areas: Landlord will maintain any common areas in the Property in a manner as Landlord determines to be in the best interest of the Property. Landlord will maintain any elevator and signs in the common area. Landlord may change the size, dimension, and location of any common areas, or allocate areas for short term or reserved parking for specific tenants, provided that such change does not materially impair Tenant's use and access to the leased premises. Tenant has the non-exclusive license to use the common areas in compliance with Landlord's rules and regulations. Tenant may not solicit any business in the common areas or interfere with any other person's right to use the common areas. This paragraph does not apply if Paragraph 2A(2) applies.
- G. Notice of Repairs: Tenant must promptly notify Landlord of any item that is in need of repair and that is Landlord's responsibility to repair. All requests for repairs to Landlord must be in writing.
- H. Failure to Repair: Landlord must make a repair for which Landlord is responsible within a reasonable period of time after Tenant provides Landlord written notice of the needed repair. If Tenant fails to repair or maintain an item for which Tenant is responsible within 10 days after Landlord provides Tenant written notice of the needed repair or maintenance, Landlord may: (1) repair or maintain the item, without liability for any damage or loss to Tenant, and Tenant must immediately reimburse Landlord for the cost to repair or maintain; or (2) exercise Landlord's remedies under Paragraph 20.

16. ALTERATIONS:

- A. Tenant may not alter (including making any penetrations to the roof, exterior walls or foundation), improve, or add to the Property or the leased premises without Landlord's written consent. Landlord will not unreasonably withhold consent for the Tenant to make reasonable non-structural alterations, modifications, or improvements to the leased premises.
- B. Tenant may not alter any locks or any security devices on the Property or the leased premises without Landlord's consent. If Landlord authorizes the changing, addition, or rekeying of any locks or other security devices, Tenant must immediately deliver the new keys and access devices to Landlord.
- C. If a governmental order requires alteration or modification to the leased premises, the party obligated to maintain and repair the item to be modified or altered as designated in Paragraph 15 will, at its expense, modify or alter the item in compliance with the order and in compliance with Paragraphs 16A and 17.
- D. Any alterations, improvements, fixtures or additions to the Property or leased premises installed by either party during the term of this lease will become Landlord's property and must be surrendered to Landlord at the time this lease ends, except for those fixtures Landlord requires Tenant to remove under Paragraph 11 or 14 or if the parties agree otherwise in writing.

17. LIENS: Tenant may not do anything that will cause the title of the Property or leased premises to be encumbered in any way. If Tenant causes a lien to be filed against the Property or leased premises, Tenant will within 20 days after receipt of Landlord's demand: (1) pay the lien and have the lien released of record; or (2) take action to discharge the lien. Tenant will provide Landlord a copy of any release Tenant obtains pursuant to this paragraph.

18. LIABILITY: To the extent permitted by law, Landlord is NOT responsible to Tenant or Tenant's employees, patrons, guests, or invitees for any damages, injuries, or losses to person or property caused by:

- A. an act, omission, or neglect of: Tenant; Tenant's agent; Tenant's guest; Tenant's employees; Tenant's patrons; Tenant's invitees; or any other tenant on the Property;

- B. fire, flood, water leaks, ice, snow, hail, winds, explosion, smoke, riot, strike, interruption of utilities, theft, burglary, robbery, assault, terrorism, vandalism, other persons, environmental contaminants, or other occurrences or casualty losses.

19. INDEMNITY: Each party will indemnify, defend, and hold the other party harmless from any property damage, personal injury, suits, actions, liabilities, damages, cost of repairs or service to the leased premises or Property, or any other loss caused, negligently or otherwise, by that party or that party's employees, patrons, guests, or invitees.

20. DEFAULT:

- A. If Landlord fails to comply with this lease within 30 days after Tenant notifies Landlord of Landlord's failure to comply, Landlord will be in default and Tenant may seek any remedy provided by law. If, however, Landlord's non-compliance reasonably requires more than 30 days to cure, Landlord will not be in default if the cure is commenced within the 30-day period and is diligently pursued.
- B. If Landlord does not actually receive at the place designated for payment any rent due under this lease within 5 days after it is due, Tenant will be in default. If Tenant fails to comply with this lease for any other reason within 20 days after Landlord notifies Tenant of its failure to comply, Tenant will be in default.
- C. If Tenant is in default, Landlord may, with at least 3 days written notice to Tenant: (i) terminate this lease, or (ii) terminate Tenant's right to occupy the leased premises without terminating this lease and may accelerate all rents which are payable during the remainder of this lease or any renewal period. Landlord will attempt to mitigate any damage or loss caused by Tenant's breach by using commercially reasonable means. If Tenant is in default, Tenant will be liable for:
- (1) any lost rent;
 - (2) Landlord's cost of reletting the leased premises, including brokerage fees, advertising fees, and other fees necessary to relet the leased premises;
 - (3) repairs to the leased premises for use beyond normal wear and tear;
 - (4) all Landlord's costs associated with eviction of Tenant, such as attorney's fees, court costs, and prejudgment interest;
 - (5) all Landlord's costs associated with collection of rent such as collection fees, late charges, and returned check charges;
 - (6) cost of removing any of Tenant's equipment or fixtures left on the leased premises or Property;
 - (7) cost to remove any trash, debris, personal property, hazardous materials, or environmental contaminants left by Tenant or Tenant's employees, patrons, guests, or invitees in the leased premises or Property;
 - (8) cost to replace any unreturned keys or access devices to the leased premises, parking areas, or Property; and
 - (9) any other recovery to which Landlord may be entitled under this lease or under law.

21. ABANDONMENT, INTERRUPTION OF UTILITIES, REMOVAL OF PROPERTY, AND LOCKOUT:

Chapter 93 of the Texas Property Code governs the rights and obligations of the parties with regard to: (a) abandonment of the leased premises; (b) interruption of utilities; (c) removal of Tenant's property; and (d) "lock-out" of Tenant.

22. HOLDOVER: If Tenant fails to vacate the leased premises at the time this lease ends, Tenant will become a tenant-at-will and must vacate the leased premises immediately upon receipt of demand from Landlord. No holding over by Tenant, with or without the consent of Landlord, will extend this lease. Tenant will indemnify Landlord and any prospective tenants for any and all damages caused by the holdover. Rent for

any holdover period will be 150% of the base monthly rent plus any additional rent calculated on a daily basis and will be immediately due and payable daily without notice or demand.

23. LANDLORD'S LIEN AND SECURITY INTEREST: To secure Tenant's performance under this lease, Tenant grants to Landlord a lien and security interest against all of Tenant's nonexempt personal property that is in the leased premises or on the Property. This lease is a security agreement for the purposes of the Uniform Commercial Code. Landlord may file a financing statement to perfect Landlord's security interest under the Uniform Commercial Code.

24. ASSIGNMENT AND SUBLETTING: Landlord may assign this lease to any subsequent owner of the Property. Tenant may not assign this lease or sublet any part of the leased premises without Landlord's written consent. An assignment of this lease or subletting of the leased premises without Landlord's written consent is voidable by Landlord. If Tenant assigns this lease or sublets any part of the leased premises, Tenant will remain liable for all of Tenant's obligations under this lease regardless if the assignment or sublease is made with or without the consent of Landlord.

25. RELOCATION:

- ☒ A. By providing Tenant with not less than 90 days advanced written notice, Landlord may require Tenant to relocate to another location in the Property, provided that the other location is equal in size or larger than the leased premises then occupied by Tenant and contains similar leasehold improvements. Landlord will pay Tenant's reasonable out-of-pocket moving expenses for moving to the other location. "Moving expenses" means reasonable expenses incurred by Tenant payable to professional movers, utility companies for connection and disconnection fees, wiring companies for connecting and disconnecting Tenant's office equipment required by the relocation, and printing companies for reprinting Tenant's stationary, business cards, and marketing materials containing Tenant's address. A relocation of Tenant will not change or affect any other provision of this lease that is then in effect, including rent and reimbursement amounts, except that the description of the suite or unit number will automatically be amended.
- ☐ B. Landlord may not require Tenant to relocate to another location in the Property without Tenant's prior consent.

26. SUBORDINATION:

- A. This lease and Tenant's leasehold interest are and will be subject, subordinate, and inferior to:
- (1) any lien, encumbrance, or ground lease now or hereafter placed on the leased premises or the Property that Landlord authorizes;
 - (2) all advances made under any such lien, encumbrance, or ground lease;
 - (3) the interest payable on any such lien or encumbrance;
 - (4) any and all renewals and extensions of any such lien, encumbrance, or ground lease;
 - (5) any restrictive covenant affecting the leased premises or the Property; and
 - (6) the rights of any owners' association affecting the leased premises or Property.
- B. Tenant must, on demand, execute a subordination, attornment, and non-disturbance agreement that Landlord may request that Tenant execute, provided that such agreement is made on the condition that this lease and Tenant's rights under this lease are recognized by the lien-holder.

27. ESTOPPEL CERTIFICATES AND FINANCIAL INFORMATION:

- A. Within 10 days after receipt of a written request from Landlord, Tenant will execute and deliver to Landlord an estoppel certificate that identifies the terms and conditions of this lease.

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- B. Within 30 days after receipt of a written request from Landlord, Tenant will provide to Landlord Tenant's current financial information (balance sheet and income statement). Landlord may request the financial information no more frequently than once every 12 months.

28. CASUALTY LOSS:

- A. Tenant must immediately notify Landlord of any casualty loss in the leased premises. Within 20 days after receipt of Tenant's notice of a casualty loss, Landlord will notify Tenant if the leased premises are less than or more than 50% unusable, on a per square foot basis, and if Landlord can substantially restore the leased premises within 120 days after Tenant notifies Landlord of the casualty loss.
- B. If the leased premises are less than 50% unusable and Landlord can substantially restore the leased premises within 120 days after Tenant notifies Landlord of the casualty, Landlord will restore the leased premises to substantially the same condition as before the casualty. If Landlord fails to substantially restore within the time required, Tenant may terminate this lease.
- C. If the leased premises are more than 50% unusable and Landlord can substantially restore the leased premises within 120 days after Tenant notifies Landlord of the casualty, Landlord may: (1) terminate this lease; or (2) restore the leased premises to substantially the same condition as before the casualty. If Landlord chooses to restore and does not substantially restore the leased premises within the time required, Tenant may terminate this lease.
- D. If Landlord notifies Tenant that Landlord cannot substantially restore the leased premises within 120 days after Tenant notifies Landlord of the casualty loss, Landlord may: (1) choose not to restore and terminate this lease; or (2) choose to restore, notify Tenant of the estimated time to restore, and give Tenant the option to terminate this lease by notifying Landlord within 10 days.
- E. If this lease does not terminate because of a casualty loss, rent will be reduced from the date Tenant notifies Landlord of the casualty loss to the date the leased premises are substantially restored by an amount proportionate to the extent the leased premises are unusable.

29. CONDEMNATION: If after a condemnation or purchase in lieu of condemnation the leased premises are totally unusable for the purposes stated in this lease, this lease will terminate. If after a condemnation or purchase in lieu of condemnation the leased premises or Property are partially unusable for the purposes of this lease, this lease will continue and rent will be reduced in an amount proportionate to the extent the leased premises are unusable. Any condemnation award or proceeds in lieu of condemnation are the property of Landlord and Tenant has no claim to such proceeds or award. Tenant may seek compensation from the condemning authority for its moving expenses and damages to Tenant's personal property.

30. ATTORNEY'S FEES: Any person who is a prevailing party in any legal proceeding brought under or related to the transaction described in this lease is entitled to recover prejudgment interest, reasonable attorney's fees, and all other costs of litigation from the nonprevailing party.

31. REPRESENTATIONS:

- A. Tenant's statements in this lease and any application for rental are material representations relied upon by Landlord. Each party signing this lease represents that he or she is of legal age to enter into a binding contract and is authorized to sign this lease. If Tenant makes any misrepresentation in this lease or in any application for rental, Tenant is in default.
- B. Landlord is not aware of any material defect on the Property that would affect the health and safety of an ordinary person or any environmental hazard on or affecting the Property that would affect the health or safety of an ordinary person, except: _____.

- C. Each party and each signatory to this lease represents that: (1) it is not a person named as a Specially Designated National and Blocked Person as defined in Presidential Executive Order 13224; (2) it is not acting, directly or indirectly, for or on behalf of a Specially Designated and Blocked Person; and (3) is not arranging or facilitating this lease or any transaction related to this lease for a Specially Designated and Blocked Person. Any party or any signatory to this lease who is a Specially Designated and Blocked person will indemnify and hold harmless any other person who relies on this representation and who suffers any claim, damage, loss, liability or expense as a result of this representation.

32. BROKERS:

- A. The brokers to this lease are:

Principal Broker: _____

Cooperating Broker: _____

Agent: _____

Agent: _____

Address: _____

Address: _____

Phone & Fax: _____

Phone & Fax: _____

E-mail: _____

E-mail: _____

License No.: _____

License No.: _____

Principal Broker: *(Check only one box)*☐ represents Landlord only.☐ represents Tenant only.☐ is an intermediary between Landlord and Tenant.

Cooperating Broker represents Tenant.

- B. Fees:

- ☐ (1) Principal Broker's fee will be paid according to: *(Check only one box)*.
- ☐ (a) a separate written commission agreement between Principal Broker and:
☐ Landlord ☐ Tenant.
- ☐ (b) the attached Commercial Lease Addendum for Broker's Fee (TXR-2102).

- ☐ (2) Cooperating Broker's fee will be paid according to: *(Check only one box)*.
- ☐ (a) a separate written commission agreement between Cooperating Broker and:
☐ Principal Broker ☐ Landlord ☐ Tenant.
- ☐ (b) the attached Commercial Lease Addendum for Broker's Fee (TXR-2102).

- 33. ADDENDA:** Incorporated into this lease are the addenda, exhibits and other information marked in the Addenda and Exhibit section of the Table of Contents. If Landlord's Rules and Regulations are made part of this lease, Tenant agrees to comply with the Rules and Regulations as Landlord may, at its discretion, amend from time to time.

- 34. NOTICES:** All notices under this lease must be in writing and are effective when hand-delivered, mailed by certified mail return receipt requested, sent by a national or regional overnight delivery service that provides a delivery receipt, or sent by confirmed facsimile transmission to:

Landlord at: GP+3 LLC

Address: _____

Attention: _____

Fax: _____

and a copy to: _____

Address: _____

Attention: _____

Fax: _____

☒ Landlord also consents to receive notices by e-mail at: gabriel@thegarzaagency.comTenant at the leased premises,and to: TGA Ventures LP dba The Garza Agency,

Address: _____

Attention: _____

Fax: _____

and a copy to: _____

Address: _____

Attention: _____

Fax: _____

☒ Tenant also consents to receive notices by e-mail at: gabriel@tthegarzaagency.com

35. SPECIAL PROVISIONS: The following special provisions apply and will control in the event of a conflict with other provisions of this lease. (If special provisions are contained in an addendum, identify the applicable addendum on the cover page of this lease.)

36. AGREEMENT OF PARTIES:

- A. Entire Agreement: This lease contains the entire agreement between Landlord and Tenant and may not be changed except by written agreement.
- B. Binding Effect: This lease is binding upon and inures to the benefit of the parties and their respective heirs, executors, administrators, successors, and permitted assigns.
- C. Joint and Several: All Tenants are jointly and severally liable for all provisions of this lease. Any act or notice to, or refund to, or signature of, any one or more of the Tenants regarding any term of this lease, its renewal, or its termination is binding on all Tenants.

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- D. Controlling Law: The laws of the State of Texas govern the interpretation, performance, and enforcement of this lease.
- E. Severable Clauses: If any clause in this lease is found invalid or unenforceable by a court of law, the remainder of this lease will not be affected and all other provisions of this lease will remain valid and enforceable.
- F. Waiver: Landlord's delay, waiver, or non-enforcement of acceleration, contractual or statutory lien, rental due date, or any other right will not be deemed a waiver of any other or subsequent breach by Tenant or any other term in this lease.
- G. Quiet Enjoyment: Provided that Tenant is not in default of this lease, Landlord covenants that Tenant will enjoy possession and use of the leased premises free from material interference.
- H. Force Majeure: If the performance of any party to this lease is delayed by strike, lock-out, shortage of material, governmental restriction, riot, war, epidemic, pandemic, quarantine, or by other cause, without fault and beyond the control of the party obligated (financial inability excepted), performance of such act will be abated for the period of the delay; provided, however, nothing in this paragraph excuses Tenant from the prompt payment of rent or other charge, nor will Tenant's inability to obtain governmental approval for its intended use of the leased premises excuse any of Tenant's obligations hereunder.
- I. Time: Time is of the essence. The parties require strict compliance with the times for performance.
- J. Counterparts: If this lease is executed in a number of identical counterparts, each counterpart is an original and all counterparts, collectively, constitute one agreement.

37. EFFECTIVE DATE: The effective date of this lease is the date the last party executes this lease and initials any changes.

38. LICENSE HOLDER DISCLOSURE: Texas law requires a real estate license holder who is a party to a transaction or acting on behalf of a spouse, parent, child, business entity in which the license holder owns more than 10%, or a trust for which the license holder acts as a trustee or of which the license holder or the license holder's spouse, parent or child is a beneficiary, to notify the other party in writing before entering into a contract of sale or rental agreement. Disclose if applicable: _____

Brokers are not qualified to render legal advice, property inspections, surveys, engineering studies, environmental assessments, tax advice, or compliance inspections. The parties should seek experts to render such services. READ THIS LEASE CAREFULLY. If you do not understand the effect of this Lease, consult your attorney BEFORE signing.

Landlord: GP+3 LLCTenant: TGA Ventures LP dba The Garza AgencyBy: Gabriel GarzaBy: Gabriel Garza

By (signature): _____

By (signature): _____

Printed Name: Gabriel GarzaPrinted Name: Gabriel GarzaTitle: President Date: _____Title: President Date: _____

By: _____

By: _____

By (signature): _____

By (signature): _____

Printed Name: _____

Printed Name: _____

Title: _____ Date: _____

Title: _____ Date: _____

AGREEMENT

THE STATE OF TEXAS §
 § KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF HARRIS §

This Agreement (the “Agreement”) is made and entered into by and between the **Tomball Economic Development Corporation**, an industrial development corporation created pursuant to Tex. Rev. Civ. Stat. Ann. Art. 5190.6, Section 4B, located in Harris County, Texas (the “TEDC”), and **The Garza Agency** (the “Company”), 4600 HWY 6 N. Suite 103, Houston, TX 77084

WITNESSETH:

WHEREAS, it is the established policy of the TEDC to adopt such reasonable measures from time-to-time as are permitted by law to promote local economic development and stimulate business and commercial activity within the City of Tomball (the “City”); and

WHEREAS, the Company proposes to lease an 1,800 square foot existing office space located at 28427 SH 249, Tomball, Texas 77375 (the “Property”), and more particularly described in Exhibit “A,” attached hereto and made a part hereof; and

WHEREAS, the Company currently provides insurance and financial services to the public under the Farmers Insurance organization and proposes to expand its business operations by opening an additional location at the Property; and

WHEREAS, the Company proposes to create up to six (6) full-time jobs in Tomball in conjunction with the new location; and

WHEREAS, the TEDC agrees to provide to the Company an amount equal to twenty-five percent (25%) of the base monthly rent for the first 12 consecutive months of operation not

to exceed Ten Thousand Dollars (\$10,000.00), in accordance with an established Rental Assistance Incentive; and

WHEREAS, the Company has agreed, in exchange and as consideration for the funding, to satisfy and comply with certain terms and conditions; and

NOW, THEREFORE, in consideration of the premises and the mutual benefits and obligations set forth herein, including the recitals set forth above, the TEDC and the Company agree as follows:

1.

Except as provided by paragraph 3, the Company covenants and agrees that it will operate and maintain the proposed business for a term of at least three (3) years within the City of Tomball.

2.

The Company also covenants and agrees that construction of the Improvements, the addition of at least two (2) full-time W-2 employees, and obtaining all necessary occupancy permits from the City shall occur within eighteen (18) months from the Effective Date of this Agreement. Extensions of these deadlines, due to any extenuating circumstance or uncontrollable delay, may be granted at the sole discretion of the Board of Directors of the TEDC.

3.

The Company further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An “undocumented worker” shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States.

4.

In consideration of the Company's representations, promises, and covenants, TEDC agrees to grant to the Company an amount equal to twenty-five percent (25%) of the base monthly rent for the first 12 consecutive months of operation not to exceed Ten Thousand Dollars (\$10,000.00). The TEDC agrees to distribute such funds to the Company within thirty (30) days of receipt of a letter from the Company requesting such payment, which letter shall also include: (a) a copy of the City's occupancy permit for the Property; (b) proof that the Company has added the minimum number of employees indicated above to its business operations on the Property, as evidenced by copies of Texas Workforce Commission form C-3 or Internal Revenue Service Form 941; and, (c) an affidavit from the landlord of the Property stating that all rents have been paid in accordance with the terms of the lease agreement for the first twelve consecutive months of operation.

5.

It is understood and agreed by the parties that, in the event of a default by the Company on any of its obligations under this Agreement, the Company shall reimburse the TEDC the full amount paid to the Company by the TEDC, with interest at the rate equal to the 90-day Treasury Bill plus ½% per annum, within thirty (30) days after the TEDC notifies the Company of the default. It is further understood and agreed by the parties that if the Company is convicted of a violation under 8 U.S.C. Section 1324a(f), the Company will reimburse the TEDC the full amount paid to the Company, with interest at the rate equal to the 90-day Treasury Bill plus ½% per annum, within thirty (30) days after the TEDC notifies the Company of the violation.

The Company shall also reimburse the TEDC for any and all reasonable attorney's fees and costs incurred by the TEDC as a result of any action required to obtain reimbursement of such funds.

6.

This Agreement shall inure to the benefit of and be binding upon the TEDC and the Company, and upon the Company's successors and assigns, affiliates, and subsidiaries, and shall remain in force whether the Company sells, assigns, or in any other manner disposes of, either voluntarily or by operation of law, all or any part of the Property and the agreements herein contained shall be held to be covenants running with the Property for so long as this Agreement, or any extension thereof, remains in effect.

7.

Any notice provided or permitted to be given under this Agreement must be in writing and may be served by (i) depositing the same in the United States mail, addressed to the party to be notified, postage prepaid, registered or certified mail, return receipt requested; or (ii) by delivering the same in person to such party; or (iii) by overnight or messenger delivery service that retains regular records of delivery and receipt; or (iv) by facsimile; provided a copy of such notice is sent within one (1) day thereafter by another method provided above. The initial addresses of the parties for the purpose of notice under this Agreement shall be as follows:

If to City:

Tomball Economic Development Corporation
401 W. Market Street
Tomball, Texas 77375
Attn: President, Board of Directors

If to Company:

The Garza Agency
4600 Hwy 6 N. Suite 103
Houston, TX 77084
Attn: Gabriel Garza, President

8.

This Agreement shall be performable and enforceable in Harris County, Texas, and shall be construed in accordance with the laws of the State of Texas.

9.

Except as otherwise provided in this Agreement, this Agreement shall be subject to change, amendment or modification only in writing, and by the signatures and mutual consent of the parties hereto.

10.

The failure of any party to insist in any one or more instances on the performance of any of the terms, covenants or conditions of this Agreement, or to exercise any of its rights, shall not be construed as a waiver or relinquishment of such term, covenant, or condition, or right with respect to further performance. This Agreement shall bind and benefit the respective Parties and their legal successors and shall not be assignable, in whole or in part, by any party without first obtaining written consent of the other party.

11.

In the event any one or more words, phrases, clauses, sentences, paragraphs, sections, or other parts of this Agreement, or the application thereof to any person, firm, corporation, or circumstance, shall be held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, then the application, invalidity or unconstitutionality of such words, phrases, clauses, sentences, paragraphs, sections, or other parts of this Agreement shall be deemed to be independent of and severable from the remainder of this Agreement, and the validity of the remaining parts of this Agreement shall not be affected thereby.

IN TESTIMONY OF WHICH, THIS AGREEMENT has been executed by the parties on this _____ day of _____ 2023 (the “Effective Date”).

THE GARZA AGENCY

By: _____

Name: Gabriel Garza

Title: President

ATTEST:

By: _____

Name: _____

Title: _____

TOMBALL ECONOMIC DEVELOPMENT CORPORATION

By: _____

Name: Gretchen Fagan

Title: President, Board of Directors

ATTEST:

By: _____

Name: Bill Sumner Jr.

Title: Secretary, Board of Directors

ACKNOWLEDGMENT

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

This instrument was acknowledged before me on the _____ day of _____
2023, by Gabriel Garza, President of The Garza Agency, for and on behalf of said company.

Notary Public in and for the State of Texas

My Commission Expires: _____

(SEAL)

ACKNOWLEDGMENT

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

This instrument was acknowledged before me on the _12th_ day of _September_
2023, by Gretchen Fagan, President of the Board of Directors of the Tomball Economic
Development Corporation, for and on behalf of said Corporation.

Notary Public in and for the State of Texas

My Commission Expires: _____

(SEAL)

Exhibit "A"
Legal Description of Property

Legal Description: RES B
TOMBALL PARK

Property Address: 28427 SH 249, Tomball, TX 77375



RESOLUTION NO. 2023-46-TEDC

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS, AUTHORIZING AND APPROVING THE TOMBALL ECONOMIC DEVELOPMENT CORPORATION'S PROJECT TO EXPEND FUNDS IN ACCORDANCE WITH AN ECONOMIC DEVELOPMENT AGREEMENT BY AND BETWEEN THE CORPORATION AND THE GARZA AGENCY TO PROMOTE AND DEVELOP A NEW OR EXPANDED BUSINESS ENTERPRISE; CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT; AND PROVIDING FOR SEVERABILITY.

* * * * *

WHEREAS, the Tomball Economic Development Corporation (the "TEDC"), created pursuant to the Development Corporation Act, now Chapter 501 of the Texas Local Government Code, as amended (the "Act"), desires to adopt projects and provide incentives for economic development within the City; and

WHEREAS, the Board of Directors of the TEDC had adopted as a specific project the expenditure of the estimated amount of Ten Thousand Dollars (10,000.00), found by the Board to be required or suitable to promote a new business development by The Garza Agency; and

WHEREAS, pursuant to the Act, the TEDC may not undertake such project without the approval of Tomball City Council; and

WHEREAS, City Council finds and determines that such project promotes new or expanded business development and is in the best interests of the citizenry; now, therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS:

Section 1. The facts and matters set forth in the preamble of this Resolution are hereby found to be true and correct.

Section 2. The City Council hereby authorizes and approves the adoption, by the Board of Directors of the Tomball Economic Development Corporation, as a specific project for the economic development of the City, an expenditure of the estimated amount of Ten Thousand Dollars (10,000.00), to The Garza Agency in accordance with an economic development agreement by and between the TEDC and The Garza Agency to promote and develop a new or expanded business enterprise, to be located at 28427 SH 249, Tomball, Texas 77375.

Section 3. In the event any clause, phrase, provision, sentence, or part of this Resolution or the application of the same to any person or circumstance shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Resolution as a whole or any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Tomball, Texas, declares that it

would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

PASSED AND APPROVED on first reading this _____ day of _____, 2023.

PASSED, APPROVED, AND RESOLVED on second and final reading this _____ day of _____, 2023.

Lori Klein Quinn, Mayor

ATTEST:

Tracy Garcia, City Secretary

Regular City Council Agenda Item Data Sheet

Meeting Date: December 18, 2023

Topic:

Approve, on Second Reading, Resolution No. 2023-50-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and T & R Harmon, LLC DBA Craving Kernels to make direct incentives to, or expenditures for, rental assistance for new or expanded business enterprise to be located at 702 South Persimmon Street, Unit 3A, Tomball, Texas 77375. The estimated amount of expenditures for such Project is an amount not to exceed \$8,820.00.

Background:

First Reading approved during the December 4, 2023, Regular City Council meeting.

On November 14, 2023, the Tomball Economic Development Corporation (TEDC) Board of Directors unanimously approved, as a Project of the Corporation, an economic development performance agreement with T & R Harmon, LLC DBA Craving Kernels for rental assistance for new or expanded business enterprise. The Tomball City Council has final approval authority over all programs and expenditures of the Corporation.

Origination: Tomball Economic Development Corporation Board of Directors

Recommendation: Approval of Resolution No. 2023-50-TEDC

Party(ies) responsible for placing this item on agenda: Kelly Violette

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: X No: If yes, specify Account Number: #Project Grants

If no, funds will be transferred from account # _____ To account # _____

Signed		Approved by	
_____	_____	_____	_____
Staff Member-TEDC	Date	Executive Director-TEDC	Date



TO: Honorable Mayor and City Council

FROM: Kelly Violette
Executive Director

MEETING DATE: December 4, 2023

SUBJECT: T & R Harmon, LLC DBA Craving Kernels

ITEM TYPE: Action

The Tomball Economic Development Corporation has received a request from Randy Harmon, Co-Owner and Vice President of Craving Kernels for funding assistance through the TEDC's Rental Incentive Program.

Craving Kernels Gourmet Popcorn and Sweet Shoppe is a Tomball based company founded in 2018. They are currently located at 312 Market Street. This location serves as their retail storefront and has been widely successful. In 2022, due to substantial corporate sales they started looking for additional space to manufacture and distribute their product. At that time, they were unable to find a suitable space in Tomball that met their needs. The owners leased a secondary location near Spring to keep up with demand but continued to look for a place to lease in Tomball.

The proposed location is a 2,800 square foot lease space located at 702 South Persimmon Street Unit 3A. They will keep their retail space at 312 Market Street and move their manufacturing/distribution operations to the secondary location at 702 South Persimmon Street. This location will serve as the hub for the retail storefront.

The goal of the TEDC's Rental Incentive Program is to assist in the establishment of new businesses in existing vacant spaces and to stimulate commercial investment in the City of Tomball. In accordance with the Rental Incentive Program Policy, the proposed performance agreement is for 25% of the base monthly rent for the first year of operation only.

The lease agreement that was submitted in conjunction with the request letter shows a three-year lease commitment with a monthly rent amount of \$2,940.00 for the first 12 months. The proposed grant amount is \$8,820.00, payable after the first year of operation based on landlord verification of rents paid and meeting the performance agreement criteria.

Although this project does not create primary jobs, it does promote the development and expansion of business enterprise, which is considered a permissible project as outlined in

Texas Economic Development Legislation. If this project is approved, it will go to the Tomball City Council for final approval by resolution at two separate readings.

November 7, 2024

Tiffani Wooten
Assistant Director
Tomball Economic Development Corporation

Good morning,

Craving Kernels Gourmet Popcorn and Sweet Shoppe is a Tomball Texas -based company founded in 2018. Offering Gourmet popcorn, Fudge, Ice Cream, Cookies and Nostalgic candy, our goal from the moment we first opened was to create a fun shopping experience for the entire family.

Since opening our doors we've dedicated ourselves to creating a brand of fun that could extend beyond our front doors and into the local community as well as corporations in the area. We have worked to develop a state of the art fundraising platform, offering schools and charitable organizations to ability raise funds through virtual or door to door fundraisers. Having spent 50 years combined in business we learned firsthand the importance of rewarding employees or the value of a simple thank you for your business to loyal customers. Be it a family shopping experience, a fundraiser or a corporate gift we have worked tirelessly to create a small local business with big business appeal.

Having navigated COVID, a recession and high inflation we consider ourselves to be very stable in the community. However, since opening day we have enjoyed success, our fundraiser and corporate orders have grown. Corporate orders alone have grown from a few hundred bags to sometimes thousands of bags. This growth has necessitated the need for additional space to complete and deliver orders. Tomball is home for our business as well as our family and it seems only natural that Tomball be home to the next phase of Craving Kernels.

We are requesting assistance through the Tomball EDC Rental Incentive Program as a means to expand our staff and operations in Tomball as quickly as possible.

We sincerely appreciate your consideration.

Sincerely



Randy Harmon

Co-Owner

Craving Kernels Gourmet Popcorn and Sweet Shoppe

312 Market St Tomball TX 77375

281-377-3282

RESOLUTION NO. 2023-50-TEDC

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS, AUTHORIZING AND APPROVING THE TOMBALL ECONOMIC DEVELOPMENT CORPORATION'S PROJECT TO EXPEND FUNDS IN ACCORDANCE WITH AN ECONOMIC DEVELOPMENT AGREEMENT BY AND BETWEEN THE CORPORATION AND T & R HARMON, LLC DBA CRAVING KERNELS TO PROMOTE AND DEVELOP A NEW OR EXPANDED BUSINESS ENTERPRISE; CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT; AND PROVIDING FOR SEVERABILITY.

* * * * *

WHEREAS, the Tomball Economic Development Corporation (the "TEDC"), created pursuant to the Development Corporation Act, now Chapter 501 of the Texas Local Government Code, as amended (the "Act"), desires to adopt projects and provide incentives for economic development within the City; and

WHEREAS, the Board of Directors of the TEDC had adopted as a specific project the expenditure of the estimated amount of Eight Thousand Eight Hundred and Twenty Dollars (\$8,820.00), found by the Board to be required or suitable to promote a new business development by T & R Harmon, LLC DBA Craving Kernels; and

WHEREAS, pursuant to the Act, the TEDC may not undertake such project without the approval of Tomball City Council; and

WHEREAS, City Council finds and determines that such project promotes new or expanded business development and is in the best interests of the citizenry; now, therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS:

Section 1. The facts and matters set forth in the preamble of this Resolution are hereby found to be true and correct.

Section 2. The City Council hereby authorizes and approves the adoption, by the Board of Directors of the Tomball Economic Development Corporation, as a specific project for the economic development of the City, an expenditure of the estimated amount of Eight Thousand Eight Hundred and Twenty Dollars (\$8,820.00), to T & R Harmon, LLC DBA Craving Kernels in accordance with an economic development agreement by and between the TEDC and T & R Harmon, LLC DBA Craving Kernels to promote and develop a new or expanded business enterprise, to be located at 702 South Persimmon Street, Unit 3A, Tomball, Texas 77375.

Section 3. In the event any clause, phrase, provision, sentence, or part of this Resolution or the application of the same to any person or circumstance shall for any reason be adjudged

invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Resolution as a whole or any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Tomball, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

PASSED AND APPROVED on first reading this ____ day of _____,
202__.

PASSED, APPROVED, AND RESOLVED on second and final reading this ____ day of
_____, 202__.

Lori Klein Quinn, Mayor

ATTEST:

Tracy Garcia, City Secretary

AGREEMENT

THE STATE OF TEXAS §
 § KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF HARRIS §

This Agreement (the “Agreement”) is made and entered into by and between the **Tomball Economic Development Corporation**, an industrial development corporation created pursuant to Tex. Rev. Civ. Stat. Ann. Art. 5190.6, Section 4B, located in Harris County, Texas (the “TEDC”), and **T & R Harmon, LLC DBA Craving Kernels** (the “Company”), 312 Market Street, Tomball, TX 77375

WITNESSETH:

WHEREAS, it is the established policy of the TEDC to adopt such reasonable measures from time-to-time as are permitted by law to promote local economic development and stimulate business and commercial activity within the City of Tomball (the “City”); and

WHEREAS, the Company proposes to lease a 2,800 square foot existing office warehouse space located at 702 South Persimmon, Unit 3A, Tomball, Texas 77375 (the “Property”), and more particularly described in Exhibit “A,” attached hereto and made a part hereof; and

WHEREAS, the Company currently manufactures and distributes gourmet popcorn proposes to expand its business operations by opening a office warehouse at the Property; and

WHEREAS, the Company proposes to create six (6) full-time jobs in Tomball in conjunction with the new location; and

WHEREAS, the TEDC agrees to provide to the Company an amount equal to twenty-five percent (25%) of the base monthly rent for the first 12 consecutive months of operation not

to exceed Eight Thousand Eight Hundred and Twenty Dollars (\$8,820.00), in accordance with an established Rental Assistance Incentive; and

WHEREAS, the Company has agreed, in exchange and as consideration for the funding, to satisfy and comply with certain terms and conditions; and

NOW, THEREFORE, in consideration of the premises and the mutual benefits and obligations set forth herein, including the recitals set forth above, the TEDC and the Company agree as follows:

1.

Except as provided by paragraph 3, the Company covenants and agrees that it will operate and maintain the proposed business for a term of at least three (3) years within the City of Tomball.

2.

The Company also covenants and agrees that construction of the Improvements, the addition of the Six (6) new employees, and obtaining all necessary occupancy permits from the City shall occur within twelve (12) months from the Effective Date of this Agreement. Extensions of these deadlines, due to any extenuating circumstance or uncontrollable delay, may be granted at the sole discretion of the Board of Directors of the TEDC.

3.

The Company further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An “undocumented worker” shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States.

4.

In consideration of the Company's representations, promises, and covenants, TEDC agrees to grant to the Company an amount equal to twenty-five percent (25%) of the base monthly rent for the first 12 consecutive months of operation not to exceed Eight Thousand Eight Hundred and Twenty Dollars (\$8,820.00). The TEDC agrees to distribute such funds to the Company within thirty (30) days of receipt of a letter from the Company requesting such payment, which letter shall also include: (a) a copy of the City's occupancy permit for the Property; (b) proof that the Company has added the number of employees indicated above to its business operations on the Property, as evidenced by copies of Texas Workforce Commission form C-3 or Internal Revenue Service Form 941; and, (c) an affidavit from the landlord of the Property stating that all rents have been paid in accordance with the terms of the lease agreement for the first twelve consecutive months of operation.

5.

It is understood and agreed by the parties that, in the event of a default by the Company on any of its obligations under this Agreement, the Company shall reimburse the TEDC the full amount paid to the Company by the TEDC, with interest at the rate equal to the 90-day Treasury Bill plus $\frac{1}{2}\%$ per annum, within thirty (30) days after the TEDC notifies the Company of the default. It is further understood and agreed by the parties that if the Company is convicted of a violation under 8 U.S.C. Section 1324a(f), the Company will reimburse the TEDC the full amount paid to the Company, with interest at the rate equal to the 90-day Treasury Bill plus $\frac{1}{2}\%$ per annum, within thirty (30) days after the TEDC notifies the Company of the violation.

The Company shall also reimburse the TEDC for any and all reasonable attorney's fees and costs incurred by the TEDC as a result of any action required to obtain reimbursement of such funds.

6.

This Agreement shall inure to the benefit of and be binding upon the TEDC and the Company, and upon the Company's successors and assigns, affiliates, and subsidiaries, and shall remain in force whether the Company sells, assigns, or in any other manner disposes of, either voluntarily or by operation of law, all or any part of the Property and the agreements herein contained shall be held to be covenants running with the Property for so long as this Agreement, or any extension thereof, remains in effect.

7.

Any notice provided or permitted to be given under this Agreement must be in writing and may be served by (i) depositing the same in the United States mail, addressed to the party to be notified, postage prepaid, registered or certified mail, return receipt requested; or (ii) by delivering the same in person to such party; or (iii) by overnight or messenger delivery service that retains regular records of delivery and receipt; or (iv) by facsimile; provided a copy of such notice is sent within one (1) day thereafter by another method provided above. The initial addresses of the parties for the purpose of notice under this Agreement shall be as follows:

If to City:

Tomball Economic Development Corporation
401 W. Market Street
Tomball, Texas 77375
Attn: President, Board of Directors

If to Company:

T & R Harmon, LLC DBA Craving Kernels
312 Market Street
Tomball, TX 77375
Attn: Randy Harmon, Co-Owner and Vice President

8.

This Agreement shall be performable and enforceable in Harris County, Texas, and shall be construed in accordance with the laws of the State of Texas.

9.

Except as otherwise provided in this Agreement, this Agreement shall be subject to change, amendment or modification only in writing, and by the signatures and mutual consent of the parties hereto.

10.

The failure of any party to insist in any one or more instances on the performance of any of the terms, covenants or conditions of this Agreement, or to exercise any of its rights, shall not be construed as a waiver or relinquishment of such term, covenant, or condition, or right with respect to further performance. This Agreement shall bind and benefit the respective Parties and their legal successors and shall not be assignable, in whole or in part, by any party without first obtaining written consent of the other party.

11.

In the event any one or more words, phrases, clauses, sentences, paragraphs, sections, or other parts of this Agreement, or the application thereof to any person, firm, corporation, or circumstance, shall be held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, then the application, invalidity or unconstitutionality of such words, phrases, clauses, sentences, paragraphs, sections, or other parts of this Agreement shall be deemed to be independent of and severable from the remainder of this Agreement, and the validity of the remaining parts of this Agreement shall not be affected thereby.

IN TESTIMONY OF WHICH, THIS AGREEMENT has been executed by the parties on this _____ day of _____ 2024 (the “Effective Date”).

T & R Harmon, LLC DBA Craving Kernels

By: _____

Name: Randy Harmon

Title: Co-Owner and Vice President

ATTEST:

By: _____

Name: _____

Title: _____

TOMBALL ECONOMIC DEVELOPMENT CORPORATION

By: _____

Name: Gretchen Fagan

Title: President, Board of Directors

ATTEST:

By: _____

Name: Bill Sumner Jr.

Title: Secretary, Board of Directors

ACKNOWLEDGMENT

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

This instrument was acknowledged before me on the _____ day of _____
2024, by Randy Harmon, Co-Owner and Vice President of Craving Kernels, for and on behalf of
said company.

Notary Public in and for the State of Texas

My Commission Expires: _____

(SEAL)

ACKNOWLEDGMENT

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

This instrument was acknowledged before me on the _14th_ day of __November__
2023, by Gretchen Fagan, President of the Board of Directors of the Tomball Economic
Development Corporation, for and on behalf of said Corporation.

Notary Public in and for the State of Texas

My Commission Expires: _____

(SEAL)

Exhibit “A”

Legal Description of Property

Legal Description: LT 3 BLK 2 VAZQUEZ-PHOENIX

Persimmon Properties

Property Address: 702 South Persimmon Street, Unit 3A, Tomball, TX 77375

DRAFT

Regular City Council Agenda Item Data Sheet

Meeting Date: December 18, 2023

Topic:

Approve, on Second Reading, Resolution No. 2023-53-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and Headquarters TOO, LLC to make direct incentives to, or expenditures for, assistance with infrastructure costs required or suitable for the promotion of new or expanded business enterprise related to the development and construction of a 15,500 square foot commercial facility to be located at 1417 Graham Drive, Tomball, Texas 77375. The estimated amount of expenditures for such Project is an amount not to exceed \$102,459.00.

Background:

First Reading approved during the December 4, 2023, Regular City Council meeting.

On November 14, 2023, the Tomball Economic Development Corporation (TEDC) Board of Directors unanimously approved, as a Project of the Corporation, a performance agreement with Church Holdings, Inc. for assistance with infrastructure costs related to the development and construction of a proposed 15,500 square foot commercial facility to be located at 1417 Graham Drive, Tomball, Texas 77375.

Targeted infrastructure projects that will promote or develop new or expanded business enterprises are authorized expenditures under the Development Corporation Act.

The Tomball City Council has final approval authority over all programs and expenditures of the TEDC. Final approval of this project requires the adoption of Resolution No. 2023-53-TEDC after two separate readings.

Origination: Tomball Economic Development Corporation Board of Directors

Recommendation: Approval of Resolution No. 2023-53-TEDC on First Reading

Party(ies) responsible for placing this item on agenda: Kelly Violette

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: X No: _____ If yes, specify Account Number: #Project Grants

If no, funds will be transferred from account # _____ To account # _____

Signed _____

Staff Member-TEDC

Date _____

Approved by _____

Executive Director-TEDC

Date _____



TO: Honorable Mayor and City Council

FROM: Kelly Violette
Executive Director

MEETING DATE: December 4, 2023

SUBJECT: Headquarters TOO, LLC

ITEM TYPE: Action

The Tomball Economic Development Corporation has received a request from Peter Licata, General Partner, Headquarters TOO, LLC., for assistance with infrastructure costs related to the construction of a multi-tenant retail development to be located at 1417 Graham Drive.

Headquarters TOO, LLC is an entity owned by the Licata family, who recently renovated the Bank of America building into a coworking concept, The Field, to Tomball. They also have other projects throughout Houston and two restaurants in Denver Colorado.

The proposed development will consist of an approximately 15,500 square foot commercial building on approximately 1.7 acres. The estimated capital investment for the project is over \$3.1 million.

The eligible infrastructure improvements include water, sanitary, gas, storm sewer, telecommunications, electric utilities and related site improvements totaling approximately \$512,296.00.

Targeted infrastructure that will promote the development and expansion of business enterprise is a permissible project as outlined in Texas Economic Development Legislation. If this project is approved, it will go to the Tomball City Council for final approval by resolution at two separate readings.

An economic impact analysis is included with the agreement to show the impact of this project on Tomball's economy. Per the analysis, the 5-year net benefit of this project on Tomball's economy is \$524,586.00.

If the agreement between the TEDC and Headquarters TOO, LLC is approved as a Project of the Corporation, the grant funding amount will not exceed \$102,459.00, based on 20% of the actual expenditures for the eligible infrastructure improvements.



November 1, 2023

Tomball Economic Development Corporation (“TEDC”)
Attn: Board of Directors
29201 Quinn Rd., Suite B
Tomball, Texas 77375

Re: Grant Request – new retail project
1417 Graham Drive
Tomball, TX 77375

Dear TEDC Board of Directors:

On behalf of Headquarters TOO LLC (“Owner”), I would like to request grant funding from the TEDC for the development and construction of a new 15,500 sq. ft. retail building to be located at 1417 Graham Drive, next to the Bank of America building. This project involves the improvement of a raw 1.7-acre tract of land. Construction will include all requirements to complete the building shell with site improvements for delivery of interior lease space to tenants for their future build-out requirements. We are in discussions with several restaurants, a yoga studio, ice cream shop, Dentist and a few other retail tenants. All prospective tenants would be new employers to the City of Tomball and would create new employment opportunities and sales tax revenue. Our goal for the center is to bring tenants that the community would appreciate and enjoy having. We are going to great lengths to ensure the project reflects Tomball and its growth.

Headquarters TOO LLC is an entity owned by The Licata Family, who recently completed renovations of the Bank of America building, and who have brought their coworking concept, The Field, to Tomball. In addition, we have various other projects throughout Houston, and two restaurants in Denver, CO. All of our properties are not only owned with family members but we take an active role in the development, leasing, and management of those properties. We take an active role in the development, leasing, and management to ensure the projects we own are taken care of in a way that we feel only an owner would. We pay close attention to parking ratios, landscaping, cleanliness of properties, and proper tenant mix.

Having a current project in Tomball has been a wonderful experience for our Family. Tomball has welcomed us with open arms, and we feel we have added to the community as well. The previous owner of the Bank of America building was leaving it to ruin, we were thrilled with the opportunity to reimagine what the building to be, and how it could function. With our connection to Tomball, it is extremely important to us to have projects in the community that are a step above “the standard”. The retail center could have been built in a less expensive way, we could have not put in as much detail to the landscaping, or not continued to make on going improvements, but we truly want to bring projects to Tomball that the community is proud of.

We have our permit for construction and anticipate turning space over to tenants in late Spring 2024.

We have provided the TEDC our site plan, rendering of the overall building, and rendering of our ideal restaurant tenant for the larger end cap space. Our renderings reflect a project that complements our Bank of America building but has its own unique look that the future tenants and community will enjoy. Please let me know if you have any questions at all.

Thank you

Sincerely,

A handwritten signature in blue ink, appearing to read 'Peter M Licata', with a stylized flourish at the end.

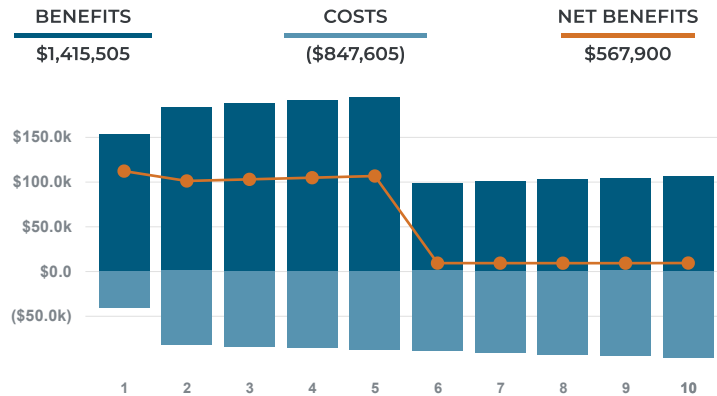
Peter M Licata
President – TPC Real Estate Corp
Partner – Headquarters TOO LLC



IMPACT REPORT THE FIELD-RETAIL CENTER

Scenario 1 with Client Data

City of Tomball



JOBS



173.6 Total

74.0 Direct
99.6 Spin-off

SALARIES



\$44,633 Avg

\$35,000 Direct
\$51,791 Spin-off

CAPITAL INVEST.



\$3.1M

Buildings + FF&E

RESIDENTIAL DEV.



0.7 Homes

4.7 Relocations

NET BENEFITS

\$567,900

Present Value \$483,955

BENEFITS

Sales Taxes	\$481,046
Real Property Taxes	\$78,632
FF&E Property Taxes	\$9,973
Inventory Property Taxes	\$0
New Residential Property Taxes	\$4,931
Hotel Occupancy Taxes	\$4,791
Building Permits and Fees	\$0
Utility Revenue	\$528,840
Utility Franchise Fees	\$30,356
Miscellaneous Taxes and User Fees	\$276,936

Benefits Subtotal \$1,415,505

COSTS

Cost of Government Services	(\$265,218)
Cost of Utility Services	(\$582,387)

Costs Subtotal (\$847,605)

INCENTIVE ANALYSIS

\$102,459

Total Incentive

\$1,385

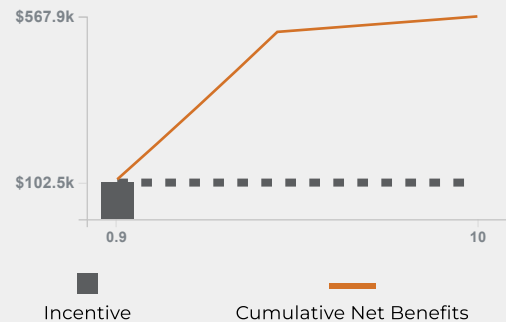
Per Job

55.4%

Rate of Return

0.9 Yrs

Payback Period



NET BENEFITS OVER 10 YEARS

CITY	\$567,900
COUNTY	\$63,666
SCHOOL DISTRICT	\$118,740
OTHER	\$193,283



AGREEMENT

THE STATE OF TEXAS §
 § KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF HARRIS §

This Agreement (the “Agreement”) is made and entered into by and between the **Tomball Economic Development Corporation**, an industrial development corporation created pursuant to Tex. Rev. Civ. Stat. Ann. Art. 5190.6, Section 4B, located in Harris County, Texas (the “TEDC”), and **Headquarters Too, LLC**. (the “Company”), 1431 Graham Drive, Tomball, TX 77375.

WITNESSETH:

WHEREAS, it is the established policy of the TEDC to adopt such reasonable measures from time-to-time as are permitted by law to endeavor to attract industry, create and retain primary jobs, expand the growth of the City of Tomball (the “City”), and thereby enhance the economic stability and growth of the City; and

WHEREAS, the Company proposes to develop a 1.7-acre tract of land within the City, located at 1417 Graham Drive, Tomball, Texas 77375 (the “Property”), more particularly described in Exhibit “A,” attached hereto and made a part hereof; and

WHEREAS, the Company plans to expend over Three Million Dollars (\$3,000,000) to construct a 15,500 square foot commercial building (the “Improvements”) on the site, more particularly described in Exhibit “B,” attached hereto and made a part hereof; and

WHEREAS, the Company also proposes to create seventy-four (74) new full-time employment positions in Tomball in conjunction with the opening of its business operations on the Property; and

WHEREAS, the TEDC agrees to provide to the Company the sum of One Hundred and Two Thousand Four Hundred and Fifty-Nine Dollars (\$102,459.00), or an amount equal to up to twenty percent (20%) of actual construction costs if less than the sum stated above, to assist in the construction of infrastructure necessary to promote and develop new business enterprises on the Property. The infrastructure found by the Board of Directors of TEDC to be required to develop the Property are certain drainage facilities and related improvements, site improvements, water, sanitary sewer, gas, and electric utilities to the exterior of the buildings (the “Infrastructure Improvements”), identified and described in Exhibit “C,” attached hereto and made a part hereof; and

WHEREAS, the Company has agreed, in exchange and as consideration for the funding, to satisfy and comply with certain terms and conditions; and

NOW, THEREFORE, in consideration of the premises and the mutual benefits and obligations set forth herein, including the recitals set forth above, the TEDC and the Company agree as follows:

1.

The Company covenants and agrees that it will construct and maintain on the Property a 15,500 square-foot commercial building (the “Improvements”) identified and described in Exhibit “B,” attached hereto and made a part hereof. In conjunction with the development of the Property, the Company further agrees to construct the Improvements contemplated by this Agreement, in accordance with the requirements of the ordinances of the City and the plans and specifications approved by the City. The Company further represents and agrees that it will

certify the costs of the construction of such Infrastructure Improvements to the TEDC prior to construction.

2.

Construction of the Improvements on the Property, including construction of the Infrastructure Improvements, must commence within 180 days from the date of this Agreement (the “Start Date”), and the Company shall notify the TEDC of such Start Date. The construction of the Improvements to the Property, including construction of the Infrastructure Improvements, shall be completed, and all necessary occupancy permits from the City shall be obtained within eighteen (18) months from the Effective Date of this agreement. Extensions of these deadlines due to extenuating circumstances or uncontrollable delay may be granted by the Board of Directors of the TEDC at its sole discretion.

3.

The Company further covenants and agrees that the Improvements described in Paragraph 1 hereof will be occupied and that the commercial building will be maintained on the property for a term of at least five (5) years.

4.

The Company further covenants and agrees that the Company or any owner or leasee of the Improvements does not and will not knowingly employ an undocumented worker. An “undocumented worker” shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States; or (b) authorized under the law to be employed in that manner in the United States.

5.

In consideration of the Company's representations, promises, and covenants, TEDC agrees to reimburse the Company for the actual cost of the Infrastructure Improvements up to the amount of One Hundred and Two Thousand Four Hundred and Fifty-Nine Dollars (\$102,459.00), or an amount equal to twenty percent (%) of actual construction costs if less than the sum stated above upon completion of construction and occupancy of each commercial space. The TEDC agrees to reimburse the Company for such amount within thirty (30) days of receipt of a letter from the Company requesting such payment and including: (a) certification of the cost of constructing the Infrastructure Improvements; (b) a copy of the City's occupancy permit for the improvements to the Property; (c) certification that the Infrastructure Improvements have been constructed in accordance with the approved plans and specifications; (d) an affidavit stating that all contractors and subcontractors providing work and/or materials in the construction of the Improvements have been paid and any and all liens and claims regarding such work have been released; and (e) Proof of payment to all vendors, contractors and subcontractors providing work and/or materials in the construction of the Improvements, proof of payment must include copies of canceled checks and/or credit card receipts and copies of paid invoices from all vendors, contractors and subcontractors.

6.

It is understood and agreed by the parties that, in the event of a default by the Company on any of its obligations under this Agreement, the Company shall reimburse the TEDC the full amount paid to the Company by the TEDC, with interest at the rate equal to the 90-day Treasury Bill plus one-half percent ($\frac{1}{2}\%$) per annum, within thirty (30) days after the TEDC notifies the

Company of the default. It is further understood and agreed by the parties that if the Company, or any owner or lessee of the Improvements, is convicted of a violation under 8 U.S.C. Section 1324a(f), the Company will reimburse the TEDC the full amount paid to the Company, with interest at the rate equal to the 90-day Treasury Bill plus one-half percent ($\frac{1}{2}\%$) per annum, within thirty (30) days after the TEDC notifies the Company of the violation.

The Company shall also reimburse the TEDC for any and all reasonable attorney's fees and costs incurred by the TEDC as a result of any action required to obtain reimbursement of such funds. Such reimbursement shall be due and payable thirty (30) days after the Company receives written notice of default.

7.

This Agreement shall inure to the benefit of and be binding upon the TEDC and the Company, and upon the Company's successors and assigns, lessees, affiliates, and subsidiaries, and shall remain in force whether the Company sells, leases, assigns, or in any other manner disposes of, either voluntarily or by operation of law, all or any part of the Property and the agreements herein contained shall be held to be covenants running with the Property for so long as this Agreement, or any extension thereof, remains in effect.

8.

Any notice provided or permitted to be given under this Agreement must be in writing and may be served by (i) depositing the same in the United States mail, addressed to the party to be notified, postage prepaid, registered or certified mail, return receipt requested; or (ii) by delivering the same in person to such party; or (iii) by overnight or messenger delivery service that retains regular records of delivery and receipt; or (iv) by facsimile; provided a copy of such

notice is sent within one (1) day thereafter by another method provided above. The initial addresses of the parties for the purpose of notice under this Agreement shall be as follows:

If to City: Tomball Economic Development Corporation
401 W. Market Street
Tomball, Texas 77375
Attn: President, Board of Directors

If to Company: Headquarters TOO, LLC
1431 Graham Drive
Tomball, Texas 77375
Attn: Peter M. Licata,
General Partner, Headquarters TOO, LLC
President, TPC Real Estate Corp

9.

This Agreement shall be performable and enforceable in Harris County, Texas, and shall be construed in accordance with the laws of the State of Texas.

10.

Except as otherwise provided in this Agreement, this Agreement shall be subject to change, amendment or modification only in writing, and by the signatures and mutual consent of the parties hereto.

11.

The failure of any party to insist in any one or more instances on the performance of any of the terms, covenants or conditions of this Agreement, or to exercise any of its rights, shall not be construed as a waiver or relinquishment of such term, covenant, or condition, or right with respect to further performance.

12.

This Agreement shall bind and benefit the respective Parties and their legal successors and shall not be assignable, in whole or in part, by any party without first obtaining written consent of the other party.

13.

In the event any one or more words, phrases, clauses, sentences, paragraphs, sections, or other parts of this Agreement, or the application thereof to any person, firm, corporation, or circumstance, shall be held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, then the application, invalidity or unconstitutionality of such words, phrases, clauses, sentences, paragraphs, sections, or other parts of this Agreement shall be deemed to be independent of and severable from the remainder of this Agreement, and the validity of the remaining parts of this Agreement shall not be affected thereby.

IN TESTIMONY OF WHICH, THIS AGREEMENT has been executed by the parties on this _____ day of _____ 2024 (the “Effective Date”).

Headquarters TOO, LLC

By: _____
Name: Peter M. Licata
Title: General Partner

ATTEST:

By: _____
Name: _____
Title: _____

**TOMBALL ECONOMIC DEVELOPMENT
CORPORATION**

By: _____

Name: Gretchen Fagan

Title: President, Board of Directors

ATTEST:

By: _____

Name: Bill Sumner

Title: Secretary, Board of Directors

DRAFT

ACKNOWLEDGMENT

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

This instrument was acknowledged before me on the _____ day of _____
2024, by Peter Licata, Partner, Headquarters TOO, LLC for and on behalf of said company.

Notary Public in and for the State of Texas

My Commission Expires: _____

(SEAL)

ACKNOWLEDGMENT

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

This instrument was acknowledged before me on the _____ day of _____
2023, by Gretchen Fagan, President of the Board of Directors of the Tomball Economic
Development Corporation, for and on behalf of said Corporation.

Notary Public in and for the State of Texas

My Commission Expires: _____

(SEAL)

Exhibit A
Legal Description of Property

LT 1BLK 1 GRAHAM ROAD ESTATES
1431 GRAHAM DR, TOMBALL, TX 77375

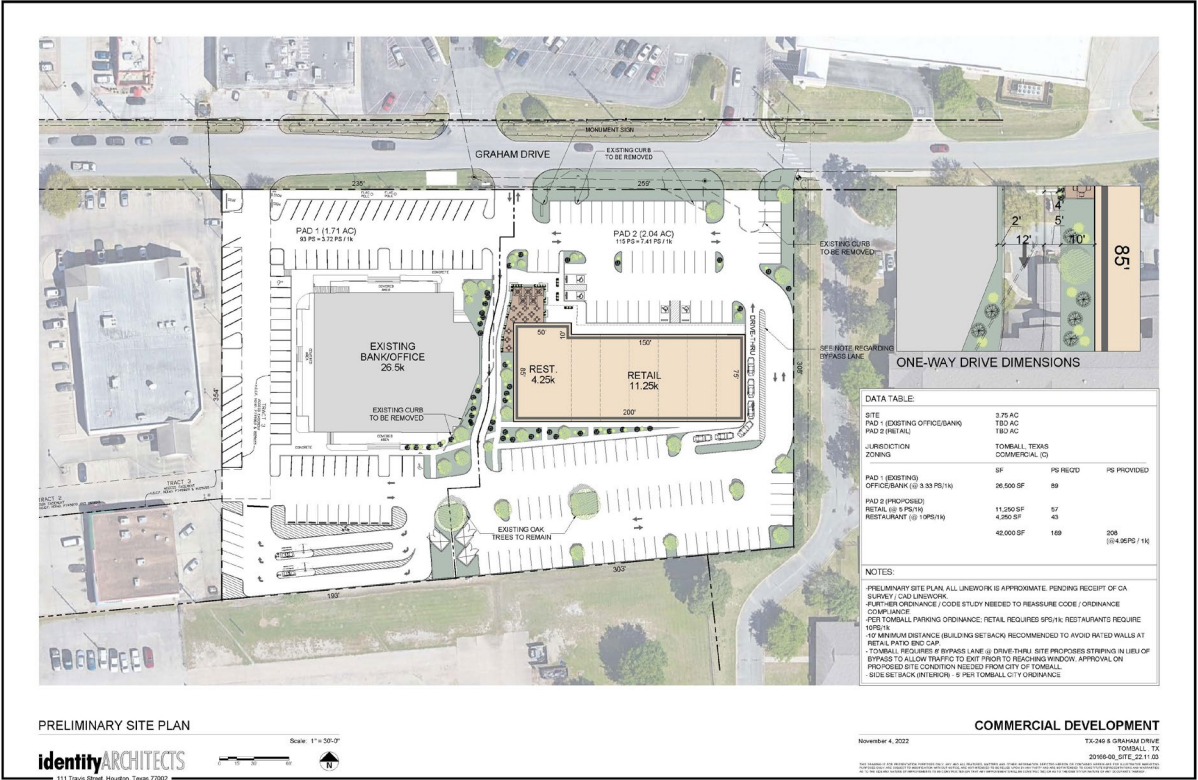


Exhibit B
Description of Improvements

Construction of a 15,500 square foot commercial building
at 1417 Graham Drive, Tomball, TX 7737.



Exhibit C

Description of Infrastructure Improvements

Targeted Infrastructure	Costs
Site Preparations	\$ 197,220.00
Storm Drainage	\$ 40,800.00
Sanitary Sewer	\$ 127,200.00
Water	\$ 39,360.00
Telecommunications/Internet	\$ 4,800.00
Electric	\$ 101,056.00
Gas	\$ 1,860.00
Total	\$ 512,296.00

RESOLUTION NO. 2023-53-TEDC

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS, AUTHORIZING AND APPROVING THE TOMBALL ECONOMIC DEVELOPMENT CORPORATION'S PROJECT TO EXPEND FUNDS IN ACCORDANCE WITH AN ECONOMIC DEVELOPMENT PERFORMANCE AGREEMENT BY AND BETWEEN THE CORPORATION AND HEADQUARTERS TOO, LLC TO PROMOTE AND DEVELOP NEW OR EXPANDED BUSINESS ENTERPRISES; CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT; AND PROVIDING FOR SEVERABILITY.

* * * * *

WHEREAS, the Tomball Economic Development Corporation (the "TEDC"), created pursuant to the Development Corporation Act, now Chapter 501 of the Texas Local Government Code, as amended (the "Act"), desires to adopt projects and provide incentives for economic development within the City; and

WHEREAS, the Board of Directors of the TEDC had adopted as a specific project the expenditure of the estimated amount of One Hundred and Two Thousand Four Hundred and Fifty-Nine Dollars (\$102,459.00), found by the Board to be required or suitable to promote a new business development by Headquarters TOO, LLC; and

WHEREAS, pursuant to the Act, the TEDC may not undertake such project without the approval of Tomball City Council; and

WHEREAS, City Council finds and determines that such project promotes new or expanded business enterprises and is in the best interests of the citizenry; now, therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS:

Section 1. The facts and matters set forth in the preamble of this Resolution are hereby found to be true and correct.

Section 2. The City Council hereby authorizes and approves the adoption, by the Board of Directors of the Tomball Economic Development Corporation, as a specific project for the economic development of the City, an expenditure of the estimated amount of One Hundred and Two Thousand Four Hundred and Fifty-Nine Dollars (\$102,459.00), to Headquarters TOO, LLC, in accordance with an economic development agreement by and between the TEDC and Headquarters TOO, LLC to promote and develop a new or expanded business enterprises, to be located at 1417 Graham Drive, Tomball, Texas 77375.

Section 3. In the event any clause, phrase, provision, sentence, or part of this Resolution or the application of the same to any person or circumstance shall for any reason be adjudged

invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Resolution as a whole or any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Tomball, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

PASSED AND APPROVED on first reading this ____ day of _____,
202__.

PASSED, APPROVED, AND RESOLVED on second and final reading this ____ day of
_____, 202__.

Lori Klein Quinn, Mayor

ATTEST:

Tracy Garcia, City Secretary

Regular City Council Agenda Item Data Sheet

Meeting Date: December 18, 2023

Topic:

Approve, on Second Reading, Resolution No. 2023-54-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and First Community Credit Union to make direct incentives to, or expenditures for, assistance with infrastructure costs required or suitable for the promotion of new or expanded business enterprise related to the development and construction of a Banking and Financial Services office building to be located at 26902 TX-249 in the City of Tomball, Texas. The estimated amount of expenditures for such Project is an amount not to exceed \$64,721.00.

Background:

First Reading approved during the December 4, 2023, Regular City Council meeting.

On November 14, 2023, the Tomball Economic Development Corporation (TEDC) Board of Directors unanimously approved, as a Project of the Corporation, a performance agreement with First Community Credit Union for assistance with infrastructure costs related to the development and construction of a Banking and Financial Services office building to be located at 26902 TX-249 in the City of Tomball, Texas.

Targeted infrastructure projects that will promote or develop new or expanded business enterprises are authorized expenditures under the Development Corporation Act.

The Tomball City Council has final approval authority over all programs and expenditures of the TEDC. Final approval of this project requires the adoption of Resolution No. 2023-54-TEDC after two separate readings.

Origination: Tomball Economic Development Corporation Board of Directors

Recommendation: Approval of Resolution No. 2023-54-TEDC on First Reading

Party(ies) responsible for placing this item on agenda:

Kelly Violette

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: X No: _____

If yes, specify Account Number: #Project Grants

If no, funds will be transferred from account # _____

To account # _____

Signed _____

Approved by _____

Staff Member-TEDC	Date
-------------------	------

Executive Director-TEDC	Date
-------------------------	------



TO: Honorable Mayor and City Council

FROM: Kelly Violette
Executive Director

MEETING DATE: December 4, 2023

SUBJECT: First Community Credit Union

ITEM TYPE: Action

The Tomball Economic Development Corporation has received a request from Arthur Gordon, Executive Vice President of First Community Credit Union, for assistance with infrastructure costs related to the development of a proposed banking and financial services office building.

The proposed development will consist of a 4,074 square foot banking and financial services office building on approximately 1.003 acres. The estimated capital investment for the project is over \$6.4 million.

The eligible infrastructure improvements include water, sanitary sewer, storm drainage, electric utilities and related site improvements totaling approximately \$830,966.31.

Targeted infrastructure that will promote the development and expansion of business enterprises is a permissible project as outlined in Texas Economic Development Legislation. If this project is approved, it will go to the Tomball City Council for final approval by resolution at two separate readings.

An economic impact analysis is included with the agreement to show the impact of this project on Tomball's economy. Per the analysis, the 5-year net benefit of this project on Tomball's economy is \$215,737.00.

If the agreement between the TEDC and First Community Credit Union is approved as a Project of the Corporation, the grant funding amount will not exceed \$64,721.00, based on 7% of the of the actual expenditures for the eligible infrastructure improvements.



October 20, 2023

To the Tomball Economic Development Board of Directors:

First Community Credit Union would like to thank the TEDC team for their assistance answering our questions as it relates to this process. We are requesting grant funding from the TEDC to complete the First Community Credit Union project. We are collaborating with ALJ Lindsey Engineering, MG Architects, and Brandt Construction to complete this project.

Our existing building is located at 28850 Tomball Parkway, and our newly purchased location will be at the northeast corner of Holderrieth Road and 249. The physical address is 26902 Texas 249 Tomball. We are excited to build a new 4074 sq. ft. building. We will have a shared driveway with Costco, to allow our Credit Union members and Costco customers easy access to enter and exit to the 249 Frontage Road or Holderrieth Road. Based on our market research performed in the area we feel strongly about having a branch presence in this particular location. This corner has great visibility that will welcome potential customers and business into the Tomball community as they pass through the site space.

First Community has been a part of the Tomball community for over 16 years, and we are proud to witness the growth during this time. We are supporters of the Chamber of Commerce and Rotary in Tomball, and frequently support local events in town to help increase continued local growth.

First Community Credit Union is seeking grant funding for our project, to include infrastructure and the demolition of the buildings currently occupying the location. After working closely with our general contractor and our architect, our estimated budget for this project will be \$8.7 million (schedule of values provided). As we continue to work with our architect and construction team, we are confident our groundbreaking ceremony will commence first quarter 2024 and we fully expect to complete the branch build first quarter 2025.

I have included our project plans and supporting documentation to provide a visualization of our branch footprint. If further information is needed, please contact me at 281-856-5396 or email Arthur.gordon@fccu.org. I will make sure to respond to your request as soon as possible. We look forward to working with TEDC to develop our new location to benefit the Tomball residence and business community.

Sincerely,

A handwritten signature in blue ink that reads "Arthur Gordon".

Arthur Gordon
Executive Vice President

Think First.

AGREEMENT

THE STATE OF TEXAS §
 § KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF HARRIS §

This Agreement (the “Agreement”) is made and entered into by and between the **Tomball Economic Development Corporation**, an industrial development corporation created pursuant to Tex. Rev. Civ. Stat. Ann. Art. 5190.6, Section 4B, located in Harris County, Texas (the “TEDC”), and **First Community Credit Union** (the “Company”), 28850 Tomball Parkway., Tomball, TX 77375.

WITNESSETH:

WHEREAS, it is the established policy of the TEDC to adopt such reasonable measures from time-to-time as are permitted by law to endeavor to attract industry, create and retain primary jobs, expand the growth of the City of Tomball (the “City”), and thereby enhance the economic stability and growth of the City; and

WHEREAS, the Company proposes to develop a 1.003-acre tract of land within the City, located at 26902 TX-249, Tomball, Texas 77375 (the “Property”), more particularly described in Exhibit “A,” attached hereto and made a part hereof; and

WHEREAS, the Company plans to expend over Six Million Four Hundred Thousand Dollars (\$6,400,000) to construct an 4,074 square foot banking and financial services office building (the “Improvements”) on the site, more particularly described in Exhibit “B,” attached hereto and made a part hereof; and

WHEREAS, the Company also proposes to create four (4) new full-time employment positions in Tomball in conjunction with the opening of its business operations on the Property; and

WHEREAS, the TEDC agrees to provide to the Company the sum of Sixty-Four Thousand Seven Hundred and Twenty-One Dollars (\$64,721.00), or an amount equal to up to Seven percent (7%) of actual construction costs if less than the sum stated above, to assist in the construction of infrastructure necessary to promote and develop new business enterprises on the Property. The infrastructure found by the Board of Directors of TEDC to be required to develop the Property are certain drainage facilities and related improvements, site improvements, water, sanitary sewer, and electric, utilities to the exterior of the buildings (the “Infrastructure Improvements”), identified and described in Exhibit “C,” attached hereto and made a part hereof; and

WHEREAS, the Company has agreed, in exchange and as consideration for the funding, to satisfy and comply with certain terms and conditions; and

NOW, THEREFORE, in consideration of the premises and the mutual benefits and obligations set forth herein, including the recitals set forth above, the TEDC and the Company agree as follows:

1.

The Company covenants and agrees that it will construct and maintain on the Property an 4,074 square-foot banking and financial services office building (the “Improvements”) identified and described in Exhibit “B,” attached hereto and made a part hereof. In conjunction with the development of the Property, the Company further agrees to construct the Improvements

contemplated by this Agreement, in accordance with the requirements of the ordinances of the City and the plans and specifications approved by the City. The Company further represents and agrees that it will certify the costs of the construction of such Infrastructure Improvements to the TEDC prior to construction.

2.

Construction of the Improvements on the Property, including construction of the Infrastructure Improvements, must commence within 180 days from the date of this Agreement (the “Start Date”), and the Company shall notify the TEDC of such Start Date. The construction of the Improvements to the Property, including construction of the Infrastructure Improvements, shall be completed, and all necessary occupancy permits from the City shall be obtained within eighteen (18) months from the Effective Date of this agreement. Extensions of these deadlines due to extenuating circumstances or uncontrollable delay may be granted by the Board of Directors of the TEDC at its sole discretion.

3.

The Company further covenants and agrees that the Improvements described in Paragraph 1 hereof will be occupied and that the indoor sports facility will be maintained on the property for a term of at least five (5) years.

4.

The Company further covenants and agrees that the Company or any owner or leasee of the Improvements does not and will not knowingly employ an undocumented worker. An “undocumented worker” shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States; or (b) authorized under the law to be employed in that manner in the United States.

5.

In consideration of the Company's representations, promises, and covenants, TEDC agrees to reimburse the Company for the actual cost of the Infrastructure Improvements up to the amount of Sixty-Four Thousand Seven Hundred and Twenty-One Dollars (\$64,721.00), or an amount equal to up to Seven percent (7%) of actual construction costs if less than the sum stated above. The TEDC agrees to reimburse the Company for such amount within thirty (30) days of receipt of a letter from the Company requesting such payment and including: (a) certification of the costs of constructing the Infrastructure Improvements; (b) a copy of the City's occupancy permit for the Improvements to the Property; (c) verification from the City acknowledging that all necessary plats, permits, plans, and specifications have been received, reviewed, and approved; (d) certification that the Infrastructure Improvements have been constructed in accordance with the approved plans and specifications; and (e) an affidavit stating that all contractors and subcontractors providing work and/or materials in the construction of the Infrastructure Improvements have been paid and any and all liens and claims regarding such work have been released.

6.

It is understood and agreed by the parties that, in the event of a default by the Company on any of its obligations under this Agreement, the Company shall reimburse the TEDC the full amount paid to the Company by the TEDC, with interest at the rate equal to the 90-day Treasury Bill plus one-half percent ($\frac{1}{2}\%$) per annum, within thirty (30) days after the TEDC notifies the Company of the default. It is further understood and agreed by the parties that if the Company, or any owner or lessee of the Improvements, is convicted of a violation under 8 U.S.C. Section 1324a(f), the Company will reimburse the TEDC the full amount paid to the Company, with

interest at the rate equal to the 90-day Treasury Bill plus one-half percent (½%) per annum, within thirty (30) days after the TEDC notifies the Company of the violation.

The Company shall also reimburse the TEDC for any and all reasonable attorney's fees and costs incurred by the TEDC as a result of any action required to obtain reimbursement of such funds. Such reimbursement shall be due and payable thirty (30) days after the Company receives written notice of default.

7.

This Agreement shall inure to the benefit of and be binding upon the TEDC and the Company, and upon the Company's successors and assigns, lessees, affiliates, and subsidiaries, and shall remain in force whether the Company sells, leases, assigns, or in any other manner disposes of, either voluntarily or by operation of law, all or any part of the Property and the agreements herein contained shall be held to be covenants running with the Property for so long as this Agreement, or any extension thereof, remains in effect.

8.

Any notice provided or permitted to be given under this Agreement must be in writing and may be served by (i) depositing the same in the United States mail, addressed to the party to be notified, postage prepaid, registered or certified mail, return receipt requested; or (ii) by delivering the same in person to such party; or (iii) by overnight or messenger delivery service that retains regular records of delivery and receipt; or (iv) by facsimile; provided a copy of such notice is sent within one (1) day thereafter by another method provided above. The initial addresses of the parties for the purpose of notice under this Agreement shall be as follows:

If to City:

Tomball Economic Development Corporation
401 W. Market Street
Tomball, Texas 77375
Attn: President, Board of Directors

If to Company: First Community Credit Union
28850 Tomball Parkway
Tomball, TX 77375
Attn: Arthur Gordon
Executive Vice President, First Community Credit Union

9.

This Agreement shall be performable and enforceable in Harris County, Texas, and shall be construed in accordance with the laws of the State of Texas.

10.

Except as otherwise provided in this Agreement, this Agreement shall be subject to change, amendment or modification only in writing, and by the signatures and mutual consent of the parties hereto.

11.

The failure of any party to insist in any one or more instances on the performance of any of the terms, covenants or conditions of this Agreement, or to exercise any of its rights, shall not be construed as a waiver or relinquishment of such term, covenant, or condition, or right with respect to further performance.

12.

This Agreement shall bind and benefit the respective Parties and their legal successors and shall not be assignable, in whole or in part, by any party without first obtaining written consent of the other party.

13.

In the event any one or more words, phrases, clauses, sentences, paragraphs, sections, or other parts of this Agreement, or the application thereof to any person, firm, corporation, or circumstance, shall be held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, then the application, invalidity or unconstitutionality of such words, phrases, clauses, sentences, paragraphs, sections, or other parts of this Agreement shall be deemed to be independent of and severable from the remainder of this Agreement, and the validity of the remaining parts of this Agreement shall not be affected thereby.

IN TESTIMONY OF WHICH, THIS AGREEMENT has been executed by the parties on this _____ day of _____ 2024 (the "Effective Date").

First Community Credit Union

By: _____
Name: Arthur Gordon
Title: Executive Vice President

ATTEST:

By: _____
Name: _____
Title: _____

TOMBALL ECONOMIC DEVELOPMENT CORPORATION

By: _____
Name: Gretchen Fagan
Title: President, Board of Directors

ATTEST:

By: _____
Name: Bill Sumner

Title: Secretary, Board of Directors

ACKNOWLEDGMENT

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

This instrument was acknowledged before me on the _____ day of _____
2024, by Arthur Gordon, Executive Vice President, First Community Credit Union for and on
behalf of said company.

Notary Public in and for the State of Texas

My Commission Expires: _____

(SEAL)

ACKNOWLEDGMENT

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

This instrument was acknowledged before me on the _____ day of _____
2023, by Gretchen Fagan, President of the Board of Directors of the Tomball Economic
Development Corporation, for and on behalf of said Corporation.

Notary Public in and for the State of Texas

My Commission Expires: _____

(SEAL)

Exhibit A
Legal Description of Property

RES A BLK 1
26902 SH 249, TOMBALL, TX 77375

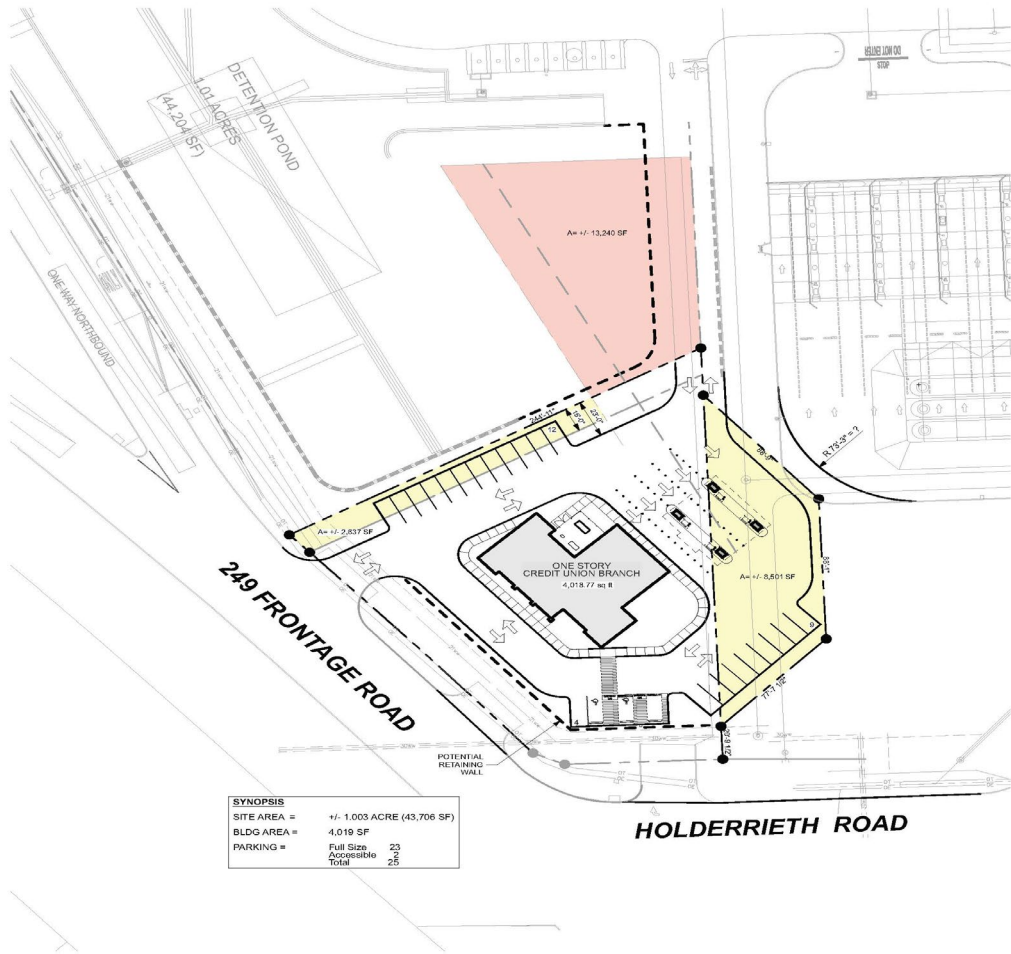


Exhibit B

Description of Improvements

Construction of an 4,074 square foot banking and financial services office building.



Exhibit C

Description of Infrastructure Improvements

Targeted Infrastructure	Cost
Site Preparations	\$ 55,000.00
New Public ROW	\$ 153,757.88
Storm Drainage	\$ 187,949.46
Sanitary Sewer	\$ 164,569.06
Water	\$ 71,341.81
Telecommunications/Internet	\$ 28,750.00
Electric	\$ 124,498.10
Gas	\$ 45,100.00
Total	\$ 830,966.31

RESOLUTION NO. 2023-54-TEDC

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS, AUTHORIZING AND APPROVING THE TOMBALL ECONOMIC DEVELOPMENT CORPORATION'S PROJECT TO EXPEND FUNDS IN ACCORDANCE WITH AN ECONOMIC DEVELOPMENT PERFORMANCE AGREEMENT BY AND BETWEEN THE CORPORATION AND FIRST COMMUNITY CREDIT UNION TO PROMOTE AND DEVELOP NEW OR EXPANDED BUSINESS ENTERPRISES; CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT; AND PROVIDING FOR SEVERABILITY.

* * * * *

WHEREAS, the Tomball Economic Development Corporation (the "TEDC"), created pursuant to the Development Corporation Act, now Chapter 501 of the Texas Local Government Code, as amended (the "Act"), desires to adopt projects and provide incentives for economic development within the City; and

WHEREAS, the Board of Directors of the TEDC had adopted as a specific project the expenditure of the estimated amount of Sixty-Four Thousand Seven Hundred and Twenty-One Dollars (\$64,721.00), found by the Board to be required or suitable to promote a new business development by First Community Credit Union; and

WHEREAS, pursuant to the Act, the TEDC may not undertake such project without the approval of Tomball City Council; and

WHEREAS, City Council finds and determines that such project promotes new or expanded business enterprises and is in the best interests of the citizenry; now, therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS:

Section 1. The facts and matters set forth in the preamble of this Resolution are hereby found to be true and correct.

Section 2. The City Council hereby authorizes and approves the adoption, by the Board of Directors of the Tomball Economic Development Corporation, as a specific project for the economic development of the City, an expenditure of the estimated amount of Sixty-Four Thousand Seven Hundred and Twenty-One Dollars (\$64,721.00), to First Community Credit Union, in accordance with an economic development agreement by and between the TEDC and First Community Credit Union, to promote and develop a new or expanded business enterprises, to be located at 26902 TX-249, Tomball, Texas 77375

Section 3. In the event any clause, phrase, provision, sentence, or part of this Resolution or the application of the same to any person or circumstance shall for any reason be adjudged

invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Resolution as a whole or any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Tomball, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

PASSED AND APPROVED on first reading this ____ day of _____,
202__.

PASSED, APPROVED, AND RESOLVED on second and final reading this ____ day of
_____, 202__.

Lori Klein Quinn, Mayor

ATTEST:

Tracy Garcia, City Secretary

City Council Meeting Agenda Item Data Sheet

Meeting Date: December 18, 2023

Topic:

Approve the Minutes of the December 4, 2023, Regular City Council meeting.

Background:

Origination: City Staff

Recommendation:

Approve Minutes

Party(ies) responsible for placing this item on agenda: Tracylynn Garcia, City Secretary

FUNDING (IF APPLICABLE)

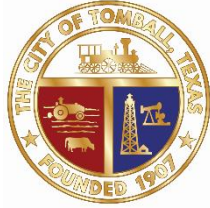
Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: # _____

If no, funds will be transferred from account # _____ To account # _____

Signed	<u>Tracylynn Garcia</u>	Approved by	_____
	Staff Member		City Manager
	Date		Date

MINUTES OF REGULAR CITY COUNCIL CITY OF TOMBALL, TEXAS



**Monday, December 04, 2023
6:00 PM**

The City Council of the City of Tomball, Texas, conducted the meeting scheduled for December 04, 2023, 6:00 PM, at 401 Market Street, Tomball, Texas 77375, via physical attendance and video/telephone conference.

- A. Mayor L. Klein-Quinn called the meeting of the City of Tomball Council to order at 6:00 p.m.

PRESENT

Mayor Lori Klein Quinn
Council 1 John Ford
Council 2 Mark Stoll
Council 3 Dane Dunagin
Council 4 Derek Townsend, Sr.
Council 5 Randy Parr

OTHERS PRESENT:

City Manager – David Esquivel
Assistant City Manager – Jessica Rogers
City Attorney – Loren Smith
City Secretary – Tracylynn Garcia
Assistant City Secretary- Sasha Luna
Director of Marketing & Tourism – Chrislord Templonuevo
Police Chief – Jeff Bert
Public Works Director – Drew Huffman
Director of Community Development – Craig Meyers
Finance Director – Katherine Tapscott
Fire Chief – Joe Sykora
Project Coordinator – Meagan Mageo
IT Sr. Specialist – Ben Lato
Community Center Manager – Rosalie Dillon

- B. Invocation - Led by Pastor Adam McIntosh – St. David's Church
- C. Pledges to U.S. and Texas Flags by Tomball Police Chief Jeff Bert.

- D. Public Comments and Receipt of Petitions; *[At this time, anyone will be allowed to speak on any matter other than personnel matters or matters under litigation, for length of time not to exceed three minutes. No Council/Board discussion or action may take place on a matter until such matter has been placed on an agenda and posted in accordance with law - GC, 551.042.]*

Blake Roberts
11114 Old M House Ln.
Tomball, Texas

- Representing Development Company S.
Cherry St. (water/sewer fees)

E. Reports and Announcements

1. Announcements

- I. Presentation received by Amanda Trickey on Tidy Up Tomball.
- II. TPD Chief Bert & TFD Chief Sykora spoke on the Holiday Heroes event.
- III. Marketing Director Templonuevo spoke briefly on the Deck the Depot event.

IV. **Upcoming Events:**

December 8-9 – Tomball Museum Candlelight Tour 6:00 p.m. – 9:00 p.m.
@ Tomball Museum

December 8-10 – Tomball German Christmas Market @ Depot and
Market St.

December 16 – TFM Christmas Market 9:00 a.m. – 1:00 p.m. @
Information Center Parking Lot

December 20 – Polar Express Sunset Market 4:00 p.m. – 7:00 p.m. @
Information Center Parking Lot

F. New Business

- 1. Approve the Minutes of the November 20, 2023, Special and Regular City Council meetings.

Motion made by Council 2 Stoll, Seconded by Council 4 Townsend, Sr..

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

2. Approve the rollover of outstanding Fiscal Year 2022-2023 purchase orders to Fiscal Year 2023-2024.

Motion made by Council 4 Townsend, Sr., Seconded by Council 5 Parr.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

3. Adopt On First and Final Reading, Ordinance No. 2023-53, An Ordinance Authorizing The Issuance And Sale Of The City Of Tomball, Texas, Combination Tax And Revenue Certificates Of Obligation, Series 2023; Levying A Tax And Providing For The Security And Payment Thereof; And Enacting Other Provisions Relating Thereto

Motion made by Council 5 Parr, Seconded by Council 4 Townsend, Sr., by caption only on First and Final Reading.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

Motion made by Council 5 Parr, Seconded by Council 4 Townsend, Sr. to adopt on First and Final Reading.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

4. Conduct Public Hearing for the Purpose of Considering the Following Proposed Annexation: *(Being a tract or parcel, containing 12.114 acres (527,706 square feet) of land situated in the Elizabeth Smith Survey, Abstract Number 70 and in the C.M. Pilot Survey, Abstract 632, Harris County, Texas; Said 12.114 acre tract of record in the name of CSV Holderrieth, LLC in Harris County Clerk's File (H.C.C.F.) Number 20140017182) (11701 Holderrieth Rd., HCAD 0410260020004)*

- Mayor Klein Quinn called the PH to order at: 6:30 p.m.

Christian Goedde (requestor) - Spoke re: annexation property.
19910 Tidy Tipps Ln.
Spring, TX 77379

- Hearing no further comments Mayor Klein Quinn closed PH at: 6:34 p.m.

5. Adopt, on First Reading, Ordinance 2023-52, an Ordinance of the City of Tomball, Texas, extending the city limits of said City to include all of the territory within certain limits and boundaries and annexing to the City of Tomball all of the territory within such limits and boundaries; approving a service plan for all of the area within such limits and boundaries; containing other provisions relating to the subject; and providing a savings and severability clause (*being a tract or parcel, containing 12.114 acres (527,706 square feet) of land situated in the Elizabeth Smith Survey, Abstract Number 70 and in the C.M. Pilot Survey, Abstract 632, Harris County, Texas[11701 Holderrieth Rd, HCAD 0410260020004]*)

Motion made by Council 3 Dunagin, Seconded by Council 4 Townsend, Sr. by caption only on First Reading.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Voting Abstaining: Mayor Klein Quinn

Motion carried unanimously.

Motion made by Council 4 Townsend, Sr., Seconded by Council 5 Parr to adopt on First Reading.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

6. Approve a services agreement with DXI Industries, Inc. for the purchase of chlorine and sulfur dioxide gas for water treatment for Fiscal Year 2024, for a not-to-exceed amount of \$225,000 (Bid No. 2024-04), approve the expenditure of funds therefor, and authorize the City Manager to execute any and all documents related to the purchases. These expenditures are included in the fiscal year 2023-2024 budget.

7. Approve a contract with B&C Constructors, LP for the renovations to the City of Tomball Administrative Services Building through a 1GPA Contract (Contract No. 19-03DP) for a not-to-exceed amount of \$98,628.68, approve the expenditure of funds therefor, and authorize the City Manager to execute any and all documents related to the purchase. This expenditure is included in the FY 2023-2024 Budget.

Motion made by Council 4 Townsend, Sr., Seconded by Council 2 Stoll.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

8. Approve Resolution 2023-55, a Resolution of the City 2023-2024 and City of Tomball, Texas, Amending Tow Truck Rotation Company Fees – Vehicle Storage Fees in the Master Fee Schedule for Fiscal Year 2023-2024, and Providing an Effective Date.

Motion made by Council 5 Parr, Seconded by Council 4 Townsend, Sr..

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

9. Approve, on First Reading, Resolution No. 2023-46-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and The Garza Agency to make direct incentives to, or expenditures for, rental assistance for new or expanded business enterprise to be located at 28427 SH 249, Tomball, Texas 77375. The estimated amount of expenditures for such Project is an amount not to exceed \$10,000.00.

Motion made by Council 1 Ford, Seconded by Council 4 Townsend, Sr. on First Reading.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

10. Approve, on First Reading, Resolution No. 2023-50-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and T & R Harmon, LLC DBA Craving Kernels to make direct incentives to, or expenditures for, rental assistance for new or expanded business enterprise to be located at 702 South Persimmon Street, Unit 3A, Tomball, Texas 77375. The estimated amount of expenditures for such Project is an amount not to exceed \$8,820.00.

Motion made by Council 1 Ford, Seconded by Council 4 Townsend, Sr, on First Reading.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

11. Approve, on First Reading, Resolution No. 2023-53-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and Headquarters TOO, LLC to make direct incentives to, or expenditures for, assistance with infrastructure costs required or suitable for the promotion of new or expanded business enterprise related to the development and construction of a 15,500 square foot commercial facility to be located at 1417 Graham Drive, Tomball, Texas 77375. The estimated amount of expenditures for such Project is an amount not to exceed \$102,459.00.

Motion made by Council 4 Townsend, Sr., Seconded by Council 2 Stoll, on First Reading.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

12. Approve, on First Reading, Resolution No. 2023-54-TEDC, a Resolution of the City Council of the City of Tomball, Texas, authorizing and approving the Tomball Economic Development Corporation's Project to Expend Funds in accordance with an Economic Development Performance Agreement by and between the Corporation and First Community Credit Union to make direct incentives to, or expenditures for, assistance with infrastructure costs required or suitable for the promotion of new or expanded business enterprise related to the development and construction of a Banking and Financial Services office building to be located at 26902 TX-249 in the City of Tomball, Texas. The estimated amount of expenditures for such Project is an amount not to exceed \$64,721.00.

Motion made by Council 4 Townsend, Sr., Seconded by Council 5 Parr.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

13. Consideration and possible action to approve, as a Project of the Tomball Economic Development Corporation, an agreement with IC Star Solar (USA), LLC to make direct incentives to, or expenditures for, the creation or retention of primary jobs associated with the development of its corporate headquarters to be located at 19200 Hamish Rd, Tomball, Texas 77377. The estimated amount of expenditures for such Project is and amount not to exceed \$522,000.00.

Motion made by Council 4 Townsend, Sr., Seconded by Council 2 Stoll.

Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

14. Executive Session: The City Council will meet in Executive Session as Authorized by Title 5, Chapter 551, Government Code, the Texas Open Meetings Act, for the Following Purpose(s):

Sec. 551.071 - Consultation with the City Attorney regarding a Matter that the Attorney's Duty Requires to be Discussed in Closed Session

Sec. 551.072 – Deliberations regarding Real Property

City Council enter Executive Session at: 7:10 p.m.

City Council reconvened at: 7:30 p.m.

M. Adjournment

Motion made by Council 4 Townsend, Sr., Seconded by Council 5 Parr.

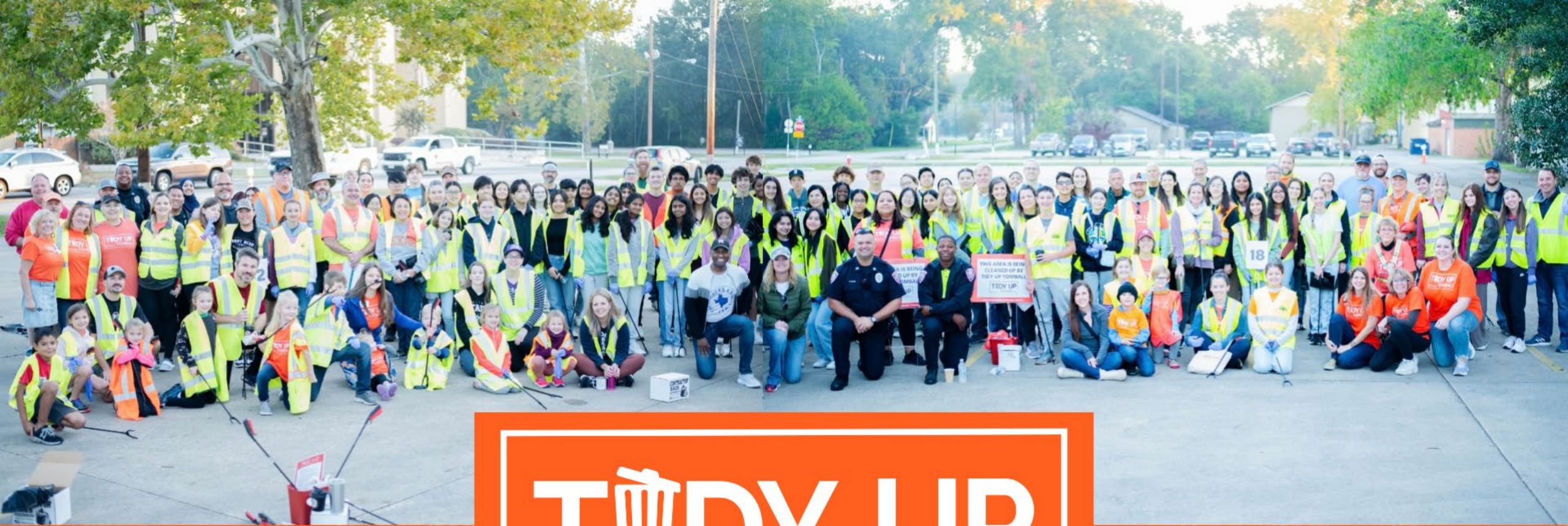
Voting Yea: Council 1 Ford, Council 2 Stoll, Council 3 Dunagin, Council 4 Townsend, Sr., Council 5 Parr

Motion carried unanimously.

PASSED AND APPROVED this 18th day of December 2023.

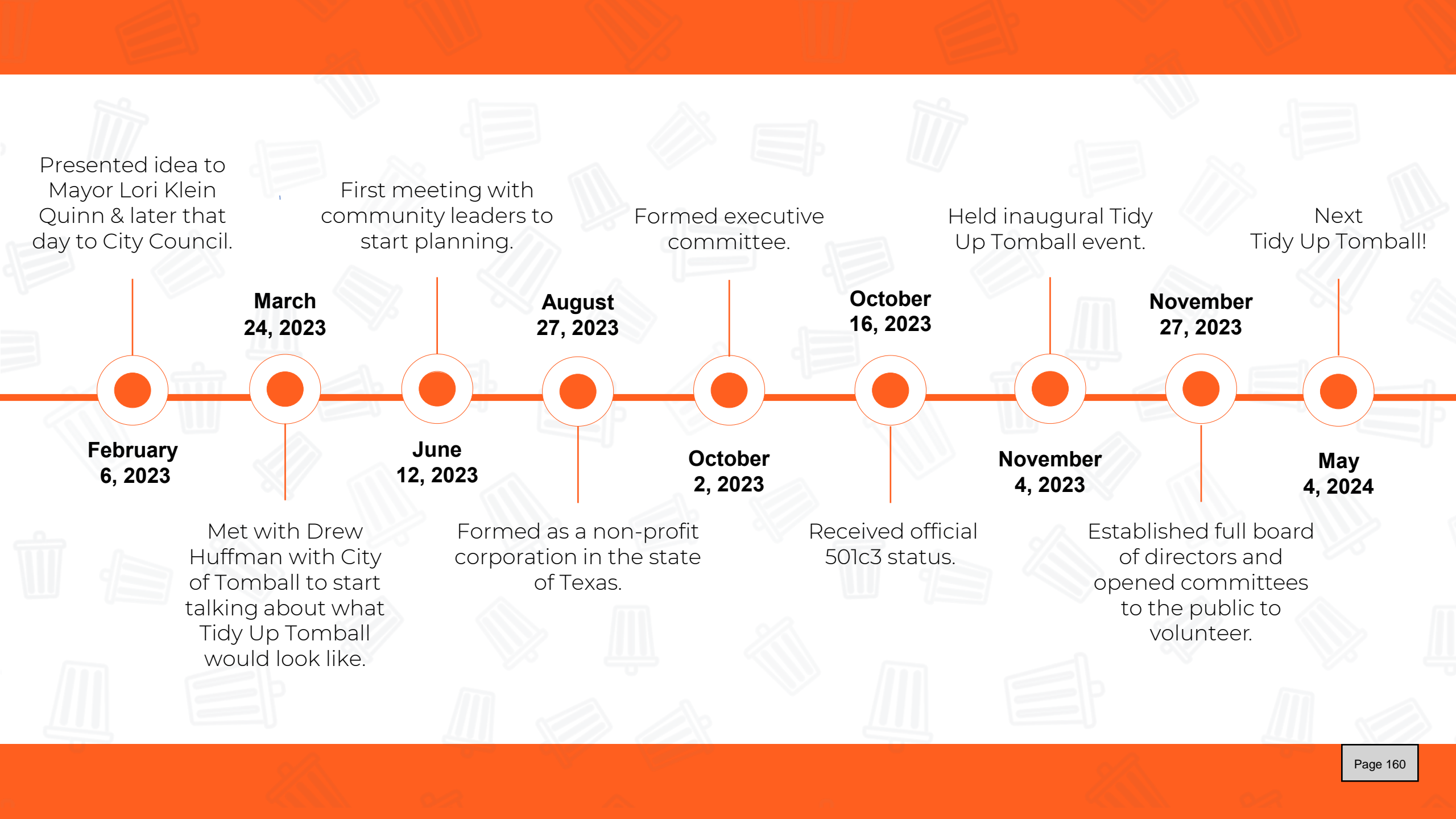
Tracylynn Garcia
City Secretary, TRMC, MMC,
CPM

Lori Klein Quinn
Mayor



TIDY UP TOMBALL

**BEAUTIFYING TOMBALL,
ONE PIECE OF TRASH AT A TIME!**



EVENT

- Kickoff event with community partner booths

- **27 sponsors**

- 300 lbs of trash picked up





“My kids are here today. Seeing them and other kids having fun picking up trash was the best part!”

- TUT VOLUNTEER MOM



PROGRESS MADE SINCE FALL 2023 EVENT



Created working committees that the public can volunteer on:

- Sponsorship Committee
- Community Outreach Committee
- Event Operations Committee
- Marketing Committee
- Finance Committee
- Advisory Council



Established next community clean-up event for May 4, 2024



City Council Meeting

Agenda Item

Data Sheet

Meeting Date: December 4, 2023

Topic:

Approve an agreement with Bull-G Construction, LLC for Project Number 2023-10015, Rudolph Road water line extension for the City of Tomball, for a not-to-exceed amount of \$333,198 (Bid No. 2024-02), approve the expenditure of funds therefor, and authorize the City Manager to execute any and all documents related to the purchases. These expenditures are included in the fiscal year 2023-2024 capital budget.

Background:

The proposed agreement with Bull-G Construction, LLC to complete the water line extension along Rudolph Road. Bull-G Construction was selected through the competitive sealed bid process (Bid No. 2024-02), which allowed for interested parties to submit sealed bids to complete the proposed project and a total of ten bids were received. After reviewing all submitted bids and reference checks, Bull-G Construction, LLC was deemed the lowest responsible bidder and provided the best value to the City based on the proposed scope of work. The selection and discussions were held in accordance with the City's adopted Procurement Policy and Manual and state procurement law.

This item authorizes an agreement with Bull-G Construction, LLC to complete the water line extension along Rudolph Road for an amount not-to-exceed \$333,198, included in the adopted fiscal year 2023-2024 capital budget.

Project Element	Total Contracts	Remaining Contract Amount
Engineering – GLS (Sanitary)	\$47,313.03	\$0.00
Engineering – OEI (Water)	\$80,000.00	\$28,286.16
Acquisition Services – Threshold	\$18,834.76	\$0.00
Acquisition	\$45,385.73	\$0.00
Surveying	\$22,620.50	\$0.00
Proposed Construction (Sewer)	\$217,885.00	Contract Pending
Proposed Construction (Water)	\$333,198.00	Contract Pending
Project Budget \$803,965.00	Total Contracts \$765,237.02	Remaining Funding \$38,727.98

Origination: Public Management

Recommendation:

Staff recommends approving an agreement with Bull-G Construction, LLC for the sanitary sewer extension along Rudolph Road for an amount no-to-exceed \$217,885.

Party(ies) responsible for placing this item on agenda: Meagan Mageo, Project Manager

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: #400-741-6409

If no, funds will be transferred from account # _____ To account # _____

Signed	<u>Meagan Mageo</u>	Approved by	_____
	Staff Member		City Manager
	Date		Date

Origination: Public Management

Recommendation:

Staff recommends approving an agreement with Bull-G Construction, LLC for the water line extension along Rudolph Road for an amount no-to-exceed \$333,198.

Party(ies) responsible for placing this item on agenda: Meagan Mageo, Project Manager

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: #400-731-6409

If no, funds will be transferred from account # _____ To account # _____

Signed	<u>Meagan Mageo</u>	Approved by	_____
	Staff Member		City Manager
	Date		Date

APPARENT LOW BIDDERS

City of Tomball Rudolph Road Water Line Extension

ID: City of Tomball Project No. 2024-02

Bid Summary	
Engineers Estimate	No Estimate
Total Bids	10
AMLT \$	\$17,627.60
AMLT %	5.29%
Average Bid	\$518,362.64

	Bidder	BASE BID
1	Bull-G Construction <i>Submitted: 11/16/2023 11:02:46 AM</i>	\$333,198.00
2	Faith Utilities LLC <i>Submitted: 11/16/2023 9:47:40 AM</i>	\$350,825.60
3	Underground Construction Solutions LLC <i>Submitted: 11/16/2023 1:05:01 PM</i>	\$375,080.00
4	ISJ Underground Utilities LLC <i>Submitted: 11/16/2023 1:45:46 PM</i>	\$386,408.04
5	SEQUEIRA CIVIL CONSTRUCTION dba SC ² <i>Submitted: 11/16/2023 11:57:34 AM</i>	\$407,404.00
6	Rangeline Tapping Services <i>Submitted: 11/16/2023 1:26:42 PM</i>	\$462,667.00
7	Waterway Directional Boring <i>Submitted: 11/16/2023 8:19:31 AM</i>	\$507,746.72
8	Reddico Construction Company, Inc. <i>Submitted: 11/16/2023 1:03:26 PM</i>	\$574,698.00
9	Texkota Enterprises, LLC <i>Submitted: 11/16/2023 10:41:56 AM</i>	\$691,359.00

10	AR TurnKee Construction Company Inc. <i>Submitted: 11/16/2023 2:26:58 PM</i>	\$1,094,240.00
----	--	----------------

Bids opened at: 11/16/2023 2:30:55 PM

Document 00520

AGREEMENT

Project: Rudolph Road Water Line Extension
Project Location: Rudolph Road (Key Map No.C-100)
Project Bid No: 2024-02
E&P Project No: 2023-10015

The City: The City of Tomball, County of Harris, Texas (the "City")
and

Contractor: Bull-G Construction, LLC
(Address for Written Notice) 8519 Cedel Drive, Houston, Texas 77055

Email Address: ildiaz.bullg@gmail.com

Public Works Director is: Drew Huffman
(Address for Written Notice) 501 James Street, Tomball, Texas 77375
Email Address: dhuffman@tomballtx.gov

THE CITY AND CONTRACTOR AGREE AS FOLLOWS:

ARTICLE 1

THE WORK OF THE CONTRACT

1.1 Contractor shall perform the Work in accordance with the Contract.

ARTICLE 2

CONTRACT TIME

2.1 Contractor shall achieve Date of Substantial Completion within **120 days** after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

2.2 The Parties recognize that time is of the essence for this Agreement and that the City will suffer financial loss if the Work is not completed within the Contract Time. Parties also recognize delays, expense, and difficulties involved in proving in a legal or arbitration proceeding actual loss suffered by the City if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Parties

00520-1
06-16-2011

agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay the City the amount stipulated in Document 00800 – Supplementary Conditions, for each day beyond Contract Time.

**ARTICLE 3
CONTRACT PRICE**

3.1 Subject to terms of the Contract, the City will pay Contractor in current funds for Contractor's performance of the Contract, Contract Price of \$333,198, which includes Alternates, if any, accepted below.

3.2 The City accepts Alternates as follows:

Alternate No. 1 Not Applicable

**ARTICLE 4
PAYMENTS**

4.1 The City will make progress payments to Contractor as provided below and in the General Conditions.

4.2 The Period covered by each progress payment is one calendar month ending on the ☐ 10th, ☐ 20th, or ☒ last day of the month.

4.3 The Schedule of Values established as provided in paragraph 2.07.A of the General Conditions will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed. The City will make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as provided below in paragraphs 4.3.1 and 4.3.2.

4.3.1 Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or City may withhold, in accordance with paragraph 14.02 of the General Conditions:

a. For contracts under \$400,000.00, 90% of Work completed (with the balance being retainage).

For contracts over \$400,000.00, 95% of Work completed (with the balance being retainage.)

b. For contracts under \$400,000.00, 90% (with the balance being retainage) and for contracts over \$400,000.00, 95% (with the balance being retainage) of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to the City as provided in paragraph 14.02 of the General Conditions).

4.3.2 Upon Substantial Completion, the City shall pay an amount sufficient to increase total payments to Contractor to 95% of the Work completed, less such amounts as Engineer shall determine in accordance with paragraph 14.02.B.5 of the General Conditions and less 100% of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the Certificate of Substantial Completion.

00520-2
06-16-2011

4.4 Final payment, constituting entire unpaid balance of Contract Price, will be made by the City to Contractor as provided in the General Conditions.

**ARTICLE 5
CONTRACTOR REPRESENTATIONS**

5.1 Contractor represents:

5.1.1 Contractor has examined and carefully studied Contract documents and other related data identified in Bid Documents.

5.1.2 Contractor has visited the site and become familiar with and is satisfied as to general, local, and site conditions that may affect cost, progress, and performance of the Work.

5.1.3 Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.

5.1.4 Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in Contract documents and (2) reports and drawings of a hazardous environmental condition, if any, at the site which has been identified in Contract documents.

5.1.5 Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including applying specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract to be employed by Contractor, and safety precautions and programs incident thereto

5.1.6 Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for performance of the Work at Contract Price, within Contract Time, and in accordance with the Contract.

5.1.7 Contractor is aware of general nature of work to be performed by the City and others at the site that relates to the Work as indicated in Contract documents.

5.1.8 Contractor has correlated information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract.

00520-3
06-16-2011

5.1.9 Contractor has given City Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract, and written resolution thereof by City Engineer is acceptable to Contractor.

5.1.10 Contract documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 6

MISCELLANEOUS PROVISIONS

6.1 The Contract may be terminated by either Party as provided in Conditions of the Contract.

6.2 The Work may be suspended by the City as provided in Conditions of the Contract.

6.3 Contractor further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An "undocumented worker" shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States.

6.4 In accordance with Chapter 2270, Texas Government Code, a government entity may not enter into a contract with a company for goods or services unless the company covenants and agrees that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. Furthermore, the contractor is prohibited from engaging in business with Iran, Sudan or Foreign Terrorist Organizations.

6.5 When conducting activities for the City of Tomball, contractor will adhere to the City's Storm Water Management Plan and permit issued by the Texas Commission on Environmental Quality.

ARTICLE 7

ENUMERATION OF CONTRACT DOCUMENTS

7.1 The following documents are incorporated into this Agreement:

7.1.1 Document 00700 - General Conditions

7.1.2 Document 00800 - Supplementary Conditions

7.1.3 General Requirements.

7.1.4 Divisions 02 through 16 of Specifications attached hereto or incorporated by reference in Document 00010 - Table of Contents.

7.1.5 Drawings listed in Document 00015 - List of Drawings and bound separately.

7.1.6 Addenda which apply to the Contract, are as follows:

Addendum No. 1, dated []

Addendum No. 2, dated []

Addendum No. 3, dated []

00520-4
06-16-2011

7.1.7 Other documents:

<u>Document No.</u>	<u>Title</u>
[X] 00410B	Bid Form -- Part B
[X] 00500	Form of Business
[X] 00501	Resolution of Corporation (if a corporation)
[X] 00610	Performance Bond
[X] 00611	Statutory Payment Bond
[X] 00612	One-year Maintenance Bond
[X] 00620	Affidavit of Insurance (with the Certificate of Insurance attached)
[] 00800	Exhibit A, Wage Rates
[] 00821	Wage Rate for Building Construction
[] 00830	Trench Safety Geotechnical Information

ARTICLE 8**SIGNATURES**

8.1 This Agreement is executed in two originals and is effective on _____.

00520-5
06-16-2011

CONTRACTOR:

By: Beatriz Rios

Name: BEATRIZ RIOS

Title: MANAGER

Date: 12/04/2023

Tax Identification Number: 85-3122313

(If Joint Venture)

By: _____

Name: _____

Title: _____

Date: _____

Tax Identification Number: _____

ATTEST/SEAL:

[SEAL]

Attest: [Signature]

Date: _____

CITY OF TOMBALL, TEXAS:

By: _____

City Manager

ATTEST/SEAL:

Date: _____

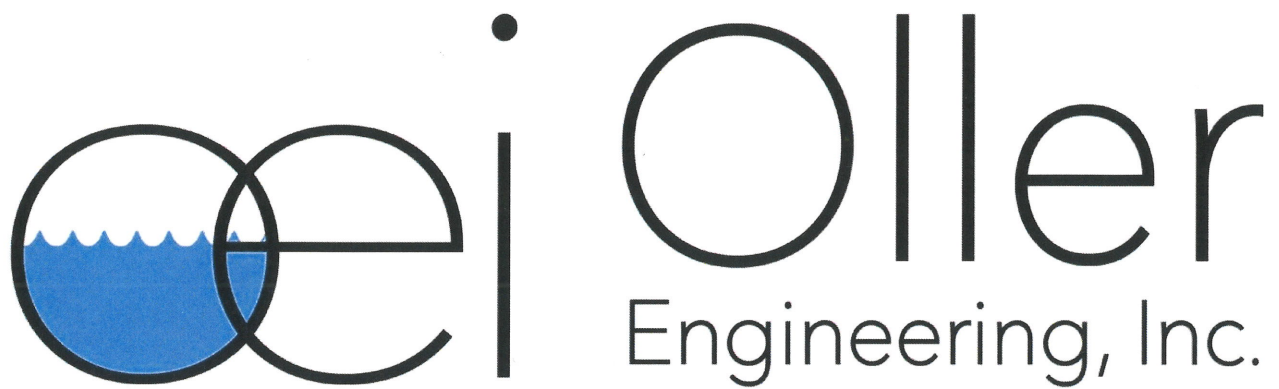
[SEAL]

Attest: _____

City Secretary

Date: _____

END OF DOCUMENT



City of Tomball

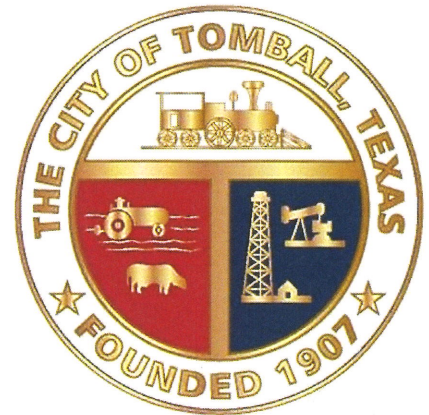
Rudolph Rd. Water Line Extension

Administrative Specifications

City of Tomball Job #2024-02

OEI Job #1057.23.01

October 2023



beyond engineering

Document 00010

TABLE OF CONTENTS

NOTE: Documents listed "for filing" are to be provided by Bidder and are not included in this Project Manual unless indicated for example only. The Document numbers and titles hold places for actual documents to be submitted by Contractor during Bid, post-bid, or construction phase of the Project. Documents in the 200, 300 and 400 series of Division 00, except for Document 00410B - Bid Form, Part B, are not part of the Contract.

Doc.

No. Document Title

Doc. Date

INTRODUCTORY INFORMATION

00010	Table of Contents	11-18-2009
00015	List of Drawings	02-01-2008

BIDDING REQUIREMENTS

00100	Invitation to Bidders	09-25-2023
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INSTRUCTIONS TO BIDDERS

00200	Instructions to Bidders	09-11-2018
00210	Supplementary Instructions to Bidders	08-01-2005
00220	Request for Bid Information	02-01-2008

INFORMATION AVAILABLE TO BIDDERS - NOT USED

BID FORMS AND SUPPLEMENTS

00410	Bid Form, Parts A & B	02-01-2008
00430	Bidder's Bond (For filing; Example Form)	02-01-2008
00453	Bidder's Statement of Residency	02-01-2008
00455	Affidavit of Ownership or Control	02-01-2008

POST-BID PROCEDURES

00495	Post-bid Procedures	02-01-2008
00496	Control Form for Contract Documents	02-01-2008
00497	Request for Bonds and Proof of Insurance	09-25-2023
00498	Notice of Intent to Award	09-25-2023

Doc.

No. Document Title

Doc. Date

CONTRACTING REQUIREMENTS

AGREEMENT

00500 Form of Business	02-01-2008
00501 Resolution of Corporation	02-01-2008
00520 Agreement	06-16-2011

BONDS AND CERTIFICATES

00600 List of Proposed Subcontractors and Suppliers, Part A	02-01-2008
00601 Drug Policy Compliance Agreement	02-01-2008
00603 Checklist for Drug Policy Submittal	02-01-2008
00604 History of OSHA Actions and List of On-the-job Injuries	02-01-2008
00607 Certification Regarding Debarment, Suspension, and Other Responsibility Matters	02-01-2008
00610 Performance Bond	02-01-2008
00611 Statutory Payment Bond	02-01-2008
00612 One-year Maintenance Bond	02-01-2008
00620 Affidavit of Insurance (with attached Certificates of Insurance)	02-01-2008
00641 Contractor's Certification of Final Completion	02-01-2008
00642 Certification of Payment to Subcontractors and Suppliers	02-01-2008
00643 Estimate and Certificate for Payment, Unit Price Work	02-01-2008
00644 Drug Policy Compliance Declaration	02-01-2008
00645 Certificate of Substantial Completion	02-01-2008
00650 Certificate of Final Completion	02-01-2008
00691 Acceptance of Water & Wastewater Lines	09-25-2023

GENERAL CONDITIONS

00700 General Conditions	2018
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SUPPLEMENTARY CONDITIONS

00800 Supplementary Conditions	04-25-2011
00820 Wage Scale and Payroll Requirements for Engineering Construction	02-01-2016

Doc.

No. Document Title

Doc. Date

ADDENDA AND MODIFICATIONS

00910	Addendum	02-01-2008
00911	Notice of Addendum	02-01-2008
00931	Request for Information (Example only)	02-01-2008
00940	Work Change Directive	02-01-2008
00941	Change Order Form	02-01-2008

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DIVISION 1 - GENERAL REQUIREMENTS

01110	Summary of Work	02-01-2008
01145	Use of Premises	02-01-2008
01230	Alternates	02-01-2008
01255	Change Order Procedures	02-01-2008
01270	Measurement and Payment	02-01-2008
01292	Schedule of Values	02-01-2008
01312	Coordination and Meetings	02-01-2008
01321	Construction Photographs	02-01-2008
01325	Construction Schedule	02-01-2008
01326	Construction Schedule (Bar Chart)	02-01-2008
01330	Submittal Procedures	02-01-2008
01340	Shop Drawings, Product Data, and Samples	02-01-2008
01410	TPDES Requirements (with Attachments)	09-08-2009
01422	Reference Standards	02-01-2008
01450	Contractor's Quality Control	02-01-2008
01452	Inspection Services	02-01-2008
01454	Testing Laboratory Services	02-01-2008
01502	Mobilization	02-01-2008
01562	Tree and Plant Protection	02-01-2008
01570	Diverting Flow	02-01-2008
01572	Pollution Source Controls on Construction Projects	02-01-2008
01573	Managing Overland Flow	02-01-2008
01574	Trapping Sediment in Channelized Flow	02-01-2008
01576	Waste Material Disposal	02-01-2008
01577	Protecting Inlets	02-01-2008
01578	Control of Ground Water and Surface Water	02-01-2008
01579	Trapping Sediment During Site Dewatering	02-01-2008
01610	Basic Product Requirements	02-01-2008
01630	Product Substitution Procedures	02-01-2008
01731	Cutting and Patching	02-01-2008

Doc.

No. Document Title

Doc. Date

01732	Procedure for Water Valve Assistance (with Attachments)	02-01-2008
01733	Procedure for New Water Line Disinfection	02-01-2008
01740	Restoration of Site Improvements	02-01-2008
01755	Staring Systems	02-01-2008
01770	Closeout Procedures	02-01-2008
01782	Operations and Maintenance Data	02-01-2008
01785	Project Record Documents	09-08-2009

DIVISION 2 - SITE WORK

02085	Valve Boxes, Meter Boxes, and Meter Vaults	09-08-2009
02233	Clearing and Grubbing	02-01-2008
02260	Trench Safety System	01-06-2009
02317	Excavation and Backfill for Utilities	01-06-2009
02320	Utility Backfill Materials	01-06-2009
02321	Cement Stabilized Sand	01-06-2009
02447	Augering Pipe and Conduit	01-06-2009
02501	Ductile Iron Pipe and Fittings	01-06-2009
02502	Steel Pipe and Fittings	01-06-2009
02503	Copper Tubbing	01-06-2009
02505	High Density Polyethylene (HDPE) Solid and Profile Wall Pipe	01-06-2009
02506	Polyvinyl Chloride Pipe	01-06-2009
02511	Water Lines	01-06-2009
02512	Water Tap and Service Line Installation	01-06-2009
02513	Wet Connections	02-01-2008
02514	Disinfection of Water Lines	01-06-2009
02515	Hydrostatic Testing Of Pipelines	01-06-2009
02516	Cut, Plug, And Abandonment of Mains	01-06-2009
02521	Gate Valves	01-06-2009
02525	Tapping Sleeves and Valves	01-06-2009
02526	Water Meters	01-06-2009
02527	Polyurethane Coatings on Steel or Ductile Iron Pipe	01-06-2009
02528	Polyethylene Wrap	01-06-2009
02605	Conductive Trace Wire for Nonmetallic Pipe Installations	01-06-2009
02911	Topsoil	01-06-2009
02922	Sodding	01-06-2009

DIVISION 3 - CONCRETE

03315	Concrete for Utility Construction	01-06-2009
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Doc.		
<u>No.</u>	<u>Document Title</u>	<u>Doc. Date</u>

DIVISION 4 - MORTAR - NOT USED

EXTRA SPECIFICATIONS

04000 - Boring or Tunneling Pipe

END OF DOCUMENT

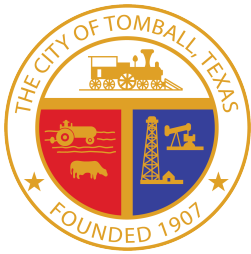
Document 00015

LIST OF DRAWINGS

<u>Sheet No.</u>	<u>Drawing Title</u>
C001	Cover Sheet
C002	City of Tomball General Notes
C100	Proposed Water Line Extension Overview
C200	Plan View Beginning to STA 14+00
C300	Plan View STA 14+00 to 28+00
C400	Plan View STA 28+00 to End
C500	City of Tomball Channel Bore HDPE Poly
C600	HCFC Channel Bore HDPE Poly
C700	E Hufsmith Road Bore
C800	Details
C900	Erosion Control Plan
C1000	Erosion Control Details
----	Survey Control

END OF DOCUMENT

00015-1
02-01-08



City of Tomball

Lori Klein Quinn
Mayor

David Esquivel, PE
City Manager

OFFICIAL NOTICE

The City of Tomball, Harris County, Texas is soliciting sealed bids for the “**Rudolph Road Water Line Extension**”. The bid documents may be obtained for **no charge** by downloading them at www.civcastusa.com (account setup required) or at the office of Oller Engineering, Inc. (2901 Wilcrest Drive, Suite 550, Houston, Texas 77042) with a **\$150.00** non-refundable charge for each complete set of documents in electronic format obtained. Make checks payable to Oller Engineering, Inc.

Sealed bids shall be submitted via CivCast E-bidding, www.civcastusa.com, for “**E&P CIP No. 2023-10015; Project Bid Number 2024-02 – “Rudolph Road Water Line Extension”**”. Bids will be accepted until **2:30 p.m. CST on Thursday, November 16, 2023**.

An electronic pre-bid conference will be held on November 9, 2023, at 2:30 p.m., to familiarize the Bidders with the goals for this project. The information for the pre-bid conference will be posted on CivCast and sent out to all plan holders. The pre-bid conference is not mandatory.

Cashier's Check, Certified Check, or Bid Bond in an amount equal to ten percent (10%) of the total amount bid must accompany the BID. The Owner reserves the right to reject any or all bids or to accept any bid deemed advantageous to it and waive informalities in bidding. All bids received after the closing time designated will be returned unopened.

During the period between the Request for Proposal, submission date, and the contract award, respondents including their agents and/or representatives/owners, shall not directly or indirectly promote their proposal or bid to any member of the Tomball City Council or City staff except in the course of City-sponsored inquiries, briefings, interviews, and/or presentations requests. Violation of this provision may result in the rejection of the respondent's Proposal submittal.

The City of Tomball reserves the right to accept or to reject any bids, to waive technicalities and to make any investigation deemed necessary concerning the bidder's ability to provide the product(s) required, and to accept what in its judgment is the most advantageous bid. All bids received after the closing time designated will be returned unopened.

David Esquivel, PE
City Manager

CERTIFICATION

I certify that the above "Notice to Bidders" was posted on the bulletin board of City Hall, City of Tomball, Texas on the ____ day of October 2023.

Tracylynn Garcia
City Secretary

Section 00200

INSTRUCTIONS TO BIDDERS

1. DEFINITIONS

- A. Terms used in these Instructions to Bidders which are defined in the Standard General Conditions of the Construction Contract (General Conditions) have the meanings assigned to them in the General Conditions. Other terms used in the Bidding Documents and not defined elsewhere have the following meanings, which are applicable to both the singular and plural thereof:
1. Bidder: One who submits a bid directly to the Owner.
 2. Successful Bidder: The most qualified, responsible and responsive bidder to whom the Owner makes an award.
 3. Bidding Documents: The Notice to Bidders, Instructions to Bidders, Supplementary Conditions to General Conditions, Special Conditions (Underground Utilities), Special Conditions to the Agreement, Proposal and the Proposed Contract Documents (including Addenda issued prior to receipt of Bids).

2. PREPARATION OF BIDS

- A. Complete sets of bidding documents must be used in preparing bids. Neither the Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of bidding documents. Copies of bidding documents are made available only for the purpose of obtaining bids on the work and do not confer a license or grant for any other use.

3. QUALIFICATIONS OF BIDDERS

- A. Each bidder must submit with the bid a Financial and Experience Statement. The statement shall be filed with the proposal in a separate sealed envelope marked "Financial and Experience Statement".
- B. Financial statements from the three most qualified bidders will be retained by the Owner until award of the contract. **NO FINANCIAL STATEMENT WILL BE READ ALOUD AT THE BID OPENING.** Upon award of the contract, the statements of all unsuccessful bidders will be returned.
- C. Additional written evidence of qualifications, such as financial data, previous

experience, present commitments, and other such data as may be called for by the OWNER.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- A. It is the responsibility of each Bidder before submitting a Bid to (a) examine the Contract Documents thoroughly, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance, or furnishing of the Work, (c) consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify ENGINEER of all conflicts, errors, or discrepancies in the Contract Documents discovered by the Bidder.
- B. Information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to OWNER and ENGINEER by owners of such Underground Facilities or others, and OWNER does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.
- C. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, underground facilities, and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions.
- D. Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies, and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work, and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.
- E. On request in advance, OWNER will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall clean up and restore the site to its former condition upon completion of such explorations.
- F. Failure to perform such investigations during the Bid period shall not relieve Bidder from responsibility for investigations, interpretations, and proper use of available information in preparation of Bidder's proposal.

- G. The lands upon which the Work is to be performed, rights-of-way, and easements for access thereto and other lands designated for use by CONTRACTOR in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by CONTRACTOR. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by OWNER unless otherwise provided in the Contract Documents.
- H. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and such means, methods, techniques, sequences, or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey an understanding of all terms and conditions for performance and furnishing of the Work.

6. INTERPRETATION OF DOCUMENTS AND ADDENDA

- A. All questions about the meaning or intent of the Contract Documents must be submitted to the Engineer in writing at least ten (10) days prior to the opening of bids. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be issued by Addenda at least 48 hours prior to Bid Opening.
- B. Any interpretation of the Contract Documents will be made only by Addendum duly issued, and a copy of such addendum will be made available to each prospective bidder recorded by ENGINEER as having received a set of Contract Documents. Each Bidder is responsible for obtaining Addenda. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- C. Addenda may also be issued to modify the Contract Documents as deemed advisable by OWNER and ENGINEER.

7. BID SECURITY

- A. Each Bid shall be accompanied by Bid security made payable to OWNER in an amount of five percent of the Bidder's maximum Bid price and in the form of a bid bond, cashier's check, or certified check. Bid Bond shall have a "B+" rating from Best's Key Rating Guide and shall be duly authorized by the State of Texas to execute Bid Security.

- B. The Bid security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required contract security, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security with 15 calendar days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the earlier of the seventh day after the Effective Date of the Agreement or the forty-sixth day after the Bid opening, whereupon Bid security furnished by such Bidders will be returned. Bid security with Bids which are not competitive will be returned within 7 days after the Bid opening.

8. CONTRACT TIME

- A. The number of days within which, or the dates by which, the Work is to be substantially completed and completed and ready for final payment (the Contract Time) are set forth in the Agreement.

9. LIQUIDATED DAMAGES

- A. Provisions for liquidated damages, if any, are set forth in the Agreement.

10. SUBSTITUTE OR "OR EQUAL" ITEMS

- A. The Contract, if awarded, will be on the basis of materials and equipment described in the DRAWINGS or specified in the Specifications without consideration of possible substitute or "or equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ENGINEER, application for such acceptance will not be considered by ENGINEER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by ENGINEER is set forth in Paragraph 6.05 of the General Conditions and may be supplemented in the General Requirements (Division 1).

11. SUBCONTRACTORS, SUPPLIERS AND OTHERS

- A. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, and other person and organizations (including those who are to furnish the principal items of material and equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within 7 days after the Bid opening, submit to OWNER a list of

all such Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person, or organization, either may, before the Notice of Award is given, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid price.

- B. If apparent Successful Bidder declines to make any such substitution, OWNER may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the Bid security of any Bidder. Any Subcontractor, Supplier, other person, or organization listed and to whom OWNER or ENGINEER does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06.B of the General Conditions.
- C. In Contracts where the Contract Price is on the basis of Cost of Work Plus a Fee, the apparent Successful Bidder, prior to the Notice of Award, shall identify in writing to OWNER those portions of the Work that such Bidder proposes to subcontract and after the Notice of Award may only subcontract other portions of the Work with OWNER'S written consent.
- D. No CONTRACTOR shall be required to employ any Subcontractor, Supplier, other person, or organization against whom CONTRACTOR has a reasonable objection.

12. BID FORMS

- A. All Bids shall be completely filled out on the specified bid forms without modification or provisions unless otherwise required.
- B. The Bids shall be completed in duplicate. The original shall be filed with the OWNER and the Bidder shall keep the duplicate.
- C. The Bids must be clearly and legibly filled out in ink or typed. In case of ambiguity or lack of clearness in stating the prices tendered or the condition of the Bid, the OWNER reserves the right to consider the most favorable construction thereof or to reject the Bid from further consideration.

- D. All Bids must be officially executed. Bids by Corporations must be executed in the corporate name by the president or vice president (or other corporate officer, accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or assistant secretary. The corporate address and state of incorporation must be shown below the signature. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature, and the official address of the partnership must be shown below the signature. All business entity names must be registered with the Secretary of State of Texas and appropriate office of registration.
- E. The Bid shall contain an acknowledgement of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

13. SUBMISSION OF BIDS

- A. Bids shall be submitted at the time and place indicated in the Notice to Bidders, and shall be enclosed in an opaque sealed envelope marked with the Project title, name and address of the Bidder and containing Bid security and other required documents. Bids will be securely kept unopened, until the specified time. The bids received after the specified time will not be considered. All incomplete Bids shall be considered non-responsive. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

14. MODIFICATION AND WITHDRAWAL OF BIDS

- A. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to opening of Bids.
- B. If, within 24 hours after Bids are opened, any Bidder files a duly signed, written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid and the Bid security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

15. OPENING OF BIDS

- A. Bids will be opened and read aloud publicly. An abstract of the amounts of the base Bids and major alternates (if any) will be made available to Bidders within 7 calendar days after the date of Bid opening.

16. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- A. The apparent Successful Bid and the next two lowest Bids will remain subject to acceptance for 60 calendar days after the day of the Bid opening. All other Bids will be released, and the Bid security returned within 7 days. OWNER may, in its sole discretion, release any Bid and return the Bid security prior to that date.

17. AWARD OF CONTRACT

- A. Contract will be awarded on basis of low Base Bid. Selection of alternates or deductive Bid Items by the OWNER will not be used to displace the low Bidder.
- B. The Owner reserves the right to reject any and all bids, to waive any and all informalities not involving price, time or changes in the Work, to negotiate contract terms with the Successful Bidder, and to disregard all non-conforming, non-responsive, unbalanced or conditional Bids. Also, OWNER reserves the right to reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive, or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- C. In evaluating Bids, OWNER will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- D. OWNER may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. OWNER also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

- E. OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to OWNER'S satisfaction within the prescribed time.
- F. Alternate bid items are included in the Bid Form. The Successful Bidder will be determined based on either the low Base Bid (Part C of the Bid), or the low Base Bid Plus Alternate Bid (Part E of the Bid), at the discretion of the OWNER.
- G. If the Contract is to be awarded, OWNER will give the Successful Bidder a Notice of Award within 60 calendar days after the day of the Bid opening.

18. CONTRACT SECURITY

- A. Paragraph 5.1 of the General Conditions and the Supplementary Conditions set forth OWNER'S requirements as to performance and payment Bonds. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required performance and payment Bonds.

19. INSURANCE CERTIFICATES

- A. The CONTRACTOR shall provide and maintain a minimum coverage as defined in the Contract Documents (Article 5 of the General Conditions). The companies providing the coverage shall be acceptable to the OWNER (Certificate of Insurance Section 00620).

20. SIGNING OF AGREEMENT

- A. When OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within 15 calendar days thereafter, CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER with the required Bonds. Within 10 calendar days thereafter, OWNER shall deliver one fully signed counterpart to CONTRACTOR. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

21. PRE-BID CONFERENCE

- A. A pre-bid conference will be held at the time and place indicated in the Invitation to Bid (Section 00100). Representatives of OWNER and ENGINEER

will be present to discuss the Project. All prospective bidders are encouraged to attend and participate in the conference. ENGINEER will notify all prospective Bidders of record of any such Addenda as ENGINEER considers necessary in response to questions arising at the conference.

22. SALES TAX

- A. Owner is exempt from Texas sales and use taxes pursuant to Texas Tax Code §151.309 as a political subdivision of the State of Texas. OWNER shall provide CONTRACTOR with a completed Texas Sales and Use Tax Exemption Certification as evidence of the applicability of such exemption and, accordingly, CONTRACTOR shall not collect Texas sales and use taxes from OWNER with respect to this Contract. CONTRACTOR and all Subcontractors to CONTRACTOR shall issue a Texas Sales and Use Tax Exemption Certification with respect to, and shall not pay Texas sales and use taxes on, all purchases of the following items that are exempt from Texas sales and use taxes pursuant to Texas Tax Code §151.311: (i) tangible personal property that will be incorporated into OWNER'S realty; (ii) tangible personal property that is necessary and essential for the performance of this Contract and is consumed entirely on the job site; and (iii) taxable services for use in the performance of this Contract that are performed at the job site and are either integral to the performance of this Contract or expressly required to be provided by this Contract. In addition, CONTRACTOR and all Subcontractors to CONTRACTOR (i) shall not include any provision for Texas sales and use taxes with respect to such exempt items in any bid or contract amount, and (ii) shall pass on to OWNER cost savings due to the exempt status of such exempt items. CONTRACTOR'S contracts with all Subcontractors to CONTRACTOR shall include the foregoing provision regarding the exemption from Texas sales and use taxes.

**END OF
SECTION**

Document 00210

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

The following Paragraphs modify Document 00200 - Instructions to Bidders. Where a portion of the Instructions to Bidders is modified or deleted by these Supplementary Instructions, the unaltered portions of the Instructions to Bidders remains in effect.

4.0 – BID DOCUMENTS:

- A. The Bid Documents may be obtained for no charge by downloading them at www.civcastusa.com (account setup required).
- B. The following plan rooms, whose names, addresses, phone and fax numbers were last updated on September 1, 2004, have been authorized by the City to display Bid Documents for examination:

AMTEK Information Services, Inc., 4001 Sherwood Lane, Houston, TX 77092, 713-956-0100, Fax 713-956-5340, Email: planroom@amtekusa.com

Associated Builders & Contractors, Inc., (ABC), 3910 Kirby, Suite 131, Houston, TX 77098-4151, 713-523-6222, Fax 713-874-0747. Email: lori@abchouston.org

Associated General Contractors (AGC-BB) Building Branch, 3825 Dacoma, Houston, TX 77092-8717, 713-843-3700, Fax 713-843-3701. Email: karla.s@agchouston.org

Associated General Contractors, (AGC-HHUI), Highway, Heavy Utilities and Industrial Branch, 2400 Augusta St., Suite 180, Houston, TX 77057, 713-334-7100, Fax 713-334-7130. Email: houston@agctx.org

Construction Information Network, 1225 North Loop West, Suite 550, Houston, TX 77008, 713-868-2233 ext. 329, Fax 866-852-2713. Email: paul.tilford@cnsx.com

F. W. Dodge Corporation, 4101 Greenbriar, Suite 320, Houston, TX 77098, 713-529-4895, Fax 713-524-7639. Email: Terrie_Harris@mcgraw-hill.com

The Builders' Exchange of Texas, Inc., 3910 Kirby, Suite 131, Houston, TX 77098, 210-564-6900, Fax: 210-564-6921, Email: houston@bctx.com

5.0 - EXAMINATION OF DOCUMENTS, SITE, AND LOCAL CONDITIONS:

- A. Work will be performed in public right-of-way and in City of Tomball easements. The site may be examined at any time during daylight hours.

8.0-SUBSTITUTION OF PRODUCTS:

- A. Where Bid Documents specify a specific Product with provision for consideration of substitutions (or equal), requests for prebid approval of substitutions will be considered from Bidders only if received by Project Manager 10 days or more prior to Bid Date.
- B. Requests for substitutions must provide complete information in order to determine acceptability of the Products, in accordance with provisions of Document 00700 - General Conditions.
- C. The City will consider requests for substitutions and, if approved, will issue an Addendum. Bidder shall base its Bid only on substitutions approved in Addenda. Substitutions, not listed in an Addendum, are not allowed.
- D. Bidder shall include in its Bid, costs of substitutions approved by Addenda.

10.0 – BID SUBMISSION:

- A. Sealed bids shall be submitted via CivCast E-Bidding, www.civcast.com, for **Rudolph Rd. Water Line Extension Project No. 2024-02**. Bids shall be submitted no later than **2:30 p.m., Local Time on November 16th 2023.**
- B. Submit one copy of the executed offer on the bid forms provided, properly signed, with required Security Deposit, and other Supplements to Bid Forms, in a sealed, opaque envelope. On the outside of the envelope, clearly identify the Certificate of Responsibility number, Bidders name, Project name, and the City's name. Bids submitted by mail shall be enclosed in a separate envelope addressed for mailing, and identifying the enclosure as a bid.

15.0 – PREBID MEETING:

1. A pre-bid conference will be hosted electronically on **November 9th at 2:30 P.M.**, to familiarize bidders with the goals for this project. The information for the pre-bid will be posted on CivCast and sent to all plan holders. **The pre-bid conference is not mandatory.**

END OF DOCUMENT

REQUEST FOR BID INFORMATION

Document 00410A

BID FORM - PART A

To: **The Honorable Mayor and City Council of the City of Tomball
City Hall**

Tomball, Texas

Project: Rudolph Rd. Water Line Extension
Project No.: 2024-02
Bidder: _____
(Print or type full name of proprietorship, partnership, corporation, or joint venture.)

1.0 OFFER

- A. Total Bid Price:** Having examined the Project location and all matters referred to in Bid Documents for the Project, we, the undersigned, offer to enter into a Contract to perform the Work for the Total Bid Price shown on the signature page of this Document
- B. Security Deposit:** Included with the Bid is a Security Deposit in the amount of 10 percent of the Total Bid Price subject to terms described in Document 00200 - Instructions to Bidders.
- C. Period for Bid Acceptance:** This offer is open to acceptance and is irrevocable for 90 days from Bid Date. That period may be extended by mutual written agreement of the City and Bidder.
- D. Addenda:** All Addenda have been received. Modifications to Bid Documents have been considered and all related costs are included in the Total Bid Price.
- E. Bid Supplements:** The following documents are attached:
- ☒ Security Deposit (*as defined in Document 00200 - Instructions to Bidders*)
 - ☒ Document 00453 - Bidder's Statement of Residency
 - ☒ Document 00455 - Affidavit of Ownership or Control
 - ☐ Page 00809-63, Request for Contractor Clearance
 - ☐ Others as listed: _____

2.0 CONTRACT TIME

- A.** If offer is accepted, Contractor shall achieve Date of Substantial Completion within [120_] days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

Document 00410B

BID FORM - PART B

**1.0 TOTAL BID PRICE HAS BEEN CALCULATED BY BIDDER, USING THE
FOLLOWING COMPONENT PRICES AND PROCESS (PRINT OR TYPE
NUMERICAL AMOUNTS):**

A. STIPULATED PRICE:

\$N/A

(Total Bid Price; minus Base Unit Prices, Extra Unit Prices, Cash Allowances and All Alternates, if any)

B. BASE UNIT PRICE TABLE:

Item No.	Control No.	Item Description	Unit Measure	Unit Quantity	Unit Price	Total in figures
1		General Terms and Conditions, Mobilization including Bonds and Insurance. (Not to exceed 4% of total base bid), complete in-full	JOB	1		
2		10-Inch HDPE DR9 Polyethylene Pipe, (Bore) Complete in Place with Stainless Steel Insert, 10-Inch 11 ¼-Degree Bend, MJ w/HDPE Adaptor and PVC MegaLug Restraints.	LF	550		
3		10-Inch x 8-Inch DI Reducer, MJ w/PVC MegaLug Restraints	EA	4		
4		8-Inch C900 DR-18 PVC, Installed	LF	2950		
5		8-Inch DI Solid Sleeve Coupling	EA	3		
6		8-Inch DI 90-Degree Bend, MJ x/PVC MegaLug Restraints	EA	2		
7		8-Inch DI 45-Degree Bend, MJ w/PVC MegaLug Restraints	EA	7		
8		8-Inch DI Gate Valve, MJ w/ PVC MegaLug Restraints and Standard Box w/Cover.	EA	8		
9		8-Inch x 6-Inch DI Tee, MJ w/PVC MegaLug Restraints	EA	10		
10		6-Inch C900 DR-18 PVC, Installed	EA	60		
11		6-Inch Fire Hydrant Assembly with 4-Foot Bury Depth, Complete in Place with 6-Inch Gate Valve.	EA	10		
12		Asphalt Drive Repair	SF	170		
13		Gravel Drive Repair	SF	250		
14		Concrete Drive Repair	SF	340		
15		Compacted Base Drive Repair	SF	240		
16		12" SCH 40 Steel Pipe Casing w/Casing Pipe Seals	LF	40		
17		1" SDR9 Service Connections Installed on City of Tomball Installed Meter, Corp. Stop and Meter Box. (City to Provide Meter, Corp Stop and Meter Box)	EA	10		

B. BASE UNIT PRICE TABLE CONTINUE:

Item No.	Control No.	Item Description	Unit Measure	Unit Quantity	Unit Price	Total in figures
18		1" SDR9 Service Reconnection With Corp Stop, 1" Meter. (Use Existing Meter Box)	EA	1		
19		Tracer Wire	LF	3560		
20		Trench Safety	LF	120		
21		Traffic Control	JOB	1		
22		Storm Water Pollution Prevention Plan Maintenance, Installation and Removal of All Erosion Control Measures.	JOB	1		
<u>TOTAL BASE UNIT PRICES</u>						\$_____

C. ALTERNATE UNIT PRICE TABLE:

Item No.	Control No.	Item Description	Unit Measure	Unit Quantity	Unit Price	Total in figures
<u>TOTAL ALTERNATE UNIT PRICES</u>						\$_____

D. CASH ALLOWANCE TABLE:

Cash Allowance No.	Cash Allowance Short Title	Cash Allowance in figures
1	Construction Contingencies	25,000
<u>TOTAL CASH ALLOWANCES</u>		25,000

E. ALTERNATES TABLE:

Alternate No.	Alternate Short Title	Total Price for Alternate in figures
<u>TOTAL ALTERNATES</u>		\$ _____

REST OF PAGE INTENTIONALLY LEFT BLANK

F. TOTAL BID PRICE:

\$ _____

(Add Totals for Items A., B., C., D., and E. above)

2.0 SIGNATURES: By signing this Document, I agree that I have received and reviewed all Addenda and considered all costs associated with the Addenda in calculating the Total Bid Price.

Bidder: _____

(Print or type full name of your proprietorship, partnership, corporation, or joint venture.*)

**** By:**

Signature

Date

Name: _____

(Print or type name)

Title

Address: _____

(Mailing)

(Street, if different)

Telephone and Fax Number: _____

(Print or type numbers)

- * If Bid is a joint venture, add additional Bid Form signature sheets for each member of the joint venture.
- ** Bidder certifies that the only person or parties interested in this offer as principals are those named above. Bidder has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding.

Footnotes for Basic Unit Price Table and Extra Unit Price Table:

- (1) Fixed Unit Price determined prior to Bid. Cannot be adjusted by the Bidder.
- (2) Minimum Bid Price determined prior to Bid. Can be increased by the Bidder by crossing out the Minimum and noting revised price on the line above.
- (3) Maximum Bid Price determined prior to Bid. Can be decreased by Bidder by crossing out the Maximum and noting revised price on the line above.
- (4) Fixed Range Unit Price determined prior to Bid. Unit Price can be adjusted by Bidder to any amount within the range defined by crossing out prices noted and noting revised price on the line above.

Note: This document constitutes a government record, as defined by § 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in § 37.10 of the Texas Penal Code.

END OF DOCUMENT

Document 00430

BIDDER'S BOND

THAT WE, _____, as Principal,
(Bidder)
("Bidder"), and the other subscriber hereto, _____, as Surety, do hereby
acknowledge ourselves to be held and firmly bound to the City of Tomball, a municipal corporation, in the
sum of _____ Dollars (\$_____) (an amount
equal to 10 percent of the Total Bid Price, including Cash Allowances and Alternates, if any, for the payment
of which sum, well and truly to be made to the City of Tomball and its successors, the Bidder and Surety do
bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Bidder has submitted on or about this day a proposal offering to perform the following:

(Project Name, Location and Number)

in accordance with the Drawings, Specifications, and terms and conditions related thereto to which
reference is hereby made.

NOW, THEREFORE, if the Bidder's offer as stated in the Document 00410 - Bid Form is accepted by the
City, and the Bidder executes and returns to the City Document 00520 - Agreement, required by the City,
on the forms prepared by the City, for the Work and also executes and returns the same number of the
Performance, Payment and Maintenance Bonds (such bonds to be executed by a Corporate Surety
authorized by the State Board of Insurance to conduct insurance business in the State of Texas, and having
an underwriting limitation in at least the amount of the bond) and other submittals as required by Document
00495 - Post-Bid Procedures, in connection with the Work, within the Contract Time, then this obligation
shall become null and void; otherwise it is to remain in full force and effect.

If Bidder is unable to or fails to perform the obligations undertaken herein, the undersigned Bidder and
Surety shall be liable to the City for the full amount of this obligation which is hereby acknowledged as the
amount of damages which will be suffered by the City on account of the failure of such Bidder to perform
such obligations, the actual amount of such damages being difficult to ascertain.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when
actually received or, if earlier, on the third day following deposit in a United States Postal Service post office
or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the
respective other Party at the address prescribed in the Contract documents, or at such other address as the
receiving Party may hereafter prescribe by written notice to the sending Party.

IN WITNESS THEREOF, the Bidder and Surety have signed and sealed this instrument on the
respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)
WITNESS: (if not a corporation)

By: _____
Name: _____
Title: _____

ATTEST/SURETY WITNESS: (SEAL)

By: _____
Name: _____
Title: _____
Date: _____

(Name of Bidder)

By: _____
Name: _____
Title: _____
Date: _____

(Full Name of Surety)

(Address of Surety for Notice)

(Telephone Number of Surety)

By: _____
Name: _____
Title: _____
Date: _____

END OF DOCUMENT

BIDDER'S STATEMENT OF RESIDENCY

The City may not award a contract for general construction, services, or purchases to a Nonresident Bidder unless Nonresident's Bid is lower than the lowest Bid submitted by a responsible Texas Resident Bidder by the same amount that a Texas Resident bidder would be required to underbid the Nonresident Bidder to obtain a comparable contract in the state in which Nonresident's principal place of business is located.

1. This certifies that the Bidder, _____, is a State of Texas Resident Bidder as defined in TEX. GOVT. CODE ANN. § 2252.001(4) (Vernon 1994).

Signature

Title

"Texas Resident Bidder" means a bidder whose principal place of business is in this State, and includes a Contractor whose ultimate parent company or majority owner has its principal place of business in this State. *When bidder cannot sign 1, above, proceed to 2.*

2. a. _____ is a resident of _____ and is a Nonresident Bidder as defined in TEX. GOVT. CODE ANN. § 2252.001(3) (Vernon 1994).

Signature

Title

"Nonresident Bidder" means a bidder whose principal place of business is not in this State, but excludes a contractor whose ultimate parent company or majority owner has its principal place of business in this State.

- b. The State of _____ Bidder's resident state _____ Does or Does Not have a state statute giving preference to resident bidders.

Signature

Title

If the answer to 2.b is that your state does have a statute giving preference to resident bidders, then you must provide a copy and proceed to 3.

3. A copy of the State of _____ statute is attached.

Signature

Title

Date

END OF DOCUMENT

Orig. Dept.: _____

File/I.D. No.: _____

INSTRUCTION: Entities using an assumed name should disclose such fact to avoid rejection of the affidavit. The following format is recommended: Corporate/Legal Name d.b.a. Assumed Name.

Document 00455

AFFIDAVIT OF OWNERSHIP OR CONTROL

BEFORE ME, the undersigned authority, on this day personally appeared

_____ (Full Name, hereafter "Affiant"),

_____ (state title/capacity with Contracting Entity) of

_____ (Contracting Entity's Corporate/Legal Name)

("Contracting Entity"), who being by me duly sworn on oath stated as follows:

1. Affiant is authorized to give this affidavit and has personal knowledge of the facts and matters herein stated.

2. Contracting Entity seeks to do business with the City in connection with

_____ (describe project or matter) which is expected to be in an amount that exceeds \$25,000.

3. The following information is submitted in connection with the proposal, submission or bid of Contracting Entity in connection with the above described project or matter.

4. Contracting Entity is organized as a business entity as noted below (check box as applicable):

FOR PROFIT ENTITY:

☐ SOLE PROPRIETORSHIP

☐ CORPORATION

☐ PARTNERSHIP

☐ LIMITED PARTNERSHIP

☐ JOINT VENTURE

☐ LIMITED LIABILITY COMPANY

☐ OTHER (Specify type in space below)

NON-PROFIT ENTITY:

☐ NON-PROFIT CORPORATION

☐ UNINCORPORATED ASSOCIATION

Orig. Dept.: _____

File/I.D. No.: _____

5. The information shown below is true and correct for the Contracting Entity and all owners of 5% or more of the Contracting Entity and, where the Contracting Entity is a non-profit entity, the required information has been shown for each officer. (NOTE: In all cases, use full names, local business and residence addresses and telephone numbers. Do not use post office boxes for any address. Inclusion of e-mail addresses is optional but recommended. Attach additional sheets as needed.)

Contracting Entity

Name: _____

Business Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (_____)_____

Email Address (optional) _____

Residence Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (_____)_____

Email Address (optional) _____

5% Owner(s) (IF NONE, STATE "NONE.")

Name: _____

Business Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (_____)_____

Email Address (optional) _____

Residence Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (_____)_____

Email Address (optional) _____

6. Optional Information

Contracting Entity and/or _____ (Name of Owner or Non-Profit Officer) is actively protesting, challenging or appealing the accuracy and/or amount of taxes levied against _____ (Contracting Entity, Owner or Non-Profit Officer) as follows:

Document 00495

POST-BID PROCEDURES

1.0 DOCUMENT ADDRESSES

- A. Notice of Intent to Award.
- B. Monitoring Authority
- C. Failure of Bidder to comply with requirements.
- D. Notice to Proceed.

2.0 NOTICE OF INTENT TO AWARD

- A. The City will provide written Notice of Intent to Award to Low Bidder.

3.0 DEFINITIONS

- A. The "Monitoring Authority" for this Project is:
- B. The "Project Manager" for this Project is:

Rich Oller, P.E.
Oller Engineering, Inc.
2901 Wilcrest Dr., Ste. 550
Houston, TX 77042
(O): 806-993-6226
(E): rich.oller@oei-eng.com

4.0 REQUIREMENTS OF BIDDER

- A. Within 3 days of receipt of Notice of Intent to Award, Low Bidder shall execute and deliver to Project Manager and Monitoring Authority, for the City's approval, documents indicated by an "X" below:
 - [X] Document 00600 - List of Proposed Subcontractors and Suppliers
 - [X] Executed Subcontract(s), Letter(s) of Intent, or documentation of good faith efforts to meet the goals

- B. Within 10 days of receipt of Notice of Intent to Award, Low Bidder shall execute and deliver to Project Manager for the City's approval, documents indicated by an "X" below:

- [X] Document 00500 - Form of Business
- [X] Document 00501 - Resolution of Corporation
- [X] Document 00520 - Agreement
- [X] Document 00601 - Drug Policy Compliance Agreement
- [X] Document 00602 - Contractor's Drug-free Workplace Policy (**Contractor creates this document.**)
- [X] Document 00604 - History of OSHA Actions and List of On-the-job Injuries
- [X] Document 00607 - Certification Regarding Debarment, Suspension, and Other Responsibility Matters
- [X] Document 00610 - Performance Bond
- [X] Document 00611 - Statutory Payment Bond
- [X] Document 00612 - One-year Maintenance Bond
- [X] Document 00620 - Affidavit of Insurance (*with Certificate of Insurance attached*)
- [X] Document 00622 - Name and Qualifications of Proposed Superintendent (**Contractor creates this document.**)

- C. On Bidder's written request, Project Manager may grant an extension of time, not to exceed 5 days, to furnish documents specified in Paragraphs 4.0.A and 4.0.B. If Bidder is required to resubmit documents specified in Paragraph 4.0.A or 4.0.B, Bidder shall do so within time limits provided in the request for resubmission.

5.0 FAILURE OF BIDDER TO COMPLY WITH REQUIREMENTS

- A. Should Bidder, on receipt of Notice of Intent to Award, fail to comply with requirements of this Document 00495 within stated time, the City may declare award in default and require forfeiture of the Security Deposit.
- B. After the City's written notice of default to Low Bidder, the City may award the Contract to Bidder whose offer is the next lowest bid, and Security Deposit of Bidder in default shall be forfeited to the City in accordance with provisions of Document 00200 - Instructions to Bidders.

6.0 NOTICE TO PROCEED

- A. Upon the City's execution of the Agreement and delivery to Contractor, City Engineer will give Document 00551 - Notice to Proceed to Contractor, which establishes Date of Commencement of the Work.

END OF DOCUMENT

Document 00496

CONTROL FORM FOR CONTRACT DOCUMENTS

NOTE: This form is to remain with the Contract documents and SHOULD NOT BE REMOVED.

PROJECT NAME: Rudolph Road Water Line Extension

PROJECT No.: 2024-02

CONTRACTOR: _____

DEPARTMENT/DIVISION: _____

CONTACT PERSON(S): _____ **PHONE NUMBER(S):** _____

These documents are assembled according to the attached checklist. For verification of items within the Contract documents, refer to the checklist.

This Ordinance and/or Contract have been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

By: _____ Date: _____
Legal Assistant

I have sent the Ordinance to the Controller's Office.

By: _____ Date: _____
Award Coordinator

TO THE CITY SECRETARY: I have examined and approved the Contract documents. Two copies of the Contract documents are sent to you herewith for signatures.

By: _____ Date: _____
Director,

TO THE CITY CONTROLLER: Two copies of the Contract documents are sent to you herewith for countersignature. They were authorized by Ordinance Number _____ passed by City Council on _____. The Contract documents were executed by the Mayor or Mayor Pro Tem on _____.

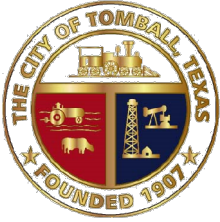
By: _____ Date: _____
City Secretary

TO THE DIRECTOR: One copy of the Contract documents is sent to you for final distribution.

By: _____ Date: _____
City Controller

END OF DOCUMENT

00496-1
02-01-08



CITY OF TOMBALL

Mayor

Director
Engineering & Planning
501 James Street
Tomball, Texas 77375

[Date]

[Contractor]
ATTN: [Contractor Contact]
[Contractor's Address]
[City, ST Zip]

RE: REQUEST FOR BONDS AND PROOF OF INSURANCE

Project No.

Dear [Contractor Contact]:

You are hereby notified that in accordance with Document 00495 - Post-bid Procedures, you have 14 days to deliver the following documents for the City's approval:

- ☒ Document 00610 - Performance Bond
- ☒ Document 00611 - Statutory Payment Bond
- ☒ Document 00612 - One-year Maintenance Bond
- ☐ Document 00613 - One-year Surface Correction Bond
- ☒ Document 00615 - Affidavit of Insurance (*with Certificate of Insurance attached*)

Deliver the documents to the Project Manager, City of Tomball, [Contracting Department], [PM's Address].

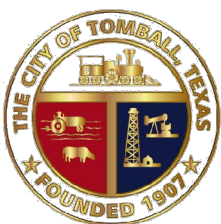
**FAILURE OF BIDDER TO MEET SUCH CONDITIONS ON OR BEFORE SUCH DATE MAY
RESULT IN APPLICATION OF PROVISIONS OF DOCUMENT 00495 - POST-BID
PROCEDURES, PARAGRAPH 5.0.**

Sincerely,

Director

[AD:typ]

c: [Contracting Department's Director]
File No. [File No.]



CITY OF TOMBALL

[Contracting Department]

Mayor

[Contracting Dept's Director]
Director
[Contracting Department]
[Dept's Address]
Tomball, Texas 77375

[Date]

[Contractor]
ATTN: [Contractor Contact]
[Contractor's Address]
[City, ST Zip]

RE: NOTICE OF INTENT TO AWARD
Rudolph Rd. Water Line Extension
Project No. 2024-02

Dear [Contractor Contact]:

Your Bid dated November 16, 2023 for the above Contract has been considered and you are the apparent Low Bidder. Subject to the approval of City Council and your satisfactory compliance with requirements listed in the attached Document 00495 - Post-Bid Procedures, the City intends to award a construction contract to you for:

[Project description of the Work plus alternates or phases of the Work, if any]

The Contract Price is [Original Contract Price].

Deliver to the City of Tomball, [Contracting Department], [Dept's Address], Tomball, Texas [Zip] two executed copies of the enclosed Agreement and each document listed in Document 00495 within the specified number of days. Also deliver listed documents to the Monitoring Authority specified in Document 00495 and in the number of days specified.

After complying with these conditions, and promptly after City Council has considered and approved this action, the City will return one fully executed Contract.

Should you, on receipt of this notice, fail to comply with the requirements of Document 00495, within the stated time, the City may declare the award in default and require forfeiture of the Security Deposit.

Direct questions regarding post-bid procedures or the contract award process to [City contact person] at [City contact person's phone number].

Sincerely,

[Contracting Division]
[Contracting Department]

c: [Distribution List]

Document 00498 – Notice of Intent to Award

Document 00500

FORM OF BUSINESS

Please mark the box describing your firm's form of business, fill in the requested information, and include the relevant attachments.

[] Corporation

Corporate Name: _____
State of Incorporation: _____
Mailing Address: _____
Type of Corporation: _____

Certificate of Assumed Name, if operating under a name different than that on the corporate charter (the Certificate must have been issued within the past 10 years to be valid)

*Certificate of Good Standing

*Certificate of Existence (if non-Texas corporation, Certificate of Authority)

[] Partnership/Joint Venture

Partnership/Joint Venture Name: _____
Mailing Address: _____
Type of Partnership/Joint Venture: _____

Copy of the Partnership or Joint Venture Agreement, **or**
Affidavit with the name of the partnership or joint venture, the names of the individual partners or participants in the joint venture, and a statement that the partnership or joint venture is in existence

Certificate of Assumed Name, (the Certificate must have been issued within the past 10 years to be valid)

If firm is a limited partnership, the Certificate of Limited Partnership

If any partner or joint venturer is a corporation, the above information relating to corporation must be included as to each sum partner or joint venturer.

[] Sole Proprietorship

Name: _____
Mailing Address: _____

Certificate of Assumed Name, if operating under a name different than that of the sole proprietor (the Certificate must have been issued within the past 10 years to be valid)

* Must be furnished upon request of the Director and must be less than 90 days old.

END OF DOCUMENT

Document 00501

RESOLUTION OF CORPORATION

I hereby certify that it was RESOLVED by a quorum of the directors of

(Name of Corporation / Contractor)

on the _____ day of _____, 20____, that _____,
(Corporate Representative)

be, and hereby is, authorized to act on behalf of the Corporation, as its
representative, in all business transactions conducted in the State of Texas, and

That the above resolution was unanimously ratified by the Board of Directors at
said meeting and that the resolution has not been rescinded or amended and is now
in full force and effect; and

In authentication of the adoption of this resolution, I subscribe my name on this
_____ day of _____, 20_____.

Secretary/Assistant Secretary

END OF DOCUMENT

Document 00520

AGREEMENT

Project: Rudolph Rd. Water Line Extension

Project Location: _____ (Key Map No. [C100])

Project Bid No: 2024-02

E&P Project No: _____

The City: The City of Tomball, County of Harris, Texas (the "City")

and

Contractor: _____

(Address for Written Notice) _____

Fax Number: _____

City Engineer is: _____

(Address for Written Notice) _____

Fax Number: _____

THE CITY AND CONTRACTOR AGREE AS FOLLOWS:

ARTICLE 1

THE WORK OF THE CONTRACT

1.1 Contractor shall perform the Work in accordance with the Contract.

ARTICLE 2

CONTRACT TIME

2.1 Contractor shall achieve Date of Substantial Completion within 120 days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

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2.2 The Parties recognize that time is of the essence for this Agreement and that the City will suffer financial loss if the Work is not completed within the Contract Time. Parties also recognize delays, expense, and difficulties involved in proving in a legal or arbitration proceeding actual loss suffered by the City if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Parties agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay the City the amount stipulated in Document 00800 – Supplementary Conditions, for each day beyond Contract Time.

ARTICLE 3 CONTRACT PRICE

3.1 Subject to terms of the Contract, the City will pay Contractor in current funds for Contractor's performance of the Contract, Contract Price of \$[Original Contract Price, in numbers only], which includes Alternates, if any, accepted below.

3.2 The City accepts Alternates as follows:

Alternate No. 1	<u>[Accepted, Not Accepted or Not Applicable]</u>
Alternate No. 2	<u>[Accepted or Not Accepted]</u>
Alternate No. 3	<u>[Accepted or Not Accepted]</u>

ARTICLE 4 PAYMENTS

4.1 The City will make progress payments to Contractor as provided below and in the General Conditions.

4.2 The Period covered by each progress payment is one calendar month ending on the [___] 10th, [___] 20th, or [X] last day of the month.

4.3 The Schedule of Values established as provided in paragraph 2.07.A of the General Conditions will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed. The City will make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as provided below in paragraphs 4.3.1 and 4.3.2.

4.3.1 Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or City may withhold, in accordance with paragraph 14.02 of the General Conditions:

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- a. For contracts under \$400,000.00, 90% of Work completed (with the balance being retainage).
For contracts over \$400,000.00, 95% of Work completed (with the balance being retainage.)
 - b. For contracts under \$400,000.00, 90% (with the balance being retainage) and for contracts over \$400,000.00, 95% (with the balance being retainage) of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to the City as provided in paragraph 14.02 of the General Conditions).
- 4.3.2 Upon Substantial Completion, the City shall pay an amount sufficient to increase total payments to Contractor to 95% of the Work completed, less such amounts as Engineer shall determine in accordance with paragraph 14.02.B.5 of the General Conditions and less 100% of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the Certificate of Substantial Completion.
- 4.4 Final payment, constituting entire unpaid balance of Contract Price, will be made by the City to Contractor as provided in the General Conditions.

ARTICLE 5

CONTRACTOR REPRESENTATIONS

- 5.1 Contractor represents:
- 5.1.1 Contractor has examined and carefully studied Contract documents and other related data identified in Bid Documents.
 - 5.1.2 Contractor has visited the site and become familiar with and is satisfied as to general, local, and site conditions that may affect cost, progress, and performance of the Work.
 - 5.1.3 Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.
 - 5.1.4 Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in Contract documents and (2) reports and drawings of a hazardous environmental condition, if any, at the site which has been identified in Contract documents.
 - 5.1.5 Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means,

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methods, techniques, sequences, and procedures of construction to be employed by Contractor, including applying specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract to be employed by Contractor, and safety precautions and programs incident thereto.

5.1.6 Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for performance of the Work at Contract Price, within Contract Time, and in accordance with the Contract.

5.1.7 Contractor is aware of general nature of work to be performed by the City and others at the site that relates to the Work as indicated in Contract documents.

5.1.8 Contractor has correlated information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract.

5.1.9 Contractor has given City Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract, and written resolution thereof by City Engineer is acceptable to Contractor.

5.1.10 Contract documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 6

MISCELLANEOUS PROVISIONS

6.1 The Contract may be terminated by either Party as provided in Conditions of the Contract.

6.2 The Work may be suspended by the City as provided in Conditions of the Contract.

6.3 Contractor further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An "undocumented worker" shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States.

6.4 In accordance with Chapter 2270, Texas Government Code, a government entity may not enter into a contract with a company for goods or services unless the company covenants and agrees that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. Furthermore, the contractor is prohibited from engaging in business with Iran, Sudan or Foreign Terrorist Organizations.

ARTICLE 7

ENUMERATION OF CONTRACT DOCUMENTS

- 7.1 The following documents are incorporated into this Agreement:
- 7.1.1 Document 00700 - General Conditions
- 7.1.2 Document 00800 - Supplementary Conditions
- 7.1.3 General Requirements.
- 7.1.4 Divisions 02 through 03 of Specifications attached hereto or incorporated by reference in Document 00010 - Table of Contents.
- 7.1.6 Addenda which apply to the Contract, are as follows:
- Addendum No. 1, dated [_____]
- Addendum No. 2, dated [_____]
- Addendum No. 3, dated [_____]

- 7.1.7 Other documents:

<u>Document No.</u>	<u>Title</u>
[X] 00410B	Bid Form - Part B
[X] 00500	Form of Business
[X] 00501	Resolution of Corporation (if a corporation)
[X] 00610	Performance Bond
[X] 00611	Statutory Payment Bond
[X] 00612	One-year Maintenance Bond
[X] 00620	Affidavit of Insurance (with the Certificate of Insurance attached)
[X] 00800	Exhibit A, Wage Rates
[] 00821	Wage Rate for Building Construction
[] 00830	Trench Safety Geotechnical Information

ARTICLE 8

SIGNATURES

- 8.1 This Agreement is executed in two originals and is effective on _____.

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06-16-2011

CONTRACTOR:

(If Joint Venture)

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Tax Identification Number: _____

Tax Identification Number: _____

ATTEST/SEAL:

[SEAL]

Attest: _____

Date: _____

CITY OF TOMBALL, TEXAS:

By: _____

City Manager

Date: _____

ATTEST/SEAL:

[SEAL]

Attest: _____

City Secretary

Date: _____

END OF DOCUMENT

Document 00600

LIST OF PROPOSED SUBCONTRACTORS AND SUPPLIERS - PART A
SCHEDULE OF SUBCONTRACTORS AND SUPPLIERS

PROJECT NAME: _____ DATE OF REPORT: _____
PROJECT NO.: _____

SUBCONTRACTOR OR SUPPLIER	ADDRESS	SCOPE OF WORK ²

- NOTES:**
1. RETURN PART B FOR ALL PROJECTS WITHIN THE SPECIFIED NUMBER OF DAYS AFTER RECEIPT OF NOTICE OF INTENT TO AWARD.
 2. DESCRIBE THE WORK TO BE PERFORMED, SUCH AS PAVING, ELECTRICAL, ETC.

CONTRACTOR SHALL EXECUTE CONTRACTS WITH APPROVED SUBCONTRACTORS AND SUPPLIERS WITHIN 30 DAYS AFTER THE DATE OF THE NOTICE TO PROCEED.

SIGNATURE: _____ COMPANY NAME: _____

NAME: _____ TITLE: _____
(Type or Print)

00600-1
02-01-08

END OF DOCUMENT

Document 00601

DRUG POLICY COMPLIANCE AGREEMENT

I, _____, _____
Name Title

of _____
Contractor

have authority to bind Contractor with respect to its Bid, Proposal, or performance of any and all contracts it may enter into with the City of Tomball; and that by making this Agreement, I affirm that Contractor is aware of and by the time the Contract is awarded will be bound by and agree to designate appropriate safety impact positions for company employee positions, and to comply with the following requirements before the City issues a Notice to Proceed:

1. Develop and implement a written Drug Free Workplace Policy and related drug testing procedures for Contractor that meet the criteria and requirements established by the Mayor's Amended Policy on Drug Detection and Deterrence (Mayor's Drug Policy) and the Mayor's Drug Detection and Deterrence Procedures for Contractors (Executive Order No. _____).
2. Obtain a facility to collect urine samples consistent with Health and Human Services (HHS) guidelines and an HHS-certified drug-testing laboratory to perform drug tests.
3. Monitor and keep records of drug tests given and results; and upon request from the City of Tomball, provide confirmation of such testing and results.
4. Submit semi-annual Drug Policy Compliance Declarations.

I affirm on behalf of Contractor that full compliance with the Mayor's Drug Policy and Executive Order No. _____ is a material condition of the Contract with the City of Tomball,

I further acknowledge that falsification, failure to comply with or failure to timely submit declarations or documentation in compliance with the Mayor's Drug Policy or Executive Order No. _____ will be considered a breach of the Contract with the City and may result in non-award or termination of the Contract by the City.

Contractor Title

Signature Date

END OF DOCUMENT

Document 00603

CHECKLIST FOR DRUG POLICY SUBMITTAL

TO: **TOMBALL, TEXAS**

FROM: **DIRECTOR**
[CONTRACTING DIVISION]
[CONTRACTING DEPARTMENT]

DATE: _____

CONTRACTOR: _____

PROJECT NAME: Rudolph Rd. Water Line Extension

PROJECT No.: 2024-02

PROJECT MANAGER: Rich Oller **TELEPHONE:** 806-993-6226 **FAX:** 806-577-4722

DOCUMENTS CHECKED BELOW ARE BEING SUBMITTED: (Project Manager, check.)

- ☐ **DOC. 00601 - DRUG POLICY COMPLIANCE AGREEMENT (Standard Form)**
- ☐ **DOC. 00602 - CONTRACTOR'S DRUG-FREE WORKPLACE POLICY (Contractor creates this Document)**
- ☐ **DOC. 00605 - LIST OF SAFETY IMPACT POSITIONS (Contractor creates this List) "OR"**
- ☐ **DOC. 00606 - CONTRACTOR'S CERTIFICATION OF NO SAFETY IMPACT POSITIONS**

CCODT REVIEW: THE FOLLOWING CHECKED ITEM(S) ARE MISSING FROM SUBMISSION/POLICY AND NEED TO BE CORRECTED PRIOR TO AWARD:

- ☐ **NAME OF DRUG TESTING LAB**
REASON FOR TESTING:
 - ☐ **RANDOM TESTING - 25% ANNUALLY**
 - ☐ **REASONABLE SUSPICION**
 - ☐ **POST ACCIDENT**
- ☐ **SAFETY IMPACT POSITIONS INCOMPLETE**
- ☐ **EMPLOYEE ACKNOWLEDGMENT FORM**
- ☐ **DRUG TESTING PROCEDURES**
- ☐ **CONSEQUENCE OF POSITIVE TEST:** *PERMANENTLY REMOVED FROM ANY CONTRACT CITY WORKSITE.*
- ☐ **CONSEQUENCE OF REFUSAL TO CONSENT:** *PERMANENTLY REMOVED FROM ANY CONTRACT CITY WORKSITE.*
- ☐ **OTHER:** _____

REJECTED	_____

APPROVED	_____

COMMENTS: _____

DATE RECEIVED: _____ **RESUBMITTAL DATE:** _____

END OF DOCUMENT

Document 00604

HISTORY OF OSHA ACTIONS AND LIST OF ON-THE-JOB INJURIES

Prior to award of the Contract, Low Bidder will be required to file the following with the City:

1. A history of all OSHA actions, advisories, etc., Contractor has received on all jobs worked in any capacity, prime or subcontractor. The history shall be for the two-year period preceding the Bid Date of the Project.
2. A list of all on-the-job injuries, accidents, and fatalities suffered by any present or former employees of Contractor during the same two-year period.
3. If less than the two-year period, give the date Contractor started doing business.

This information must be submitted to the City within the time period stated in Document 00498 - Notice of Intent to Award. An officer of the company must certify in a notarized statement that the information submitted is true and correct.

END OF DOCUMENT

Document 00607

CERTIFICATION REGARDING DEBARMENT,
SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

Contractor certifies to the best of its knowledge and belief that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal, State, or local department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction: violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph 2 of this certification; and
4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Section 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to five years, or both.

Company:

Typed Name & Title of Authorized Representative

Signature of Authorized Representative

Date

☐ I am unable to certify the above statements. My explanation is attached.

00607-1
02-01-08

END OF DOCUMENT

Document 00610

PERFORMANCE BOND

THAT WE, _____, as Principal, (the "Contractor"), and the other subscriber hereto, _____ as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Tomball (the "City"), a municipal corporation, in the penal sum of \$_____ for the payment of which sum, well and truly to be made to the City, its successors and assigns, Contractor and Surety do bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a Contract in writing with the City for _____

_____ all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

NOW THEREFORE, if the said Contractor shall faithfully and strictly perform the Contract in all its terms, provisions, and stipulations in accordance with its true meaning and effect, and in accordance with the Contract documents referred to therein and shall comply strictly with each and every provision of the Contract and with this Bond, then this obligation shall become null and void and shall have no further force and effect; otherwise the same is to remain in full force and effect. Should the Contractor fail to faithfully and strictly perform the Contract in all its terms, including but not limited to the indemnifications thereunder, the Surety shall be liable for all damages, losses, expenses and liabilities that the City may suffer in consequence thereof, as more fully set forth herein.

It is further understood and agreed that the Surety does hereby relieve the City or its representatives from the exercise of any diligence whatever in securing compliance on the part of the Contractor with the terms of the Contract, and the Surety agrees that it shall be bound to take notice of and shall be held to have knowledge of all acts or omissions of the Contractor in all matters pertaining to the Contract. The Surety understands and agrees that the provision in the Contract that the City will retain certain amounts due the Contractor until the expiration of 30 days from the acceptance of the Work is intended for the City's benefit, and the City will have the right to pay or withhold such retained amounts or any other amount owing under the Contract without changing or affecting the liability of the Surety hereon in any degree.

It is further expressly agreed by Surety that the City or its representatives are at liberty at any time, without notice to the Surety, to make any change in the Contract

documents and in the Work to be done thereunder, as provided in the Contract, and in the terms and conditions thereof, or to make any change in, addition to, or deduction from the Work to be done thereunder; and that such changes, if made, shall not in any way vitiate the obligation in this Bond and undertaking or release the Surety therefrom.

It is further expressly agreed and understood that the Contractor and Surety will fully indemnify and save harmless the City from any liability, loss, cost, expense, or damage arising out of Contractor's performance of the Contract.

If the City gives Surety notice of Contractor's default, Surety shall, within 45 days, take one of the following actions:

1. Arrange for Contractor, with consent of the City, to perform and complete the Contract; or
2. Take over and assume completion of the Contract itself, through its agents or through independent contractors, and become entitled to the payment of the balance of the Contract Price.

If the Surety fails to take either of the actions set out above, it shall be deemed to have waived its right to perform and complete the Contract and receive payment of the balance of the Contract Price and the City shall be entitled to enforce any remedies available at law, including but not limited to completing the Contract itself and recovering any cost in excess of the Original Contract Price from the Surety.

This Bond and all obligations created hereunder shall be performable in Harris County, Texas. This Bond is given in compliance with the provisions of Chapter 2253, Texas Government Code, as amended, which is incorporated herein by this reference.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other Party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)
WITNESS: (if not a corporation)

Name of Contractor

By: _____
Name:
Title:

By: _____
Name:
Title:
Date:

ATTEST/SURETY WITNESS:
(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _____
Name:
Title:
Date:

By: _____
Name:
Title: Attorney-in-Fact
Date:

END OF DOCUMENT

Document 00611

STATUTORY PAYMENT BOND

THAT WE, _____, as Principal,
hereinafter called Contractor and the other subscriber hereto, _____

_____,
as Surety, do hereby acknowledge ourselves to be held and firmly bound unto the City of Tomball, a municipal corporation, in the sum of \$_____ for the payment of which sum, well and truly to be made to the City of Tomball, and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a contract in writing with the City of Tomball for _____

_____,
all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein;

NOW, THEREFORE, if the said Contractor shall pay all claimants supplying labor and materials to him or a Subcontractor in the prosecution of the Work provided for in the Contract, then, this obligation shall be void; otherwise the same is to remain in full force and effect;

PROVIDED HOWEVER, that this Bond is executed pursuant to the provisions of Chapter 2253, Texas Government Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said Article to the same extent as if it were copied at length herein.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)
WITNESS: (if not a corporation)

Name of Contractor

By: _____
Name:
Title:

By: _____
Name:
Title:
Date:

ATTEST/SURETY WITNESS:
(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _____
Name:
Title:
Date:

By: _____
Name:
Title: Attorney-in-Fact
Date:

END OF DOCUMENT

Document 00612

ONE-YEAR MAINTENANCE BOND

THAT WE, _____, as Principal,
hereinafter called Contractor, and the other subscriber hereto, _____,

as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Tomball, a municipal corporation, in the sum of \$_____, for the payment of which sum well and truly to be made to the City of Tomball and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a Contract in writing with the City of Tomball for _____

all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

NOW THEREFORE, if the said Contractor shall comply with the provisions of Paragraph 13.07 of the General Conditions, and correct work not in accordance with the Contract documents discovered within the established one-year period, then this obligation shall become null and void, and shall be of no further force and effect; otherwise, the same is to remain in full force and effect.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)
WITNESS: (if not a corporation)

Name of Contractor

00612-1
02-01-08

City of Tomball
Rudolph Rd. Water Line Extension
Project No. 2024-02

ONE-YEAR MAINTENANCE BOND

By: _____
Name:
Title:

By: _____
Name:
Title:
Date:

ATTEST/SURETY WITNESS:

(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _____
Name:
Title:
Date:

By: _____
Name:
Title: Attorney-in-Fact
Date:

END OF DOCUMENT

00612-2
02-01-08

Document 00620

AFFIDAVIT OF INSURANCE

BEFORE ME, the undersigned authority, on this day personally appeared

_____, who
Affiant

being by me duly sworn on his oath stated that he is _____ of
Title

Contractor's Company Name

the Contractor named and referred to within the Contract documents; that he is fully competent and authorized to give this affidavit and that the attached original insurance certificate truly and accurately reflects the insurance coverage that is now available and will be available during the term of the Contract.

Affiant's Signature

SWORN AND SUBSCRIBED before me on _____
Date

Notary Public in and for the State of TEXAS

Print or type Notary Public name

My Commission Expires: _____
Expiration Date

END OF DOCUMENT

00620-1
02-01-08

Document 00641

CONTRACTOR'S CERTIFICATION OF FINAL COMPLETION

CERTIFICATE OF FINAL COMPLETION OF: Rudolph Rd. Water Line Extension

Project No.: 2024-02

Contract Dated: _____

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____ who, being by me duly sworn, on his oath says that he or she represents _____, the Contractor who has performed a contract with the City of Tomball for the construction of the Work described above, and is duly authorized to make this affidavit; that he or she has personally examined the Work described above as required by the Contract documents; that said Work and all items thereof have been completed and all known defects made good; that all surplus material, refuse, dirt and rubbish have been cleaned up and removed or disposed of as directed by the City Engineer; that all parts of Work are in a neat, tidy, finished condition and ready in all respects for acceptance by the City; that all gravel or shell roadway surfaces removed during the course of the Work have been replaced in accordance with the Specifications, that rates of pay for all labor employed on said Work have not been below the minimum set out in "Labor Classification and Minimum Wage Scale" in the Contract documents and that within the knowledge of affiant all just bills for labor and material and for the rental or use of any equipment or apparatus, used in, on, or in connection with the Work have been paid in full by the Contractor.

Affiant's Signature

SWORN AND SUBSCRIBED before me on _____

Date

Notary Public in and for the State of TEXAS

Print or type name

My Commission Expires: _____

Expiration Date

THIS IS TO CERTIFY that I have thoroughly inspected the Work performed by the above named Contractor on the above described Contract and find all things in accordance with the Contract documents governing this Work.

Inspector

[Project Manager or Construction Manager]

City of Tomball
Rudolph Rd. Water Line Extension
Project No. 2024-02

AFFIDAVIT OF INSURANCE

Approved:

[Title of Approval Authority], [Contracting Department]

END OF DOCUMENT

00641-2
02-01-08

Document 00642

CERTIFICATION OF PAYMENT
TO SUBCONTRACTORS AND SUPPLIERS

The undersigned, _____, states that he is the _____,
of _____
Affiant Title

Contractor

and that he is duly authorized to execute this Certification of Payment to
Subcontractors and Suppliers; that Contractor has made payments to
Subcontractors and Suppliers for all labor, materials, equipment, and services
furnished to date for Work on Project No. _____

in the amounts for which Contractor has been paid; that the labor, materials,
equipment, and services covered by this Certificate of Payment have been
furnished in accordance with and all in compliance with the Contract

Documents; that no sums have been withheld by Contractor for Subcontractors
and Suppliers as a result of any allegations of deficiencies in the Work; and that
such payments were made in accordance with the Contract Documents and
with the laws of the State of Texas.

Affiant's Signature

SWORN AND SUBSCRIBED before me on _____.
Date

Notary Public in and for the State of TEXAS

Print or type name

00642-1
02-01-08

City of Tomball
Rudolph Rd. Water Line Extension
Project No. 2024-02

**CERTIFICATION OF
PAYMENT TO SUBCONTRACTORS**

My Commission Expires: _____
Expiration Date

END OF DOCUMENT

00642-2
02-01-08

Document 00643

ESTIMATE AND CERTIFICATE FOR PAYMENT, UNIT PRICE WORK

Estimate No. _____
Cut off Date: _____
Estimate Date: _____

Project Name: Rudolph Rd. Wate Line Extension
Contractor: _____
Address: _____

Contract No.: _____
Project No.: 2024-02
Ordinance No.: _____

Contract Date: _____
Start Date: _____
Current Contract Completion Date: _____
Substantial Completion Date: _____
Percentage: By Time _____% In Place _____%

CONTRACT TIME IN CALENDER DAYS

Original Contract Time: _____ Days
Approved Extensions: _____ Days
Total Contract Time: _____ Days
Days Used to Date: _____ Days
Days Remaining to Date: _____ Days

Date Insurance Exp. _____ Drug Policy Due _____ Current MWBE % _____ Schedule Update Received _____

CONTRACT AMOUNT TO DATE:

1. Original Contract Price:		\$	_____
2. Approved Change Orders: <u>No./Description</u>	<u>Amount</u>		
_____	\$	_____	
_____	\$	_____	
_____	\$	_____	
_____	\$	_____	
_____	\$	_____	
_____	\$	_____	
Total Change Orders to Date: _____ +/-	\$	_____	
TOTAL CONTRACT AMOUNT:		\$	_____

A. EARNINGS TO DATE:

1. Work Completed to Date: _____ % Complete	\$	_____
2. Materials Stored on Site: _____	\$	_____
3. Materials Stored in Place: _____	\$	_____
4. Balance - Materials Accepted, Not in Work:	\$	_____

TOTAL EARNINGS TO DATE:

\$ _____

B. DEDUCTIONS:

1. Retainage: _____ % of \$ _____	\$	_____
2. Add: Retainage Deduction: _____	\$	_____
3. Total Retainage: _____	\$	_____
4. Liquidated Damages: _____ Days @ \$ _____	\$	_____
5. Quality Control Retest Cost: _____	\$	_____
6. Sunday/Holiday Overtime Cost: _____	\$	_____

TOTAL DEDUCTIONS:

\$ _____

C. AMOUNT DUE THIS PERIOD:

1. Total Earnings to Date:	\$	_____
2. Total Deductions:	\$	_____
3. Total Payments Due:	\$	_____
4. Less Previous Payments:	\$	_____
5. Restoration Adjustment:	\$	_____

TOTAL AMOUNT DUE THIS DATE:

\$ _____

Prepared By: _____ Date: _____ Checked By: _____ Date: _____

Submitted By: _____ Date: _____ Approved: _____ Date: _____

Approved: _____ Date: _____
Director,

City of Tomball
Rudolph Rd. Water Line Extension
Project No. 2024-02

**ESTIMATE AND CERTIFICATE FOR
PAYMENT, UNIT PRICE WORK**

END OF DOCUMENT

Document 00644

DRUG POLICY COMPLIANCE DECLARATION

BEFORE ME, the undersigned authority, on this day personally appeared

_____ who being by me duly sworn on his oath stated

Affiant

that he is _____ of _____
Title Contractor's Company Name

the Contractor named and referred to within the Contract documents; that he is fully competent and authorized to give this affidavit and that he has personal knowledge and full authority to make the following declarations:

This reporting period covers the preceding six months from _____ to _____, 20____.

_____ A written Drug Free Workplace Policy has been implemented and employees notified.

Initials The policy meets the criteria established by the Mayor's Amended Policy on Drug Detection and Deterrence (Mayor's Policy).

_____ Written drug testing procedures have been implemented in conformity with the Mayor's

Initials Drug Detection and Deterrence Procedures for Contractors, Executive Order No. . Employees have been notified of such procedures.

_____ Collection/testing has been conducted in compliance with federal Health and Human
Initials Services (HHS) guidelines.

_____ Appropriate safety impact positions have been designated for employee positions
Initials performing on the City of Tomball contract. The number of employees in safety impact positions during this reporting period is _____.

_____ From _____ to _____ the following testing has occurred:
Initials Start date End date

Reasonable Post

00644-1
02-01-08

	<u>Random</u>	<u>Suspicion</u>	<u>Accident</u>	<u>Total</u>
Number Employees Tested	_____	_____	_____	_____
Number Employees Positive	_____	_____	_____	_____
Percent Employees Positive	_____	_____	_____	_____

_____ Any employee who tested positive was immediately removed from the City
Initials worksite consistent with the Mayor's Policy and Executive Order No. _____

_____ I affirm that falsification or failure to submit this declaration timely in accordance
Initials with established guidelines will be considered a breach of contract.

I declare under penalty of perjury that the affirmations made herein and all
information contained in this declaration are within my personal knowledge and are true
and correct.

Affiant's Signature

SWORN AND SUBSCRIBED before me on

Date

Notary Public in and for the State of TEXAS

Print or type name

My Commission Expires: _____
Expiration Date

END OF DOCUMENT

00644-2
02-01-08

Document 00645

CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT: Rudolph Road Water Line Extension

CONTRACT No.:

PROJECT No.: 2024-02

TO:

Contractor and

Address for Written Notice

- 1.01 DATE OF SUBSTANTIAL COMPLETION
The Work performed under the Contract was inspected on [Date Inspected], and found to be substantially complete. The Date of Substantial Completion of the Work is hereby established as [Date of Substantial Completion].
- 1.02 PUNCH LIST
A list of items to be completed or corrected, prepared by Contractor and verified by Project Manager, (the "Punch List") is attached hereto. Failure to include any items on such list does not alter the responsibility of Contractor to complete the Work in accordance with the Contract. Contractor shall complete or correct the Work on the Punch List attached hereto within [30 or Agreed Time] days from the above Date of Substantial Completion.
- 1.03 OCCUPANCY BY THE CITY
[Owning Department or User Group] will assume full possession at [Time of Day] on [Date].
- 1.04 CONSENT OF SURETY
Contractor shall obtain consent of Surety for approval of reduction in retainage.
- 1.05 WARRANTY PERIOD
Warranties required by the Contract will commence on the above Date of Substantial Completion.
- 1.06 TRANSITION OF RESPONSIBILITIES
The City and Contractor agree that security, maintenance, heating, ventilating, air conditioning, utilities, damage to the Work, and insurance, during the period prior to Final Completion, transfer to the City unless otherwise stated in the attached Transition of Responsibilities document.
- 1.07 CONTRACTOR'S ACKNOWLEDGEMENT
Signature of Contractor, or its agent, acknowledges attached Punch List, referenced in Paragraph 1.02, and Transition of Responsibilities, referenced in Paragraph 1.06.

Contractor	Signature	Date
Inspector	Signature	Date

City of Tomball
Rudolph Rd. Water Line Extension
Project No. 2024-02

**CERTIFICATE OF
SUBSTANTIAL COMPLETION**

_____ Project Manager or Construction Manager	_____ Signature	_____ Date
_____ [Intermediate Authority]	_____ Signature	_____ Date
_____ City Engineer	_____ Signature	_____ Date

cc: [Design Consultant], [Owning Dept. Director], [Other Copy Address], [File]

END OF DOCUMENT

Document 00650

CERTIFICATE OF FINAL COMPLETION

PROJECT: Rudolph Rd. Water Line Extension
CONTRACT No.:
PROJECT No.: 2024-02

TO:
Contractor and
Address for Written Notice

- 1.01 DATE OF FINAL COMPLETION
The Work performed under the Contract was inspected on [Date Inspected], and found to be complete. The date of final completion of the Work is hereby established as [Date of Final Completion].
- 1.02 PUNCH LIST
Contractor certified in Document 00641 - Contractor's Certification of Final Completion that all Punch List items were completed or corrected. Failure to identify incomplete work items or requirements of the Contract prior to issuance of this Certificate does not alter the responsibility of Contractor to comply with all provisions of the Contract.
- 1.03 ACCEPTANCE OF THE WORK
Based on inspection and to the best of our knowledge, information and belief, the Work has been completed in accordance with the terms and conditions of the Contract and we recommend acceptance of the Work by City Council or their delegated authority.

Inspector	Signature	Date
Project Manager or Construction Manager	Signature	Date
[Intermediate Authority]	Signature	Date
City Engineer	Signature	Date

1.04 TRANSITION OF RESPONSIBILITIES

Except as provided in the Contract documents attached hereto, [Owning Department or User Group] accepts the Work as complete and accepts responsibility for security, maintenance, heating, ventilating, air conditioning, utilities, damage to the Work, and insurance, that has not been previously transferred from Contractor.

[Printed Name]

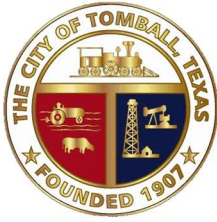
[Owning Department or User Group]

Signature

Date

cc: [Design Consultant], [Owning Dept. Director], [Other Copy Addrees], [File]

END OF DOCUMENT



CITY OF TOMBALL

Engineering & Planning
Department

Mayor

Director
Engineering & Planning
Department

Tomball, Texas

T. 281
F. 281

[Date]

[Contractor]
[Contractor's Address]
[City, ST Zip]

ATTN: [Contractor Contact]

RE: ACCEPTANCE OF WATER LINES
RUDOLPH RD. WATER LINE EXTENSION
2024-02

Dear _____,

Please be advised that the water lines in the **Rudolph Rd. Water Line Extension Project** have been accepted by the City of Tomball as shown below:

1. [Start Point] [Direction] to [End Point], [X]' of [Y]" Pipe, \$[Dollar Value]
2. [Start Point] [Direction] to [End Point], [X]' of [Y]" Pipe, \$[Dollar Value]
3. [Start Point] [Direction] to [End Point], [X]' of [Y]" Pipe, \$[Dollar Value]

Date of Acceptance: [Date of Final Completion]

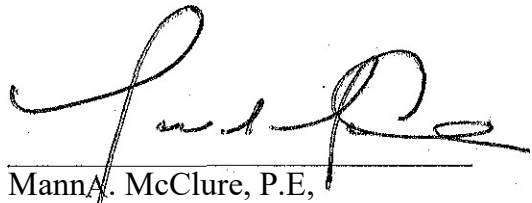
One year warranty period begins on **[Date of Substantial Completion]** and ends on **[Calculated End Date]** for the infrastructure listed above. [One year surface correction warranty period begins on that end date and extends the warranty for surface restoration of waterline work one additional year.]

Sincerely,

City Engineer

JJS:xxx
c: [Additional Distribution]

The City of Tomball purchased rights (03/06/08) to utilize the Standard General Conditions of the Construction Contract prepared by Engineers Joint Contract Documents Committee (EJCDC) C-700, Copyright 2007 National Society of Professional Engineers, A copy of the EJCDC instruction and license agreement is attached for reference. A scanned copy of the EJCDC 00700 Standard General Conditions (2018) is also attached. Note that the City of Tomball has created required supplemental conditions included as Section 00800.

A handwritten signature in black ink, appearing to read 'Mann A. McClure', written over a horizontal line.

Mann A. McClure, P.E.,
Director of Engineering & Planning

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
- 11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 - 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 - 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 - 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 - 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 - 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 - 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 - 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 - 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 - 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 - 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. ~~*Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions. See SC 6.04 A~~
- B. *Property Insurance for Facilities of Owner Where Work Will Occur:* Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities:* Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;
 - 6. The issuance of a notice of acceptability by Engineer;
 - 7. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 Indemnification

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 Delegation of Professional Design Services

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

~~c. Construction Equipment Rental~~

- ~~1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.~~
- ~~2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.~~
- ~~3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.~~

~~d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.~~

~~e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.~~

~~f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.~~

~~g. The cost of utilities, fuel, and sanitary facilities at the Site.~~

~~h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.~~

~~i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.~~

C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
2. The cost of purchasing, renting, or furnishing small tools and hand tools.
3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
6. Expenses incurred in preparing and advancing Claims.
7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 Defective Work

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS
SECTION 00800

SUPPLEMENTARY CONDITIONS
(TO ACCOMPANY STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION
CONTRACT, EJCDC NO. C-700 [2007 EDITION] FOR CITY OF TOMBALL CONSTRUCTION
PROJECTS)

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SECTION 00800

SUPPLEMENTARY CONDITIONS

PART I AMENDMENTS TO GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (General Conditions) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1 DEFINITIONS

SC-1.01

The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract (General Conditions) have the meanings assigned to them in the General Conditions.

Amend Paragraph 1.01.A.19, Engineer, of the General Conditions by adding the following to the end:

"For this project the following named persons, firms, or corporations have been utilized by ENGINEER to furnish services as a consultant with respect to the project (if blank, none have been utilized by the ENGINEER):

1. Ellis Surveying
2. _____
3. _____

ARTICLE 2 PRELIMINARY MATTERS

SC-2.02

Amend the first sentence of Paragraph 2.02.A of the General Conditions to read as follows:

"Five sets of the Contract Documents shall be furnished to the CONTRACTOR, at no charge, for construction purposes."

And so amended, Paragraph 2.02 remains in effect.

SC-2.03

Amend the third sentence of Paragraph 2.03.A of the General Conditions to read as follows: "In no event will the Contract Time commence to run later than 90 days after the day of Bid opening or 30 days after the Effective Date of the Agreement, whichever is earlier, without the written agreement of the Contractor and Owner."

ARTICLE 4 AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS;
HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

SC-4.02

In the preparation of Drawings and Specifications, ENGINEER or ENGINEER's Consultants have relied upon:

4.02.A.1 The following reports of exploration and tests of subsurface conditions at the site of the Work (if blank, no reports or tests were used by ENGINEER or ENGINEER's Consultants):

1. _____
2. _____

The technical data contained in such reports upon which the CONTRACTOR may rely is_____.

4.02.A.2 The following drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities) which are at or contiguous to the site of Work:

1. _____
2. _____
3. _____

All of the information in such drawings constitutes technical data on which CONTRACTOR may rely with the following exceptions:_____

Copies of these reports and drawings that are not included with the Bidding Documents may be examined at the office of the ENGINEER during regular business hours. These reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which CONTRACTOR is entitled to rely as provided in GC-4.02.B and as identified and established above are incorporated therein by reference. CONTRACTOR is not entitled to rely upon other information and data utilized by ENGINEER.

SC-4.06

Delete Paragraph 4.06.G of the General Conditions in its entirety.

ARTICLE 5 BONDS AND INSURANCE

SC-5.01

Delete Paragraphs 5.01.A and 5.01.B of the General Conditions in their entirety and insert the following in their place:

"A. The Successful Bidder must furnish with the executed Contract Documents a Performance Bond and a Payment Bond on the forms furnished with the Contract Documents, each in the amount of 100% of the total Contract Price in accordance with Texas Local Government Code § 252.044 and Texas Government Code Ch. 2253. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. The surety company must be authorized to do business in Texas, which authorization must be recorded in the files of the State Board of Insurance. The surety company must be authorized to issue Payment and Performance Bonds in the amount required for the particular Contract, which authorization must be recorded in the files of the State Board of Insurance. The surety company must have a rating of at least "B" in the current Best's Key Rating Guide, or if the surety company does not have such a rating due to the length of time it has existed, the surety company must be eligible to participate in the surety bond guarantee program of the Small Business Administration and must be an approved surety listed in the current U.S. Department of Treasury Circular 570, and must meet all of the related rules and regulations of the Treasury Department. The person executing the Payment and Performance Bonds must be a licensed Texas local recording agent, and such licensing must be recorded in the files of the State Board of Insurance. The person executing the Payment and Performance Bonds must be authorized by the surety company to execute Payment and Performance Bonds on behalf of the company in the amount required for the Contract, and such authorization must be recorded in the files of the State Board of Insurance. The Contract shall not be in effect until such Bonds have been provided by the CONTRACTOR and accepted by the OWNER."

SC-5.04

The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

Worker's Compensation

- | | |
|---|-------------------------|
| (1) State: <u>Statutory</u> | |
| (2) Applicable Federal (e.g., Longshoreman's): <u>Statutory</u> | |
| (3) Employer's Liability: | |
| \$500,000 | Each Accident |
| \$500,000 | Disease - Policy Limit |
| \$500,000 | Disease - Each Employee |

Commercial General Liability

- | | |
|---|-------------|
| (1) General Aggregate Limit (other than products-completed operations) coverage must include Explosion, Collapse, and Underground Coverages | \$1,000,000 |
| (2) Products-Completed Operations Aggregate Limit | \$1,000,000 |
| (3) Each Occurrence Limit | \$ 500,000 |

Commercial Automobile Liability

\$500,000	Any One Loss or Accident
-----------	--------------------------

Umbrella Liability

\$1,000,000	Excess Limit
-------------	--------------

Shortages in coverage in any of the areas listed above may be covered by additional umbrella coverage.

The Contractor shall not commence work on any Contract in the City until the Contractor has obtained all the insurance required under this paragraph and such insurance has been approved by the City.

Workers' Compensation Insurance Coverage - Continued

A. Definitions:

Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (DWC-81, DWC-82, DWC-83, or DWC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

Duration of the project - includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

Persons providing services on the project ("subcontractor" in 406.096) - includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnished persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

- B. The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.
- C. The contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.
- D. If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.
- E. The contractor shall obtain from each person providing services on the project, and provide to the governmental entity:
 - (1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

- (2) no later than seven days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
- F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.
- G. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.
- H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Division of Workers' Compensation, Texas Department of Insurance, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.
- I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:
 - (1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
 - (2) provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
 - (3) provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (4) obtain from each other person with whom it contracts, and provide to the contractor:
 - (a) a certificate of coverage, prior to the other person beginning work on the project; and
 - (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
 - (6) notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision

of coverage of any person providing services on the project; and

- (7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.
- J. By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.
- K. The contractor's failure to comply with any of these provisions is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten days after receipt of notice of breach from the governmental entity.

SC-5.06

Delete Paragraphs 5.06, 5.07, and 5.08 of the General Conditions in their entirety.

SC-5.09

Delete Paragraph 5.09 of the General Conditions in its entirety and insert the following in its

place: "A. If OWNER has any objection to the coverage afforded by or other provisions of the

insurance required to be purchased and maintained by CONTRACTOR in accordance

with Article 5 on the basis of its not complying with the Contract Documents, OWNER shall notify CONTRACTOR in writing. OWNER and CONTRACTOR shall each provide to the other such information in respect of insurance provided by each as the other may reasonably request."

ARTICLE 6 CONTRACTOR'S RESPONSIBILITIES

SC-6.02

Add Paragraph 6.02.C to the General Conditions to read as follows:

- "C. CONTRACTOR further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An "undocumented worker" shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States."

SC-6.06

Delete Paragraph 6.06.G of the General Conditions in its entirety and insert the following in its place:

"G. All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate Agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER."

Add a new paragraph immediately after Paragraph 6.06.G of the General Conditions which is to read as follows:

"6.06.H OWNER or ENGINEER may furnish to any such Subcontractor, Supplier, or other person or organization, to the extent practicable, information about amounts paid to CONTRACTOR in accordance with CONTRACTOR's Applications for Payment on account of the particular Subcontractor's, Supplier's, other person's, or other organization's Work."

SC-6.10

Delete Paragraph 6.10 of the General Conditions in its entirety and insert the following in its

place: "A. The CONTRACTOR's attention is directed to Paragraph No. 3 of Ruling No.

9,

Repairmen and Contractors (as amended) issued by the Comptroller of Public Accounts. Reference Article 20.01 (T), Limited Sales, Excise, and Use Tax and to subsequent applicable legislation. The OWNER requires that no sales tax be paid on any materials incorporated into the completed Work on this Project. All Bidders and their respective Subcontractors must comply with Paragraph No. 3 of Ruling No. 9 by obtaining the necessary permit or permits from the State Comptroller allowing the purchase of materials for incorporation into this Project without having to pay the Limited Sales, Excise, and Use Tax at the time of purchase. Total materials cost should not include materials which are used up or consumed in performing the Work, but which do not become a part of this proposed Work."

SC-6.16

Amend the third sentence of Paragraph 6.16 of the General Conditions to read as follows:

"If ENGINEER and OWNER determine that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued."

And so amended, Paragraph 6.16 remains in effect.

SC-6.22

Amend Article 6 of the General Conditions by inserting the following Paragraph

6.22: "6.22 LOSSES FROM NATURAL CAUSES:

- A. All loss or damage to the CONTRACTOR arising out of the nature of the Work to be done, or from the action of the elements, or from any unforeseen circumstance in the prosecution of the same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the Work, shall be sustained and borne by the CONTRACTOR at his own cost and expense."

ARTICLE 7 OTHER WORK AT THE SITE

SC-7.02

Delete Paragraphs 7.02.A and 7.02.B of the General Conditions in their entirety and insert the following in its place:

- "A. If OWNER contracts with others for the performance of other Work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors shall be the OWNER's Representative. The extent of the authority and responsibility of the OWNER's Representative will be as specified in the Contract Documents."
- "B. Should CONTRACTOR cause damage to work or property of any separate contractor at the site, or should any claim arising out of CONTRACTOR'S performance of the Work at the site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, ENGINEER'S Consultants, the Construction Coordinator, or any other person, CONTRACTOR shall promptly attempt to settle with such other contractor by agreement, or otherwise resolve the dispute by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER, ENGINEER, ENGINEER's Consultants, and the Construction Coordinator harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals, and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER, ENGINEER, ENGINEER's Consultants or the Construction Coordinator to the extent based on a claim arising out of CONTRACTOR's performance of the Work. Should a separate contractor cause damage to the Work or property of CONTRACTOR or should the performance of Work by any separate contractor at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER, ENGINEER, ENGINEER's Consultants, or the Construction Coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER, ENGINEER, ENGINEER's Consultants, or the Construction Coordinator on account of any such damage or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be CONTRACTOR's exclusive remedy with respect to OWNER, ENGINEER, ENGINEER's Consultants, and Construction Coordinator for any delay, disruption, interference, or hindrance caused by any separate contractor. This paragraph does not prevent recovery from OWNER, ENGINEER, ENGINEER's Consultant, or Construction Coordinator for activities that are their respective responsibilities."

ARTICLE 8 OWNER'S RESPONSIBILITIES

SC-8.02

Amend Paragraph 8.02 of the General Conditions to read as follows:

"In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer whose status under the Contract Documents shall be that of the former ENGINEER."

And so amended, Paragraph 8.02 remains in effect.

SC-8.06

Delete Paragraph 8.06 of the General Conditions in its entirety.

ARTICLE 9 ENGINEER'S STATUS DURING

CONSTRUCTION SC-9.01

Amend the second sentence of Paragraph 9.01 of the General Conditions to read as follows:

"The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and will not be changed except by written direction of OWNER."

And so amended, Paragraph 9.01 remains in effect.

SC-9.04

Delete the third sentence of Paragraph 9.04, Authorized Variations in Work, of the General Conditions in its entirety, and so amended, Paragraph 9.04 remains in effect.

ARTICLE 10 CHANGES IN THE WORK; CLAIMS

SC-10.03

Amend the first sentence of Paragraph 10.03.A of the General Conditions to read as follows:

"OWNER and CONTRACTOR shall, when appropriate, execute Change Orders recommended by ENGINEER (or Written Amendments) covering:"

And so amended, Paragraph 10.03 remains in effect.

SC-10.05

Amend the first sentence of Paragraph 10.05.B., Claims - Notice, of the General Conditions shall be amended by changing ""30 days" to read "fourteen (14) calendar days"

Amend Paragraph 10.05.E by deleting it in its entirety.

And so amended, Paragraph 10.05 remains in effect.

ARTICLE 13 TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

SC-13.04

Amend the first sentence of Paragraph 13.04.B of the General Conditions to read as follows:

"If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request and with OWNER's written approval, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment."

And so amended, Paragraph 13.04 remains in effect.

SC-13.07

Delete Paragraph 13.07.D of the General Conditions in its entirety and insert the following in its place:

"D. Notwithstanding any other provision of this section or the Contract Documents to the contrary, this provision shall not serve to limit any causes of action which the OWNER may have against the CONTRACTOR for Defective Work or for otherwise failing to fulfill CONTRACTOR's obligations under the Contract Documents; nor shall this provision serve to limit the time in which such causes of action shall be asserted."

SC-13.09

Amend the second sentence of Paragraph 13.09.B of the General Conditions to read as follows:

"In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere."

And so amended, Paragraph 13.09 remains in effect.

ARTICLE 14 PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02

Amend Paragraph 14.02.D.1.b of the General Conditions to read as follows:

"Claims or Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;"

Add Paragraph 14.02.D.1.e to the General Conditions to read as follows:

"OWNER concludes that one or more of the events enumerated in Paragraph 14.02.B.2.a through 14.02.B.2.c have not occurred."

And so amended, Paragraph 14.02 remains in effect.

SC-14.03

Amend Paragraph 14.03.A of the General Conditions to read as follows:

"CONTRACTOR warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens or Claims."

And so amended, Paragraph 14.03 remains in effect.

SC-14.04

Insert prior to the first sentence of Paragraph 14.04.A of the General Conditions the following:

"Substantial completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the OWNER can occupy or utilize the Work for its intended use."

And so amended, Paragraph 14.04 remains in effect.

SC-14.07

Amend Paragraph 14.07.A.2(d) of the General Conditions to read as follows:

"complete and legally effective releases or waivers (satisfactory to OWNER) of all Claim or Lien rights arising out of or Claims or Liens filed in connection with the Work."

Amend Paragraph 14.07.A.3 of the General Conditions to read as follows:

"In lieu of the releases or waivers of Liens and Claims specified in Paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien or Claim could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien or Claim."

Amend Paragraph 14.07.C.1 of the General Conditions to read as follows:

"If OWNER concurs with ENGINEER's recommendation, thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR."

And so amended, Paragraph 14.07 remains in effect.

SC-14.09

Amend Paragraph 14.09.A.1 of the General Conditions to read as follows:

"a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens or Claims of laborers and materialmen, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and"

And so amended, Paragraph 14.09 remains in effect.

ARTICLE 15 SUSPENSION OF WORK AND TERMINATION

SC-15.02

Amend Paragraph 15.02.A.1 of the General Conditions to read as follows:

"CONTRACTOR's failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);"

Amend the first sentence of Paragraph 15.02.B of the General Conditions to read as follows:

"If one or more of the events identified in Paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site and take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient."

And so amended, Paragraph 15.02 remains in effect.

ARTICLE 16 DISPUTE RESOLUTION

SC-16.01

Amend Paragraph 16.01 A. of the General Conditions by deleting the second and third sentences in their entirety.

Amend Paragraph 16.01 B. of the General Conditions by deleting it in its entirety.

ARTICLE 17 MISCELLANEOUS

Amend "ARTICLE 17 MISCELLANEOUS PROVISIONS of the General Conditions to add the following provisions:

- 17.07 WAGE RATES. The prevailing wage rates for this project are included as Exhibit A to the Supplementary Conditions and are hereby made a part of the Contract Documents by reference. Wages not less than these rates must be paid on this project, including fringe benefits. The CONTRACTOR shall post the Prevailing Wage Rate Determination in a prominent and easily accessible location at the project site and shall abide by all associated laws and regulations pertaining thereto.
- 17.08 LIQUIDATED DAMAGES. The Owner will suffer financial loss in an amount that is difficult to quantify if the Project is not Substantially Completed on the date set forth in the Contract Documents. The Owner may assess liquidated damages against the Contractor (and its surety) in an amount equal to .5% of the Contract per week for each project, as fixed, agreed and liquidated damages and not a penalty, for each calendar day of delay until the Work is Substantially Completed. In the event liquidated damages are caused by the Contractor and another entity, the Owner may reasonably apportion damages. The right to assess liquidated damages is in addition to, and not in limitation of, any right or remedy available to the Owner."
- 17.09 VENUE. This Agreement is governed by the laws of the State of Texas. The parties agree that venue for any litigation arising out of this Agreement shall lie exclusively in the State and Federal Courts in Harris County, Texas.
- 17.10 NO THIRD PARTY BENEFICIARIES The signing parties to this agreement do not intend to confer any rights upon any persons not a party to this Contract; accordingly this contract shall not be construed to create any third party beneficiaries."

(SPACE INTENTIONAL)

PART II OTHER PROVISIONS

The following additional items are attached to this section.

1. Exhibit A, Wage Rates
2. Exhibit B, Worker's Compensation Insurance Coverage
3. Exhibit C, A Listing of the Duties, Responsibilities, and Limitations of Authority of the Resident Project Representative
4. Exhibit D, Addenda (if any)
5. Exhibit E, Change Order (form)
6. Exhibit F, Application for Payment (form)
7. Exhibit G, Storm Water Pollution Prevention Plan (SCSN)
8. Exhibit H, Conflict of Interest Questionnaire

END OF SECTION 00800

EXHIBIT A

Wage Rates

Document 00820

WAGE SCALE AND PAYROLL REQUIREMENTS FOR ENGINEERING
CONSTRUCTION

Wage Scale Requirements

- 1.1 In accordance with Prevailing Wage Law on Public Works (Chapter 2258 of the Texas Government Code), the public body awarding Contract does hereby specify the following to be the general prevailing rates in the locality in which the Work is being performed.
- 1.2 This prevailing wage rate does not prohibit the payment of more than the rates stated.
- 1.3 In bidding, Contractor warrants and represents that it has carefully examined the classifications for each craft or type of worker needed to execute the Contract and determined that such classifications in Exhibit "A" include all necessary categories to perform the work under the Contract.
- 1.4 The wage scale for engineering construction is to be applied to all site work greater than five feet from an exterior wall of new building under construction or from an exterior wall of an existing building.
- 1.5 If Contractor believes that an additional classification for a particular craft or type of worker is necessary to perform work under the Contract, it must submit with its bid a request to the Contract Compliance Division of the Office Of Business Opportunity ("OBO") to use an additional labor classification not listed in Exhibit "A" and specify the proposed new classification. OBO shall determine whether a proposed classification is already covered in Exhibit "A", and, if it is, specify which classification is appropriate. OBO's decision is conclusive. If OBO decides that a new classification is necessary, it will determine the appropriate prevailing wage rate for any resurveyed, amended, new, or additional craft or type of worker not covered by Exhibit "A". Such determination must be decided in accordance with procedures established by OBO, and in compliance with Chapter 2258 of the Texas Government Code.
- 1.6 Contractor must not use any labor classification not covered by Exhibit "A" until such classification is established and approved for use by OBO.
- 1.7 A Contractor or Subcontractor who violates Chapter 2258 of the Texas Government Code must pay to the City, \$60 per each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates set forth in Exhibit "A".

- 1.8 The City may withhold money required to be withheld under Chapter 2258 of the Texas Government Code from the final payment to Contractor or earlier payments if City Council makes a determination that there is good cause to believe that Contractor has not complied with these provisions and Chapter 2258 of the Government Code, in which case the City may withhold the money at any time subsequent to the finding by City Council.
- 1.9 Contractor and Subcontractors must keep records specifying:
- (1) the name and classification of each worker employed under the Contract; and
 - (2) the actual per diem wages paid to each worker, and the applicable hourly rate.
- The records must be open at all reasonable hours for inspection by the officers and agents of the City.
- 1.10 The hourly cost of salary for non-exempt workers for labor in excess of 40 hours per worker per week, shall be calculated at 1.5 times the worker's base pay for the applicable craft and level.

Certified Payroll Requirements

- 2.1 Employees are paid weekly and payrolls are submitted weekly using the City of Tomball's electronic payroll submission module, unless the prime Contractor has been instructed to do otherwise by the Office of Business Opportunity. When no work is done after a Contractor has started work, the Contractor is required to submit a weekly compliance statement indicating no work was performed. The payrolls must reflect the exact work and classification of the workers, the exact amount that they were paid. Workers must be paid the contracted amount (prevailing wage rates). The Contractor will be penalized \$60.00 a day for each employee who is underpaid per Texas Government Code §2258.023 for all contracts.
- 2.2 Payrolls must be submitted electronically & indicate whether the worker worked inside or outside the building area when both wage rates are applicable to the contract.
- 2.3 Payrolls must be submitted each week until all work by the contractor is complete and the electronic payroll submission is marked as final in the system.
- 2.4 Payrolls must cover a seven day period from the start of the work week and must be consecutive seven day periods until all work is complete.
- 2.5 Payrolls must have employees' names, addresses, last four digits of the social security numbers, and job classifications. The job classifications must be the same as the classifications on the prevailing wage rate schedule.

- 2.6 A payroll deduction authorization form must be submitted for each employee for any deductions other than Federal and FICA taxes.
- 2.7 Employees must be paid overtime (time and a half) for all hours worked over 40 hours a week on both federally and City-funded contracts.
- 2.8 The Contractor has the responsibility to comply with all Internal Revenue Service rules and regulations. Contractors who submit certified payrolls with **Owner Operators (truckers)** must submit a signed tax liability statement from Owner Operator acknowledging their responsibility for Federal Income Tax and FICA reporting obligations.
- 2.9 If the Contractor wants to use the apprentice wage rates for an employee, the apprenticeship certificates must be submitted to the Office of Business Opportunity in advance of the employee working on the project and appearing on the payroll. You must comply with the listed number of journeymen to apprentices as listed.
- 2.10 A poster of the Prevailing Wage Rate Schedule should be clearly displayed on each job site from the time the project starts until the work is completed, or in case of annual service agreements, in the Contractor's office.
- 2.11 The Contractor shall submit the "Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "**B**") to the Monitoring Authority listed in Document 00495 prior to final execution of the contract.
- 2.12 During the course of the work, ALL Subcontractors shall submit the "Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "**C**") to the Monitoring Authority listed in Document 00495.
- 2.13 Upon completion of the Project, as part of the contract-awarding department's total clearance process, the Office of Business Opportunity's Contract Compliance Section must review whether the Wage Rate and Payroll Requirements were met and report the results to the department.

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EXHIBIT "A"

LABOR CLASSIFICATIONS AND PREVAILING WAGE RATES FOR
ENGINEERING CONSTRUCTION **2016 & 2023***

CLASSIFICATION	RATE	CLASSIFICATION	RATE
Asphalt Distributor Operator	\$14.06*	Milling Machine Operator - Fine Grade	\$13.53
Asphalt Paving Machine Operator	\$14.32*	Mixer Operator	\$10.33
Asphalt Raker	\$12.36*	Motor Grader Operator- Rough	\$14.23*
Asphalt. Shoveler	\$11.68	Motor Grader Operator	\$15.69*
Broom or Sweeper Operator	\$12.68*	Oiler	\$12.12
Bulldozer Operator	\$11.81	Painter-Structures	\$18.62*
Carpenter- Rough	\$12.49	Pavement Marking Machine Operator	\$11.18*
Concrete Finisher- Paving	\$13.07	Pile Driverman	\$14.95*
Concrete Finisher- Structures	\$12.98*	Pipe Layer	\$12.12*
Concrete Paving Curbing Machine Operator	\$11.71	Reinforcing Steel Setter - Paving	\$15.15
Concrete Paving Finishing Machine Operator	\$13.07*	Reinforcing Steel Setter - Structure	\$14.39
Concrete Paving Joint Sealer Operator	\$11.00	Roller Operator, Pneumatic - Self-propelled	\$16.00*
Concrete Paving. Saw Operator	\$13.99*	Roller Operator, Steel Wheel, Flat Wheel/Tamping	\$16.00*
Concrete Paving Spreader Operator	\$10.44	Roller Operator, Steel Wheel, Plant Mix Pavement	\$16.00*
Concrete Rubber . . .	\$9.00	Scraper Operator	\$13.47*
Crane Clamshell Backhoe Derrick, Dragline, Shovel Operator	\$12.71	Servicer	\$13.97*
Crusher and Screening Plant Operator	\$11.29	Sign Installer - PGM	\$8.54
Electrician * 3 Journeyman 2 Apprentice Allowed	\$27.11	Slip Form Machine Operator	\$11.07
Flagger	\$10.33*	Spreader Box Operator	\$13.58*
Form Builder/Setter- Structures	\$13.84*	Structural Steel Worker	\$14.39*
Form Liner- Paving and Curb	\$12.34*	Tractor Operator - Crawler Type	\$13.68*
Form Setter- Paving and Curb	\$12.34	Tractor Operator- Pneumatic	\$10.07
Foundation Drill Operator - Crawler Mounted	\$17.43*	Transit Mixer Truck Driver	\$11.00
Foundation Drill Operator - Truck Mounted	\$15.89*	Truck Driver, Lowboy-float	\$16.03*
Front End Loader Operator	\$13.55*	Truck Driver, Single-Axle - Heavy	\$11.48*
Laborer Common	\$11.02*	Truck Driver, Single-Axle - Light	\$11.48
Laborer- Utility	\$11.73*	Truck Driver, Tandem Axle Semi-Trailer	\$12.27*
Manhole Builder	\$9.00	Work Zone Barricade Servicer	\$11.67*
Mechanic	\$16.96*	Welders - Receive rate prescribed for craft performing operation to which welding is incidental	
* Apprentices- must be in an approved USDOL Program and cannot exceed ratios			

Engineering Prevailing Wages Classification Definitions

Asphalt Distributor Operator

Drives distributor truck, sets spray bars and operates valves and levers to control distribution of bituminous material for highway surfacing. May oil, grease or otherwise service and make adjustments to equipment as needed. Performs other related duties.

Asphalt Paving Machine Operator

Operates paving machine that spreads and levels asphaltic concrete on highway subgrade. Controls movement of machine, raises and lowers screed, regulates width of screed. May, oil, grease, service and make adjustments to equipment as needed. Performs other related duties.

Asphalt Raker

Distributes asphaltic materials evenly over road surface by raking and brushing material to correct thickness; directs Laborers when to add or take away material to fill low spots or to reduce high spots. Performs other related duties.

Asphalt Shoveler

A general term used on construction work covering many unskilled classifications requiring work of a physical nature. A laborer works with all crews doing everything from pick and shovel work to cleaning up lumber with hammer, shoveling and placing concrete, uses air tools, cleans concrete joints and fills joints with sealing compound from bucket or with hose and nozzle from a central source, applies coating of oil to inside face of forms, may help set and strip forms, unloads and transports reinforcing steel, cures newly poured concrete, helps lower pipe into ditch for pipelayers, builds fences, works with dirt crew keeping construction layout stakes out of the way of dirt moving equipment.

Broom or Sweeper Operator

Operates a self-propelled machine to sweep and clean roadway surfaces. May oil grease, service and make adjustments to equipment as needed. Performs other related duties.

Bulldozer Operator

Operates a crawler tractor with a bulldozer mounted in front of chassis to level, distribute and push earth or other material. May operate a ripper attachment to break up rock or other hard material. May use a push block on front of tractor to push load scrapers. May oil, grease, or otherwise service and make minor repairs to equipment as needed. Performs other related duties.

Carpenter, Rough

Works from plans to build, assemble, fit together, align, plum, and set in place forms for molding concrete structures. Forms may be wood, steel, aluminum, fiberglass or any other type of material. Checks form while concrete is placed. May install miscellaneous materials integral to concrete structures. May set precast concrete elements. Prepares for slipforming traffic rail and median barrier. May install permanent metal deck forms. May work with power tools. Performs other related duties.

Concrete Finisher, Paving

Finishes the exposed surfaces of fresh concrete paving, median barrier and every element of concrete structures to the final grade and contour structures to the final grade and contour with the use of straight edges and steel trowels. Operates bridge deck finishing machine. Finishes concrete curbs and gutters. Finishes exposed surface of concrete after forms have been removed by patching imperfections with fresh concrete, rubbing surface with abrasive stone, and directing others in removing excess or defective concrete with power tools. Performs other related duties.

Concrete Finisher, Structures

A worker semi-skilled in concrete finishing who assists Concrete finisher by performing specific or general duties of lesser skill and keeping Concrete Finisher supplied with materials, tools, and supplies; cleaning working area and equipment; and holding materials and tools. Performs other related duties.

Concrete Paving Curbing Machine Operator

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

Concrete Paving Finishing Machine Operator

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

Concrete Paving Joint Sealer Operator

Cleans and seals joints requiring a hot or cold sealing compound in concrete paving, sidewalks, driveway and approach slabs. May oil, grease or make necessary repairs adjustments to equipment as needed. Performs other related duties.

Concrete Paving Saw Operator

Operates a water-cooled power saw with either or an abrasive blade to saw expansion and contraction joints in concrete paving. May also be used to saw asphaltic pavements. May oil grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Concrete Paving Spreader Operator

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

Concrete Rubber

Finishes the exposed surface of concrete masonry after the forms have been removed by patching holes and broken corners with fresh concrete, rubbing surface with abrasive stone to remove rough spots, and removing high spots and defective concrete with hand chisel and hammer or pneumatic chisel and powered abrasive stone. Performs other related duties.

Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel Operator

A worker who operates a lattice boom type crane can hoist and move materials, raise and lower heavy weights and perform other related operations. May be crawler type or rubber tired. May include placement of rock riprap, clamshell, dragline, pipe and pile driving operations. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Crusher and Screed Plant Operator

Operates a crusher or screening plant through which rock is run to break it into crushed stone for construction or to control flow of materials not needed. May include minor repairs and may service and make necessary adjustments to equipment as needed. Performs other related duties.

Electrician *3 Journeyman 2 Apprentice

Plans and directs the layout of metal electrical conduit, installs wiring systems, switch-panels, buss bars, works on overhead distribution systems and underground distribution systems. Performs other related duties.

Flagger

A worker who directs traffic in or around a construction site. May use signs or devices to direct traffic. May help assemble, position and clean devices or equipment used to direct traffic. Must be able to effectively communicate with the public. May require certain level of training by TXDOT specifications. Performs other related duties.

Form Builder/Setter, Structures

Fits together, aligns and sets to grade metal and wooden forms for placement of concrete. Forms may be wood, steel, aluminum, fiberglass or any other type of material. Checks forms while concrete is placed. May install miscellaneous materials integral to concrete structures. May set precast concrete elements. Prepares for slipforming traffic rail and median barrier. May install permanent metal deck forms. May work with power tools. Performs other related duties.

Form Liner, Paving & Curb

Fits together, panels align and sets to grade metal and wooden forms for placement of concrete. Works with survey crew to set stringline for panels or moles. Performs other related duties.

Form Setter, Paving & Curb

Fits together, align and set to grade metal and wooden forms for placement of concrete paving and curbs. Works with survey crew to set stringline for paving, curb and gutter curb. Performs other related duties.

Foundation Drill Operator, Crawler Mounted

Operates a hole-drilling machine that is crawler mounted. May include geotechnical operations such as soils nails, rock nails, tiebacks, anchors and jet grouting. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Foundation Drill Operator, Truck Mounted

Operates a hole drilling machine that is mounted on the rear of a rubber tired vehicle or truck. May include soils nails, rock nails, tiebacks, anchors and jet grouting. Drive truck from location to location or may have laborer who drives truck. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Front End Loader Operator

Operates a rubber tired, skid steer or crawler type tractor with an attached scoop type bucket on front end. Machine is used to load materials from stockpiles, excavation, charging batch plants, loading and unloading trucks. May be used with attachments in lieu of the bucket. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Laborer, Common

A general term used on construction work covering many unskilled classifications requiring work of a physical nature. A laborer works with all crews doing everything from pick and shovel work to cleaning up lumber with hammer, shoveling and placing concrete, uses air tools, cleans concrete joints and fills joints with sealing compound from bucket or with hose and nozzle from a central source, applies coating of oil to inside face of forms, may help set and strip forms, unloads and transports reinforcing steel, cures newly poured concrete, helps lower pipe into ditch for pipelayers, builds fences, works with dirt crew keeping construction layout stakes out of the way of dirt moving equipment.

Laborer, Utility

Performs a variety of manual duties, usually working in a utility capacity by working on multiple projects and tasks where demands require workmen with varied experience and ability to work without close direction. Unloads and transports reinforcing steel. May occasionally place and tie reinforcing steel. Directs common laborers in pouring concrete. Erects shoring and bracing. Assists in installation of pipe. Installs, operate and maintains dewatering systems. May assist equipment operators in positioning machines, verifying grades and signaling operators. Directs truck drivers and scraper operators to dumping positions to maintain grades as directed. Uses power tools and air tools. May work as lead man in a labor crew. His performance of a wide variety of construction jobs distinguishes him from a helper assigned to a specific craft. Installs and maintains erosion control. Is more or less a general utility construction worker. May be second step in learning a skill, and may later become a helper in a specific classification. Performs other related duties.

Manhole Builder

Constructs a means of permanent access to water and sewer lines for maintenance purposes. This work consists of laying brick or concrete slab at bottom of ditch up to an approximate grade line near the surface of the ground. Brick or block is normally laid to form a nearly circular manhole. Brick or block is laid in by eyesight and is normally to a plumb line. Chipped or culled brick can be used quite often is. No effort may be made to keep mortar off the face of the brick and joints are not pointed. May apply coating of concrete to interior and exterior surface. Performs other related duties.

Mechanic

Assembles, set up, adjusts and maintains and repairs all types of construction equipment and trucks. He may perform the duties of a welder in repair of equipment. Performs other related duties.

Milling Machine Operator, Fine Grade

Operates a power-driven milling machine that planes material of the to roadbed and discharges the material into a hauling unit or a windrow. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Mixer Operator

Performs a variety of manual duties, usually working in a utility capacity by working on multiple projects and tasks where demands require workmen with varied experience and ability to work without close direction. Unloads and transports reinforcing steel. May occasionally place and tie reinforcing steel. Directs common laborers in pouring concrete. Erects shoring and bracing. Assists in installation of pipe. Installs, operate and maintains dewatering systems. May assist equipment operators in positioning machines, verifying grades and signaling operators. Directs truck drivers and scraper operators to dumping positions to maintain grades as directed. Uses power tools and air tools. May work as lead man in a labor crew. His performance of a wide variety of construction jobs distinguishes him from a helper assigned to a specific craft. Installs and maintains erosion control. Is more or less a general utility construction worker. May be second step in learning a skill, and may later become a helper in a specific classification. Performs other related duties.

Motor Grader Operator, Rough

Operates a motor grader. Equipment is used to grade excavation and embankment and to lay asphalt, base and other materials. May blade haul roads and do other general motor grader work, but does not perform finish grade work to close specification tolerances. This operator may be a learner in the first phase of learning the skills of motor grader work. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Motor Grader Operator

Operates a motor grader. Equipment is used to grade excavation and embankment and to lay asphalt, base and other materials. May blade haul roads and do other general motor grader work, but does not perform finish grade work to close specification tolerances. This operator may be a learner in the first phase of learning the skills of motor grader work. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Oiler

A learner or semi-skilled worker who under the direction of the watch engineer. May oil and grease or otherwise service all engines and necessary equipment as needed. He may clean and paint engine room as needed. Performs other related duties.

Painter, Structures

Paints and stains structural steel and concrete surfaces of bridges, retaining walls, or other structures. Directs cleaning and abrasive blasting of surfaces prior to painting or staining. Performs other related duties.

Pavement Marking Machine Operator

Operates machine used in laying paint stripes or markers on all types of paving. Loads machine with appropriate materials and may walk or ride on machine. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Piledriverman

Sets in place, aligns, plumbs directs driving of timber, concrete, steel, pipe and any other type of piling. Sets, drives and pulls steel, concrete and other types of sheet piling. Rigs pile and leads and bracing. Signals operator. Splices piles before and after driving. Directs pile cutoff. May direct jetting or drilling equipment in connection with installing piles to grade. Performs other related duties.

Pipelayer

Installs concrete, clay, steel, ductile iron, plastic, corrugated pipe and any other type of pipe for storm drainage, water lines, gas lines and sanitary sewer lines. Lays underground communication and electrical ducts. May install and set electrical ground boxes, hand holes, manholes, inlets and other structures. Caulks joints, makes threaded and flanged connections. Installs valves and other accessories. Performs other related duties.

Reinforcing Steel Setter, Paving

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker (helper) or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

Reinforcing Steel Setter, Structure

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker (helper) or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

Roller Operator, Pneumatic, Self-Propelled

Operates a self-propelled machine with either steel wheels pneumatic tires, which is used to compact and smooth all bituminous materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Roller Operator, Steel Wheel, Flat Wheel/Tamping

Operates a self-propelled machine with either steel wheels or pneumatic tires which is used to compact earth fills, subgrade, flexible base and all other types of materials except bituminous. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Roller Operator, Steel Wheel, Plant Mix Pavement

Operates a self-propelled machine with either steel wheels pneumatic tires, which is used to compact and smooth all bituminous materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Scraper Operator

Operates a self-contained wheeled tractor scraper both self loading or assisted by crawler tractors or other scrapers. Used to excavate and transport earth or other materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Servicer

Drives a truck, which carries various fuels, oils, greases and filters. Must have knowledge of and is responsible for the correct oiling and greasing and changing of filters on equipment according to the manufacturers' specifications. Uses compressed air grease guns, wrenches and other tools. May make adjustments to clutches, brakes and other mechanical items. Keeps record of service preventive maintenance records. May have laborer assisting him. May require CDL if driving truck on public highways. Performs other related duties.

Sign Installer (PGM)

Sets forms, reinforcing steel, anchor bolts and pours concrete for Sign foundations. Fabricates and erects pipe and angle Frameworks by bolting, welding or other means prior to installation of signs that are normally prefabricated. Works from plans in location and drilling holes for proper location and alignment of signs. May direct hoisting of signs into place. Fastens signs to framework by bolting and other means. Locates and sets lighting brackets. May perform other work associated with signing projects. Supervises sign erector helper. Performs other related duties.

Slip Form Machine Operator

Cleans and seals joints requiring a hot or cold sealing compound in concrete paving, sidewalks, driveway and approach slabs. May oil, grease or make necessary repairs adjustments to equipment as needed. Performs other related duties.

Spreader Box operator

Operates spreader box by adjusting hopper and strike off blade so that the gravel, stone or other material may be spread to a specific depth on road surface during seal coat and surface treatment operations. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Structural Steel Worker

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker (helper) or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

Tractor operator, Crawler Type

Operates a crawler tractor with a bulldozer mounted in front of chassis to level, distribute and push earth or other material. May operate a ripper attachment to break up rock or other hard material. May use a push block on front of tractor to push load scrapers. May oil, grease, or otherwise service and make minor repairs to equipment as needed. Performs other related duties.

Tractor Operator, Pneumatic

Operates a gasoline or diesel powered agricultural tractor that tows compaction rollers, plow, disc, water tanks, scrapers and other similar operations. May use other miscellaneous attachments. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Traveling Mixer Operator

Drives a gasoline or diesel truck upon which is mounted a concrete mixer. Operates concrete mixer and dumps concrete on the grade, into forms or into concrete pumps or buckets. Cleans mixer drum. May require CDL license for on highway use. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

Truck driver, lowboy-Float

Drives a heavy-duty diesel powered truck to which is attached a trailer upon which heavy equipment is hauled. Driver is often required to operate heavy equipment to load or unload the lowboy. May require CDL license for on highway use. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

Truck driver, Single Axle, Heavy

Drive a light capacity truck for transporting loads of construction material. The truck is of single rear axle type, may have various kinds of beds attached, such as dump, flat bed, tank, etc. May require CDL license for driving on highway. May services and make necessary adjustments for proper operation equipment. Performs other related duties.

Truck driver, Single Axle-Light

Drive a light capacity truck for transporting loads of construction material. The truck is of single rear axle type, may have various kinds of beds attached, such as dump, flat bed, tank, etc. May require CDL license for driving on highway. May services and make necessary adjustments for proper operation equipment. Performs other related duties.

Truck Driver, Tandem Axle, Semi-Trailer

Drives a diesel-powered tractor pulling a semi trailer hauling materials. Hauls dirt, rock, aggregates or other material. May require CDL license for driving on highway. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

Work Zone Barricade Servicer

Fabricates, erects and maintains temporary traffic control devices, including arrow boards, signs, barricades, channelizing devices, barrels and all message boards. May operates a truck during traffic control operations.

WELDERS - Receives rate for craft being performed to which welding is incidental.

EXHIBIT "B"

CERTIFICATE FROM CONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO
SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

E-Mail Address: _____

Project WBS#: _____ Date _____

(I) (We) hereby certify that (I am) (we are) the **Prime Contractor** for _____

(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed _____, whose signature appears below, to supervise the payment of (my) (our) employees beginning _____, 20 ____; that he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and the City of

Tomball, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to the City of Tomball a new certificate appointing some other person for the purposes hereinabove stated.

(Identifying Signature of Appointee) Phone: _____

Attest: _____
(Name of Firm or Corporation)

By: _____
(Signature)

(Title)

By: _____
(Signature)

(Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and the City of Tomball.

EXHIBIT "C"

CERTIFICATE FROM SUBCONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO
SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

E-Mail Address: _____

Project WBS#: _____ Date _____

(I) (We) hereby certify that (I am) (we are) the **Sub Contractor** for _____

(Specify work to be performed by subcontractor for this project)
in connection with construction of the above-mentioned Project, and that (I) (we) have
appointed _____, whose signature appears below, to supervise
the payment of (my) (our) employees beginning _____, 20_____;
that he/she is in a position to have full knowledge of
the facts set forth in the payroll documents and in the statement of compliance required
by the Copeland Act and the City of Tomball, which he/she is to execute with (my) (our)
full authority and approval until such time as (I) (we) submit to the City of Tomball a new
certificate appointing some other person for the purposes hereinabove stated.

(Identifying Signature of
Appointee) Phone: _____

Attest: _____
(Name of Firm or Corporation)

By: _____ By: _____
(Signature) (Signature)

(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and the City of Tomball.

EXHIBIT B

Worker's Compensation Insurance Coverage

EXHIBIT B
MEMORDANDUM

4/28/2008

Date: April 28, 2008
To: City of Tomball Contract Insurance Requirements
From: Mark A. McClure, P.E. *mm*
Director of Engineering & Planning
City of Tomball
Re: Certificate of Insurance Explanations

Effective immediately, to facilitate the processing of Contracts, the Engineering & Planning Department is requesting the following information be submitted with each Certificate of Insurance. A sample insurance form is attached, matching the numbered listings below:

1. Certificate must not be more than 12 months old.
2. Name and address of producer writing coverage.
3. Name of insurance company providing coverage as listed in Best's Key Rating Guide or on company's Certificate of Authority on file with Texas Department of Insurance. Company must have rating of B+ or better; provided, however, that this requirement will be waived for workers compensation coverage if the coverage is placed with a company that participates in the State of Texas Workers' Compensation Assigned Risk Pool.
4. Name and address of insured, as shown on policy.
5. Must reference the insurer of the policy being described.
6. Must be a policy number, no binders.
7. Date policy became effective.
8. Expiration date must be at least 60 days from date of deliver of certificate.
9. Check limits of liability against contract.
10. Must check either; 1) Any Auto, or 2) All Owned, Hired, and Non-Owned Autos.
11. Statutory limits must be checked per our ordinance.
12. Must name the City as Additional Insured on Commercial General Liability and Automobile Liability. Must have a Waiver of Subrogation in favor of the City on Commercial General Liability, Automobile Liability, and Workers' Compensation/Employers' Liability.
13. Name and file number of project.
14. Address of the City of Tomball and the name of the project manager (as a suggestion either project applicable Department Director or Assistant City Manager).
15. Cancellation clause of the underlying policy must endorsed to provide that , "should any of the above described policies be canceled before the expiration date thereof, the issuing company will mail 30 days written notice to the certificate holder named."
16. Signature or facsimile signature of authorized representative of producer.

UNLESS OTHERWISE SPECIFIED:

Minimum Insurance Requirements: Small contracts (less than \$50,000.00)-Workers compensation insurance and Automobile Liability Insurance required by law.

Minimum Insurance Requirements: All other contracts-

1. Commercial General Liability: \$500,000 per occurrence for bodily injury, personal injury and property damage. \$1,000,000 Aggregate Policy will include coverage for a) Premises - Operations; b) Broad Form Contractual Liability; c) Products and Completed Operations; d) Use of Contractors and Subcontractors; e) Personal Injury; f) Broad Form Property Damage; g) Explosion Collapse and Underground (XCU) Coverage (when applicable), Fire Damage, Medical Expense. NOTE: The aggregate loss limit applies to each project.
2. Workers' Compensation and Employer's Liability: Workers' Compensation limits as required by the Labor Code of the State of Texas and Statutory Employer's Liability Limits.
3. Automobile Liability - \$500,000 per occurrence; 1,000,000 Aggregate if contract involves road construction projects.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

PRODUCER	THIS CERTIFICATION IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
INSURED	INSURERS AFFORDING COVERAGE	NAIC #
	INSURER A:	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR/ADD'L LTR/INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
5	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	6	7	8	EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN EA ACC \$ AUTO ONLY: AGG \$
	EXCESS/UMBRELLA LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE RETENTION \$				EACH OCCURRENCE \$ AGGREGATE \$ \$ \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				WC STATU-TORY LIMITS OTH-ER 11 E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
	OTHER PROFESSIONAL LIABILITY				PER CLAIM \$ AGGREGATE \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

GENERAL LIABILITY AND AUTOMOBILE LIABILITY POLICIES ENDORSED TO INCLUDE CITY OF TOMBALL

PROJECT DESCRIPTION:

CERTIFICATE HOLDER

City of Tomball
501 James Street
Tomball, Texas 77377

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

EXHIBIT C
A Listing of the Duties, Responsibilities, and Limitations to Authority of the
Resident Project Representative (RPR)

A. General

RPR as Owner's agent at the site, will act as directed by and under the supervision of the Owner, and will confer with ENGINEER regarding RPR's actions. RPR's dealings in matters pertaining to the on-site Work shall in general be with ENGINEER and CONTRACTOR keeping OWNER advised as necessary. RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of CONTRACTOR. RPR shall generally communicate with OWNER with the knowledge of and under the direction of ENGINEER.

B. Duties and Responsibilities of RPR

1. Schedules:

Review the progress schedule, schedule of Shop Drawing submittals, and other required schedules prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.

2. Conferences and Meetings:

Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.

3. Liaison:

- a. Serve as ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent, and assist in understanding of the Contract Documents, and assist ENGINEER in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's on-site operations.
- b. Assist in obtaining from OWNER additional details or information when required for proper execution of the Work.

4. Shop Drawings and Samples:

- a. Record date of receipt of Shop Drawings and samples.
- b. Receive samples, which are furnished at the site by CONTRACTOR, and notify ENGINEER of availability of samples for examination.
- c. Advise ENGINEER and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or sample if the submittal has not been approved by ENGINEER.

5. Review of Work, Rejection of Defective Work, Inspections, and Tests:

- a. Conduct on-site observations of the Work in progress to assist ENGINEER in determining if the Work is in general proceeding in accordance with the Contract Documents.
- b. Report to ENGINEER whenever RPR believes that any Work is unsatisfactory, faulty or defective, or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test, or approval required to be made; and advise ENGINEER of Work that RPR believes should be corrected or rejected, or should be uncovered for observation, or requires special testing, inspection, or approval.
- c. Verify that tests, equipment, and systems start-up and operating and maintenance training are conducted in the presence of appropriate personnel, and that CONTRACTOR maintains adequate records thereof; and observe, record, and report to ENGINEER appropriate details relative to the test procedures and start-ups.
- d. Accompany visiting inspectors, other than the OWNER's, representing public or other agencies having jurisdiction over the Project, record the result of these inspections, and report to ENGINEER.

6. Interpretation of Contract Documents:

Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to Contract clarifications and interpretations as issued by the ENGINEER.

7. Modifications:

Consider and evaluate CONTRACTOR's suggestions, for modifications in Drawings or Specifications and report with RPR's recommendations to ENGINEER. Transmit to CONTRACTOR decisions as issued by ENGINEER.

8. Records:

- a. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions of original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, ENGINEER's clarification and interpretations of the Contract Documents, progress reports, and other Project-related documents.
- b. Keep a diary or log book recording CONTRACTOR hours on the job site, weather conditions, data relative to questions of Work Directive Changes,

Change Orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures, and send copies to ENGINEER.

- c. Record names, addresses, and telephone numbers of all contractors, subcontractors, and major Suppliers of materials and equipment.

9. Reports:

- a. Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the progress schedule and schedule of Shop Drawings and sample submittals.
- b. Consult with ENGINEER in advance of schedule of major tests, inspections, or start of important phases of the Work.
- c. Draft proposed Change Orders and Work Directive Changes, obtaining back-up material from CONTRACTOR, and recommend to ENGINEER Change Orders, Work Directive Changes, and Field Orders.
- d. Report immediately to OWNER and ENGINEER upon the occurrence of any accident.

10. Payment Requests:

Review Applications for Payment with CONTRACTOR for compliance with the established procedure for their submission and forward with recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of items, Work completed, and materials and equipment delivered at the site but not incorporated in the Work.

11. Certificates, Maintenance and Operation Manuals:

During the course of the Work, verify that certificates, maintenance and operation manuals, and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment for Work.

12. Completion:

- a. Before ENGINEER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring completion of correction.
- b. Conduct final inspection in the company of ENGINEER, OWNER, and CONTRACTOR, and prepare a final list of items to be completed or corrected.
- c. Observe that all items on final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance.

C. Limitations of Authority

Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment unless authorized by ENGINEER.
2. Shall not exceed limitations of authority as set forth in the Agreement or the Contract Documents.
3. Shall not undertake any of the responsibilities of CONTRACTOR, subcontractor, or CONTRACTOR's superintendent.
4. Shall not advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences, or procedures of construction unless such advice or directions are specifically required by the Contract Documents.
5. Shall not advise on, issue directions regarding, or assume control over safety precautions and programs in connection with the Work.
6. Shall not accept Shop Drawing or sample submittals from anyone other than CONTRACTOR.
7. Shall not authorize OWNER to occupy the Project in whole or in part.
8. Shall not participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by Owner.

EXHIBIT D

Attach any and all Addendums

Document 00910

ADDENDUM NO. _____

Date of Addendum: _____

PROJECT NAME: Rudolph Rd. Water Line Extension

PROJECT NO: 2024-02

BID DATE: Nov. 16, 2023 (There is no change to the Bid Date.)

FROM: [City Engineer's Name], P.E., City Engineer
City of Tomball, [Contracting Department]
[Street Address of Contracting Department]
_____, Texas [Zip Code]
Attn: _____, P.E., Project Manager

TO: Prospective Bidders

This Addendum forms a part of the Bidding Documents and will be incorporated into the Contract documents, as applicable. Insofar as the original Project Manual and Drawings are inconsistent, this Addendum governs.

CHANGE IN BID DATE

The Bid Date for this Project has been changed from _____ to _____.
Date Date

The bid date for this project has been indefinitely postponed. Another Addendum will be issued to reset the Bid Date or to cancel bidding on this Project.

This Addendum uses the change page method: remove and replace or add pages, or Drawing sheets, as directed in the change instructions below. Change bars (|) are provided in the outside margins of pages from the Project Manual to indicate where changes have been made; no change bars are provided in added Sections. Reissued Drawing Sheets show the Addendum number below the title block and changes in the Drawing are noted by a revision mark and enclosed in a revision cloud.

CHANGES TO PREVIOUS ADDENDA

ADDENDUM NO. _____

CHANGES TO PROJECT MANUAL

BIDDING REQUIREMENTS

[2. Document 00020 - Notice to Bidders. Replace page 00020-

2.] CONTRACT FORMS

[3. Document 00610 - Replace revised Performance Bond, page 00610-1.]

CONDITIONS OF THE CONTRACT

[4. Document 00800 - Supplementary Conditions. Replace page 00800-4
and add page 00800-5.]

SPECIFICATIONS

[5. Section 02050 - Demolition. Add section including pages 02050-
1 through 02050-3.]

00910-3
02-01-08

CHANGES TO DRAWINGS

[6. Delete Sheet S-9, Beam Schedule, and replace with Sheet S-9-A.]

CLARIFICATIONS

[7. Document 00210 - Supplementary Instructions to Bidders states that no substitutions will be considered during the bidding phase. Substitutions will be considered during the first 15 percent of the Contract Time or first 90 days of the Contract, whichever is less, as stated in Document 00700 - General Conditions.]

END OF ADDENDUM NO. ____

DATED: _____
[Director]

END OF DOCUMENT

Document 00911

NOTICE OF
ADDENDUM NO. _____

Date of Addendum: _____

PROJECT NAME: Rudolph Rd. Water Line Extension

PROJECT NO: 2024-02

BID DATE: Nov. 16, 2023 (There is no change to the Bid Date.)

FROM: [Director's Name], [Title]
City of Tomball, [Contracting Department]
[Street Address of Contracting Department]
Tomball, Texas [Zip Code]
Attn: _____, P.E., Project Manager

TO: Prospective Bidders

CHANGE IN BID DATE

The Bid Date for this Project has been changed from _____ to _____.
Date Date

00911-1
02-01-08

The bid date for this project has been indefinitely postponed. Another Addendum will be issued to reset the Bid Date or to cancel bidding on this Project.

The referenced Addendum forms a part of the Bidding Documents and will be incorporated into the Contract documents, as applicable.

Written questions regarding this Addendum may be submitted to the Project Manager following the procedures specified in Document 00200 - Instructions to Bidders. Immediately notify the City Engineer through the named Project Manager upon finding discrepancies or omissions in the Bid Documents.

This Addendum includes:

ADDENDUM SYNOPSIS

Changes to Previous Addendum
Changes to Project Manual
 Bidding Requirements
 Contract Forms
 Condition of the Contract
 Specifications
Changes to Drawings
Clarifications

DATED: _____
[Director]

END OF DOCUMENT

00911-2
02-01-08

Document 00931

REQUEST FOR INFORMATION

1. PROJECT No.: _____
2. RFI No.: _____
3. PROJECT NAME: _____
4. CONTRACTOR: _____
5. CONTRACT No.: _____
6. SPECIFICATION Nos.: _____
7. DRAWING Nos.: _____
8. RESPONSE CODE: ☐ CRITICAL ☐ ROUTINE
9. DATE RESPONSE REQUIRED: _____
10. INFORMATION REQUIRED:

11. _____
CONTRACTOR (Signature) TITLE DATE

12. RESPONSE:

13. _____
PROJECT MANAGER (Signature) DATE

- 14. If Contractor believes the response given in Item 12 requires an adjustment in Contract Price or Contract Time, Contractor shall submit a timely proposal so as not to delay Contractor's Work in accordance with General Conditions, Article 7 - Changes in the Work.**

END OF DOCUMENT

00931-1
02-01-08

EXHIBIT E

Change Orders

Document 00940

WORK CHANGE DIRECTIVE / WCD No. _____

PROJECT: Rudolph Road Water Line Extension
CONTRACT No.: _____ PROJECT No.: 2024-02

TO: _____
Contractor and _____
Address for Written Notice _____

REFERENCE RFIs/RFPs: _____

You are hereby directed to make the following changes in the Work, as described below and specified or shown on attachments, if applicable.

1.01 DESCRIPTION OF CHANGES

A. Brief description of changes in the Work:

B. Justification for change(s):

1.02 PROPOSED ADJUSTMENTS

A. Contract Price (Check one):

- ☐ Lump sum [increase / decrease] of \$_____.
☐ Unit Price of \$_____ per _____.
☐ As provided in subparagraph _____ of General Conditions.
☐ As follows:

B. Contract Time: Contract Time is proposed to [be adjusted / remain unchanged].
Proposed adjustment, if any, is [an increase / a decrease] of ____ days.

1.03 NOTICE TO PROCEED BY THE CITY

Signature by City Engineer indicates notice to proceed to Contractor for the described work and outlines proposed method of adjustment in Contract Price and Contract Time.

Project Manager

Date

[Intermediate Authority, if needed]

Date

[Intermediate Authority, if needed]

Date

City Engineer

Date

1.04 ACCEPTANCE BY CONTRACTOR

Signature by Contractor indicates Contractor's agreement with the above proposed adjustments in Contract Price and Contract Time.

Contractor Signature and Title

Date

END OF DOCUMENT

cc: [Design Consultant], [Owning Dept. Director], [Other Copy Addressees], [File(s)]

EXECUTIVE SUMMARY

WCD No. _____ Contract No.: _____ Proj. No.: 2024-02

1.01	CONTRACT PRICE SUMMARY	DOLLAR AMOUNT	PERCENT
A.	Original Contract Price	\$	100.00%
B.	Previous Change Orders	\$0.00	#VALUE!
C.	This Work Change Directive	\$0.00	#VALUE!
D.	Revised Contract Price	\$0.00	#VALUE!
E.	Projected Contract Modifications*		
F.	Projected Contract Price		
D.	Revised Contract Time	180 Days	Friday, March 28, 2003
E.	Projected Contract Modifications*		
F.	Projected Contract Time		

1.03 TOTAL VALUE OF INCREASES OUTSIDE OF GENERAL SCOPE OF WORK
A. Including this Work Change Directive, the following table is provided to track conditions related to Paragraph 7.1.2.3 of Document 00700 - General Conditions.

WCD & C.O. Nos.	AMOUNT ADDED	PERCENT OF ORIGINAL CONTRACT PRICE
[1]	[\$0.00]	[0%]
TOTALS	\$0.00	0.0%

* Based on approved WCDs not yet included in Change Orders and Change Orders not yet issued.

END OF SUMMARY

Project No. 2024-02
EXECUTIVE SUMMARY:

1. Paragraph 1.01: Insert (A) Original Contract Price, (B) cost of previous Change Orders and (C) cost of this WCD in the price summary block. Other amounts and percentages in block are calculated by formula except projected amounts on last two lines. Fill in these lines, based on approved WCDs not yet included in Change Orders and Change Orders not yet issued.
2. Paragraph 1.02: Insert Date of Commencement of Work (from Notice to Proceed), (A) original Contract Time, (B) additional days added from previous Change Orders and (C) days required for this WCD in the time summary block. Other days and dates in block are calculated by formula except projected amounts on last two lines. Fill in these lines, based on approved WCDs not yet included in Change Orders and Change Orders not yet issued.
3. Paragraph 1.03 A: Project Manager will provide information from all previous Change Orders and WCDs for this table (i.e. number, amount and percentage of Original Contract Price) so that it can be determined if Council Action is necessary. *NOTE: The conditions of Paragraph 7.1.2.3 of Document 00700 - General Conditions may make Council Action necessary even if funding is already available and even if the 5% contingency threshold has not yet been reached.*

Document 00941

CHANGE ORDER / C.O. No. _____

PROJECT: Rudolph Rd. Water Line Extension

CONTRACT No.: _____ PROJECT No.: 2024-02

TO: _____

Contractor and _____

Address for Written Notice _____

REFERENCE RFIs/RFPs: _____

1.01 DESCRIPTION OF CHANGES	CONTRACT CHANGE	
	AMOUNT	TIME
ITEM 1 SCOPE: <i>[Description of first change order item]</i>	\$0.00	0 Days
JUSTIFICATION: <i>[Justification for adding or deleting work described in "Item 1 Scope"]</i>		
ITEM 2 SCOPE:	\$0.00	0 Days
JUSTIFICATION:		
ITEM 3 SCOPE:	\$0.00	6 Days
JUSTIFICATION:		
TOTALS:	\$0.00	6 Days

1.02 ACCEPTANCE BY CONTRACTOR

Contractor agrees to perform change(s) included in this Change Order for the price and time indicated. The prices for changes include all costs associated with this Change Order.

Contractor Signature and Title

Date

1.03 ACCEPTANCE BY THE CITY

Project Manager

[Intermediate Authority, if needed]

[Intermediate Authority, if needed]

Date

Date

Date

[City Management - Required for COs to Council]

[Mayor - Required for COs to Council]

Public Works Director

Date

Date

Date

END OF DOCUMENT

cc: [Design Consultant], [Owning Dept. Director], [Other Copy Address], [File(s)]

EXECUTIVE SUMMARY

C.O. No. _____ Contract No.: _____ Proj. No.: 2024-02

1.01	CONTRACT PRICE SUMMARY	DOLLAR AMOUNT	PERCENT
A.	Original Contract Price	\$0.00	100.00%
B.	Previous Change Orders	\$0.00	#DIV/0!
C.	This Change Order	\$0.00	#DIV/0!
D.	Contract Price	\$0.00	#DIV/0!

Date of Commencement of the Work:			#VALUE! DATE HERE
1.02	CONTRACT TIME SUMMARY	DURATION	COMPLETION DATE
A.	Original Contract Time	120 Days	#VALUE! #VALUE!
B.	Previous Change Orders	0 Days	#VALUE! #VALUE!
C.	This Change Order	0 Days	
D.	Contract Time	120 Days	#VALUE! #VALUE!

1.03 TOTAL VALUE OF INCREASES OUTSIDE OF GENERAL SCOPE OF WORK
A. Including this Change Order, the following table is provided to track conditions related to Paragraph 7.1.2.3 of Document 00700 - General Conditions.

CHANGE ORDER No.	AMOUNT ADDED	PERCENT OF ORIGINAL CONTRACT PRICE
[1]	[\$0.00]	[0%]

TOTALS	\$0.00	0.0%
--------	--------	------

END OF SUMMARY

INSTRUCTIONS

PURPOSE: Change Orders are used to affect Modifications to the Contract. Prior to final payment, previously approved Work Change Directives can be combined into a summary Change Order to reconcile project cost accounting. When signed and dated by Contractor and City Engineer, document becomes an approved Change Order.

APPLICATION: This form is applicable to agreed on Modifications to the Contract including, but not limited to the following:

- ☐ Additions or reductions (including deletions) of existing bid item quantities.
- ☐ Increases or decreases in construction Contract Time.
- ☐ Change in methods, material, etc., not covered by existing bid item quantities.
- ☐ New work not covered by existing bid item quantities.
- ☐ Price or schedule consideration for conditions not indicated by the Contract.

INSTRUCTIONS: Project Manager or Design Consultant prepares this form. The Executive Summary is for use by the City in analyzing the Change Order but is not a part of the Change Order. This form has two MS Excel tables imbedded in the MS Word document (Paragraphs 1.01 and 1.02 in the Executive Summary). Double click on any cell in these tables to make entries in spreadsheet mode. Click anywhere outside the spreadsheet to return to word processing mode. Other tables in the Change Order and Executive Summary are MS Word tables, not imbedded Excel spreadsheets. Red colored text and numerals represent input fields. Black text and numerals are in cells with formulas or fixed text. Do not make entries in these cells. Following instructions correspond to blanks requiring input and paragraph numbers on form. Paragraph 1.02 of the Change Order form is completed by Contractor. All other items are completed by the City or Design Consultant. Paragraph 1.03 of the Change Order form is completed by administrative and approving authorities. Contractor shall provide all backup material to justify the costs of items enumerated in Paragraph 1.01 of the Change Order form.

CHANGE ORDER FORM:

1. Insert Change Order number and Contract number for the Project at the top of each page, following page one, if the Change Order must be longer than one page.
2. Insert Project name exactly as stated in the Agreement.
3. Insert Project number and other identifying numbers (e.g. CIP, Proj. No., AIP, File No.) for the Project.
4. Insert name of Contractor performing the Work and Contractor's address for notices. Address should be as shown in the Agreement unless changed by proper notice.
5. Insert applicable references to related RFIs and RFPs.
6. Paragraph 1.01: Insert brief descriptions of the changes, including reference to applicable Work Change Directives. Give justification to support change, cost of making change, and adjustment in Contract Time warranted by change. If more than one item is included, number each item. Extend the table to additional pages if necessary. Formulas are imbedded for totals but check the math when extending the table length.
7. Paragraph 1.02: Project Manager signs and dates and has other administrative authorities or representatives sign and date where indicated. Project Manager will substitute actual titles of these persons where red bracketed instructions are shown. Mayor's and Contracting Department Director's signature (and date) are only needed when the Change Order must go to City Council for funding prior to approval. City Engineer for Contracting Department (should be the same person designated in the Agreement) will only sign and date Paragraph 1.03 when funds are approved and in place for payment of additional work. City Engineer's signature and date signify approval of Change Order and is the only authorized approval authority of the City according to Document 00700 - General Conditions.

8. Insert appropriate list of "copy to" persons and file. Delete brackets and instructions. Change color of remaining text to black.

EXECUTIVE SUMMARY:

1. Paragraph 1.01: Insert (A) Original Contract Price, (B) cost of previous Change Orders and (C) cost of this Change Order in the price summary block. Other amounts and percentages in block are calculated by formula. Cost of this Change Order is calculated at the bottom of the table in Paragraph 1.01 of the Change Order form, when all items have been filled in BUT it does not automatically change the amount in Paragraph 1.01 C.
2. Paragraph 1.02: Insert Date of Commencement of Work (from Notice to Proceed), (A) original Contract Time, (B) additional days added from previous Change Orders and (C) days required for this Change Order in the time summary block. Other days and dates in block are calculated by formula. Days for this Change Order are calculated at the bottom of the table in Paragraph 1.01 of the Change Order form, when all items have been filled in BUT it does not automatically change the amount in Paragraph 1.02 C.
3. Paragraph 1.03 A: Project Manager will provide information from all previous Change Orders for this table (i.e. number, amount and percentage of Original Contract Price) so that it can be determined if Council Action is necessary. *NOTE: The conditions of Paragraph 7.1.2.3 of Document 00700 - General Conditions may make Council Action necessary even if funding is already available and even if the 5% contingency threshold has not yet been reached.*

EXHIBIT F

Applications for Payment

Document 00643

ESTIMATE AND CERTIFICATE FOR PAYMENT, UNIT PRICE WORK

Estimate No. _____
Cut off Date: _____
Estimate Date: _____

Project Name: Rudolph Rd. Wate Line Extension
Contractor: _____
Address: _____

Contract No.: _____
Project No.: 2024-02
Ordinance No.: _____

Contract Date: _____
Start Date: _____
Current Contract Completion Date: _____
Substantial Completion Date: _____
Percentage: By Time _____% In Place _____%

CONTRACT TIME IN CALENDER DAYS

Original Contract Time: _____ Days
Approved Extensions: _____ Days
Total Contract Time: _____ Days
Days Used to Date: _____ Days
Days Remaining to Date: _____ Days

Date Insurance Exp. _____ Drug Policy Due _____ Current MWBE % _____ Schedule Update Received _____

CONTRACT AMOUNT TO DATE:

1. Original Contract Price:		\$ _____
2. Approved Change Orders: <u>No./Description</u>	<u>Amount</u>	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
Total Change Orders to Date: _____ +/-	\$ _____	\$ _____
TOTAL CONTRACT AMOUNT:		\$ _____

A. EARNINGS TO DATE:

1. Work Completed to Date: _____ % Complete	\$ _____
2. Materials Stored on Site: _____	\$ _____
3. Materials Stored in Place: _____	\$ _____
4. Balance - Materials Accepted, Not in Work:	\$ _____

TOTAL EARNINGS TO DATE:

\$ _____

B. DEDUCTIONS:

1. Retainage: _____ % of \$ _____	\$ _____
2. Add: Retainage Deduction: _____	\$ _____
3. Total Retainage: _____	\$ _____
4. Liquidated Damages: _____ Days @ \$ _____	\$ _____
5. Quality Control Retest Cost: _____	\$ _____
6. Sunday/Holiday Overtime Cost: _____	\$ _____

TOTAL DEDUCTIONS:

\$ _____

C. AMOUNT DUE THIS PERIOD:

1. Total Earnings to Date:	\$ _____
2. Total Deductions:	\$ _____
3. Total Payments Due:	\$ _____
4. Less Previous Payments:	\$ _____
5. Restoration Adjustment:	\$ _____

TOTAL AMOUNT DUE THIS DATE:

\$ _____

Prepared By: _____ Date: _____ Checked By: _____ Date: _____

Submitted By: _____ Date: _____ Approved: _____ Date: _____

Approved: _____ Date: _____
Director,

City of Tomball
Rudolph Rd. Water Line Extension
Project No. 2024-02

**ESTIMATE AND CERTIFICATE FOR
PAYMENT, UNIT PRICE WORK**

END OF DOCUMENT

EXHIBIT G

Storm Water Pollution Prevention Plan

Refer to Plans and Specifications

EXHIBIT "H"

Conflict of Interest Questionnaire

EXHIBIT "H"

Section 00800

Conflict of Interest Questionnaire



City of Tomball

***Gretchen Fagan
Mayor***

February 7, 2008

Attention: Vendors, Agents, Contractors, Prospective Bidders, Etc.

Re: House Bill 914 – Adding Chapter 176.2 to the Local Government Code

In the 2005 Regular Session, the Texas Legislature passed House Bill 914, which requires the disclosure and availability of information concerning certain local government entities, local government officials, and vendors or other persons, agencies, corporations, or entities contracting or seeking to contract with the City of Tomball for the sale or purchase of property, goods or services.

As a courtesy, enclosed is a copy of the Conflict of Interest Questionnaire (CIQ), a copy of HB 914, and a list of all City officials, as defined under Chapter 176 of the Local Government Code. Please complete this questionnaire and return to the City Secretary as soon as possible at the following address:

CIQ
Attention: City Secretary
City of Tomball
401 Market Street
Tomball, Texas 77375.

If you need additional information regarding the new requirements, please contact your attorney for additional instructions. You may also contact me at 281-290-1002 or dspeer@ci.tomball.tx.us.

Sincerely,

Doris Speer
City Secretary

Enclosure

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.

2 ☐ Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

☐ Yes

☐ No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes

☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

☐ Yes

☐ No

D. Describe each employment or business relationship with the local government officer named in this section.

4

Signature of person doing business with the governmental entity

Date

Section 01110

SUMMARY OF WORK

This text gives standard City of Tomball provisions, as they may be appropriate to an individual Project. Determine Project requirements from City authorities in editing this text, and provide additional text as appropriate.

PART 1 G E N E R A L

1.1 SECTION INCLUDES

1. Summary of the Work including work by City, City furnished products, Work sequence, future Work, Contractor use of Premises, and City occupancy.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

1. Work of the contract is for the construction of the Rudolph Rd. Water Line Extension.

1.3 CASH ALLOWANCES

1. Include the following specific Cash Allowances in the Contract Price under provision of General Conditions Paragraph 3.9:
 1. (List Cash Allowances as appropriate.)

1.4 CITY FURNISHED PRODUCTS

1. Items Furnished by City for Installation and Final Connection by Contractor: Water meter.
2. Contractor's Responsibilities:
 1. Arrange and pay for product delivery to site.
 2. Receive and unload products at site; jointly with City, inspect for completeness or damage.

3. Handle, store, install, and finish products.
4. Repair or replace damaged items.

Use the following Paragraph for lump sum Projects. List Cash Allowances in Document 00405 - Schedule of Unit Prices for unit price Projects.

1.5 WORK SEQUENCE

1. Construct Work in phases during the construction period, coordinate construction schedule and operations with City:
 1. Phase 1: [_____].
 2. Phase 2: [_____].
 3. Phase 3: [_____].
2. Coordination of the Work: Refer to Section 01312 - Coordination and Meetings, and Section 01230 - Alternates

1.6 CONTRACTOR USE OF PREMISES

1. Comply with procedures for access to the site and Contractor's use of rights-of-way as specified in Section 01145 - Use of Premises.
2. Construction Operations: Limited to City's rights-of-way provided by City.
3. Utility Outages and Shutdown: Provide notification to the City and private utility companies (when applicable) a minimum of 48 hours, excluding weekends and holidays, in advance of required utility shutdown. Coordinate all work as required.

1.7 STREET CUT ORDINANCE

1. Excavations on or under pavement in City's Right-of-Way must have a permit. Comply with City of Tomball, Texas Ordinance No. _____, an ordinance amending Chapter ____ of the Code of Ordinances, Tomball, Texas, relating to excavating on the Public Right-of-Way.
2. Comply with New Pavement Repair Details Drawing No. _____ sheets _____ and Street Cut Pavement Replacement, Drawing No. _____ sheets _____.

3. Quantities are included for the pavement replacement in accordance with the various specification sections that identify method of pavement.

1.8 WARRANTY

1. Comply with warranty requirements in accordance with Document 00700 - General Conditions.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01145

USE OF PREMISES

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. General use of site including properties inside and outside rights-of-way, work affecting road, ramps, streets and driveways and notification to adjacent occupants.

1.02 MEASUREMENT AND PAYMENT

- B. No payment will be made for this item. Include cost of work activities specified in this section in overhead cost of this project.

1.03 RIGHTS-OF-WAY

- A. Confine access, operations and storage areas to rights-of-way provided by City as stipulated in Document 00700 - General Conditions; trespassing on abutting lands or other lands in the area is not allowed.
- B. Make arrangements, at no cost to City, for temporary use of private properties. Contractor and Contractor's surety shall indemnify and hold harmless City against claims or demands arising from use of properties outside rights-of-way. Submit notarized copy of agreement between private property owner and Contractor prior to use of area.
- C. Obtain permits from City of Tomball Parks and Recreation Department for storage of materials on esplanades and other areas within rights-of-way under Parks and Recreation Department's jurisdiction. Submit copies of permits to City prior to use of area.
- D. Restrict total length of distributed materials along route of construction to 1,000 linearfeet unless approved in writing by City Engineer.

1.04 PROPERTIES OUTSIDE OF RIGHTS-OF-WAY

- A. Do not alter condition of properties adjacent to and along rights-of-way.
- B. Do not use ways, means, methods, techniques, sequences, and procedures that result in damage to properties or improvements.

- C. Restore damaged properties outside of rights-of-ways at no cost to City.

1.05 USE OF SITE

- A. Obtain approvals from governing authorities prior to impeding or closing public roads and streets. Do not close more than two consecutive intersections at one time.
- B. Notify City Engineer and City Traffic Management and Maintenance department at least 48 hours prior to closing street or street crossing. Obtain permits for street closures in advance.
- C. Maintain 10-foot-wide minimum access lane for emergency vehicles including access to fire hydrants.
- D. Avoid obstructing drainage ditches or inlets; when obstruction is unavoidable due to requirements of Work, provide grading and temporary drainage structures to maintain unimpeded flow.
- E. Locate and protect private lawn sprinkler systems which may exist within site. Test existing irrigation systems prior to construction. Repair or replace damaged systems to condition existing at start of Work, or better.
- F. Perform daily clean-up in affected construction areas in order to restore site to existing or better conditions. Areas should be free of debris, scrap material, dirt, mud, and other items identified by City Engineer. Do not leave buildings, roads, streets and other construction areas unclean.
- G. Restore damaged landscaping to condition existing at start of Work, or better.
- H. Beware of overhead power lines existing in area and in close proximity of project. When 10 feet of clearance between energized overhead power line and construction-related activity cannot be maintained, request Reliant Energy de-energize or move conflicting overhead power line. Contact Reliant Energy representatives at (713) 207-7777. Schedule, coordinate and pay costs associated with de-energizing or moving conflicting overhead power lines. There is no separate pay item for this effort. Include these costs in various items of bid that make such work necessary.

1.06 NOTIFICATION TO ADJACENT OCCUPANTS

- A. Notify individual occupants in areas to be affected by Work of proposed construction and time schedule. Notify not less than 72 hours or more than 2 weeks prior to work performed within 200 feet of homes or businesses. Follow form and content of sample door hanger provided by City Engineer.
- B. Include in notification names and telephone numbers of two company representatives for resident contact available on 24-hour call. Include precautions taken to protect private property and identify potential access, utility inconvenience and disruption.
- C. Submit proposed notification to City Engineer for approval. Consider ethnicity of neighborhood where English is not dominant language. Provide notice in understandable language.

1.07 PUBLIC, TEMPORARY, AND CONSTRUCTION ROADS AND RAMPS

- A. Construct and maintain temporary detours, ramps, and roads to provide for normal public traffic flow when use of public roads or streets is closed by necessities of Work.
- B. Provide mats or other means to prevent overloading or damage to existing roadways from tracked equipment, large tandem axle trucks or equipment that will damage existing roadway surface.
- C. Construct and maintain access roads and parking areas as specified in Section 01504- Temporary Facilities and Controls.

1.08 EXCAVATION IN STREETS AND DRIVEWAYS

- A. Avoid hindering or inconveniencing of public travel on streets or intersecting alleys for more than two blocks at one time, except by permission of City Engineer.
- B. Obtain City Traffic Management and Maintenance Department and City Engineer's approval when nature of Work requires closing entire street. Permits required for street closure are Contractor's responsibility. Avoid unnecessary inconvenience to abutting property owners.
- C. Remove surplus materials and debris and open each block for public use when work in that block is complete.
- D. Acceptance of any portion of Work is not based on return of street to public use.

- E. Avoid obstructing driveways or entrances to private property.
- F. Provide temporary crossing or complete excavation and backfill in one continuous operation to minimize duration of obstruction when excavation is required across drives or entrances.
- G. Provide barricades and signs in accordance with Section VI of the State of Texas Manual on Uniform Traffic Control Devices.

1.09 TRAFFIC CONTROL

- A. Comply with traffic regulation as specified in Section 01555 - Traffic Control and Regulation.

1.10 RESTORATION

- A. Restore site to condition existing before construction.
- B. Repair paved area per requirements of Section 02951 - Pavement Repair and Resurfacing.
- C. Repair damaged turf areas, level with bank run sand conforming to Section 02317 - Excavation and Backfill for Utilities, or topsoil conforming to Section 02911 - Topsoil, and re-sod in accordance with Section 02922 - Sodding. Water and level newly sodded areas with adjoining turf using appropriate steel wheel rollers for sodding. Do not use spot sodding or sprigging.

1.11 LIMITS OF CONSTRUCTION

- A. Confine operations to lands within construction work limits shown on Drawings. Unless otherwise noted on Drawings adhere to the following:
 - 1. Where utility alignment is within esplanade, and construction limits are shown on Drawings to extend to edge of esplanade, keep equipment, materials, stockpiles, a minimum of 5 feet from back of curb.
 - 2. Where construction limits are shown on Drawings to extend to property line, keep equipment, materials, stockpiles, a minimum of 5 feet away from sidewalks.

1.12 EQUIPMENT AND MATERIAL SALVAGE

- A. Upon completion of Work, carefully remove salvageable equipment and material. Deliver them to City of Tomball as directed by City Engineer. Dispose of equipment offsite at no additional cost to City when City Engineer deems equipment unfit for further use.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not

Used

END OF
SECTION

Section 01230

ALTERNATES

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Submission procedures.
- B. Documentation of changes to Contract Price and Contract Time.

1.02 RELATED SECTIONS

- A. Document 00200 - Instructions to Bidders: Definition of Alternate Bids.
- B. Document 00410 - Bid Form: Quotation of each Alternate Bid.
- C. Document 00520 - Agreement Between City of Tomball and Contractor: Monetary value of each accepted Alternate.
- D. Document 00700 - General Conditions: Product Options and Substitutions.
- E. Section 01110 - Summary of Work: Description of each Alternate Bid.
- F. Section 01330 - Submittal Procedures: Construction schedule affected by Alternates.

1.03 REQUIREMENTS

- A. When allowed in Bid documents, alternate bids quoted on Bid Forms will be reviewed and accepted or rejected at City option.
- B. Volunteer Alternates, any Alternate not specified in Section 01110, will not be considered.
- C. Accepted Alternates will be identified in Owner-Contractor Agreement.

1.04 SELECTION AND AWARD OF ALTERNATIVES

- A. Bids will be evaluated on base bid price. After determination of lowest bidder, consideration will be given to Alternates and Bid Price adjustments.

PART 2 P R O D U C T S - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01255

CHANGE ORDER PROCEDURES

PART1 GENERAL

1.1 SECTION INCLUDES

1. Procedures for processing Change Orders, including:
 1. Assignment of responsible individual for approval and communication of changes in Work
 2. Documentation of change in Contract Price and Contract Time.
 3. Change procedures, using proposals and construction contract modifications, Work Change Directive, Stipulated Price Change Order, Unit Price Change Order, Time and Materials Change Order.
 4. Execution of Change Orders.
 5. Correlation of Contractor submittals.

1.2 REFERENCES

1. Rental Rate Blue Book for Construction Equipment (Data Quest Blue Book). Rental Rate is defined as full unadjusted base rental rate for appropriate item of construction equipment.

1.3 RESPONSIBLE INDIVIDUAL

1. Provide letter indicating name and address of individual authorized to execute change documents and responsible for informing others in Contractor's employ and Subcontractors of changes to Work. Information shall be provided at Preconstruction Conference.

1.4 DOCUMENTATION OF CHANGE IN CONTRACT PRICE AND CONTRACT TIME

1. Maintain detailed records of changes in Work. Provide full information required for identification and evaluation of proposed changes, and substantiate costs of changes in Work.

2. Document each proposal for change in cost or time with sufficient data to allow evaluation of proposal.
3. Proposals shall include the following minimum information:
 1. Quantities of items in original Document 00410 - Bid Form with additions, reductions, deletions, and substitutions.
 2. Quantities and cost of items in original schedule of values with additions, reductions, deletions and substitutions.
 3. Provide unit prices for items not included in Schedule of Unit Prices with supporting information when absent from Schedule of Unit Price Work.
 4. Justification for changes in Contract Time.
 5. Additional data upon request.
4. For changes in Work performed on a time-and-materials basis, provide the following additional information:
 1. Quantities and description of products and equipment.
 2. Taxes, insurance and bonds.
 3. Overhead and profit as noted in Document 00800 - Supplementary Conditions.
 4. Dates, times, and by whom work was performed.
 5. Time records and certified copies of applicable payrolls.
 6. Invoices, receipts for products, rented equipment, and subcontracts, similarly documented.
5. For changes in Work performed on a time-and-materials basis, payment for rental equipment will be as follows:
 1. Actual invoice cost for duration required to complete extra work without markup for overhead and profit. When extra work comprises only a portion of rental invoice where equipment would otherwise be on site, compute hourly equipment rate by dividing the actual monthly invoice by 176. (One day equals 8 hours and one week equals 40 hours.)

2. Do not exceed estimated operating costs given in Blue Book for items of equipment. Overhead and profit will be allowed on operating cost.
6. For changes in Work performed on a time-and-materials basis using Contractor-owned equipment, use Blue Book rates as follows:
 1. Contractor-owned equipment will be paid at Blue Book Rental Rate for duration of time required to complete extra work without markup for overhead and profit. Utilize lowest cost combination of hourly, daily, weekly or monthly rates. Use 150 percent of Rental Rate for double shifts (one extra shift per day) and 200 percent of Rental Rate for more than two shifts per day. Standby rates shall be 50 percent of appropriate Rental Rate shown in Blue Book. No other rate adjustments apply.
 2. Do not exceed estimated operating costs given in Blue Book. Overhead and profit will be allowed on operating cost. Operating costs will not be allowed for equipment on standby.

1.5 CHANGE PROCEDURES

1. Changes to Contract Price or Contract Time can only be made by issuance of Document 00941 - Change Order. Issuance of Document 00940- Work Change Directive will be formalized into a Change Order. Changes will be in accordance with requirements of Document 00700 - General Conditions.
2. City Engineer will advise of minor changes in Work not involving an adjustment to Contract Price or Contract Time as authorized by Document 00700 - General Conditions by issuing supplemental instructions.
3. Request clarification of Drawings, Specifications, Contract Documents or other information by using Document 00931- Request for Information. Response by City Engineer to Requests for Information does not authorize Contractor to perform tasks outside scope of Work. Changes must be authorized as described in this section.

1.6 PROPOSALS AND CONTRACT MODIFICATIONS

1. City Engineer may issue Document 00932- Request for Proposal, which includes detailed description of proposed change with supplementary or revised Drawings and Specifications. City Engineer may also request a proposal in response to Request for Information. Prepare and submit proposal within 7 days or as specified in request.

2. Submit request for Contractor changes to City Engineer describing proposed change and its full effect on Work, with a statement describing reason for change and effect on Contract Price and Contract Time including full documentation.
3. City may use Design Consultant to review change orders.

1.7 WORK CHANGE DIRECTIVE

1. City Engineer may issue a signed Work Change Directive instructing Contractor to proceed with a change in Work. Work Change Directive will subsequently be incorporated in Change Order.
2. Document will describe changes in Work and designate method of determining change in Contract Price or Contract Time.
3. Proceed promptly to execute changes in Work in accordance with Work Change Directive.

1.8 STIPULATED PRICE CHANGE ORDER

1. Stipulated Price Change Order will be based on accepted proposal.

1.9 UNIT PRICE CHANGE ORDER

1. Where Unit Prices for affected items of Work are included in Document 00410 - Bid Form, unit price Change Order will be based on unit prices, subject to Articles 7 and 9 of Document 00700 - General Conditions.
2. Where unit prices of Work are not pre-determined in Document 00410- Bid Form, Work Change Directive or accepted proposal will specify unit prices to be used.

1.10 TIME-AND-MATERIAL CHANGE ORDER

1. Provide itemized account and supporting data after completion of change, within time limits indicated for claims in Document 00700 - General Conditions.
2. City Engineer will determine change allowable in Contract Price and Contract Time as provided in Document 00700 - General Conditions.
3. Maintain detailed records of work done on time-and-material basis as specified in Paragraph 1.04, Documentation of Change in Contract Price and Contract Time.

4. Provide full information required for evaluation of changes and substantiate costs for changes in Work.

1.11 EXECUTION OF CHANGE DOCUMENTATION

1. City Engineer will issue Change Orders, Work Change Directives, or accepted proposal for signatures of parties as described in Document 00700 - General Conditions.

1.12 CORRELATION OF CONTRACTOR SUBMITTALS

1. For Stipulated Price Contracts, promptly revise Schedule of Values and Application for Payment forms to record authorized Change Orders as separate line item.
2. For Unit Price Contracts, next monthly estimate of Work after acceptance of a Change Order will be revised to include new items not previously included and appropriate unit rates.
3. Promptly revise progress schedules to reflect change in Contract Time, and to adjust time for other items of work affected by change, and resubmit for review.
4. Promptly enter changes to on-site and record copies of Drawings, Specifications or Contract Documents as required in Section 01785 - Project Record Documents.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01270

MEASUREMENT AND PAYMENT

PART 1 G E N E R A L

1.1 SECTION INCLUDES

1. Procedures for measurement and payment plus conditions for nonconformance assessment and nonpayment for rejected products.

1.2 AUTHORITY

1. Measurement methods delineated in Specification sections are intended to complement criteria of this section. In event of conflict, requirements of the Specification section shall govern.
2. City Engineer will take measurements and compute quantities accordingly.
3. Assist by providing necessary equipment, workers, and survey personnel.

1.3 UNIT QUANTITIES SPECIFIED

1. Quantity and measurement estimates stated in Agreement are for contract purposes only. Quantities and measurements supplied or placed in Work and verified by City Engineer shall determine payment as stated in Article 9 of Document 00700 - General Conditions.
2. When actual Work requires greater or lesser quantities than those quantities indicated in Document 00410 - Bid Form, provide required quantities at unit prices contracted, except as otherwise stated in Article 9 of Document 00700 - General Conditions.

1.4 MEASUREMENT OF QUANTITIES

1. Measurement by Weight: Reinforcing steel, rolled or formed steel or other metal shapes are measured by CRSI or AISC Manual of Steel Construction weights. Welded assemblies are measured by CRSI or AISC Manual of Steel Construction or scale weights.

2. Measurement by Volume:

1. Stockpiles: Measured by cubic dimension using mean length, width, and height or thickness.
2. Excavation and Embankment Materials: Measured by cubic dimension using average end area method.

3. Measurement by Area: Measured by square dimension using mean length and width or radius.

4. Linear Measurement: Measured by linear dimension, at item centerline or mean chord.

5. Stipulated Price Measurement: By unit designated in Agreement.

6. Other: Items measured by weight, volume, area, or linear means or combination, as appropriate, as completed item or unit of Work.

G. Measurement by Each: Measured by each instance or item provided.

H. Measurement by Lump Sum: Measure includes all associated work.

1.5 PAYMENT

1. Payment Includes: Full compensation for required supervision, labor, products, tools, equipment, plant, transportation, services, and incidentals; and erection, application or installation of an item of Work; and Contractor's overhead and profit.

2. Total compensation for required Unit Price Work shall be included in Unit Price bid in Document 00410 - Bid Form. Claims for payment as Unit Price Work, but not specifically covered in list of unit prices contained in Document 00410, will not be accepted.

3. Interim payments for stored materials will be made only for materials to be incorporated under items covered in unit prices, unless disallowed in Supplementary Conditions.

4. Progress payments will be based on City Engineer's observations and evaluations of quantities incorporated in Work multiplied by unit price.

5. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities determined by City Engineer multiplied by unit price for Work which is incorporated in or made necessary by the Work.

1.6 NONCONFORMANCE ASSESSMENT

1. Remove and replace Work, or portions of Work, not conforming to Contract Documents.
2. When not practical to remove and replace Work, City Engineer will direct one of the following remedies:
 1. Nonconforming Work will remain as is, but Unit Price will be adjusted lower at discretion of City Engineer.
 2. Nonconforming Work will be modified as authorized by City Engineer, and Unit Price will be adjusted lower at discretion of City Engineer, when modified Work is deemed less suitable than specified.
3. Specification sections may modify above remedies or may identify a specific formula or percentage price reduction.
4. Authority of City Engineer to assess nonconforming work and identify payment adjustment is final.

1.7 NONPAYMENT FOR REJECTED PRODUCTS

1. Payment will not be made for the following:
 1. Products wasted or disposed of in unacceptable manner.
 2. Products determined as nonconforming before or after placement.
 3. Products not completely unloaded from transporting vehicle.
 4. Products placed beyond lines and levels of required Work.
 5. Products remaining on hand after completion of Work, unless specified otherwise.
 6. Loading, hauling, and disposing of rejected products.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01292

SCHEDULE OF VALUES

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Preparation and submittal of Schedule of Values for stipulated price contracts or for major lump sum items on unit price contracts for progress payments.

1.02 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for this item. Include cost of preparing Schedule of Values in overhead cost for this project.

1.03 DEFINITION

- A. Schedule of Values is itemized list that establishes value of each part of Work for stipulated price contract and for major lump sum items in unit price contract. Schedule of Values is used as basis for preparing applications for payments. Quantities and unit prices may be included in schedule when designated by City Engineer.
- B. Major lump sum item is a lump sum item in Schedule of Unit Price Work which qualifies as Major Unit Price Work as defined in Document 00700 - General Conditions. Break down costs to list major products or operations for each line item which has an installed value of more than \$2000.

1.04 PREPARATION

- A. For stipulated price contracts, subdivide Schedule of Values into logical portions of Work, such as major work items or work in contiguous geographic areas. Use Section 01325 - Construction Schedule to guide subdivision of work items. Items in Schedule of Values will correlate directly with tasks enumerated in Construction Schedule. Organize each portion using Table of Contents of Project Manual as an outline for listing value of Work by Sections. A pro rata share of mobilization, bonds, and insurance may be listed as separate items for each portion of Work.
- B. For unit price contracts, items should include proportional share of Contractor's overhead and profit so that total of all items will equal Contract Price.

- C. For lump sum equipment items where submittal of operation/maintenance data and testing are required, include separate item for equipment operation and maintenance data submittal valued at 5 percent of lump sum amount for each equipment item and separate item for testing and adjusting valued at 5 percent of lump sum amount for each equipment item.
- D. Round off figures for each listed item to nearest \$100 except for value of one item, when necessary, to make total of items in Schedule of Values equal Contract Price for stipulated price contracts or lump sum amount in Schedule of Unit Price Work.
- E. Submit Schedule of Values in approved electronic spreadsheet file and print on 8-1/2-inch by 11-inch white bond paper.

1.05 SUBMITTAL

- A. Submit Schedule of Values in accordance with requirements of Section 01330 - Submittal Procedures. Submit at least 10 days prior to submitting first application for progress payment.
- B. Revise Schedule of Values and resubmit for items affected by contract modifications, Change Orders, and Work Change Directives. After changes are reviewed without exception by City Engineer, make submittal at least 10 days prior to submitting next application for progress payment.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01312

COORDINATION AND MEETINGS

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. General coordination including preconstruction conference, site mobilization conference, and progress meetings.

1.02 MEASUREMENT AND PAYMENT

- 1. No payment will be made for this item. Include cost of meetings and project coordination in overhead cost for this project.

1.03 RELATED DOCUMENTS

- A. Coordination is required throughout documents. Refer to Contract Documents, coordinate as necessary.

1.04 CITY ENGINEER AND REPRESENTATIVES

- A. City Engineer, named in Document 00520 - Agreement Between City of Tomball and Contractor, may act directly or through designated representatives as defined in Document 00700 - General Conditions.

1.05 CONTRACTOR COORDINATION

- A. Coordinate scheduling, submittals, and Work of various Specification sections to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Coordinate completion and clean up of Work for Substantial Completion and for portions of Work designated for City's partial occupancy.
- C. Coordinate access to site for correction of nonconforming Work to minimize disruption of City's activities where City is in partial occupancy.

1.06 PRECONSTRUCTION CONFERENCE

- A. City Engineer will schedule preconstruction conference.

B. Attendance Required: City Engineer's representatives, Design Consultant, Special Consultants as required by City Engineer, Contractor, and major Subcontractors.

C. Agenda:

1. Distribution of Contract Documents.
2. Designation of personnel representing parties in Contract, and Design Consultant.
3. Review of insurance.
4. Discussion of formats for Schedule of Values and Construction Schedule.
5. Procedures and processing of shop drawings, substitutions, pay estimates or applications for payment, Requests for Information, Request for Proposal, Change Orders, and Contract closeout, other submittals
6. Scheduling of Work and coordination with other contractors.
7. Review of Subcontractors.
8. Appropriate agenda items listed for Site Mobilization Conference, Paragraph 1.07C, when preconstruction conference and site mobilization conference are combined.
9. Procedures for testing.
10. Procedures for maintaining record documents.

1.07 SITE MOBILIZATION CONFERENCE

- A. When required by Contract Documents, City Engineer will schedule conference at Project site prior to Contractor occupancy.
- B. Attendance Required: City Engineer representatives, Design Consultant , Special Consultants, Contractor's Superintendent, and major Subcontractors.

C. Agenda:

1. Use of premises by City and Contractor.
2. Safety and first aid procedures.
3. Construction controls provided by City.
4. Temporary utilities.
5. Survey and layout.
6. Security and housekeeping procedures.
7. Field office requirements.

1.08 PROGRESS MEETINGS

- A. Hold project meetings at Project field office or other location as designated by City Engineer. Hold meetings at monthly intervals, or more frequently when directed by City Engineer.
- B. Attendance Required: Job superintendent, major Subcontractors and suppliers, City Engineer representatives, and Design Consultant as appropriate to agenda topics for each meeting.
- C. City Engineer or representative will make arrangements for meetings, and recording minutes.
- D. City Engineer or representative will prepare agenda and preside at meetings.
- E. Provide required information and be prepared to discuss each agenda item.
- F. Agenda:
 1. Review minutes of previous meetings.
 2. Review of Work progress schedule, pay estimates, cash flow curve, payroll and compliance submittals.
 3. Field observations, problems, and decisions.
 4. Identification of problems, which impede planned progress.
 5. Review of submittal schedule and status of submittals.

6. Review of RFI and RFP status.
7. Change Order status.
8. Review of off-site fabrication and delivery schedules.
9. Maintenance of progress schedule.
10. Corrective measures to regain projected schedule.
11. Planned progress during succeeding Work period.
12. Coordination of projected progress.
13. Maintenance of quality and Work standards.
14. Effect of proposed changes on progress schedule and coordination.
15. Other item relating to Work.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01321

CONSTRUCTION PHOTOGRAPHS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Photographic requirements for construction photographs and submittals.

1.02 MEASUREMENT AND PAYMENT

- A. No payment will be made for this item. Include cost of construction photographs in overhead cost for this project.

1.03 SUBMITTALS

- A. Refer to Section 01330 for submittal requirements.
- B. Prints: Prepare 2 prints of each view and submit 1 print directly to City and Engineer within 7 days of taking photographs. Retain one print in field office at Project site and available for reference.
- C. Extra Prints: When requested by City and Engineer, submit extra prints of photographs, with distribution directly to designated parties who will pay costs for extra prints directly to photographer.
- D. Submit photographs taken prior to start of construction to show original site conditions.
- E. Submit photographs monthly, with Pay Estimate.
- F. Negatives: Include photographic negatives in protective envelopes, identified by Project name, Contractor, and date taken with each submittal

1.04 QUALITY ASSURANCE

- A. Responsible for timely execution of photographs, their vantage point, and quality.

PART 2 PRODUCTS

2.01 PRECONSTRUCTION PHOTOGRAPHS

- A. Prior to commencement of any construction, take 35mm color photographs of entire route of project and streets proposed to detour traffic. Present one set of prints and negatives to City and Engineer for use in contract administration and inspection.
- B. Photographs: Two prints; color, matte finish; 3 by 5 -inch size, mounted on 8-1/2 by 11- inch soft card stock, with left edge binding margin for three-hole punch.
- C. Photographs shall show on readable non-reflective chalkboard :
 - 1. Job number
 - 2. Project Number
 - 3. Date and time photographs were taken (Automatic date/time in negative is acceptable)
 - 4. Baseline station, direction of view (i.e. N, S, NW, etc.) and house number or street address and street name on chalkboard.
- D. Indicate condition of the following:
 - 1. Esplanades and boulevards
 - 2. Yards (near side and far side of street)
 - 3. Housewalk and sidewalk
 - 4. Curb
 - 5. Area between walk and curb
 - 6. Particular features (for example, yard light, shrubs, fences, and trees)
 - 7. Date shall be on negative
 - 8. Provide notation of vantage point marked for location and direction of shot, onkey plan of site
- E. Take sufficient number of photographs to show structural condition of concrete and condition of trees, shrubs, and grass.

- F. Identify each photograph with applied label or rubber stamp on back with the following information:
1. Name of Project
 2. Name and address of photographer (if professional photographer is used)
 3. Name of Contractor
 4. Date photograph was taken
 5. Place photographs in plastic pockets and bound in three-ring notebook for easy access and viewing
- G. Include photographs of streets not previously included in detour.

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01325

CONSTRUCTION SCHEDULE

PART 1 GENERAL

1.01 GENERAL

- A. Provide Construction Schedules for Work included in Contract in accordance with requirements in this Section. Create Construction Schedule using Critical Path Method (CPM) computer software capable of mathematical analysis of Precedence Diagramming Method (PDM) plans. Provide printed activity listings and bar charts in formats described in this Section.
- B. Combine activity listings and bar charts with narrative report to form Construction Schedule submittal for City and Engineer.

1.02 MEASUREMENT AND PAYMENT

- A. No payment will be made for this item. Include the cost of construction scheduling in overhead cost for this project.

1.03 SCHEDULING STAFF

- A. Employ or retain services of individual experienced in critical path scheduling for duration of Contract. Individual shall cooperate with City and Engineer and update schedule monthly as required to indicate current status of Work.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. During preconstruction meeting, as described in Section 01312 - Coordination and Meetings, provide sample bar charts and activity listings produced from scheduling software proposed. Scheduling software is subject to review by City and Engineer and must meet requirements provided in this Section. Review of samples will be provided by City and Engineer within 7 days of submittal.
- C. Within 21 days of receipt of approval of Contractor's format, or 30 days of Notice to Proceed, whichever is later, submit proposed Construction Schedule for review. Base Construction Schedule submittal on following:

1. Level of detail and number of activities required in schedule are dependent on project type.
 - a. For wastewater projects, Categorize Work Type and Area Code in schedule.
 - 1) For wastewater rehabilitation projects, there are 6 work-type categories. An area code will be assigned for each Meter Service Area or Basin. Include at least one activity for each unique combination of work type and area code. Normal schedules of wastewater rehabilitation projects contain between 35 and 100 activities, depending on number of basins and work types involved in each basin.
 - 2) For wastewater relief projects (line work), area codes will be assigned geographically.
 - 3) For wastewater plant or facility work, other criteria may apply to assignment of area codes, such as a combination of geographical and craft categories.
2. For projects with multiple types of tasks within scope, indicate types of Work separately within schedule.
3. For projects with work at different physical locations or service areas, or different facilities within a site, indicate each location or facility separately within schedule. Show Work on each floor of multi-story building as separate tasks.
4. For projects with multiple crafts or significant subcontractor components, indicate elements separately within schedule. Unless permitted by City and Engineer, tasks shall consist of work covered by only one division of Project Manual.
5. Unless permitted by City and Engineer, each schedule task shall be same as Schedule of Values line item, and vice versa.
6. For projects with significant major equipment items or materials representing over 5 percent of Total Contract Price, indicate shop drawing submittal and review, purchase, delivery, and installation dates. Include activities for testing, adjustment, and delivering O & M manuals.
7. No task except acquisition of major equipment items shall represent more than one percent of Total Contract Price for facility projects and 3 percent of Total

Contract Price for other projects. Duration of tasks may not exceed 40 calendar days.

8. For projects where operating facilities are involved, identify each period of work, which will impact any process or operation in schedule and must be agreed to by City and Engineer and facility operator prior to starting work in area.
9. Construction Schedule submittals shall include:
 - a. Printed bar charts that meet criteria outlined in this Section and are produced by Contractor's approved scheduling software.
 - b. Activity listings that meet criteria outlined in this Section and are produced by Contractor's approved scheduling software.
 - c. Predecessor/successor listing sorted by Activity ID that meets criteria outlined in this Section and which is produced by Contractor's scheduling software.
 - d. A logic network diagram is required with first Construction Schedule submittal for facilities projects.
 - e. Prepare and submit graphic or tabular display of estimated monthly billings, i.e., a cash flow curve for Work with first schedule submittal. This information is not required in monthly updates, unless significant changes in work require re-submittal of schedule for review. Display shall allocate units indicated in bid schedule or Schedule of Values to Construction Schedule activities. (Weighted allocations are acceptable, where appropriate). Dollar value associated with each allocated unit will be spread across duration of activity on monthly basis. Total for each month and cumulative total will be indicated. These monthly forecasts are only for planning purposes of. Monthly payments for actual work completed will be made by City Engineer in accordance with Document 00700 - General Conditions.
 - f. Narrative Report that provides information outlined in this Section.
- D. No payment will be made until Construction Schedule and billing forecast are accepted by City Engineer.
- E. If Contractor desires to make changes in his method of operating and scheduling, after original schedule has been reviewed by City Engineer, notify City Engineer in

writing, stating reasons for changes. When City Engineer considers these changes to be significant, Contractor may be required to revise and resubmit for review all or affected portion of Contractor's Construction Schedule to show effect on Work.

- F. Upon written request from City Engineer, revise and submit for review all or any part of Construction Schedule submittal to reflect changed conditions in Work or deviations made from original plan and schedule.
- G. Updated Construction Schedule with Actual Start and Actual Finish Dates, Percent Complete, and Remaining Duration of each Activity shall be submitted monthly. Data date used in updating monthly Construction Schedule shall be same date as is used in monthly Payment Application. This monthly update of schedule shall be required before monthly Payment Application will be processed for payment.

1.05 SCHEDULING COMPUTER SOFTWARE REQUIREMENTS

- A. Create Contractor's Construction Schedule using CPM computer software that provides mathematical analysis of PDM plans. Use software capable of creating bar charts and activity listings which can be sorted by various fields, i.e., Sort by Activity ID; Sort by Early Start; Sort by Total Float; Sort by Area Code; sort by Specification Section number; and sort by Subcontractor. Use software capable of producing logic network diagram.
- B. Use PDM scheduling software capable of producing activity listings and bar charts with following information for each activity in schedule:
 - 1. Activity ID
 - 2. Activity Description
 - 3. Estimated (Original) Duration
 - 4. Remaining Duration
 - 5. Actual Duration
 - 6. Early Start Date
 - 7. Late Start Date
 - 8. Early Finish Date
 - 9. Late Finish Date
 - 10. Free Float
 - 11. Total Float
 - 12. Activity Codes (such as Area Code, Work Type, Specification Section, Subcontractor)
- C. Use PDM scheduling software capable of printing calendars using mathematical analysis of schedule, indicating standard work days of week and scheduled holidays.

- D. Use Scheduling software capable of printing activity listing that indicates Predecessors and Successors, Lag Factors and Lag Relationships used in creating logic of schedule.
- E. Use scheduling software to provide monthly time in Bar Chart Format and scale with 12-month scale not to exceed one page width. Bar charts may be printed or plotted on 8.5 by 11-inch, 8.5 by 14-inch or 11 by 17-inch sheet sizes. Over-size plots are not acceptable.

1.06 NARRATIVE SCHEDULE REPORT

- A. Narrative Schedule Report shall list Activities Started This Month; Activities Completed This Month; Activities Continued This Month; Activities Scheduled To Start or Complete Next Month; Problems Encountered This Month; Actions Taken to Solve These Problems.
- B. Narrative Schedule Report shall describe changes made to Construction Schedule Logic (i.e., changes in Predecessors and Lags); Activities Added to Schedule; Activities Deleted from Schedule; any other changes made to Schedule other than addition of Actual Start Dates and Actual Finish Dates and changes of Data Date and Remaining Durations for re-calculation of mathematical analysis.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01326

CONSTRUCTION SCHEDULE (BAR CHART)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Provide initial Construction Schedule as required by this section for Work. Do not start construction until schedule is reviewed by City and Engineer.

1.02 MEASUREMENT AND PAYMENT

- A. No payment will be made for this item. Include the cost of construction scheduling in overhead cost for this project.

1.03 FORM AND CONTENT OF INITIAL CONSTRUCTION SCHEDULE

A. Bar Chart:

1. Show major construction activities such as pipe laying (by traffic control phases or other approved key areas), tunnel construction, pavement removal, pavement replacement, pressure testing, chlorination, clean up and punch out as separate activities on schedule.
2. Show week duration for activities.
3. Show separate activities for each shop drawing and product data submittal critical to timely completion. Show submission dates and dates approved submittals will be needed from City and Engineer.
4. Provide separate horizontal bar for each activity. List start and finish date for each activity at left side of diagram.
5. Horizontal Time Scale: Identify first work day of each week.
6. Scale and Spacing: Notes must be legible. Allow space for notations and future revisions.
7. Order of Listings: Order bar chart listings by phases or other approved groups of activities that are contiguous. List activities in chronological order within each phase or group.

B. Narrative Description:

1. Submit Narrative Description of anticipated work sequence as indicated by sequence of activities presented in schedule.
2. Narrative shall be of sufficient detail to discuss any activity that affects public (such as phases of traffic control), interaction with specific City forces (such as valved operation, chlorination and testing) or other associated prime Contractors.

1.04 PROGRESS REVISIONS

- A. Submit Progress Revisions or necessary information to complete and process Payment Application. When required, resubmittal for rejected revision must be submitted and reviewed prior to following months processing of Payment Application. Following months Payment Application will not be processed until resubmittal is reviewed and required Progress Revisions received.
- B. Provide Narrative Report to describe:
 1. Major changes in scope.
 2. Revised projections in progress, completion, or changes in activity duration.
 3. Other identifiable changes.
 4. Problem areas, anticipated delays, and impact on schedule.
 5. Corrective action recommended and its effect.
 6. Effect of changes on schedules or other prime contractors.
 7. Material delivery lead times.
 8. Include additional data with Bar Chart described in Paragraph 1.03A of this section:
 9. Show original dates for each activity in approved initial progress schedule by narrow bar next to wider bar for current schedule.
 10. Show date each activity actually started or finished when event has occurred. Clearly identify actual dates in two right-most columns in left portion of 11 by 17-inch chart.
 11. Indicate percentage progress to date of submission for each activity.

1.05 SUBMITTALS

- A. Submit initial progress schedule within 15 days after award of contract. City and Engineer will review schedule and return copy within 21 days after receipt.
- B. Progress revisions cut-off date may be as early as twentieth of month to avoid delaying processing of Payment Application. Use cut-off day for first approved revision for all revisions.
- C. When required, resubmit within 7 days after return of review copy.
- D. Include in schedule connecting lines between bars to indicate sequence that activities will be accomplished. Impact will be known by corresponding changes to preceding or succeeding activities identified by connecting lines when activities start or finish is modified. Submit minimum of 6 copies of bar chart on 11 by 17-inch opaque reproductions. Five copies will be retained by City and Engineer and remaining copy will be returned.

PART 1 P R O D U C T S - Not Used

PART 2 E X E C U T I O N - Not Used

END OF SECTION

Section 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Submittal procedures for:
 1. Schedule of Values
 2. Construction Schedules and Cash Flow Curve (billing forecast).
 3. Shop Drawings, Product Data and Samples
 4. Operations and Maintenance Data
 5. Manufacturer's Certificates
 6. Construction Photographs
 7. Project Record Documents and monthly certification.
 8. Video Tapes
 9. Design Mixes

1.2 SUBMITTAL PROCEDURES

1. Scheduling and Handling:
 1. Submit shop drawings, data and samples for related components as required by City and Engineer.
 2. Schedule submittals well in advance of need for material or equipment for construction. Allow time to make delivery of material or equipment after submittal is approved.
 3. Develop submittal schedule that allows sufficient time for initial review, correction, resubmission and final review of all submittals. City and Engineer will review and return submittals to Contractor as expeditiously as possible but amount of time required for review will vary depending on complexity and

quantity of data submitted. In no case will submittal schedule be acceptable that allows less than 30 days for initial review by City and Engineer. This time for review is not justification for delays or additional compensation to Contractor.

4. City and Engineer's review of submittals covers only general conformity to Drawings, Specifications and dimensions that affect layout. Contractor is responsible for quantity determination. No quantities will be verified by City and Engineer. Contractor is responsible for errors, omissions or deviations from Contract requirements; review of submittals in no way relieves Contractor from the obligation to furnish required items according to Drawings and Specifications.
5. Submit 5 copies of documents unless otherwise specified in following paragraphs or Specifications.
6. Revise and resubmit submittals as required. Identify all changes made since previous submittal.
7. Assume risk for material or equipment which is fabricated or delivered prior to approval. No material or equipment shall be incorporated into Work or included in periodic progress payments until approval has been obtained in specified manner.

2. Transmittal Form and Numbering:

1. Transmit each submittal to City and Engineer with Transmittal letter which includes:
 1. Date and submittal number
 2. Project title and number
 3. Names of Contractor, Subcontractor, Supplier and Manufacturer
 4. Identification of product or material being supplied
 5. Location of where product or material is being installed
 6. Specification section number
2. Identification of deviations from contract documents must be clouded on submitted drawings, and itemized and detailed on separate 8-1/2 by 11-inch

sheet titled "DEVIATIONS FOR _____." When deviations do not exist, this sheet must state so.

3. Design deviations must be signed and sealed by Professional Engineer registered in State of Texas.
 4. Sequentially number each transmittal letter beginning with number 1. Resubmittals use original number with alphabetic suffix (i.e., 2A for first resubmittal of Submittal 2 or 15C for third resubmittal of Submittal 15). Each submittal shall only contain one type of work, material, or equipment. Mixed submittals will not be accepted.
3. Contractor's Stamp:
1. Apply Contractor's Stamp, certifying that items have been reviewed in detail and are correct in accordance with Contract, except as noted by any requested variance.
 2. As a minimum, Contractor's Stamp shall include:
 1. Contractor's name
 2. Job number
 3. Submittal number
 4. Certification statement Contractor has reviewed submittal and it is in compliance with Contract
 5. Signature line for Contractor
4. Submittal Response:
1. Submittal will be returned marked "ACKNOWLEDGE RECEIPT" when no response is required. Resubmittal is not required.
 2. Submittal will be returned marked "NO EXCEPTION" when sufficient information is supplied to determine item described is equal to that specified. Resubmittal is not required.
 3. Submittal will be returned marked "EXCEPTIONS AS NOTED" when sufficient information is supplied to determine that item will be acceptable when certain changes are made. Changes, or exceptions, will be clearly stated. When exceptions require other changes, additional changes must be submitted for approval. Resubmittal is not required, when exceptions do not require other changes.

4. When submittal does not contain sufficient information or when information provided does not meet contract requirements, submittal will be returned "REJECTED-RESUBMIT." Additional data or details as requested by City and Engineer for approval must be formulated and resubmitted as required.

1.3 SCHEDULE OF VALUES

1. Submit Schedule of Values in accordance with Section 01292 - Schedule of Values.

1.4 CONSTRUCTION SCHEDULES

1. Submit Construction Schedules and billing forecast in accordance with Section 01325 - Construction Schedule (CPM), or Section 01326 - Construction Schedule (Bar Chart).

1.5 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

1. Submit shop drawings in accordance with Section 01340 - Shop Drawings, Product Data, and Samples.

1.6 OPERATIONS AND MAINTENANCE DATA

1. Submit Operations and Maintenance data in accordance with Section 01782 - Operations and Maintenance Data.

1.7 MANUFACTURER'S CERTIFICATES

1. When specified in Specification sections, submit manufacturers' certificate of compliance for review by City and Engineer.
2. Place Contractor's Stamp, as described in Paragraph 1.03C, on front of certification.
3. Submit supporting reference data, affidavits, and certifications as appropriate.
4. Certificates may be recent or previous test results on material or product but must be acceptable to City and Engineer.

1.8 CONSTRUCTION PHOTOGRAPHS

19. Asphaltic concrete paving (ref. Section 02741)
20. Concrete paving (ref. Section 02751)
21. Temporary and removable reflectorized pavement markings (ref. Section 02765)
22. Manholes (ref. Section 02081, 02082 and 02084)
23. Ductile iron pipe (ref. Section 02501)
24. Steel pipe (ref. Section 02502 and 02518)
25. Pretensioned and prestressed concrete cylinder pipe (ref. Section 02613 and 02507)
26. PVC pipe (ref. Section 02506)
27. Water main in tunnels or casings (ref. Section 02517)
28. Blocking pipe in tunnel (ref. Section 02517)
29. Polyurethane coatings on steel pipe, if applicable (ref. Section 02527)
30. Valves and appurtenances (ref. Sections 02521 - 02524)
31. Cathodic protection systems (ref. Section 13111)
32. Concrete for utility construction (ref. Section 03315)
33. Miscellaneous metals (ref. Section 05500)

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

1. Submit Construction Photographs and video tapes in accordance with Section 01321 - Construction Photographs, Section 01322 - Construction Photographs for Facility Projects.

1.9 PROJECT RECORD DOCUMENTS

1. Submit Project Record Documents in accordance with Section 01785 - Project Record Documents.
2. With each payment request, submit written certification that As-built conditions are being documented on-site in accordance with Section 01785 - Project Record Documents, and that they have been reviewed by City.

1.10 VIDEO

1. Submit television videos as required in Section 02533 - Acceptance Testing for Sanitary Sewers.
2. Number transmittal forms for videos sequentially beginning with T01, T02, T03, etc.

1.11 DESIGN MIXES

1. When specified in Specifications, submit design mixes for review.
2. Place Contractor's Stamp, as described in Paragraph 1.03C, on front of each design mix.
3. Mark each design mix to identify proportions, gradations, and additives for each class and type of design mix submitted. Include applicable test results on samples for each mix. All tests and certifications shall have been performed within the last 12 months prior to date of submittal
4. Maintain copy of approved design mixes at mixing plant.

1.12 CHANGES TO CONTRACT

1. Change to contract may be initiated by completing Request for Information form. City and Engineer provides response to Contractor by completing form and returning it to Contractor. When Contractor signs form and checks block indicating that response will result in no increase in cost or time, inquiry is complete. When Contractor and City and Engineer agree that an increase in time

or cost is warranted, City and Engineer will forward Request for Proposal so that Change Order may be negotiated and approved.

1.13 NON-INCLUSIVE SUBMITTAL LIST

1. See entire Specification Section 01292, "Schedule of Values"
2. See entire Specification Section 01330, "Submittal Procedures"
3. See entire Specification Section 01326, "Construction Schedule (Bar Chart)"
4. Construction Photographs (ref. Section 01321)
5. Design of temporary utility relocations and permanent relocations initiated by Contractor
6. Potentially petroleum contaminated material, if applicable (ref. Section 02105 and 02110)
7. Tree and shrub protection and name and experience of qualified tree surgeon (ref. Section 01562)
8. Groundwater control for open cut excavation (ref. Section 01578)
9. Traffic control plan (ref. Section 01555)
10. Project record documents (ref. Section 01785)
11. Operation and maintenance information (ref. Section 01782)
12. Potential obstruction report (ref. Section 02317)
13. Hot-mix asphaltic base (ref. Section 02711)
14. Geotextile (ref. Section 02621)
15. Tunnel shafts (ref. Section 02445)
16. All items listed in Section 02425, "Tunnel Excavation and Primary Liner"
17. Auger pits (ref. Section 02447)
18. Tunneling grout (ref. Section 02431)

Section 01340

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Methods, schedule, and process followed for shop drawings, product data and sample submittals.

1.2 REQUIREMENT

1. Submit shop drawings, product data and samples as required by General Conditions and as designated in Specifications using procedures specified in Section 01330 - Submittal Procedures and requirements of this Section.
2. Shop drawings, product data and samples are not considered Contract Documents.
3. Registered Professional Engineer licensed by State of Texas must sign and seal design deviations from contract documents.

1.3 SHOP DRAWING/SUBMITTAL SCHEDULE

1. Submit separate Shop Drawing/Submittal schedule at same time Construction Schedule is submitted. List products, materials and equipment for which Shop Drawings and other submittals are required in the order in which they appear in Specifications. Include product data and sample submittals in schedule. Application for payment will not be processed until schedule of shop drawing submittals is approved by City and Engineer.

1.4 SHOP DRAWINGS

1. Submit minimum of seven sets of Shop Drawings and product data in form and quality suitable for microfilming. Review and sign Shop Drawings indicating compliance with Contract.
2. Place Contractor's Stamp on each drawing as described in Section 01330 - Submittal Procedures.
3. Show the following accurately and distinctly:

1. Field and erection dimensions
 2. Arrangement and section views
 3. Relation to adjacent materials or structure, including complete information for making connections between work under this Contract and work under other contracts
 4. Types of materials and finishes
 5. Parts list and descriptions
 6. Assembly drawings of equipment components and accessories showing respective positions and relationships to complete equipment package
 7. Identify details by reference to drawing sheet and detail numbers, schedule or room numbers as shown on Contract Drawings where necessary for clarity.
4. Scale drawings to provide true representation of specific equipment or item furnished.
 5. Coordinate and submit components, necessary for City and Engineer to adequately review submittal, as complete package. Reproduction of design drawings for use of shop drawings is not allowed.
 6. For major changes to original documents, submit CAD drawings.

1.05 PRODUCT DATA

1. Submit product data for review as required in Specification sections.
2. Place Contractor's Stamp, on each data item submitted, as described in Section 01330 - Submittal Procedures.
3. Mark each copy to identify applicable products, models, options to be used in this Project. Supplement manufacturers' standard data to provide information unique to this Project, where required by Specifications.
4. Give manufacturers, trade name, model or catalog designation and applicable reference standard for products specified only by reference standard.
5. Pre-approved and Pre-qualified Products.

1. For "pre-approved", "pre-qualified" and "approved" products named in City standard products list, provide appropriate list designation as described in Section 01630 - Product Substitution Procedures within 30 days after Notice to Proceed.
2. For products proposed as alternates to "approved" products, provide information required to demonstrate proposed products meet level of quality and performance criteria of "approved" product.
6. Submit revised data and samples for resubmittal in manner required for initial submission.

1.06 SAMPLES

1. Submit samples for review as required by Specifications. Have samples reviewed and signed by Registered Professional.
2. Place Contractor's Stamp on each sample or firmly attached sheet of paper, as described in Section 01330 - Submittal Procedures.
3. Submit number of samples specified in Specifications; one will be retained by City and Engineer.
4. Reviewed samples that may be used in Work are identified in Specifications.
5. Provide mark up as identified in specifications.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01410

TPDES REQUIREMENTS

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Documentation to be prepared and signed by CONTRACTOR before conducting construction operations, in accordance with the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit Number TXR 150000 issued March 5, 2023 (the Construction General Permit).
- B. Implementation, maintenance, inspection, and termination of storm water pollution prevention control measures including, but not limited to, erosion and sediment controls, storm water management plans, waste collection and disposal, off-site vehicle tracking, and other practices shown on the Drawings or specified elsewhere in this or other Specifications.
- C. Review of the Storm Water Pollution Prevention Plan (SWPPP) implementation in a meeting with the ENGINEER prior to start of construction.

1.02 DEFINITIONS

- A. Commencement of Construction Activities: The exposure of soil resulting from activities such as clearing, grading, and excavating.
- B. Large Construction Activity: Project that:
 - 1. Disturbs five acres or more, or
 - 2. Disturbs less than five acres but is part of a larger common plan of development that will disturb five acres or more of land.
- C. Small Construction Activity: Project that:
 - 1. Disturbs one or more acres but less than five acres, or
 - 2. Disturbs less than one acre but is part of a larger common plan of development that will ultimately disturb one or more acres but less than five acres.
- D. TPDES Operator:
 - 1. The person or persons who have day-to-day operational control of

the construction activities, which are necessary to ensure compliance with the SWPPP for the site or other Construction General Permit conditions.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N

3.01 SITE SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

- A. Prepare a SWPPP following Part III of the Construction General Permit.
- B. Update or revise the SWPPP as needed during the construction following Part III, Section E of the Construction General Permit.
- C. Submit the SWPPP and any updates or revisions to ENGINEER for review and address comments prior to commencing, or continuing construction activities.

3.02 NOTICE OF INTENT FOR LARGE CONSTRUCTION ACTIVITY

- A. Fill out, sign, and date TCEQ Form 20022 (03/18) Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity under the TPDES Construction General Permit (TXR 150000), Attachment 1 of this Section 01410.
- B. Transmit the signed Contractor's copy of TCEQ Form 20022 (03/18), along with a \$100.00 check, made out to Texas Commission on Environmental Quality, and the completed Payment Submittal Form to ENGINEER.
- C. ENGINEER will complete a separate TCEQ Form 20022 (03/18) for City's Notice of Intent, and will submit both Notices, along with checks for application fees, to the TCEQ.
- D. Submission of the Notice of Intent form by both the City and Contractor to TCEQ is required a minimum of two days before Commencement of Construction Activities.

3.03 NOTICE OF INTENT FOR SMALL CONSTRUCTION ACTIVITY

- A. Fill out, sign, and date Construction Site Notice, Attachment 2 to TPDES General Permit TXR 150000, "Construction Site Notice", Attachment 2 of this Section 01410.
- B. Transmit the signed Construction Site Notice to ENGINEER at least seven days prior to Commencement of Construction Activity.

3.04 CERTIFICATION REQUIREMENTS

- A. Submit Contractor's name, address, and telephone number, and the names of persons or firms responsible for maintenance and inspection of erosion and sediment control measures.
- B. Conduct inspections in accordance with TCEQ requirements. Ensure persons or firms responsible for maintenance and inspection of erosion and sediment control measures read, fill out, sign, and date the Erosion Control Contractor's Certification for Inspection and Maintenance. Use the EPA NPDES Construction Inspection Form, Attachment 3 of this Section 01410.

3.05 RETENTION OF RECORDS

- A. Keep a copy of this document and the SWPPP in a readily accessible location at the construction site from Commencement of Construction Activity until submission of the Notice of Termination (NOT) for Storm Water Discharges Associated with Construction Activity under TPDES Construction General Permit (TXR 150000). Contractors with day-to-day operational control over SWPPP implementation shall have a copy of the SWPPP available at a central location, on-site, for the use of all operators and those identified as having responsibilities under the SWPPP. Upon submission of the NOT, submit all required forms and a copy of the SWPPP with all revisions to ENGINEER.

3.06 REQUIRED NOTICES

- A. Post the following notices from the effective date of the SWPPP until date of final site stabilization as defined in the Construction General Permit:
 - 1. Post the TPDES permit number for Large Construction Activity, or a signed TCEQ Construction Site Notice for Small Construction Activity. Signed copies of the City's and Contractor's NOI must also be posted.
 - 2. Post notices near the main entrance of the construction site in a prominent place for public viewing. Post name and telephone number of Contractor's local contact person, brief project description, and location of the SWPPP.
 - a. If posting near a main entrance of the construction site is not feasible due to safety concerns, coordinate posting of notice with OWNER to conform to requirements of the Construction General Permit.
 - b. If Project is a linear construction project (e.g.: road, utilities, etc.), post notice in a publicly accessible location near active

construction. Move as necessary.

3. Post a notice to equipment and vehicles operators, instructing them to stop, check, and clean tires of debris and mud before driving onto traffic lanes. Post at each stabilized construction exit area.
4. Post a notice of waste disposal procedures in a readily visible location on site.

3.07 ON-SITE WASTE MATERIAL STORAGE

- A. On-site waste material storage shall be self-contained and shall satisfy appropriate local, state, and federal rules and regulations.
- B. Prepare list of waste material to be stored on-site. Update list as necessary to include up-to-date information. Keep a copy of updated list with the SWPPP.
- C. Prepare description of controls to reduce pollutants generated from on-site storage. Include storage practices necessary to minimize exposure of materials to storm water, and spill prevention and response measures consistent with best management practices. Keep a copy of the description with the SWPPP.

3.08 NOTICE OF TERMINATION

- A. Submit a NOT, Attachment 4 of this Section 01410, to ENGINEER within 30 days after:
 1. Final stabilization has been achieved on all portions of the site that are the responsibility of the Contractor; or
 2. Another operator has assumed control over all areas of the site that have not been stabilized; and
 3. All silt fences and other temporary erosion controls have either, been removed, scheduled to be removed as defined in the SWPPP, or transferred to a new operator if the new operator has sought permit coverage.
- B. ENGINEER will complete City's NOT and submit Contractor and City's notices to the TCEQ and MS4 entities.

END OF SECTION

TXR150000 TPDES PERMIT REQUIREMENTS

EPA NPDES CONSTRUCTION INSPECTION FORM

SMALL CONSTRUCTION SITE NOTICE



EPA NPDES Construction Inspection Form

The following inspection is being performed in compliance with Part 3.10. of the NPDES Region 6 Storm Water Construction General Permit [68 FR 39087, July 7, 2003]. Qualified personnel (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, placement and effectiveness of structural control measures, and locations where vehicles enter or exit the site. Inspections shall be performed either once every 7 days (this option not available in New Mexico per Part 9.C.1.c.) or once every 14 days and within 24 hours of the end of a storm event of 0.5 inches or greater. Where sites have been temporarily stabilized, runoff is unlikely due to winter conditions, or during seasonal arid periods in arid areas (0-10 inches of rainfall annually) and semi-arid areas (10-20 inches annually) such inspections shall be conducted at least once every month. This form is primarily intended for use with construction projects in New Mexico. Permittees on Indian Country lands in Texas, Oklahoma, Louisiana and Arkansas and some oil and gas facilities in Texas and Oklahoma may use this form if they are eligible for this permit and EPA is their NPDES permitting authority. Other facilities need to check with their NPDES authority before using this form.

If you do not know your NPDES Permit Number, contact the NOI Processing Center at 866-352-7755. This form was prepared as an example and it is not a required form for use with the permit. Alternative forms may be used if they contain all of the required information as set forth in the permit. This form and additional information regarding the NPDES Region 6 storm water program may be found on the Internet at www.epa.gov/region6/gen/w/formsw.htm. Any person with a complaint about the operation of this facility in regards to this permit should contact EPA Region 6 at (214)665-8060.

Permit Number(s) covered by this inspection (e.g., owners, developers, general contractor, builders).	
Signature and Certification in accordance with Appendix G, Section 11 of the permit.	<small>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (Clean Water Act, 33 U.S.C. 1251 et seq.)</small>
Date of Inspection.	
Inspector Name.	
Is there a copy of the permit language with the SWPPP?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the inspector qualified and are the qualifications documented in the SWPPP?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is an NPDES storm water construction sign posted at the entrance for all permittees?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>You may want to use EPA Region 6 construction checklist to assure components of the SWPPP are complete. This form, the construction sign, and the checklist are available on the Region 6 NPDES Storm Water Forms and Documents web page which may be found on the internet at http://www.epa.gov/earth1r6/gen/w/formsw.htm In addition to the checklist, you should provide a narrative (see next page) on the existing Best Management Practices and Structural Controls found during each inspection. Any problems identified in an inspection should be corrected within 7 days. The inspection should cover all components of the SWPPP and all potential pollutants. While eroded soil is the primary pollutant of concern, do not forget to inspect for other pollutant sources such as fuel tanks, paints, solvents, stabilization materials, concrete hardener, batch plants, and construction debris. The inspector will need to update the SWPPP to reflect findings of the inspection. The site map should be updated after an inspection to show controls that have been added or removed, to ensure the site map is kept current in accordance with Part 3.11.A. of the permit.</p>	

July 29, 2003

Narrative Findings of the inspection:

Observations should include any findings of Best Management Practices or controls that are not in accordance with the SWPPP. If a control is not in place or failed, observe the reason why. A control removed temporarily for work is not necessarily a violation if properly recorded in the SWPPP. If it has been removed, record why it was removed and, if applicable, when it will be reinstalled. If the control has failed, observe the conditions so a conclusion may be made as to whether the control failed for improper maintenance or improper design. The qualified inspector will know when a failed control is inadequate and should be replaced by an improved control mechanism. Qualified inspectors are to have authority to make changes to the SWPPP to assure compliance. Controls that have not been installed should be given a reason why they are not installed and/or a scheduled date for installation if they are designed for a later phase of construction. After the inspection, the SWPPP and its site map should be updated to reflect current conditions of controls and Best Management Practices at the time of the inspection. This includes removing uninstalled controls from the site map or otherwise denoting on the site map if they are no longer installed if the controls have been removed because they are no longer necessary (e.g., stabilization has been achieved in that area).

Part 3.10.G. of the permit: For each inspection required above, you must complete an inspection report. At a minimum, the inspection report must include: 1. The inspection date; 2. Names, titles, and qualifications of personnel making the inspection; 3. Weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred; 4. Weather information and a description of any discharges occurring at the time of the inspection; 5. Location(s) of discharges of sediment or other pollutants from the site; 6. Location(s) of BMPs that need to be maintained; 7. Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location; 8. Location(s) where additional BMPs are needed that did not exist at the time of inspection; and 9. Corrective action required including any changes to the SWPPP necessary and implementation dates.

July 29, 2003



TCEQ Small Construction Site Notice

Small construction sites disturb at least one but less than five acres or are part of a larger common plan of development or sale that disturbs between one and five acres. Operators of small construction sites will fill out this notice. Operators will then post this notice at the construction site in a location where it is safely and readily available for viewing by the general public and local, state, and federal authorities. Additional information about the TCEQ Construction Stormwater General Permit may be found on TCEQ's webpage on [Assistance Tools for Construction Stormwater General Permits](#).

Note: You must also develop a Stormwater Pollution Prevention Plan prior to the commencement of construction.

Operator

Name: _____

Contact Name and Phone Number: _____

Project Description:

Physical Location/Description _____

Estimated Start Date _____

Projected End Date or Date Disturbed Soils Will Be
Stabilized _____

Location of Stormwater Pollution Prevention Plan (SWP3): _____

For Small Construction Activities Authorized Under Part II.E.2. (Obtaining Authorization to Discharge) the following certification must be completed:

I _____ (Typed or Printed Name Person Completing This Certification) certify under penalty of law that I have read and understand the eligibility requirements for claiming an authorization under Part II.E.2. of TPDES General Permit TXR150000 and agree to comply with the terms of this permit. A stormwater pollution prevention plan has been developed and will be implemented prior to construction, according to permit requirements. A copy of this signed notice is supplied to the operator of the Municipal Separate Storm Sewer Systems (MS4) if discharges enter an MS4. I am aware there are significant penalties for providing false information or for conducting unauthorized discharges, including the possibility of fine and imprisonment for knowing violations.

Signature and Title _____ Date _____

Name of MS4 Operator notified: _____ and Date notified (per Part II.F.3.): _____

Date Site Notice Removed _____

Section 01422

REFERENCE STANDARDS

PART 1 G E N E R A L

1.1 SECTION INCLUDES

- 1. Section includes general quality assurance related to Reference Standards and list of references.

1.2 QUALITY ASSURANCE

- 1. For Products or workmanship specified by association, trade, or Federal Standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.
- 2. Conform to reference standard by current date of issue as stated in Document 0700 - General Conditions.
- 3. Request clarification from City and Engineer before proceeding when specified reference standards conflict with Contract Documents.

1.3 SCHEDULE OF REFERENCES

AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W. Washington, D.C. 20001
ACI	American Concrete Institute P.O. Box 9094 Farmington Hills, MI 48333-9094
AGC	Associated General Contractors of America 333 John Carlyle Street Alexandria, VA 22314
AI	Asphalt Institute Research Park Drive P.O. Box 14052 Lexington, KY 40512

	AITC	American Institute of Timber Construction 7012 S. Revere Parkway, Suite 140 Englewood, CO 80112
	AISC	American Institute of Steel Construction One East Wacker Dr. Chicago, IL 60601
	AISI	American Iron and Steel Institute 1101 17 th Street NW, Suite 1300 Washington, D.C. 20036
	ASME	American Society of Mechanical Engineers Three Park Avenue New York, NY 10016
	ANSI	American National Standards Institute 1819 L Street NW Sixth Floor Washington, D.C. 20036
	APA	American Plywood Association Box 11700 Tacoma, WA 98411
	API	American Petroleum Institute 1220 L Street, N.W. Washington, D.C. 20005
Association	AREMA	American Railway Engineering and Maintenance-of-Way 8201 Corporate Drive, Suite 1125 Landover, Maryland 20785
	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, PA 19428
	AWPA	American Wood-Preservers' Association P.O. Box 5690 Granbury, TX 76049
	AWS	American Welding Society

	550 NW 42 nd Avenue Miami, FL 33126
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
COH	City of Houston P.O. Box 1562 Houston, TX 77251-1562
CLFMI	Chain Link Fence Manufacturers Institute 9891 Broken Land Parkway, Suite 300 Columbia, MD 21046
CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Road Schaumburg, IL 60173-4758
EJMA	Expansion Joint Manufacturers Association 25 North Broadway Tarrytown, NY 10591
FS	Federal Standardization Documents General Services Administration Specifications Unit (WFSIS) 7th and D Streets, S.W. Washington, D.C. 20406
ICEA	Insulated Cable Engineer Association P.O. Box 440 S. Yarmouth, MA 02664
IEEE	Institute of Electrical and Electronics Engineers 445 Hoes Lane P.O. Box 459 Piscataway, NJ 08855-459
ISA	International Society of Arboriculture P.O. Box 3129 Champaign, IL 61826-3129
MIL	Military Specifications

General Services Administration
Specifications Unit (WFSIS)
7th and D Streets, S.W.
Washington, D.C. 20406

NACE National Association of Corrosion Engineers
1440 South Creek Drive
Houston, TX 77084-4906

NEMA National Electrical Manufacturers' Association

1300 North 17th Street, Suite 1847
Rosslyn, VA 22209

NFPA National Fire Protection Association
1 Batterymarch Park
P.O. Box 9101
Quincy, MA 02269-9101

OSHA Occupational Safety Health Administration
U.S. Department of Labor
Office of Public Affairs-Room N3647
200 Constitution Avenue
Washington, D.C. 20210

PCA Portland Cement Association
5420 Old Orchard Road
Skokie, IL 60077-1083

PCI Prestressed Concrete Institute
209 W. Jackson Blvd.
Chicago, IL 60606

SDI Steel Deck Institute
P.O. Box 25
Fox River Grove, IL 60021

SSPC Society for Protective Coatings (Steel Structures Painting

40 24th Street, Sixth Floor
Pittsburgh, PA 15222

Council)

TAC	Texas Administrative Code Texas Natural Resources Conservation Commission P. O. Box 13087 Library MC-196 Austin, TX 78711-3087
TxDOT	Texas Department of Transportation 125 East 11 th Street Austin, TX 78701 2483
UL	Underwriters' Laboratories, Inc. 333 Pfingston Road Northbrook, IL 60062
UNI-BELL	UNI-BELL Pipe Association 2655 Villa Creek Drive, Suite 155 Dallas, TX 75234

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01450

CONTRACTOR'S QUALITY CONTROL

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Quality assurance and control of installation and manufacturers' field services and reports.

1.02 MEASUREMENT AND PAYMENT

- A. No payment will be made for this item. Include cost of Contractor's quality control in overhead cost for this project.

1.03 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions and workmanship, to produce Work of specified quality at no additional cost to City.
- B. Comply fully with manufacturers' installation instructions, including each step in sequence.
- C. Request clarification from City and Engineer before proceeding when manufacturers' instructions conflict with Contract.
- D. Comply with specified standards as minimum requirements for Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce specified level of workmanship.

1.04 REFERENCES

- A. Obtain copies of standards and maintain at job site when required by individual Specification sections.

1.05 MANUFACTURERS' FIELD SERVICES AND REPORTS

Section 01452

INSPECTION SERVICES

PART 1 G E N E R A L

1.1 SECTION INCLUDES

1. Inspection services and references

1.2 INSPECTION

1. City and Engineer will appoint Inspector as representative of City to perform inspections, tests and other services specified in individual specification Sections
2. Alternately, City and Engineer may appoint, employ and pay independent firm to provide additional inspection or construction management services as indicated in Section 01454 - Testing Laboratory Services.
3. Reports will be submitted by independent firm to City and Engineer, indicating observations and results of tests and indicating compliance or non-compliance with Contract.
4. Assist and cooperate with Inspector; furnish samples of materials, design mix, equipment, tools, and storage.
5. Notify City and Engineer 24 hours prior to expected time for operations requiring services.
6. Sign and acknowledge report for Inspector.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01454

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Testing laboratory services and responsibilities related to those services.

1.2 REFERENCES

1. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
2. ASTM D 3666 - Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Materials.
3. ASTM D 3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
4. ASTM E 329 - Standard Specification for Minimum Requirements for Agencies Engaged the Testing and/or Inspection of Materials Used in Construction.
5. ISO/IEC 17025 - General Requirements for the Competence of Calibration and Testing Laboratories.

1.3 SELECTION AND PAYMENT

1. The City will select, employ, and pay for services of independent testing laboratory to perform inspection and testing identified in Part 3 of individual Specification sections.
2. Employ and pay for services of independent testing laboratory or laboratories to perform inspection and testing identified in Part 2 of individual Specification sections.
3. Employment of testing laboratory by the City does not relieve the Contractor of obligation to perform the Work in accordance with requirements of Contract Documents.

4. City deducts minimum 2-hour charge for testing laboratory time from periodic progress payment when operations requiring testing or inspection are canceled without prior notification.
5. City deducts cost of retesting from periodic progress payment whenever failed work is removed, replaced and retested.
- F. City and Engineer schedules and monitors testing. Provide 24 hours notice of testing to City and Engineer to avoid delay of the Work.

1.4 QUALIFICATION OF LABORATORY

1. Meet laboratory requirements of ASTM E 329 and applicable requirements of ASTM C 1077, ASTM D 3666 and ASTM D 3740.
2. Meet ISO/IEC 17025 conditions for accreditation by the American Association for Laboratory Accreditation (A2LA) in specific fields of testing required in individual Specification sections.
3. If laboratory subcontracts are part of testing services, such work will be placed with laboratory complying with requirements of this Section.

1.5 LABORATORY REPORTS

1. Testing laboratory provides and distributes copies of laboratory reports to distribution list provided by City and Engineer at preconstruction conference.
2. Keep one copy of each laboratory report distributed or faxed at site field office for duration of project.
3. Laboratory will fax material supplier, Contractor and City and Engineer no later than close of business on working day following test completion and review, reports which indicate failing test results.

1.6 LIMITS ON TESTING LABORATORY AUTHORITY

1. Laboratory may not release, revoke, alter, or enlarge requirements of Contract.
2. Laboratory may not approve or accept any portion of the Work.
3. Laboratory may not assume duties of Contractor.
4. Laboratory has no authority to stop the Work.

1.7 CONTRACTOR RESPONSIBILITIES

1. Provide safe access to the Work and to manufacturer=s facilities for City and Engineer and for testing laboratory personnel.
2. Provide testing laboratory with copy of construction schedule and copy of each update to construction schedule.
3. Notify City and Engineer and testing laboratory during normal working hours of day previous to expected time for operations requiring inspection and testing services. When Contractor fails to make timely prior notification, then do not proceed with operations requiring inspection and testing services.
4. Notify Design Consultant 24 hours in advance when Specification requires presence of Design Consultant for sampling or testing.
5. Request and monitor testing as required to provide timely results and avoid delay to the Work. Provide samples to laboratory in sufficient time to allow required test to be performed in accordance with specified test methods before intended use of material.
6. Cooperate with laboratory personnel in collecting samples on site. Provide incidental labor and facilities for safe access to the Work to be tested; to obtain and handle samples at site or at source of products to be tested; and to facilitate tests and inspections including storage and curing of test samples.
- G. Arrange with laboratory through City and Engineer. Payment for additional testing will be made in accordance with Document 00700 - General Conditions:
 1. Retesting required for failed tests
 2. Retesting for nonconforming Work
 3. Additional sampling and tests requested beyond specified requirements
 4. Insufficient notification of cancellation of tests for Work scheduled but not performed

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

1.8 CONDUCTING TESTING

1. Conform laboratory sampling and testing specified in individual Specification sections to latest issues of ASTM standards, TxDOT methods, or other recognized test standards as approved by City and Engineer.
2. Requirements of this section also apply to those tests for approval of materials, for mix designs and for quality control of materials as performed by employed testing laboratories.

END OF SECTION

Section 01502

MOBILIZATION

PART 1 G E N E R A L

1.1 SECTION INCLUDES

1. Mobilization of construction equipment and facilities onto site.

1.2 UNIT PRICES

- A. Measurement for mobilization is on lump sum basis.
- B. Mobilization payments will be included in periodic progress payment upon written application subject to following provisions:
 1. Authorization for payment of 50 percent of Contract Price for mobilization will be made upon receipt and approval by City and Engineer of following items, as applicable:
 - a. Schedule of Values
 - b. Trench safety program
 - c. Construction Schedule
 - d. Preconstruction photographs
 - f. Dewatering plan, when required
 2. Authorization for payment of remaining 50 percent of Contract Price for mobilization will be made upon completion of Work amounting to 5 percent of Contract Price less mobilization unit price.
- C. Mobilization payments will be subject to retainage amounts stipulated in Document 0700 - General Conditions.
- D. A reduction of 10% of mobilization amount bid in Schedule for Unit Price Work will be applied to each Payment Application when Field Office is not properly maintained. Proper maintenance consists of operational plumbing and sanitary facilities, adequate potable water supply, operational telephone and facsimile machine and functionable temperature control.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01562

TREE AND PLANT PROTECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Tree and plant protection and maintenance.
 - 1. Relocating and replanting existing trees.
 - 2. Employ qualified Arborist acceptable to City Engineer to move and relocate trees. Arborist must be normally engaged in field and have minimum of 5 years experience.

1.02 UNIT PRICES

- A. No separate payment will be made for other tree and plant protection specified herein.

1.03 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit name and experience of qualified Arborist to City Engineer.

1.04 PROJECT CONDITIONS

- A. Preserve and protect existing trees and plants to remain from foliage, branch, trunk, or root damage that could result from construction operations.
- B. Prevent following types of damage:
 - i. Compaction of root zone by foot, vehicular traffic, or material storage.
 - ii. Trunk damage from equipment operations, material storage, or from nailing or bolting.
 - iii. Trunk and branch damage caused by ropes or guy wires.
- 4. Root poisoning from spilled solvents, gasoline, paint, and other noxious materials.

5. Branch damage due to improper pruning or trimming.
6. Damage from lack of water due to:
 - a. Cutting or altering natural water migration patterns near root zones
 - b. Failure to provide adequate watering
7. Damage from alteration of soil pH factor caused by depositing lime, concrete, plaster, or other base materials near roots
8. Cutting of roots larger than 1-1/2 inches in diameter

1.05 DAMAGE ASSESSMENT

1. When trees other than those designated for removal are destroyed or badly damaged as result of construction operations, remove and replace with same size, species, and variety up to and including 8 inches in trunk diameter. Tree larger than 8 inches in diameter shall be replaced with 8-inch diameter tree of same species and variety and total contract amount shall be reduced by amount determined from following International Shade Tree Conference formula: $0.7854 \times D^2 \times \38.00 where D is diameter in inches of tree or shrub trunk measured 12 inches above grade.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Asphalt Paint: Emulsified asphalt or other adhesive, elastic, antiseptic coating formulated for horticultural use on cut or injured plant tissue, free from kerosene and coal creosote
- B. Burlap: Suitable for use as tree wrapping.
- C. Fertilizer: Liquid containing 20 percent nitrogen, 10 percent phosphorus, and 5 percent potash.
- D. Necessary tree replacements shall be as approved by City Engineer.

PART 3 EXECUTION

3.01 PROTECTION AND MAINTENANCE OF EXISTING TREES AND SHRUBS

- A. Except for trees shown on Drawings or determined by City Engineer to be removed and relocated, trees within Project area are to remain in place, protected from damage and maintained by Contractor.
- B. For trees or shrubs to remain, perform following:
 - 1. Trim trees and shrubs to remain only under supervision of professional tree surgeon or horticulturist.
 - 2. Prune trees according to International Society of Arbor culture specifications.
 - 3. Trees and shrubs requiring pruning for construction should also be pruned for balance as well as to maintain proper form and branching habit.
 - 4. Cut limbs at branch collar. No stubs should remain on trees. Branch cuts should not gouge outer layer of tree structure or trunk.
 - 5. Prior to construction, prune all trees to remain of new or recent growth to maintain basic branching form of trees. Base extent of pruning upon proximity of pavement to trunk and size of tree block outs and requirements of construction adjacent to tree.
 - 6. Limit pruning to young branches as much as possible. Take care to maintain older branches that provide basic form of tree. All pruning shall be done in presence of and direction of City Engineer.
 - 7. Paint cuts over 3/4" in diameter with tree paint, covering exposed, living tissue.
 - 8. Use extreme care to prevent excessive damage to root systems.
 - 9. Roots in construction areas shall be cut smoothly with a trencher before excavation begins. Do not allow ripping of roots with a backhoe or other equipment.
 - 10. Temporarily cover exposed roots with wet burlap to prevent roots from drying out.
 - 11. Cover exposed roots with soil as soon as possible.
 - 12. Prevent damage or compaction of root zone (area below drip line) by

construction activities.

13. Do not allow scarring of trunks or limbs by equipment or other means.
14. Do not store construction materials, vehicles, or excavated material under drip line of trees.
15. Do not pour liquid materials under drip line.
16. Water and fertilize remaining trees and shrubs to maintain their health during construction period.
17. Supplemental watering of landscaping during construction should be done once every 7 days in cold months and once every 4 days in hotter months.
18. This watering shall consist of saturating soils at least 6 to 8 inches beneath surface.
19. Water areas currently being served by private sprinkler systems while systems are temporarily taken out of service to maintain health of existing landscapes.
20. Contractor's option with City Engineer's permission, shrubs to remain may be temporarily transplanted and returned to original positions under supervision of professional horticulturist.

3.02 PROTECTION

A. Protection of Trees or Shrubs in Open Area:

1. Install steel drive-in fence posts in protective circle, approximately 8 feet on center, not closer than 4 feet to trunk of trees or stems of shrubs.
2. Drive steel drive-in fence posts into ground for 3 feet minimum, leaving 5 feet minimum above ground.
3. Mount fluorescent orange construction fence on fence posts.
4. For trees or shrubs in paved areas, mount concrete-filled steel pipe 2-1/2 inches in diameter minimum in rubber auto tires filled with concrete (movable posts).

B. Timber Wrap Protection for Trees in Close Proximity of Moving or Mechanical Equipment and Construction Work: When work is required within construction fence protecting trees, provide timber wrap protection for trees in close

proximity of moving or mechanical equipment and work.

1. Wrap trunk with layer of burlap.
2. Install 2 by 4's or 2 by 5's (5-foot to 6-foot lengths) vertically, spaced 3 inches to 5 inches apart around circumference of tree trunk.
3. Tie in place with 12 to 9 gauge steel wire.

3.03 MAINTENANCE OF NEWLY PLANTED TREES AND REPLANTED TREES

- A. Show proof of capacity to water during dry periods.
- B. Guarantee trees planted for this Project shall remain alive and healthy at least until end of one-year warranty period and additional one-year period required by Surface Restoration Bond.
- C. Within four weeks notice from City Engineer, replace dead trees or trees that in opinion of City Engineer, have become unhealthy, unsightly or have lost their natural shape as result of additional growth, improper pruning, maintenance or weather conditions.
- D. When tree must be replaced, guarantee period begins on date of tree replacement, subject to City Engineers inspection, for no less than one year.
- E. Straighten leaning trees and bear entire cost.
- F. Dispose of trees rejected by City Engineer and bear entire cost.

END OF SECTION

Section 01570

DIVERTING FLOW

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Installation of erosion and sediment control diversion dikes, interceptor dikes, diversion swales, interceptor swales, down spout extenders, pipe slope drains, paved flumes and level spreaders used during construction and prior to final development of site.

1.02 UNIT PRICES

- A. Measure and pay for diversion dikes by linear feet of completed and accepted diversion dikes.
- B. Measure and pay for interceptor dikes by linear feet of completed and accepted interceptor dikes.
- C. Measure and pay for diversion swales by linear feet of completed and accepted diversion swales.
- D. Measure and pay for interceptor swales by linear feet of completed and accepted interceptor swales.
- E. Measure and pay for down spout extenders by linear feet of completed and accepted down spout extender parallel to pipe laid from end of roof downspout to end of stabilized outlet.
- F. Measure and pay for pipe slope drains by linear feet of completed and accepted pipe slope drains parallel to pipe laid from end of entrance section to end of outlet.
- G. Measure and pay for paved flumes by linear feet parallel with slope of completed and accepted paved flume.
- H. Measure and pay for level spreaders by linear feet of completed and accepted level spreaders.

1.03 REFERENCE STANDARDS

Project No. 2024-02

- A. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
- B. Storm Water Quality Management Guidance Manual prepared by City of Tomball and Montgomery County.

1.04 SUBMITTALS

- A. Manufacturers catalog sheets and other pertinent information on pipe, flexible tubing, connecting band, grommet materials and connections of type proposed.
- B. Sieve analysis of aggregates conforming to requirements.
- C. Concrete mix design.

PART 2 PRODUCTS

2.01 CONCRETE

- A. Use bituminous concrete, Portland cement concrete, or comparable non-erodible material.

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. Provide erosion and sediment control systems at locations shown on Drawings. Construct in accordance with requirements shown on Drawings and of type indicated as specified in this Section.
- B. No clearing, grubbing or rough cutting permitted until erosion and sediment control systems are in place, other than site work specifically directed by City Engineer to allow soil testing and surveying.
- C. Maintain existing erosion and sediment control systems located within project site until acceptance of Project or until directed by City Engineer to remove and discard existing system.
- D. Regularly inspect and repair or replace damaged components of erosion and sediment control systems as specified in this Section. Unless otherwise directed, maintain erosion and sediment control systems until project area stabilization is accepted by City. Remove erosion and sediment control systems promptly when directed by City Engineer. Discard removed materials off site.

- E. Remove and dispose sediment deposits at designated spoil site for Project. If a project spoil site is not designated on Drawings, dispose of sediment off site at location not in or adjacent to stream or flood plain. Assume responsibility for off-site disposal. Spread sediment evenly throughout site, compacted and stabilized. Prevent sediment from flushing into a stream or drainage way. If sediment has been contaminated, dispose of in accordance with existing federal, state, and local rules and regulations.
- F. Unless otherwise indicated, compact embankments, excavations, and trenches by mechanically blading, tamping, and rolling soil in maximum of 8-inch layers. Compaction density shall be at a minimum of 90 percent Standard Proctor ASTM D698-78 density. Make at least one test per 500 cubic yards of embankment.
- G. Prohibit equipment and vehicles from maneuvering on areas outside of dedicated rights-of-way and easements for construction. Immediately repair damage caused by construction traffic to erosion and sediment control.
- H. Employ protective measures to avoid damage to existing trees to be retained on project site. Conduct construction operations under this Contract in conformance with erosion control practices described in Drawings and this Specification.

3.02 DIKE AND SWALE CONSTRUCTION METHODS

- A. Provide dikes and swales at locations specified on Drawings.
- B. Unless otherwise indicated, maintain minimum dike height of 18 inches, measured from existing or graded ground at up slope toe to top of dike.
- C. Dike and Swale Stabilization: When indicated on Drawings, place stone stabilization in layer minimum of 3 inches in thickness and embedded into soil (6 inches if truck crossing is expected). Extend stone lining across bottom and up both sides of channel minimum height of 8 inches vertically, above bottom. Stone lining on dike side shall extend up the up slope side of dike a minimum height of 8 inches, measured vertically from interface of existing or graded ground and up slope toe of dike, as shown on Drawings. Coarse aggregate may be used in place of stone.
- D. Divert flow from dikes and swales to sediment basins, stabilized outlets, or sediment trapping devices of types and at locations shown on Drawings. Show grade for dikes and swales on Drawings, or, if not specified, provide positive drainage with maximum grade of 1 percent to outlet or basin.

- E. Clear, grub and strip area under dike of vegetation and root material. Remove and dispose of trees, brush, stumps, roots, woody vegetation, oversized stones and rocks, obstructions, organic, and other objectionable material from compacted soil used as fill material for dikes, including soil obtained from swale construction. Dike side slopes shall be 2:1 or flatter. Compact embankments by mechanically blading, tamping, and rolling soil in maximum lifts of 8-inch layers. Use compaction density at minimum of 90 percent Standard Proctor ASTM D-698-78 density. Make at least one test per 500 cubic yards of embankment.
- F. Carry out excavation for swale construction in such manner that erosion and water pollution be minimal. Minimum depth and bottom width shall be 1 foot and 4 feet, respectively, with swale bottom constructed to level. Excavation slopes shall be 2:1 or flatter. Clear, grub and strip excavation area of vegetation and root material.
- G. Inspect dike and swale after each rainfall, daily during periods of prolonged rainfall, and at minimum once a week. Maintain dikes and swales at required depth, grade, and cross section as specified on Drawings. Remove projections or other irregularities, which will impede normal flow.

3.03 DOWN SPOUT EXTENDER CONSTRUCTION METHODS

- A. Install down spout extenders for building roof drains at locations specified on Drawings.
- B. Down spout extender shall have slope of approximately 1 percent. Use pipe diameter of 4 inches or as indicated on Drawings.
- C. Construct down spout of plastic pipe, flexible tubing or similar material.
- D. Inspect down spout extenders after each rain, daily during period of prolonged rainfall, and at minimum once a week. Repair damaged down spout extenders. Redress and replace stone, sod or other stabilizing material at outlet as needed.

3.04 PIPE SLOPE DRAIN CONSTRUCTION METHODS

- A. Install Slope Drains at locations specified on Drawings.
- B. Tamp soil around and under entrance section to top of embankment in lifts appropriately sized for method of compaction utilized.
- C. Construct sub grade to required elevations. Remove and replace soft sections and unsuitable material. Compact sub grade thoroughly and shape to smooth,

uniform surface.

- D. Use fill material for embankment free of roots, woody vegetation, oversized stones or rocks, or organic or other objectionable matters. Clear, grub and strip area under embankment of vegetation and root material.
- E. Inlet pipe shall have slope of 1 percent or greater. Use pipe diameter as indicated on Drawings.
- F. Top of embankment over inlet pipe and those carrying water to pipe shall be at least 1 foot higher at all points than top of inlet pipe.
- G. Unless otherwise specified, pipe shall be corrugated galvanized metal pipe with watertight connection bands.
- H. Pipe shall be secured with hold-down grommets spaced 10 feet on centers.
- I. Depth of riprap apron shall be equal to pipe diameter with 2:1 side slopes and placed in minimum 12-inch thick layers.
- J. Inspect slope drains after each rain, daily during period of prolonged rainfall, and at minimum once a week. Repair damaged slope drain sections. Redress and replace stone at outlet as needed to replenish depleted stone. Remove sediment from riprap apron when sediment has accumulated to one-half pipe diameter or one foot, whichever is less, for pipe slope drain.

3.05 PAVED FLUME CONSTRUCTION METHODS

- A. Install Slope Drains at locations specified on Drawings.
- B. Tamp soil around and under entrance section to top of embankment in lifts appropriately sized for method of compaction utilized.
- C. Construct sub grade to required elevations. Remove and replace soft sections and unsuitable material. Compact sub grade thoroughly and shaped to smooth, uniform surface.
- D. Use fill material for embankment free of roots, woody vegetation, oversized stones or rocks, or organic or other objectionable matters. Clear, grub and strip area under embankment of vegetation and root material.
- E. Paved flumes to be utilized on temporary basis during construction may be constructed without reinforcing steel. Construct permanent paved flumes in accordance with applicable agency requirements. Slope shall be as indicated on

Drawings.

- F. Inspect paved flumes after each rain, daily during period of prolonged rainfall, and at minimum once a week. Repair damaged sections. Redress and replace stone at outlet as needed to replenish depleted stone.
- G. Remove sediment from riprap apron when sediment has accumulated to depth of one foot.

3.06 LEVEL SPREADER CONSTRUCTION METHODS

- A. Install level spreaders at locations specified on Drawings.
- B. Construct level spreader on undisturbed soil and not on fill. Ensure that spreader lip is level for uniform spreading of storm runoff.
- C. Carry out excavation for level spreader construction in such a manner that erosion and water pollution is minimal. Clear, grub and strip excavation area of vegetation and root material.
- D. Inspect level spreaders after each rainfall, daily during periods of prolonged rainfall, and at minimum once a week. Maintain at required depth, grade, and cross section as specified on Drawings. Remove sediment deposits as well as projections or other irregularities, which will impede normal flow.

END OF SECTION

Section 01572

POLLUTION SOURCE CONTROLS ON CONSTRUCTION
PROJECTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of erosion, sediment control and other control-related practices utilized during construction activities.

1.02 UNIT PRICES

- A. Unless indicated in Unit Price Schedule as a pay item, no separate payment shall be made for Work performed under this Section. Include cost of Work performed under this Section in pay items of which this Work is a component.

1.03 REFERENCE STANDARDS

- A. ASTM D 4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- B. Storm Water Quality Management Guidance Manual prepared by City of Tomball, Harris County and Harris County Flood Control District.

1.04 SUBMITTALS

- A. Submit manufacturer's catalog sheets and other product data on dispensing equipment, pump, and aboveground fuel storage tanks, indicating capacity and dimensions of tank.
- B. Submit drawings to show location of tank protection area and driveway. Indicate nearest inlet or channelized flow area. Clearly dimension distances and measurements.
- C. Submit list of spill containment equipment, and quantities thereof, located at fueling area.
- D. Submit manufacturer's catalog sheets and other product data on geotextile fabric.

1.05 QUALITY ASSURANCE

- A. Person conducting visual examination for pollutant shall be fully knowledgeable about the NPDES Construction General Permit, detecting sources of storm water contaminants, inspection of aboveground storage tank and appurtenances for leakage, and the day-to-day operations that may cause unexpected pollutant releases.

PART 2 PRODUCTS

2.01 ABOVEGROUND STORAGE TANK

- A. Tank Assembly: Must be listed with UL 1709 and UL 2085.
- B. Inner Steel Storage Tank: Follow UL 142, with minimum thickness of 1/8-inch welded construction.
- C. Tank Encasement: Either concrete or steel to provide minimum of 110 percent containment of inner tank capacity. Provide 5-gallon overspill containment pan for tank refueling.
- D. Dispenser Pump: For submersible pump, UL listed emergency shut-off valve to be installed at each dispenser. For suction pump, UL listed vacuum-activated shut-off valve, with shear section, is to be installed at each dispenser. Fuel may not be dispensed from tank by gravity flow or by pressurization of tank. Means must be provided to prevent release of fuel by siphon flow.
- E. Representative Manufacturers: Convault, Fireguard, Ecovault, SuperVault, or equal.

2.02 CONCRETE

- A. Provide concrete with minimum strength of 4,000 psi at 28 days.

2.03 AGGREGATES

- A. Coarse aggregate shall consist of crushed stone, gravel, crushed blast furnace slag, or combination of these materials. Aggregate shall be composed of clean, hard, durable materials, free from adherent coatings, salt, alkali, dirt, clay, loam, shale, soft or flaky materials, or organic and injurious matter.
- B. Coarse aggregates shall conform to following gradation requirements.

Sieve Size	Percent Retained
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01572-2
02-01-08

(Square Mesh)	(By Weight)
2-1/2"	0
2"	0 - 20
1-1/2"	15 - 50
3/4"	60 - 80
No. 4	95 - 100

2.04 GEOTEXTILE FABRIC

- A. Provide woven or non-woven geotextile filter fabric made of either polypropylene, polyethylene, ethylene, or polyamide material in continuous rolls of longest practical length.
- B. Geotextile fabric shall have a grab strength of 270 psi in any principal direction (ASTM D4632), Mullen burst strength exceeding 200 psi (ASTM D-3786) and equivalent opening size between 50 and 70.
- C. Filter fabric material shall contain ultraviolet inhibitors and stabilizers to provide minimum of 6 months of expected usable construction life at a temperature range of 0 degrees F to 120 degrees F.
- D. Representative Manufacturers: Mirafi, Inc., Synthetic Industries, or equal.

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. No clearing and grubbing or rough cutting permitted until erosion and sediment control systems are in place, other than site Work specifically directed by City Engineer to allow soil testing and surveying.
- B. Prohibit equipment and vehicles from maneuvering on areas outside of dedicated rights-of- way and easements for construction. Immediately repair damage caused by construction traffic to erosion and sediment control systems.
- C. Maintain existing erosion and sediment control systems located within project site until acceptance of Project or until directed by City Engineer to remove and discard existing system.
- D. Regularly inspects and repairs or replaces damaged components of erosion and sediment control systems as specified in this Section. Unless otherwise directed,

- maintain erosion and sediment control systems until project area stabilization is accepted by City. Remove erosion and sediment control systems promptly when directed by City Engineer. Discard removed materials off site.
- E. Remove and dispose sediment deposits at designated spoil site for Project. If a project spoil site is not designated on Drawings, dispose of sediment off site at location not in or adjacent to stream or flood plain. Assume responsibility for off-site disposal. Spread sediment evenly throughout site, compacted and stabilized. Prevent sediment from flushing into a stream or drainage way. If sediment has been contaminated, dispose of in accordance with existing federal, state, and local rules and regulations.
 - F. Assume responsibility for collecting, storing, hauling, and disposing of spoil, silt, and waste materials as specified in this or other Specifications and in compliance with applicable federal, state, and local rules and regulations.
 - G. Employ protective measures to avoid damage to existing trees to be retained on project site. Conduct construction operations under this Contract in conformance with erosion control practices described in Drawings and this Specification.
 - H. Prepare spill response and containment procedures to be implemented in event of significant materials spill. Significant materials include but are not limited to: raw materials; fuels; materials such as solvent, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; chemical required to be reported pursuant to Section 313 of Title III of SARA; fertilizers; pesticides, and waste products such as slag, ashes and sludge that have potential to be released with storm water discharges. Spill containment procedures shall be kept on-site or in construction field office.
 - I. Spill containment equipment appropriate to size of operation is to be located in close proximity of fueling area. Such equipment includes, but not limited to, suitable waste containers for significant materials, drip pans, booms, inlet covers, or absorbent.
 - J. Properly label significant materials or waste containers used for construction activities and stored on-site overnight.
 - K. Install, maintain, and inspect erosion, sediment control measures and practices as specified in Drawings and in this or other Specifications.

3.02 TOPSOIL PLACEMENT FOR EROSION AND SEDIMENT CONTROL SYSTEMS

- A. When topsoil is specified as a component of another Specification, conduct erosion control practices described in this Specification during topsoil placement operations.
 - 1. When placing topsoil, maintain erosion and sediment control systems consisting of swales, grade stabilization structures, berms, dikes, waterways, and sediment basins.
 - 2. Maintain grades, which have been previously established on areas to receive topsoil.
 - 3. After areas to receive topsoil have been brought to grade, and immediately prior to dumping and spreading topsoil, loosen sub grade by discing or by scarifying to a depth of at least 2 inches to permit bonding of topsoil to subsoil. Compact by passing bulldozer up and down slope, tracking over entire surface area of slope to create horizontal erosion control slots.
 - 4. No sod or seed shall be placed on soil, which has been treated with soil sterilants until sufficient time has elapsed to permit dissipation of toxic materials.

3.03 DUST CONTROL

- A. Implement dust control methods to control dust creation and movement on construction sites and roads and to prevent airborne sediment from reaching receiving streams or storm water conveyance systems, to reduce on-site and off-site damage, to prevent health hazards, and to improve traffic safety.
- B. Control blowing dust by using one or more of following methods:
 - 1. Mulches bound with chemical binders such as Carasol, Terratack, or equal.
 - 2. Temporary vegetative cover.
 - 3. Spray-on adhesives on mineral soils when not used by traffic.
 - 4. Tillage to roughen surface and bring clods to surface.
 - 5. Irrigation by water sprinkling.
 - 6. Barriers using solid board fences, snow fences, burlap fences, crate walls, bales of hay, or similar materials.

- C. Implement dust control methods immediately whenever dust can be observed blowing on project site.

3.04 KEEPING STREETS CLEAN

- A. Keep streets clean of construction debris and mud carried by construction vehicles and equipment. If necessary, install stabilized construction exits at construction, staging, storage, and disposal areas. Vehicle/equipment wash area (stabilized with coarse aggregate) may be installed adjacent to stabilized construction exit, as needed. Release wash water into a drainage swale or inlet protected by erosion and sediment control measures. Construction exit and wash areas are specified in Section 01575 - Stabilized Construction Exit.
- B. In addition to stabilized construction exits, shovel or sweep pavement to extent necessary to keep street clean. Water hosing or sweeping of debris and mud off of street into adjacent areas is not allowed.

3.05 EQUIPMENT MAINTENANCE AND REPAIR

- A. Confine maintenance and repair of construction machinery and equipment to areas specifically designated for that purpose. Locate areas so that oils, gasoline, grease, solvents, and other potential pollutants cannot be washed directly into receiving streams or storm water conveyance systems. Provide these areas with adequate waste disposal receptacles for liquid as well as solid waste. Clean and inspect maintenance areas daily.
- B. On construction site where designated equipment maintenance areas are not feasible, take precautions during each individual repair or maintenance operation to prevent potential pollutants from washing into streams or conveyance systems. Provide temporary waste disposal receptacles.

3.06 WASTE COLLECTION AND DISPOSAL

- A. Formulate and implement a plan for collection and disposal of waste materials on construction site. In plan, designate locations for trash and waste receptacles and establish a collection schedule. Specify and carry out methods for ultimate disposal of waste in accordance with applicable local, state, and federal health and safety regulations. Make special provisions for collection and disposal of liquid wastes and toxic or hazardous materials.
- B. Keep receptacles and waste collection areas neat and orderly to extent possible. Waste shall not be allowed to overflow its container or accumulate from day-to-day. Locate trash collection points where they shall least likely be affected by

concentrated storm water runoff.

3.07 WASHING AREAS

- A. Avoid washing concrete delivery trucks or dump trucks and other construction equipment at locations where runoff shall flow directly into a watercourse or storm water conveyance system. Designate special areas for washing vehicles. Locate these areas where wash water shall spread out and evaporate or infiltrate directly into ground, or where runoff can be collected in temporary holding or seepage basin. Beneath wash areas construct a gravel or rock base to minimize mud production.

3.08 STORAGE OF CONSTRUCTION MATERIALS AND CHEMICALS

- A. Isolate sites where chemicals, cements, solvents, paints, or other potential water pollutants are stored in areas where they shall not cause runoff pollution.
- B. Store toxic chemicals, materials, pesticides, paints, and acids in accordance with manufacturers' guidelines. Protect groundwater resources from leaching by placing a plastic mat, packed clay, tar paper, or other impervious materials on areas where toxic liquids are to be opened and stored.

3.09 DEMOLITION AREAS

- A. Demolition activities which create large amounts of dust with significant concentrations of heavy metals or other toxic pollutants shall use dust control techniques to limit transport of airborne pollutants. However, retain water or slurry used to control dust contaminated with heavy metals or toxic pollutants on site, and prevent runoff directly into watercourses or storm water conveyance systems. Carry out methods of ultimate disposal of these materials in accordance with applicable local, state, and federal health and safety regulations.

3.10 SANITARY FACILITIES

- A. Provide construction sites with adequate portable toilets for workers in accordance with Section 01504 - Temporary Facilities and Controls, and applicable health regulations.

3.11 PESTICIDES

- A. Use and store pesticides during construction in accordance with manufacturer's guidelines and with local, state, and federal regulations. Avoid overuse of pesticides, which could produce contaminated runoff. Take great care to prevent accidental spillage. Never wash pesticide containers in or near flowing

streams or storm water conveyance systems.

3.12 CONSTRUCTION METHODS

- A. Provide fuel tank protection area and driveway as shown on Drawings.
- B. Do not locate fueling area in or near channelized flow area or close to storm sewer conveyance system. Provide sufficient space to allow installation of other erosion and sediment controls to protect those areas.
- C. Clear and grub fueling area to remove unsuitable materials. Place geotextile fabric as permeable separator to prevent mixing of coarse aggregate with underlying soil. Overlap fabric minimum of 6 inches. Place coarse aggregate on top of geotextile fabric to minimum depth of 8 inches.
- D. Grade protection area and driveway to provide sufficient drainage away from stabilized areas. Use sandbags, gravel, boards, or similar methods to prevent sediment from entering public right-of-way, receiving stream or storm water conveyance system. Provide driveway to fuel tank area with minimum width of 15 feet for one-way traffic and 30 feet for two-way traffic.
- E. Place aboveground storage tank on top of cast-in-place or pre-cast foundation. Base size and thickness of foundation on size and weight of tank to be used, with minimum thickness of 6 inches. Enclose concrete foundation by 5-inch by 5-inch concrete curb and extend minimum of 1 foot beyond tank and dispenser assemblies, so that leak and drip can be contained within concrete foundation.
- F. Slope concrete foundation minimum of 1 percent toward 6-inch wide by 12-inch long by 4-inch deep sump pit. Install minimum of 2-inch pipe inside sump pit with valve on outside of curb to allow draining of concrete foundation.
- G. Install portable concrete Jersey Barrier around concrete foundation. Provide minimum clearance of 2 feet from edge of foundation. In lieu of Jersey barrier, install 4-inch diameter steel pipe bollards around foundation. Bury bollards minimum of 3 feet deep, 3 feet above ground, and 4 feet on center, encased in 12-inch wide concrete foundation.

3.13 MAINTENANCE

- A. Inspections shall be conducted by designated health and safety officer qualified to conduct health and safety inspections.

- B. Inspect stabilized areas after every storm event and at least once a week. Provide periodic top dressing with additional coarse aggregate to maintain required depth. Repair and clean out damaged control measures used to trap sediment.
- C. Inspect fuel tank foundation's bermed area after every storm event and at least once a week. Visually examine storm water contained in tank's bermed foundation area for oil sheen or other obvious indicators of storm water pollution. Properly dispose of storm water when pollutant is present. Record visual examination of storm water discharge in Report noting date and time of examination, name of examiner, observations of water quality, and volume of storm water discharged from bermed area. Keep Report with other storm water pollution control inspection reports on site, in readily accessible location.

3.14 TEMPORARY FUELING AREA CLOSURE

- A. Dispose of temporary vehicle and equipment fueling area by removal of sediment and erosion controls properly off site. City Engineer will inspect topsoils in fueling area and immediate vicinity for evidence of fuel leaks. If City Engineer determines that sufficient pollutants have been released, remove soil and properly dispose off site. Other remediation methods may be required.

END OF SECTION

Section 01573

MANAGING OVERLAND FLOW

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Installation of erosion and sediment control filter fabric fences, triangular filter fabric fences, straw bale fences and brush berms used during construction and prior to final development of site. Purpose of control fences is to contain pollutants from overland flow. Control fences are not for use in channelized flow areas.

1.02 UNIT PRICES

- A. Measure and pay for filter fabric fence by linear foot of completed and accepted filter fabric fence between limits of beginning and ending of wooden stakes.
- B. Measure and pay for triangular filter fabric fence by linear feet of completed and accepted triangular filter fabric fence between limits of beginning and ending of wooden stakes.
- C. Measure and pay for straw bale barrier by linear feet of completed and accepted straw bale barrier.
- D. Measure and pay for brush berm by linear feet of completed and accepted brush berm.

1.03 SUBMITTALS

- A. Manufacturers catalog sheets and other product data on geotextile fabric.

1.04 REFERENCES

- A. ASTM D 698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
- B. ASTM D 4355 - Standard Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus).
- C. ASTM D 4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity.

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- D. ASTM D 4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- E. ASTM D 4833 - Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products.
- F. Storm Water Quality Management Guidance Manual prepared by City of Tomball and Montgomery County.

PART 2 PRODUCTS

2.01 FILTER FABRIC

- A. Provide woven or nonwoven geotextile filter fabric made of either polypropylene, polyethylene, ethylene, or polyamide material.
- B. Geotextile fabric shall have a grab strength of 100 psi in any principal direction (ASTM D4632), puncture strength exceeding 115 psi (ASTM D4833) and equivalent opening size between 50 and 140 for soils with more than 15 percent by weight passing No. 200 sieve and between 20 and 50 for soil with less than 15 percent by weight passing No. 200 sieve; and maximum water flow rate of 40 gallons per minute per square feet (ASTM D4491).
- C. Filter fabric material shall contain ultraviolet inhibitors and stabilizers to provide expected usable life comparable to anticipated construction period. Ultraviolet stability shall exceed 70% after 500 hours of exposure (ASTM D4355).
- D. Representative Manufacturers: Mirafi, Inc., or equal.

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. Provide erosion and sediment control systems at locations shown on Drawings. Construct in accordance with requirements shown on Drawings and of type indicated as specified in this Section.
- B. No clearing, grubbing or rough cutting permitted until erosion and sediment control systems are in place, other than site work specifically directed by City Engineer to allow soil testing and surveying.
- C. Maintain existing erosion and sediment control systems located within

project site until acceptance of Project or until directed by City Engineer to remove and discard existing system.

- D. Regularly inspect and repair or replace damaged components of erosion and sediment control systems as specified in this Section. Unless otherwise directed, maintain erosion and sediment control systems until project area stabilization is accepted by City. Remove erosion and sediment control systems promptly when directed by City Engineer. Discard removed materials off site.
- E. Remove and dispose sediment deposits at designated spoil site for Project. If a project spoil site is not designated on Drawings, dispose of sediment off site at location not in or adjacent to stream or floodplain. Assume responsibility for off-site disposal. Spread sediment evenly throughout site, compacted and stabilized. Prevent sediment from flushing into a stream or drainage way. If sediment has been contaminated, dispose of in accordance with existing federal, state, and local rules and regulations.
- F. Unless otherwise indicated, compact embankments, excavations, and trenches by mechanically blading, tamping, and rolling soil in maximum of 8-inch layers. Compaction density shall be at a minimum of 90 percent Standard Proctor ASTM D698-78 density. Make at least one test per 500 cubic yards of embankment.
- G. Prohibit equipment and vehicles from maneuvering on areas outside of dedicated rights-of- way and easements for construction. Immediately repair damage caused by construction traffic to erosion and sediment control.
- H. Conduct all construction operations under this Contract in conformance with erosion control practices described in Section 01572- Source Controls for Erosion and Sedimentation.

3.02 GENERAL CONSTRUCTION METHODS

- A. Provide erosion and sedimentation control systems in accordance with Drawings. Install erosion and sedimentation control systems in manner that surface runoff shall percolate through system in sheet flow fashion and allow retention and accumulation of sediment.
- B. Inspect erosion and sedimentation control systems after each rainfall, daily during periods of prolonged rainfall, and at minimum once each week. Repair or replace damaged sections immediately. Remove sediment deposits when silt reaches depth one-third height of fence or 6 inches, whichever is less.

3.03 FILTER FABRIC FENCE CONSTRUCTION METHODS

- A. Attach filter fabric to 1-inch by 2-inch wooden stakes spaced a maximum of 3 feet apart and embedded minimum of 8 inches. If filter fabric is factory preassembled with support netting, then maximum spacing allowable is 8 feet. Install wooden stakes at slight angle toward source of anticipated runoff.
- B. Trench in toe of filter fabric fence with spade or mechanical trencher so that downward face of trench is flat and perpendicular to direction of flow. V-trench configuration as shown on Drawings may also be used. Lay filter fabric along edges of trench. Backfill and compact trench.
- C. Filter fabric fence shall have a minimum height of 18 inches and a maximum height of 36 inches above natural ground.
- D. Provide filter fabric in continuous rolls and cut to length of fence to minimize use of joints. When joints are necessary, splice fabric together only at support post with minimum 6inch overlap and seal securely.

3.04 TRIANGULAR FILTER FABRIC FENCE CONSTRUCTION METHODS

- A. Attach filter fabric to fence structure fashioned from 6 gauge, 6-inch by 6-inch wire mesh, 18 inches on each side as shown on attached drawing. Fabric cover and skirt should be continuous wrapping of fabric. Skirt should form continuous extension of fabric on upstream side of fence.
- B. Secure triangular fabric filter fence in place using one of the following methods:
 - 1. Toe-in skirt 6 inches with mechanically compacted material;
 - 2. Weight down skirt with continuous layer of 3-inch to 5-inch graded rock; or
 - 3. Trench-in entire structure 4 inches.
- C. If provided, anchor triangular fabric filter fence structure and skirt securely in place using 6- inch wire staples on 2-foot centers on both edges and on skirt, or staked using 18-inch by 3/8- inch diameter re-bar with tee ends.
- D. Lap over fabric filter material by 6 inches to cover segment joints. Fasten joints with galvanized shoat rings.

3.05 STRAW BALE FENCE CONSTRUCTION METHODS

- A. Bound bales with either wire, nylon or polypropylene rope tied across hay bales.

Do not use jute or cotton bindings.

- B. Place bales in row with ends tightly abutting adjacent bales. Place bales with bindings parallel to ground surface.
- C. Embed bale in soil a minimum of 4 inches.
- D. Securely anchor bales in place by 3/8-inch rebar stakes driven through bales a minimum of 18-inches into ground. Angle first stake in each bale toward previously laid bale to force bales together.
- E. Fill gaps between bales with straw to prevent water from escaping between bales. Wedge carefully in order not to separate bales.
- F. Replace with new straw bale fence every two months.

3.06 BRUSH BERM CONSTRUCTION METHODS

- A. Construct brush berm along contour lines by hand placing method. Do not use machine placement of brush berm.
- B. Use woody brush and branches having diameter less than 2-inches with 6-inches overlap. Avoid incorporation of annual weeds and soil into brush berm.
- C. Use minimum height of 18-inches measured from top of existing ground at upslope toe to top of berm. Top width shall be 24 inches minimum and side slopes shall be 2:1 or flatter.
- D. Embed brush berm into soil a minimum of 4-inches and anchor using either wire, nylon or polypropylene rope across berm with a minimum tension of 50 pounds. Tie rope securely to 18-inch x 3/8-inch diameter rebar stakes driven into ground on 4-foot centers on both sides of berm.

END OF SECTION

Section 01574

TRAPPING SEDIMENT IN CHANNELIZED FLOW

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Installation of reinforced filter fabric barriers, sandbag barriers, stone outlet sediment trap, excavated earth outlet sediment trap, embankment earth outlet sediment trap, sediment basin with pipe outlet and sediment basin with stone outlet for erosion and sediment control used during construction and prior to final development of site. Reinforced filter fabric barriers are used to retain sedimentation in channelized flow areas.

1.02 UNIT PRICES

- A. Measure and pay for reinforced filter fabric barrier by linear feet of completed and accepted filter fabric barrier between limits of beginning and ending steel fence posts.
- B. Measure and pay for sandbag barrier by linear feet of completed and accepted sandbag barrier between limits of beginning and ending of sandbags.
- C. Measure and pay for stone outlet sediment trap is on unit price basis for each completed and accepted stone outlet sediment traps.
- D. Measure and pay for excavated earth outlet sediment trap is on unit price basis for each completed and accepted excavated earth outlet sediment traps.
- E. Measure and pay for embankment earth outlet sediment trap is on unit price basis for each completed and accepted embankment earth outlet sediment traps.
- F. Measure and pay for sediment basin with pipe outlet or stone outlet by square yard of completed and accepted sediment basin.

1.03 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit manufacturers catalog sheets and other product data on geotextile or

filter fabric's outlet pipe, perforated riser and connectors.

1.04 REFERENCES

- A. ASTM D 698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
- B. ASTM D 4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
- C. ASTM D 4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- D. ASTM D 6382 - Standard Practice for Dynamic Mechanical Analysis and Thermogravimetry of Roofing and Waterproofing Membrane Material.
- E. Storm Water Quality Management Guidance Manual prepared by City of Tomball and/or Montgomery County.

PART 2 PRODUCTS

2.01 FILTER FABRIC

- A. Provide woven or non-woven geotextile filter fabric made of either polypropylene, polyethylene, ethylene, or polyamide material.
- B. Geotextile fabric: minimum grab strength of 100 psi in any principal direction (ASTM D- 4632); Mullen burst strength exceeding 200 psi (ASTM D-3786); equivalent opening size between 50 and 140 for soils with more than 15 percent by weight passing No. 200 sieve and between 20 and 50 for soils with less than 15 percent by weight passing No. 200 sieve; and maximum water flow rate of 40 gallons per minute per square feet (ASTM D4491).
- C. Filter fabric material shall contain ultraviolet inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 degrees F to 120 degrees F.
- D. Representative Manufacturers: Mirafi, Inc., or equal.

2.02 FENCING

- A. Provide woven galvanized steel wire fence with minimum thickness of 14 gauge and a maximum mesh spacing of 6 inches.

- B. Woven wire shall be galvanized 2-inch by 4-inch welded wire fabric, 12-1/2 gauge.

2.03 SANDBAG MATERIAL

- A. Provide woven material made of polypropylene, polyethylene, or polyamide material.
- B. Minimum unit weight of four ounces per square yard.
- C. Minimum grab strength of 100 psi in any principal direction (ASTM D4632)
- D. Mullen burst strength exceeding 300 psi (ASTM D3786).
- E. Ultraviolet stability exceeding 70 percent.

2.04 SANDBAG

- A. Length: 18 to 24 inches. Width: 12 to 18-inches. Thickness: 6 to 8-inches. Weight: 50 to 125 pounds.

2.05 GEOTEXTILE FABRIC WRAP

- A. Provide woven or non-woven geotextile filter fabric made of either polypropylene, polyethylene, ethylene, or polyamide material.
- B. Geotextile fabric: Minimum grab strength of 270 psi (ASTM D 6832) and equivalent opening size specified on Drawings.
- C. Filter fabric material shall contain ultraviolet inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 degrees F to 120 degrees F. Both geotextile and threads must be resistant to chemical attack, mildew and rot.
- D. Representative Manufacturers: Mirafi, Inc., or equal.

2.06 ROCK AND STONE

- A. Use open graded rock with most fines removed.
- B. Rock: Minimum of 3-inches in diameter and less than 2 cubic foot in volume unless otherwise specified. Use clean, hard rocks free from adherent coatings, salt, alkali, dirt, clay, loam, shale, soft or flaky materials, or organic and injurious matter.

2.07 PIPE

- A. Conform to requirements of Section 02642 - Corrugated Metal Pipe for outlet pipe and riser pipe.

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. Provide erosion and sediment control systems at locations shown on Drawings. Construct in accordance with requirements shown on Drawings and of type indicated as specified in this Section.
- B. No clearing, grubbing, or rough cutting permitted until erosion and sediment control systems are in place, other than as specifically directed by City Engineer to allow soil testing and surveying.
- C. Maintain existing erosion and sediment control systems located within Project site until acceptance of Project or until directed by City Engineer to remove and discard existing system.
- D. Regularly inspect and repair or replace damaged components of reinforced filter fabric barrier as specified in this Section. Unless otherwise directed, maintain erosion and sediment control systems until project area stabilization is accepted by City. Remove erosion and sediment control systems promptly when directed by City Engineer. Discard removed materials off site.
- E. Remove and dispose of sediment deposits at designated spoil site for Project. If a project spoil site is not designated on Drawings, dispose of sediment off site at a location not in or adjacent to a stream or flood plain. Assume responsibility for off site disposal. Spread sediment evenly throughout site, compacted and stabilized. Do not allow sediment to flush into a stream or drainage way. If sediment has been contaminated, dispose in accordance with existing federal, state, and local rules and regulations.
- F. Unless otherwise indicated, compact embankments, excavations, and trenches by mechanically blading, tamping, and rolling soil in maximum of 8-inch layers. Compaction density shall be at a minimum of 90 percent Standard Proctor ASTM D698-78 density. Make at least one test per 500 cubic yards of embankment.
- G. Prohibit equipment and vehicles from maneuvering on areas outside of dedicated rights-of-way and easements for construction. Damage caused by construction traffic to erosion and sediment control systems shall be repaired

immediately.

- H. Conduct construction operations under this Contract in conformance with erosion control practices described in Section 01572 - Source Controls for Erosion and Sedimentation.

3.02 CONSTRUCTION METHODS

- A. Provide barriers, sediment traps and sediment basins in accordance with Drawing details. Install erosion and sedimentation systems in manner so that surface runoff shall percolate through system in sheet flow fashion and allow retention and accumulation of sediment.
- B. Inspect erosion and sedimentation control systems after each rainfall, daily during periods of prolonged rainfall, and at minimum once each week. Repair or replace damaged sections immediately.

3.03 REINFORCED FILTER FABRIC BARRIER CONSTRUCTION METHODS

- A. Attach woven wire support to 2-inch by 2-inch wooden posts or steel posts (min. of 1.25 lbs. per linear foot and Brinell Hardness greater than 140 spaced maximum 6 feet apart and embedded minimum of 12-inches. Maximum spacing of 8 feet is allowed when posts are made of hot rolled steel, at least 4 feet long with Tee or Y-bar sections with surface painted or galvanized. Provide safety caps on top of metal posts. Install stakes at slight angle toward source of anticipated runoff.
- B. Trench in toe of filter fabric barrier with spade or mechanical trencher so that downward face of trench is flat and perpendicular to direction of flow as shown on Drawings. Trench shall be minimum of 6-inch by 6-inch. Lay filter fabric along edges of trench. Backfill and compact trench.
- C. Use galvanized 2-inch by 4-inch welded wire fabric for woven wire. Securely fasten filter fabric material to woven wire with tie wires.
- D. Reinforced filter fabric barrier shall have a height of 18-inches.
- E. Provide filter fabric in continuous rolls and cut to length of fence to minimize use of joints. When joints are necessary, splice fabric together only at support post with minimum 6-inch overlap and seal securely.
- F. When used in swales, ditches or diversions, elevation of barrier at top of filter fabric at flow line location in channel shall be lower than bottom elevation of filter fabric at ends of barrier or top of bank, whichever is less, in order to keep storm water discharge in channel from overtopping bank.

- G. Remove sediment deposits when silt reaches depth one-third height of barrier or 6-inches, whichever is less.

3.04 SEDIMENT TRAP CONSTRUCTION METHODS

- A. Use fill material for embankment free of roots, woody vegetation, oversized stones or rocks, or organic or other objectionable matter. Clear, grub and strip area under embankment of vegetation and root material.
- B. Limit of excavation and outlet length and height shall be as specified on Drawings. Use side slopes of 2:1 or flatter.
- C. Maintain minimum of 6-inches between top of core material and top of stone outlet, minimum of 4 inches between bottom of core material and existing ground and minimum of 1 foot between top of stone outlet and top of embankment.
- D. Embed rock minimum of 4-inches into existing ground for stone outlet.
- E. For stone outlet, core shall be minimum of 1 foot in height and in width and wrapped in triple layer of geotextile fabric.
- F. Repair or replace damaged trap components. Redress and replace stone as needed to replenish depleted stone. Remove sediment deposit and restore traps to original dimensions when sediment has accumulated to one-half design depth of the trap or one foot, whichever is less.

3.04 SEDIMENT BASIN CONSTRUCTION METHODS

- A. Do not start installation of sediment basins until permits from governmental agencies, where required, have been obtained.
- B. Use fill material for embankment for pipe outlet free of roots, woody vegetation, oversized stones or rocks, or organic or other objectionable matter. Clear, grub and strip area under embankment of vegetation and root material.
- C. Install stone outlet or outlet pipe and riser as shown on Drawings.
- D. Maintain basin dimensions necessary to obtain required basin volume as shown on Drawings. Repair and replace damaged components of basin.
- E. Remove sediment deposits when design basin volume is reduced by one-third or sediment level is one foot below principal spillway crest, whichever is less.

City of Tomball

Rudolph Rd. Water Line Extension

Project No. 2024-02

TRAPPING SEDIMENT IN CHANNELIZED FLOW

END OF SECTION

Section 01576

WASTE MATERIAL DISPOSAL

PART 1 G E N E R A L

1.1 SECTION INCLUDES

- A. Disposal of waste material and salvageable material.

1.2 UNIT PRICES

- A. No separate payment will be made for waste material disposal under this Section. Include payment in unit price for related sections.

1.3 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit copy of approved "Development Permit", as defined in Chapter _____ of Flood Plain Ordinance (City Ordinance Number _____), prior to disposal of excess material in areas designated as being in "100-year Flood Hazard Area" within City. Contact City of Tomball/Montgomery County Flood Plain Manager, _____, at (_____) for flood plain information.
- C. Obtain and submit disposal permits for proposed disposal sites if required by local ordinances.
- D. Submit copy of written permission from property owner, with description of property, prior to disposal of excess material adjacent to Project. Submit written and signed release from property owner upon completion of disposal work.

PART 2 P R O D U C T S - Not Used

PART 3 EXECUTION

1.4 SALVAGEABLE MATERIAL

- A. Excavated Material: When indicated on Drawings, load, haul, and deposit excavated material at location or locations shown on Drawings outside limits of Project.
- B. Base, Surface, and Bedding Material: Load shell, gravel, bituminous, or other base and surfacing material designated for salvage into City trucks.
- C. Pipe Culvert: Load culverts designated for salvage into City trucks.
- D. Other Salvageable Materials: Conform to requirements of individual Specification Sections.
- E. Coordinate with City Engineer loading of salvageable material on City trucks.

1.5 EXCESS MATERIAL

- A. Remove and legally dispose of vegetation, rubble, broken concrete, debris, asphaltic concrete pavement, excess soil, and other materials not designated for salvage from job site.
- B. Excess soil may be deposited on private property adjacent to Project when written permission is obtained from property owner. See Paragraph 1.03 D above.
- C. Verify flood plain status of any proposed disposal site. Do not dispose of excavated materials in area designated as within 100-year Flood Hazard Area unless a Development Permit has been obtained. Remove excess material placed in "100-year Flood Hazard Area" within City, without "Development Permit", at no additional cost to City.
- D. Remove waste materials from site daily, in order to maintain site in neat and orderly condition.

END OF SECTION

Section 01577

PROTECTING INLETS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Installation of erosion and sediment control inlet protection barriers, drop inlet baskets and storm inlet sediment traps used during construction and prior to final development of site.

1.02 UNIT PRICES

- A. Measure and pay for inlet protection barriers by linear foot along outside face of completed and accepted inlet protection barrier.
- B. Measure and pay for drop inlet baskets is on a unit price basis for each completed and accepted drop inlet basket.
- C. Measure and pay for storm inlet sediment traps is on a unit price basis for each completed and accepted storm inlet sediment trap.

1.03 SUBMITTALS

- A. Manufacturer's catalog sheets and other product data on filter fabric.

1.04 REFERENCES

- A. ASTM A 36 - Standard Specification for Carbon Structural Steel.
- B. ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- C. Storm Water Quality Management Guidance Manual prepared by City of Tomball and Montgomery County.

PART 2 PRODUCTS

2.01 FILTER FABRIC

- A. Provide woven or nonwoven geotextile filter fabric made of either polypropylene, polyethylene, ethylene, or polyamide material.
- B. Geotextile fabric shall have a grab strength of 100 psi in any principal direction (ASTM D4632), Mullen burst strength exceeding 200 psi (ASTM D-3786) and equivalent opening size as shown on Drawings.
- C. Filter fabric material shall contain ultraviolet inhibitors and stabilizers to provide expected usable life comparable to anticipated construction period. Ultraviolet stability shall exceed 70% after 500 hours of exposure (ASTM D4355).
- D. Representative Manufacturers: Mirafi, Inc., or equal.

2.02 METALS

- A. Provide steel frame members in accordance with ASTM A36.

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. Provide erosion and sediment control systems at locations shown on Drawings. Construct in accordance with requirements shown on Drawings and of type indicated as specified in this Section.
- B. No clearing, grubbing or rough cutting permitted until erosion and sediment control systems are in place, other than site work specifically directed by City Engineer to allow soil testing and surveying.
- C. Maintain existing erosion and sediment control systems located within project site until acceptance of Project or until directed by City Engineer to remove and discard existing system.
- D. Regularly inspect and repair or replace damaged components of erosion and sediment control systems as specified in this Section. Unless otherwise directed, maintain erosion and sediment control systems until project area stabilization is accepted by City. Remove erosion and sediment control systems promptly when directed by City Engineer. Discard removed materials off site.
- E. Remove and dispose sediment deposits at designated spoil site for Project. If a project spoil site is not designated on Drawings, dispose of sediment off site at

location not in or adjacent to stream or floodplain. Assume responsibility for off-site disposal. Spread sediment evenly throughout site, compacted and stabilized. Prevent sediment from flushing into a stream or drainage way. If sediment has been contaminated, dispose of in accordance with existing federal, state, and local rules and regulations.

- F. Prohibit equipment and vehicles from maneuvering on areas outside of dedicated rights-of-way and easements for construction. Immediately repair damage caused by construction traffic to erosion and sediment control.
- G. Conduct all construction operations under this Contract in conformance with erosion control practices described in Section 01572- Source Controls for Erosion and Sedimentation.

3.02 GENERAL CONSTRUCTION METHODS

- A. Provide erosion and sedimentation control systems in accordance with Drawing details.
- B. Inspect erosion and sedimentation control systems after each rainfall, daily during periods of prolonged rainfall, and at minimum once each week. Repair or replace damaged components immediately. Remove sediment deposits when sediment has accumulated to one-half height of barrier.

3.03 DROP INLET BASKET CONSTRUCTION METHODS

- A. Fit inlet insert basket into inlet without gaps around insert as shown on Drawings.
- B. Support for inlet insert basket shall consist of fabricated metal as shown on Drawings.
- C. Construct top frame of basket with two short sides of 2-inch by 2-inch and single long side of 1-inch by 1-inch, 1/8-inch angle iron. Construct basket hangers of 2-inch by 1/4-inch iron bars. Construct bottom frame of 1-inch by 1/4-inch iron bar or 1/4-inch plate with center 3-inches removed. Use minimum 1/4-inch diameter iron rods or equivalent for sides of inlet basket. Weld minimum of 14 rods in place between top frame/basket hanger and bottom frame.
Exact dimensions for top frame and insert basket will be determined based on dimensions of type of inlet being protected.
- D. Push down and form filter fabric to shape of basket. Use sheet of fabric large enough to be supported by basket frame when holding sediment and extend at least 6-inches past frame. Place inlet grates over basket/frame to serve as fabric anchor.

- E. Remove sediment deposit after each storm event.

3.04 STORM INLET SEDIMENT TRAP CONSTRUCTION METHODS

- A. Limit of excavation and outlet length and height shall be as shown on Drawings. Side slopes shall be 2:1 or flatter.
- B. Remove sediment deposit and restore traps to original dimensions when sediment has accumulated to one-half design depth of trap or one foot, whichever is less.

END OF SECTION

Section 01578

CONTROL OF GROUND WATER AND SURFACE
WATER

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Dewatering, depressurizing, draining, and maintaining trenches, shaft excavations, structural excavations and foundation beds in stable condition, and controlling ground water conditions for tunnel excavations.
- B. Protecting work against surface runoff and rising flood waters.
- C. Disposing of removed water.

1.02 UNIT PRICES

- A. No separate payment will be made for control of ground water and surface water. Include cost to control ground water and surface water in unit price for work requiring controls.

1.03 REFERENCES

- A. ASTM D 698 - Standard Test Methods for Laboratory Compaction of Soils Using Standard Effort (12,400 ft-lbf/ft³ (600kN-m/m³).
- B. Federal Regulations, 29 CFR Part 1926, Standards-Excavation, Occupational Safety and Health Administration (OSHA).

1.04 DEFINITIONS

- A. Ground water control includes both dewatering and depressurization of water-bearing soil layers.
 - 1. Dewatering includes lowering water table and intercepting seepage that would otherwise emerge from slopes or bottoms of excavations, or into tunnels and shafts, and disposing of removed water. Intent of dewatering is to increase stability of tunnel excavations and excavated slopes, prevent dislocation of material from slopes or bottoms of excavations, reduce lateral loads on sheeting and bracing, improve excavating and hauling characteristics

- of excavated material, prevent failure or heaving of bottom of excavations, and to provide suitable conditions for placement of backfill materials and construction of structures and other installations.
2. Depressurization includes reduction in piezometric pressure within strata not controlled by dewatering alone, as required to prevent failure or heaving of excavation bottom or instability of tunnel excavations.
- B. Excavation drainage includes keeping excavations free of surface and seepage water.
 - C. Surface drainage includes use of temporary drainage ditches and dikes and installation of temporary culverts and sump pumps with discharge lines as required to protect Work from any source of surface water.
 - D. Equipment and instrumentation for monitoring and control of ground water control system includes piezometers, monitoring wells and flow meters for observing and recording flow rates.

1.04 PERFORMANCE REQUIREMENTS

- A. Conduct subsurface investigations to identify groundwater conditions and to provide parameters for design, installation, and operation of groundwater control systems. Submit prepared method and spacing of readings for review prior to obtaining water level readings.
- B. Design ground water control system, compatible with requirements of Federal Regulations 29 CFR Part 1926 and Section 02260 - Trench Safety Systems, to produce following results:
 1. Effectively reduce hydrostatic pressure affecting excavations and tunnel excavation, face stability or seepage into tunnels.
 2. Develop substantially dry and stable sub grade for subsequent construction operations.
 3. Preclude damage to adjacent properties, buildings, structures, utilities, installed facilities and other work.
 4. Prevent loss of fines, seepage, boils, quick condition, or softening of foundation strata.

5. Maintain stability of sides and bottom of excavations.
- C. Provide ground water control systems that include single-stage or multiple-stage well point systems, eductor and ejector-type systems, deep wells, or combinations of these equipment types.
- D. Provide drainage of seepage water and surface water, as well as water from any other source entering excavation. Excavation drainage may include placement of drainage materials, crushed stone and filter fabric, together with sump pumping.
- E. Provide ditches, berms, pumps and other methods necessary to divert and drain surface water

from excavation and other work areas.
- F. Locate ground water control and drainage systems so as not to interfere with utilities, construction operations, adjacent properties, or adjacent water wells.
- G. Assume sole responsibility for ground water control systems and for any loss or damage resulting from partial or complete failure of protective measures and any settlement or resultant damage caused by ground water control operations. Modify ground water control systems or operations if they cause or threaten to cause damage to new construction, existing site improvements, adjacent property, or adjacent water wells, or affect potentially contaminated areas. Repair damage caused by ground water control systems or resulting from failure of system to protect property as required.
- H. Provide adequate number of piezometers installed at proper locations and depths as required to provide meaningful observations of conditions affecting excavation, adjacent structures and water wells.
- I. Provide environmental monitoring wells installed at proper locations and depths as required to provide adequate observations of hydrostatic conditions and possible contaminant transport from contamination sources into work area or ground water control system.

1.05 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittals Procedures.
- B. Submit Ground Water and Surface Water Control Plan for review by City Engineer prior to start of any fieldwork. Plan shall be signed by Professional

Engineer registered in State of Texas. Submit plan to include following:

1. Results of subsurface investigation and description of extent and characteristics of water bearing layers subject to ground water control
2. Names of equipment suppliers and installation subcontractors
3. Description of proposed ground water control systems indicating arrangement, location, depth and capacities of system components, installation details and criteria and operation and maintenance procedures
4. Description of proposed monitoring and control system indicating depths and locations of piezometers and monitoring wells, monitoring installation details and criteria, type of equipment and instrumentation with pertinent data and characteristics
5. Description of proposed filters including types, sizes, capacities and manufacturer's application recommendations
6. Design calculations demonstrating adequacy of proposed systems for intended applications. Define potential area of influence of ground water control operation near contaminated areas.
7. Operating requirements, including piezometric control elevations for dewatering and depressurization
8. Excavation drainage methods including typical drainage layers, sump pump application and other necessary means
9. Surface water control and drainage installations
10. Proposed methods and locations for disposing of removed water

C. Submit following records upon completed initial installation:

1. Installation and development reports for well points, eductors, and deep wells
2. Installation reports and baseline readings for piezometers and monitoring wells
3. Baseline analytical test data of water from monitoring wells
4. Initial flow rates

D. Submit the following records weekly during operations:

1. Records of flow rates and piezometric elevations obtained during monitoring of dewatering and depressurization. Refer to Paragraph 3.02, Requirements for Eductor, Well Points, or Deep Wells.
2. Maintenance records for ground water control installations, piezometers and monitoring wells

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Comply with requirements of agencies having jurisdiction.
- B. Comply with Texas Natural Resource Conservation Commission regulations and Texas Water Well Drillers Association for development, drilling, and abandonment of wells used in dewatering system.
- C. Obtain necessary permits from agencies with control over use of groundwater and matters affecting well installation, water discharge, and use of existing storm drains and natural water sources. Because review and permitting process may be lengthy, take early action to pursue and submit for required approvals.
- D. Monitor ground water discharge for contamination while performing pumping in vicinity of potentially contaminated sites.

PART 2 PRODUCTS

2.01 EQUIPMENT AND MATERIALS

- A. Use optional equipment and materials as necessary to achieve desired results for dewatering. Selected equipment and materials are subject to review of City Engineer through submittals required in Paragraph 1.06, Submittals.
- B. Eductors, well points, or deep wells, where used, must be furnished, installed and operated by experienced contractor regularly engaged in ground water control system design, installation, and operation.
- C. Equipment must be in good repair and operating order.
- D. Keep sufficient standby equipment and materials available to ensure continuous operation, where required.

PART 3 EXECUTION

3.01 GROUND WATER CONTROL

- A. Perform subsurface investigation by borings as necessary to identify water bearing layers, piezometric pressures and soil parameters for design and installation of ground water control systems. Perform pump tests, if necessary to determine draw down characteristics of water bearing layers. Present results in Ground Water and Surface Water Control Plan (See Paragraph 1.06B.1).
- B. Provide labor, material, equipment, techniques and methods to lower, control and handle ground water in manner compatible with construction methods and site conditions. Monitor effectiveness of installed system and its effect on adjacent property.
- C. Install, operate, and maintain ground water control systems in accordance with Ground Water and Surface Water Control Plan. Notify City Engineer in writing of changes made to accommodate field conditions and changes to Work. Provide revised drawings and calculations with notification.
- D. Provide for continuous system operation, including nights, weekends, and holidays. Arrange for appropriate backup if electrical power is primary energy source for dewatering system.
- E. Monitor operations to verify system lowers ground water piezometric levels at rate required to maintain dry excavation resulting in stable sub grade for prosecution of subsequent operations.
- F. Where hydrostatic pressures in confined water bearing layers exist below excavation, depressurize those zones to eliminate risk of uplift or other instability of excavation or installed works. Define allowable piezometric elevations in Ground Water and Surface Water Control Plan.
- G. Remove ground water control installations.
 - 1. Remove pumping system components and piping when ground water control is no longer required
 - 2. Remove piezometers, including piezometers installed during design phase investigations and left for Contractor=s use, upon completion of testing, in accordance with Section 02533 - Acceptance Testing of Sanitary Sewers.

3. Remove monitoring wells when directed by City Engineer
 4. Grout abandoned well and piezometer holes. Fill piping that is not removed with cement-bentonite grout or cement-sand grout.
- H. During backfilling, dewatering may be reduced to maintain water level minimum of 5 feet below prevailing level of backfill. However, do not allow that water level to result in uplift pressures in excess of 80 percent of downward pressure produced by weight of structure or backfill in place. Do not allow water levels to rise into cement stabilized sand until at least 48 hour after placement.
- I. Provide uniform diameter for each pipe drain run constructed for dewatering. Remove pipe drain when it has served its purpose. If removal of pipe is impractical, provide grout connections at 50-foot intervals and fill pipe with cement-bentonite grout or cement-sand grout when pipe is removed from service.
- J. Extent of construction ground water control for structures with permanent perforated underground drainage system may be reduced, for units designed to withstand hydrostatic uplift pressure. Provide means of draining affected portion of underground system, including standby equipment. Maintain drainage system during operations and remove it when no longer required.
- K. Remove system upon completion of construction or when dewatering and control of surface or ground water is no longer required.
- L. Compact backfill to not less than 95 percent of maximum dry density in accordance with ASTM D 698.
- M. Foundation Beds: Maintain saturation line at least 3 feet below lowest elevations where concrete is to be placed. Drain foundations in areas where concrete is to be placed before placing reinforcing steel. Keep free from water for 3 days after concrete is placed.

3.02 REQUIREMENTS FOR EDUCTOR, WELL POINTS, OR DEEP WELLS

- A. For aboveground piping in ground water control system, include 12 inch minimum length of clear, transparent piping between every eductor well or well point and discharge header to visually monitor discharge from each installation.
- B. Install sufficient piezometers or monitoring wells to show trench or shaft excavations in water bearing materials are predrained prior to excavation. Provide

separate piezometers for monitoring of dewatering and for monitoring of depressurization. Install piezometers and monitoring wells for tunneling as appropriate for selected method of Work.

- C. Install piezometers or monitoring wells not less than one week in advance of beginning associated excavation.
- D. Dewatering may be omitted for portions of under drains or other excavations, but only where auger borings and piezometers or monitoring wells show that soil is predrained by existing system and that criteria of ground water control plan are satisfied.
- E. Replace installations that produce noticeable amounts of sediments after development.
- F. Provide additional ground water control installations, or change methods, in event that installations according to ground water control plan does not provide satisfactory results based on performance criteria defined by plan and by specification. Submit revised plan according to Paragraph 1.06B.

3.03 EXCAVATION DRAINAGE

- A. May use excavation drainage methods if necessary to achieve well drained conditions. Excavation drainage may consist of layer of crushed stone and filter fabric, and sump pumping in combination with sufficient wells for ground water control to maintain stable excavation and backfill conditions.

3.04 MAINTENANCE AND OBSERVATION

- A. Conduct daily maintenance and observation of piezometers or monitoring wells while ground water control installations or excavation drainage are operating in area or seepage into tunnel is occurring. Keep system in good condition.
- B. Replace damaged and destroyed piezometers or monitoring wells with new piezometers or wells as necessary to meet observation schedule.
- C. Cut off piezometers or monitoring wells in excavation areas where piping is exposed, only as necessary to perform observation as excavation proceeds. Continue to maintain and make observations, as specified.
- D. Remove and grout piezometers inside or outside excavation area when ground

water control operations are complete. Remove and grout monitoring wells when directed by City Engineer.

3.05 MONITORING AND RECORDING

- A. Monitor and record average flow rate of operation for each deep well, or for each wellpoint or eductor header used in dewatering system. Also monitor and record water level and ground water recovery. Obtain records daily until steady conditions are achieved, and twice weekly thereafter.
- B. Observe and record elevation of water level daily as long as ground water control system is in operation, and weekly thereafter until Work is completed or piezometers or wells are removed, except when City Engineer determines more frequent monitoring and recording are required. Comply with City Engineer's direction for increased monitoring and recording and take measures necessary to ensure effective dewatering for intended purpose.

3.06 SURFACE WATER CONTROL

- A. Intercept surface water and divert it away from excavations through use of dikes, ditches, curb walls, pipes, sumps or other approved means. Requirement includes temporary works required to protect adjoining properties from surface drainage caused by construction operations.
- B. Divert surface water and seepage water into sumps and pump it into drainage channels or storm drains, when approved by agencies having jurisdiction. Provide settling basins when required by agencies.

END OF SECTION

Section 01579

TRAPPING SEDIMENT DURING SITE DEWATERING

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Installation of erosion and sediment control sediment tanks and sediment sump pits used during construction and prior to final development of site.

1.02 UNIT PRICES

- A. Measure and pay for sediment tanks is on a unit price basis for each completed and accepted sediment tank.
- B. Measure and pay for sediment sump pits is on a unit price basis for each completed and accepted sediment sump pit.

1.03 REFERENCE STANDARDS

- A. ASTM D 698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
- B. Storm Water Quality Management Guidance Manual prepared by City of Tomball and Montgomery County.

PART 2 P R O D U C T S

2.01 ROCK AND STONE

- A. Use open graded rock with most fines removed.
- B. Use rock 2-inches in diameter unless otherwise approved by City Engineer.
- C. Use clean hard rocks free from adherent coatings, salt, alkali, dirt, clay, loam, shale, soft or flaky materials, or organic and injurious matter.

PART 3 E X E C U T I O N

3.01 PREPARATION AND INSTALLATION

- A. Provide erosion and sediment control systems at locations shown on Drawings. Construct in accordance with requirements shown on Drawings and of type indicated as specified in this Section.
- B. No clearing, grubbing or rough cutting permitted until erosion and sediment control systems are in place, other than site work specifically directed by City Engineer to allow soil testing and surveying.
- C. Maintain existing erosion and sediment control systems located within project site until acceptance of Project or until directed by City Engineer to remove and discard existing system.
- D. Regularly inspect and repair or replace damaged components of erosion and sediment control systems as specified in this Section. Unless otherwise directed, maintain erosion and sediment control systems until project area stabilization is accepted by City. Remove erosion and sediment control systems promptly when directed by City Engineer. Discard removed materials off site.
- E. Remove and dispose sediment deposits at designated spoil site for Project. If a project spoil site is not designated on Drawings, dispose of sediment off site at location not in or adjacent to stream or flood plain. Assume responsibility for off-site disposal. Spread sediment evenly throughout site, compacted and stabilized. Prevent sediment from flushing into a stream or drainage way. If sediment has been contaminated, dispose of in accordance with existing federal, state, and local rules and regulations.
- F. Prohibit equipment and vehicles from maneuvering on areas outside of dedicated rights-of-way and easements for construction. Immediately repair damage caused by construction traffic to erosion and sediment control.
- G. Unless otherwise indicated, compact embankments, excavations, and trenches by mechanically blading, tamping, and rolling soil in maximum of 8-inch layers. Compaction density shall be at a minimum of 90 percent Standard Proctor ASTM D698-78 density. Make at least one test per 500 cubic yards of embankment.
- H. Conduct all construction operations under this Contract in conformance with erosion control practices described in Section 01572- Source Controls for Erosion and Sedimentation.

3.02 SEDIMENT TANK CONSTRUCTION METHODS

- A. Install sediment tank as shown on Drawings.

- B. Steel drums or other type of tanks may be used, providing that volume requirements are met. When recycled steel drums are used, they must be free of chemical contamination.
- C. Inspect after each pumping and clean out tank when one-third of sediment tank is filled with silt.
- D. Dispose of sediment collected in tank at approved site in a manner that will not contribute to additional siltation.
- E. Remove sediment tank when construction is complete.

3.03 SEDIMENT SUMP PIT CONSTRUCTION METHODS

- A. Install sediment sump pits as shown on Drawings.
- B. Construct standpipe by perforating 12-inch to 24-inch diameter corrugated or PVC pipe.
- C. Extend standpipe 12-inches to 18-inches above lip of pit.
- D. Convey discharge of water pumped from standpipe to sediment trapping device.
- E. Fill sites of sump pits, compact to density of surrounding soil and stabilize surface when construction is complete.

END OF SECTION

Section 01610

BASIC PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Requirements for transportation, delivery, handling and storage of materials and equipment.

1.02 PRODUCTS

1. Products: Means material, equipment, or systems forming Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of Work. Products may also include existing materials or components designated for reuse.
2. Do not reuse materials and equipment, designated to be removed, except as specified by Contract.
3. Provide equipment and components from fewest number of manufacturers as practical, in order to simplify spare parts inventory and allow for maximum interchangeability of components. For multiple components of same size, type or application, use same make and model of component throughout Project.

1.03 TRANSPORTATION

1. Make arrangements for transportation, delivery and handling of equipment and materials required for timely completion of Work.
2. Transport and handle products in accordance with instructions.
3. Consign and address shipping documents to proper party giving name of Project, street number and city. Shipments shall be delivered to Contractor.

1.04 DELIVERY

1. Arrange deliveries of products to accommodate short-term site completion schedules and in ample time to facilitate inspection prior to installation. Avoid deliveries that cause lengthy storage or overburden of limited storage space.

2. Coordinate deliveries to avoid conflict with Work and conditions at site and to accommodate following:
 - a. Work of other contractors or City
 - b. Limitations of storage space.
 - c. Availability of equipment and personnel for handling products.
 - d. City's use of premises.
3. Have products delivered to site in manufacturer's original, unopened, labeled containers.
4. Immediately upon delivery, inspect shipment to assure:
 - a. Product complies with requirements of Contract.
 - b. Quantities are correct.
 - c. Containers and packages are intact; labels are legible.
 - d. Products are properly protected and undamaged.

1.05 PRODUCT HANDLING

1. Coordinate off-loading of materials and equipment delivered to job site. If necessary to move stored materials and equipment during construction, relocate materials and equipment at no additional cost to City.
2. Provide equipment and personnel necessary to handle products, including those provided by City, by methods to prevent damage to products or packaging.
3. Provide additional protection during handling as necessary to prevent breaking, scraping, marring, or otherwise damaging products or surrounding areas.
4. Handle products by methods to prevent over bending or over stressing.
5. Lift heavy components only at designated lifting points.
6. Handle materials and equipment in accordance with manufacturer's recommendations.

7. Do not drop, roll, or skid products off delivery vehicles. Hand carry or use suitable materials handling equipment.

1.06 STORAGE OF MATERIAL

1. Store and protect materials in accordance with manufacturer's recommendations and requirements of these Specifications.
2. Make necessary provisions for safe storage of materials and equipment. Place loose soil materials, and materials to be incorporated into Work to prevent damage to any part of Work or existing facilities and to maintain free access at all times to all parts of Work and to utility service company installations in vicinity of Work. Keep materials and equipment neatly and compactly stored in locations that will cause minimum inconvenience to other contractors, public travel, adjoining owners, tenants, and occupants. Arrange storage to provide easy access for inspection.
3. Restrict storage to areas available on construction site for storage of material and equipment as shown on Drawings or approved by City Engineer.
4. Provide off-site storage and protection when on-site storage is not adequate. Provide addresses of and access to off-site storage locations for inspection by City Engineer.
5. Do not use lawns, grass plots, or other private property for storage purposes without written permission of owner or other person in possession or control of premises.
6. Protect stored materials and equipment against loss or damage.
7. Store in manufacturer's unopened containers.
8. Neatly, safely, and compactly stack materials delivered and stored along line of Work to avoid inconvenience and damage to property owners and general public, and maintain at least 3 feet from fire hydrant. Keep public, private driveways and street crossings open.
9. Repair or replace damaged lawns, sidewalks, streets or other improvements to satisfaction of City Engineer. Total length which materials may be distributed along route of construction at one time is 1000 linear feet, unless otherwise approved in writing by City Engineer.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01630

PRODUCT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Options for making product or process selections.
2. Procedures for proposing equivalent construction products or processes, including preapproved, prequalified, and approved products or processes.

1.2 DEFINITIONS

1. Product means materials, equipment, or systems incorporated into Project. Product does not include machinery and equipment used for production, fabrication, conveying, and erection of Work. Products may also include existing materials or components designated for reuse.
2. Process proprietary system or method for installing system components resulting in integral, functioning part of Work. For this Section, the word Products includes Processes.

1.3 SELECTION OPTIONS

1. Preapproved Products are construction products of certain manufacturers or suppliers designated in Specifications as "preapproved." List of preapproved products is maintained by City. Preapproved products for this Project are designated as preapproved in Specifications. Products of other manufacturers or suppliers not acceptable for this Project and not considered under submittal process for approving alternate products.
2. Prequalified Products are construction products of certain manufacturers or suppliers designated in Specifications as "prequalified." Prequalified Products for this Project are designated as prequalified in Specifications. Products of other manufacturers or suppliers shall not be acceptable for this Project and shall not be considered under submittal process for approving alternate products.
3. Approved Products are construction products or processes of certain

manufacturers or suppliers designated in Specifications followed by words "or approved equal." Approval of alternate products or processes not listed in Specifications may be obtained through provisions for product options and substitutions in Document 00700 - General Conditions, and by following submittal procedures specified in 01330- Submittal Procedures. Procedure for approval of alternate products is not applicable to preapproved or prequalified products.

4. Product Compatibility to maximum extent possible, is to provide products that are of same type or function from single manufacturer, make, or source. Where more than one choice is available, select product that is compatible with other products already selected, specified, or in use by City.

1.4 CONTRACTOR'S RESPONSIBILITY

1. Responsibility related to product options and substitutions is defined in Document 00700 - General Conditions.
2. Furnish information City Engineer deems necessary to judge equivalency of alternate product.
3. Pay for laboratory testing, as well as other review or examination costs, needed to establish equivalency between products in order to obtain information upon which City Engineer can base decision.
4. If City Engineer determines alternate product is not equal to that named in Specifications, furnish one of specified products.

1.5 CITY ENGINEER'S REVIEW

1. Use alternate products or processes only when approved in writing by City Engineer. City Engineer's determination regarding acceptance of proposed alternate product is final.
2. Alternate products shall be accepted if product is judged by City Engineer to be equivalent to specified product or to offer substantial benefit to City.
3. City retains right to accept any product or process deemed advantageous to City, and similarly, to reject any product or process deemed not beneficial to City.

1.6 SUBSTITUTION PROCEDURE

1. Collect and assemble technical information applicable to proposed

product to aid in determining equivalency as related to approved product specified.

2. Submit written request for construction product to be considered as alternate product.
3. Submit product information after effective date of Contract and within time period allowed for substitution submittals given in Document 00700 - General Conditions. After submittal period has expired, requests for alternate products shall be considered only when specified product becomes unavailable because of conditions beyond Contractor's control.
4. Submit 5 copies of each request for alternate product approval. Include following information:
 1. Complete data substantiating compliance of proposed substitution with Contract.
 2. For products:
 1. Product identification, including manufacturer's name and address
 2. Manufacturer's literature with product description, performance and test data and reference standards
 3. Samples, as applicable
 4. Name and address of similar projects on which product was used and date of installation. Include name of Owner, Architect/Engineer, and installing contractor
 3. For construction methods:
 1. Detailed description of proposed method
 2. Drawings illustrating methods
 4. Itemized comparison of proposed substitution with product or method specified
 5. Data relating to changes in construction schedule
 6. Relation to separate contracts, if any

7. Accurate cost data on proposed substitution in comparison with product or method specified
8. Other information requested by City Engineer
5. Approved alternate products shall be subject to same review process as specified product for shop drawings, product data, and samples.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01731

CUTTING AND PATCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cutting, patching and fitting of Work or Work under construction. Coordinating installation or connection of Work with existing facilities, or uncovering Work for access, inspection or testing and related submittals. Demolition is specified elsewhere.

1.02 UNIT PRICES

- A. No separate payment will be made for cutting and patching under this Section. Include payment in unit price for related sections.

1.03 CUTTING AND PATCHING

- A. Perform activities to avoid interference with facility operations and Work of others in accordance with Document 00700 - General Conditions of Contract.
- B. Execute cutting and patching, including excavation, backfill and fitting to:
 - 1. Remove and replace defective Work or Work not conforming to Drawings and Specifications
 - 2. Take samples of installed Work as required for testing
 - 3. Remove construction required to provide for specified alteration or addition to existing Work
 - 4. Uncover Work to provide for inspection or reinspection of covered Work by City Engineer or regulatory agencies having jurisdiction
 - 5. Connect Work not accomplished in proper sequence to completed Work
 - 6. Remove or relocate existing utilities and pipes that obstruct Work
 - 7. Make connections or alterations to existing or new facilities

8. When necessary, provide openings, channels, chases and flues and cut, patch, and finish

9. Provide protection for other portions of Project

C. Restore existing Work to state equal to or better than that prior to cutting and patching and to standards of these Specifications.

D. Support, anchor, attach, match, trim and seal materials to Work of others. Unless otherwise specified, furnish and install sleeves, inserts, hangers, required for execution of Work.

E. Provide shoring, bracing and support as required to maintain structural integrity and protect adjacent Work from damage during cutting and patching. Before cutting beams or other structural members, anchors, lintels or other supports, request written instructions from City Engineer. Follow instructions, as applicable.

F. Fully integrate new materials with existing similar materials by bonding, lapping, mechanically tying, anchoring or other effective means that shall prevent cracks and shall not show evidence of patching. Conceal effects of demolition and patching and provide new construction that blends with existing adjacent or abutting surfaces without obvious breaks, joints or changes of surface appearance unless specifically shown otherwise.

1.03 SUBMITTALS

A. Conform to requirements of Section 01330 - Submittal Procedures.

1. Submit written notice to City Engineer requesting consent to proceed prior to cutting, which may affect structural integrity or design function, City operations, or Work of another contractor.

B. Include the following in submittal:

1. Identification of Project

2. Description of affected Work

3. Necessity for cutting

4. Effect on other Work and on structural integrity

5. Include description of proposed Work:
 - a. Scope of cutting and patching
 - b. Contractor, subcontractor or trade to execute Work
 - c. Proposed products
 - d. Extent of refinishing
 - e. Schedule of operations

6. Alternatives to cutting and patching

- D. When conditions of Work or schedule indicate change of materials or methods, submit written recommendation to City Engineer including:
 1. Conditions indicating change
 2. Recommendations for alternative materials or methods
 3. Submittals as required for substitutions
- E. Submit written notice to City Engineer designating time Work shall be uncovered for observation. Do not begin cutting or patching operations until authorized by City Engineer.

1.04 CONNECTIONS TO EXISTING FACILITIES

- A. Perform construction necessary to complete connections and tie-ins to existing facilities. Keep all existing facilities in continuous operation unless otherwise specifically permitted in these Specifications or approved by City Engineer.
- B. Coordinate interruption of service requiring connection into existing facilities with City Engineer. Bypassing of wastewater or sludge to waterways is not permitted. Provide temporary pumping facilities to handle wastewater if necessary. Use temporary bulkheads to minimize disruption. Provide temporary power supply and piping to facilitate construction where necessary.
- C. Submit detailed schedule of proposed connections, including shut-downs and tie-ins. Include proposed time and date as well as anticipated duration of Work. Submit detailed schedule coordinated with construction schedule.

1. Provide specific time and date information to City Engineer 48 hours in advance of proposed Work.

D. Procedures and Operations:

1. Operate existing pumps, valves and gates required for sequencing procedures under supervision of City Engineer. Do not operate valve, gate or other item of equipment without City Engineer's knowledge.
2. Insofar as possible, equipment shall be tested and in operating condition before final tie-ins are made to connect equipment to existing facility.
3. Carefully coordinate Work and schedules. Provide written notice to City Engineer at least 48 hours before shutdowns or bypasses are required.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01732

PROCEDURE FOR WATER VALVE ASSISTANCE

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Operation of existing valves is by City of Tomball employees. Operation of new valves by the Contractor's employees is included in the project.

1.02 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for this item. Include the cost of valve operation and valve assistance in Unit Price bid for valves and water mains.

1.03 PROCEDURE

- A. Perform activities listed in Exhibit A attached to this section.

1.04 SUBMITTALS

- A. Submit request for work order planning meeting as noted in 01330 - Submittal Procedures.

1. Include information listed in Step 1 of Exhibit A, attached to this Section.

1.05 CANCELLATION

- A. The Contractor, Construction, and Public Utilities Division may cancel the agreed scheduled valve assistance appointment at no extra cost to either party. The Contractor shall notify the City Inspector 24 hours in advance. The City Inspector shall notify Central Operation Service (COS) immediately of the cancellation. Cancellation may be caused by bad weather, unforeseen delays by either party, preparation work taking longer than anticipated, etc.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

EXHIBIT A

PROCEDURE FOR VALVE ASSISTANCE

- NOTE:**
- 1. DO NOT OPERATE EXISTING WATER VALVES.**
 - 1. OPERATE ALL NEW WATER VALVES INSTALLED UNTIL ACCEPTED BY THE CITY.**
 - 2. UTILITY MAINTENANCE DIVISION TO WITNESS THE TESTING OF ALL NEW WATER VALVES PRIOR TO SCHEDULING SUBSTANTIAL COMPLETION INSPECTION.**

Telephone: (713) 837-0500 (24 Hrs.)

The following procedure will be used by Utility Maintenance Division personnel when completing a service request from individual City Inspectors for operation of existing water valves.

ROUTINE VALVE ASSISTANCE REQUEST (NON-EMERGENCY JOBS):

- Step 1. a.** The City Inspector shall schedule a work order planning meeting by calling the Central Operation Service (COS) at **(713) 837-0500** a minimum of 3 days in advance (excluding weekends, holidays, inclement weather days, and the day of the call) and providing the following information:

Location of Work (Street Intersection)	Project #
Project Description	Contractor (Company Name)
Job Superintendent's Name	Superintendent's Office #/Mobile #/Pager
# Contractor's Emergency Information	Name and Phone#/Mobile #/Pager #
City Inspector/Senior Inspector	Name, Phone#/Mobile #/Pager #
Date & Time assistance is requested	

- b.** The COS will create a work order for each wet connection, cut and plug, etc. which will be designated as a A Code 40" (Private Contractor).
- c.** The COS will give the City Inspector the work order number. This work order number must be used as a reference in all communications regarding this request for Valve Assistance.
- d.** The valve personnel must have the work order number on his/her route sheet. When the valve personnel arrive at the job site for the **WORK ORDER PLANNING MEETING** (between the City Inspector, Contractor, and the Utility Maintenance valve personnel), he/she should verify the street intersection and work order number with the City Inspector before beginning the **WORK ORDER PLANNING MEETING.**

- e. During the **WORK ORDER PLANNING MEETING** between the City Inspector, Contractor, and the Utility Maintenance valve personnel, the work to be performed will be outlined and **the actual date the work is to be performed will be mutually determined by the City Inspector and the Utility Maintenance Division valve personnel, based upon relevant factors such as preparatory work needed, customer requirements, etc.**
- f. The valve personnel will perform the work specifically outlined in the work order requested. Also, the Utility Maintenance Branch valve personnel will only operate the existing water valves. The City Inspector must contact COS and request a new work order for additional work.
- g. The valve personnel will contact the dispatcher and advise when the job is complete. Valve personnel will list all appropriate information on his/her Crew Activity Report.

Step 2. Should valve personnel not be able to keep an appointment to provide valve assistance, Utility Maintenance Branch will provide notification to the appropriate City Inspector by phone at least 24 hours prior, with that fact and rescheduling information, if available.

Step 3. The City Inspector will notify COS if the valve personnel have not arrived at the site within 30 minutes of the scheduled appointment. **If the Contractor is not ready when the valve operator arrives to provide valve assistance, the Contractor shall pay a penalty of \$50.00 per hour to the City.**

Step 4. The Contractor will not be due delay claims or downtime if Utility Maintenance Branch has notified the City Inspector that they will not be able to provide the valve assistance as scheduled.

Step 5. Test new valves installed in the presence of the City Inspector before the substantial completion inspection is scheduled. Place new valves in the open position at or before substantial completion.

Step 6. Construction Division will notify in writing to the Utility Maintenance Division 2 months before the warranty expires to report any problems they have with the new water lines. Construction Division will notify Contractor about the problems.

EMERGENCY REQUEST FOR VALVE ASSISTANCE PROCEDURE:

Step 1. The City Inspector will request emergency Valve Assistance due to a broken main/service, etc. by calling COS at **(713) 837-0500** provide the following information:

Location of Work (Street Intersection)	Project #
Project Description	Superintendent's Office #/Mobile #/Pager
# Contractor (Company Name)	Name and Phone#/Mobile #/Pager #
Job Superintendent's Name	Name, Phone#/Mobile #/Pager
# Contractor's Emergency Information	
City Inspector/Senior Inspector	
Date & Time assistance is requested	

Step 2. COS will create an emergency work order number and describe the work to be performed.

Step 3. COS will give the City Inspector the emergency work order number. Reference work order number in all communications regarding request for Valve Assistance.

Step 4. COS will contact the designated valve personnel and assign the emergency work order. The dispatcher will follow the standard COS procedures if this situation occurs after normal working hours.

Step 5. The valve personnel must have the emergency work order number on his/her route sheet. When the valve personnel arrive at the job site for the emergency work, he/she should verify the street intersection and the emergency work order number with the City Inspector prior to beginning the work requested for operating the existing water valves. The valve personnel will coordinate the verification of the street intersection and the work order number with City Inspector prior to performing the work.

Section 01733

PROCEDURE FOR NEW WATER LINE DISINFECTION

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Disinfection of new water lines is performed by Public Utility Division personnel.

1.02 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for this item. Include the cost of disinfection and pressure testing of new water lines in Unit Price bid for water main construction.

1.03 PROCEDURE

- A. Perform activities listed in Exhibit A attached to this section.

1.04 SUBMITTALS

- A. A Request for Disinfection and Placement in Service: Submit as noted in 01330 - Submittal Procedures.

1.05 CANCELLATION

- A. The Contractor, Construction, and Public Utilities Division may cancel the agreed scheduled disinfection appointment at no extra cost to either party. The Contractor shall notify the City Inspector 24 hours in advance. The City Inspector shall notify COS immediately of the cancellation. Cancellation may be caused by bad weather, unforeseen delays by either party, preparation work taking longer than anticipated, etc.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

EXHIBIT A

REQUEST FOR NEW WATER LINE DISINFECTION

Water Production Telephone: (_____)

ONLY FAX REQUESTS FOR NEW WATER LINE DISINFECTION WILL BE ACCEPTED. FAX NO. (
_____.

The following procedure will be used by the Water Production Branch, Systems Development Section when receiving requests from City Inspector for New Water Line Disinfection.

- a. Forms must be completed correctly and faxed a minimum of 3 days prior to the actual date work is to be performed (excluding weekends, holidays, inclement weather days, and the day fax is received).
- b. **All requests for disinfection will be addressed to _____.**

PHASE I - CHLORINATION OF NEW WATER LINES:

- Step 1.** The City Inspector will complete the 4 forms: Request for Disinfection and Placement in Service of Water Mains, Disinfection of Water Mains Exhibit, and Chlorination of Water Mains Checklist.
- Step 2.** The City Inspector will mark the water lines that have been disinfected on the construction drawings for his records.
- Step 3.** The City Inspector shall check for proper installation of blow-off and chlorination injection risers.
- Step 4.** The City Inspector shall notify _____ at (_____)_____, **Pager No. (____)** _____, **Mobile Telephone No. (____)** _____, if the chlorination crew has not arrived at the site within 30 minutes of the scheduled appointment. **If the Contractor is not ready when the chlorination crew arrives to disinfect the new water main, Contractor shall reimburse the City for mobilization in the amount of \$ _____.00 for each request.**
- Step 5.** Contractor and Construction Division shall assist the chlorination crews to flush the dirt and debris out of the pipes **before** applying the chlorine.
- Step 6.** The chlorination crews shall inject chlorine solution into the pipe, confirming no less than a 25 ppm.
- Step 7.** The chlorine shall be left in the pipe for at least 24 hours.

Exhibit A
Revised 12/01/98

PHASE II - FINAL FLUSHING/BACTERIOLOGICAL SAMPLING:

- Step 8.** The chlorination crews shall flush chlorine out thoroughly until clear water is obtained from existing system. Crews shall collect samples from prescribed sample points, preferably every 1000 feet length of pipes, all dead ends, and blow-off, if any.
- Step 9.** The chlorination crews shall obtain sample results from the laboratory.
- Step 10.** If samples are good **(negative)**, Water Production Branch shall send back the request form to the City Inspector with second part completed **(fax to Construction Division Inspector/Senior Inspector)**. The original form shall be sent by interoffice mail.
- Step 11.** Water Production Branch shall advise the City Inspector when it is permissible to perform hydrostatic test.
- Step 12.** The Water Production Branch will receive the pressure test results performed by the Contractor from the City Inspector. **If the water line was opened, the City will re-chlorinate the water line at the Contractor's cost and obtain samples until found good.** The Water Production Branch will obtain the third part of the request form from the City Inspector.
- Step 13.** **If the samples are found to be POSITIVE more than twice**, re-chlorinate the water line.
- Step 14.** Send correspondence to Construction Division with any necessary charges.
- Step 15.** After the residual results are acceptable, the new water line is now ready to be **PLACED IN SERVICE**. Water Production Branch shall complete the fourth part of the Request for Disinfection and Placement in Service of Water Mains form and fax to the City Inspector. The original form will be sent by interoffice mail.

WATER MAINS PIPE-LAYING PRE/POST INSPECTION CHECKLIST (for water mains 30 inches in diameter and larger):

GFS/File No: _____ Exhibit: Location: _____

Inspector: _____ Contractor: _____
(Print name)**All questions must be answered A Yes prior to requesting disinfection of water mains.**

	<u>Yes</u>	<u>No</u>
1. Installed and maintained trench safety and confined space safety systems according to provisions of OSHA 29CFR .	Q	Q
2. Confirmed that separation of gravity sanitary sewers, manholes, and force mains complies with minimum clearance specified.	Q	Q
3. Pipe trenches were free of water, which might impair pipe laying and cause contamination.	Q	Q
4. Covered or backfilled laid pipe and securely placed stoppers or bulkheads in all openings and in end of line when pipe-laying operations are interrupted and during nonworking hours.	Q	Q
5. Placed pipe along project site before installation where storm water or other water will not enter or pass through pipe.	Q	Q
6. Thoroughly cleaned and dried interior of pipe and fittings of foreign matter before installation. Kept interior clean until Work had been accepted. Kept joint contact surfaces clean until joining was completed.	Q	Q
7. Left no debris, tools, clothing, or other materials in pipe.	Q	Q
8. Inspected each pipe and fitting for defects before installation. Rejected defective or damaged pipe and fittings and removed from site.	Q	Q
9. Cleaned pipe interior, removed all debris, and inspected thoroughly after all pipe-laying operations.	Q	Q

Inspector: _____
(Signature)

Date: _____ / _____ / _____

DISINFECTION OF WATER MAINS CHECKLIST:

File No: _____ Exhibit: Location: _____

Inspector: _____ Contractor: _____
(Print name)**All questions must be answered A Yes prior to requesting disinfection of water mains.**

	<u>Yes</u>	<u>No</u>
1. Construction is completed and the water mains have been laid as shown on the drawings. Water mains shown in Exhibit _____ are free of dirt and debris.	Q	Q
2. A chlorine riser has been installed at the beginning of the new main. It is located in a manner that it can be reached conveniently from a chlorination trailer. The corporation cock is turned on.	Q	Q
3. A water supply riser is installed on a <i>live</i> line within 20 feet of the chlorine riser. The corporation cock is turned on.	Q	Q
4. Blow-offs with minimum diameter of 2 inches or greater are installed at each end, and at every 1,000 feet of the new mains. The blow-offs are large enough for the size of pipe used and length of main laid. They are safely accessible. Handwheel valve is installed 3 feet above grade on each one of them. The corporation cocks are turned on.	Q	Q
5. Adequate drainage is provided for blow-offs and fire hydrants so that private property or other construction sites will not be flooded.	Q	Q
6. An operator can reach all valves with a valve key. Stacks, if used, are straight and clean. There is no dirt or debris covering the operating nuts. There are no large holes full of water or anything else to prevent an operator from reaching the valve.	Q	Q
7. Wet connection valve is installed and existing water supply is adequate for proper disinfection.	Q	Q

Inspector: _____
(Signature)

Date: ____ / ____ / ____

***HYDROSTATIC PRESSURE TEST FOR:**
Q Small-diameter (less than or equal to 20 inches), minimum test pressure 125 psi
Q Large-diameter (greater than 20 inches), minimum test pressure 150 psi

File No:_____Exhibit:_____Location:_____
Inspector:_____Contractor: _____

(Print name)

SECTION TO BE TESTED				
ON (street name)	FROM (street name)	TO (street name)	TOTAL FOOTAGE (feet)	PIPE DIAMETER (inches)

Section 01740

RESTORATION OF SITE IMPROVEMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Restoration of site affected by Utility Work or Roadway Reconstruction and Widening. Section does not apply to roadway extension projects.

1.02 UNIT PRICES

- A. Measurement for restoration of project site for utilities disturbed by proposed construction is by linear foot. Site Restoration for utilities will be measured like particular utility as described in appropriate specification. No separate measurement will be made for branch pipe, valves and other associated work for utilities. Multiple utilities within same right-of-way will be paid on linear foot basis for only one utility.
- B. Measurement for restoration of project site disturbed along roadway reconstruction or widening project is by linear foot. Site restoration for roadway reconstruction or widening projects will be measured along the centerline of right-of-way. No separate payment will be made when more than one phase occurs within same right-of-way.
- C. Payment will be made at unit price for Site Restoration, regardless of size or type of pipe, method of construction, paved or unpaved areas or thickness and width of pavement. Payment for site restoration will be made when restoration is complete within right-of-way, including service connections. No partial payment will be made.
- D. Service Reconnections. Service reconnections are not considered restoration of site improvements and are not paid under this Section. Service reconnections are paid under Section 02426 - Sanitary Sewer Service Reconnections.

1.03 REFERENCES

- A. ANSI Z60.1. American Standard for Nursery Stock.

1.04 DEFINITIONS

- A. Site Restoration is replacement or reconstruction of site improvements to rights-of-way, easements, public property, and private property that are affected or altered by construction operations, with improvements restored to condition which is equal to, or better than, that which existed prior to construction operations.
- B. Site Improvement includes but is not limited to pavement, curb and gutter, esplanades, sidewalks, driveways, fences, lawns, irrigation systems and landscaping.
- C. Line Segment. Length of sewer from center line to centerline of manholes, in line junction structure and bends as designated on Drawings, and to end of stubs or termination of pipe.
- D. Minimum Trench Width. Allowable trench width for corresponding pipe outside diameter as defined in Section 02317 - Excavation and Backfill for Utilities.

1.05 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit qualifications of nursery or landscaping firm to be used.

1.06 QUALITY ASSURANCE

- A. Have trees, landscape shrubs and plantings performed by qualified personnel.

1.07 SCHEDULING

- A. After paving or utility work is completed on line segment and segment is submitted on monthly estimate for payment, complete site restoration for that segment before next monthly estimate for payment is submitted, unless extended in writing by City Engineer.
- B. For utility work requiring testing or post-installation TV inspection, completion of segment is not considered to include testing or TV inspection. Schedule for completion of site restoration is not determined by completion of testing or TV inspection.

1.08 WARRANTY

- A. Provide two-week warranty on plants and grasses that die due to shock or damage only.

- B. Replace plants that fail during warranty period according to specifications governing original plants.
- C. Provide written notification to homeowner stating that homeowner is responsible for watering replaced plants and grasses.
- D. Damage caused by natural hazards including hail, high winds or storm is not covered by warranty.
- E. Existing plant material required to be moved on site are covered under warranty.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Pavement, Sidewalks and Driveways. Use materials as specified in Section 02951 - Pavement Repair and Resurfacing.
- B. Seeding and Sodding. Provide sod as specified in Section 02922 - Sodding. For areas to be seeded, conform to Section 02921 - Hydromulch Seeding.
- C. Trees, Shrubs and Plantings.
 - 1. Provide trees, shrubs and plants of quantity, size, genus, species and variety of those being replaced and conforming to recommendations and requirements of ANSI Z60.1.
 - 2. Use balled-and-burlapped nursery stock for tree replacement.
 - 3. Within availability of standard nursery stock, replace each removed tree with one of an equivalent species and size, but with not less than 2-1/2 inch diameter trunk, as measured 1-1/2 feet above natural ground.

PART 3 EXECUTION

3.01 COORDINATION

- A. For water main and sanitary sewer construction, complete site restoration within 45 days from date construction is successfully tested, unless extended in writing by City Engineer.
- B. For water main and sanitary sewer construction, site restoration associated with

wet connections, cut and plugs, salvaging of fire hydrants and sewer reconnections which needs to occur after line is tested, can be restored after 45 days provided site is restored immediately after accomplishing such work. No payment will be made for such wet connections, cut and plugs, salvaging of fire hydrants and sewer reconnection work until site restoration is complete.

- C. Utility installation or roadway reconstruction and widening cannot exceed site restoration by more than 8,000 linear feet. Site restoration must proceed continuously and be sequentially completed in order of work progress. When utility work and reconstruction or widening work occurs within same limits of right-of-way, utility installation cannot exceed pavement improvements by more than 3,000 linear feet. No intermediate areas can be skipped or left to be completed at a future date, unless otherwise approved by City Engineer.
- D. Do not proceed with additional work if requirements in paragraphs 3.01A, B and C are not satisfied.
- E. Limit utility installation to maximum of two project site locations for projects involving multiple subdivisions or locations.
- F. When roadway reconstruction and widening is being completed in phases, complete restoration of site in previous phase before continuing to next phase, unless otherwise approved by City Engineer.

3.02 EXAMINATION

- A. Construction Site Photographs. Document conditions on and adjacent to construction site with construction photographs as specified Section 01321 - Construction Photographs.
- B. Make photographs of all areas where construction operations will be conducted including driveways and sidewalks within or adjacent to Work area.

3.03 PREPARATION

- A. Removing Pavements and Structures.
 - 1. Remove minimum pavement, curb and gutter, and other structures as required to perform Work. Perform removals in accordance with Section 02221 - Removing Existing Pavements and Structures.
 - 2. Remove concrete and asphaltic concrete material using sawed joints in accordance with Section 02752 - Concrete Pavement Joints.

3. Remove curb and gutter a distance of 2 feet outside excavation, unless otherwise approved by City Engineer.

- B. Remove or relocate existing fencing, if required, for construction operations. Maintain integrity of private property owner=s fencing if needed for protection of children, pets or property. Notify property owner 72 hours in advance before removing fencing and coordinate security needs.

3.04 INSTALLATION

- A. Pavement, Sidewalk, and Driveway Restoration.

1. Replace pavement, curb and gutter, sidewalks, and driveways removed or damaged as result of construction operations. Reconstruct in accordance with Section 02951 - Pavement Repair and Resurfacing.
2. Where replacement sidewalks terminate at street curb radius, construct wheel chair ramp according to City of Tomball Standard Detail Drawing Wheel Chair Ramp Details.

- B. Seeding and Sodding.

1. Clean up construction debris and level area with bank sand so that resulting surface of new grass matches level of existing grass and maintains pre-construction drainage patterns. Level minor ruts or depressions caused by construction operations where grass is still viable by filling with bank sand.
2. Restore previously existing turfed areas with sod and fertilize in accordance with Section 02922 - Sodding. Sod to match existing turf.
3. Restore unpaved areas not requiring sodding with hydromulch methods conforming to Section 02921 - Hydromulch Seeding.

- C. Trees, Shrubbery and Plants.

1. Take extra care in removing and replanting trees, shrubbery and plants. Remove trees, shrubbery and plants, leaving soil around roots. Place trees, shrubbery and plants outside of excavation area.
2. Replace in kind any trees, shrubbery, and plants removed or damaged by construction operations.
3. Have nursery or landscape firm make tree replacements using balled-

and-burlapped nursery stock.

D. Fence Removal and Replacement.

1. Replace fencing removed or damaged to equal or better than what existed prior to construction, including concrete footings and mow strips. Provide new wood posts, top and bottom railing and panels. Metal fencing material not damaged by Work may be reused.
2. Remove and dispose of damaged or substandard material.

3.05 CLEANING

- A. Remove debris and trash to maintain clean and orderly site as described in General Conditions and Section 01576 - Waste Material Disposal.

3.06 MAINTENANCE

- A. Maintain shrubs, plantings, sodded areas and seeded areas through warranty period.
- B. Replace shrubs, plantings and seeded or sodded areas that fail to become established through warranty period.
- C. Maintain newly planted trees, shrubs and plantings as follows:
1. Water as often as necessary to keep ground and backfill moist until plantings have become established.
 2. Repair or replace bracing as necessary.
 3. Prune as necessary.
 4. Treat plants in accordance with approved methods of horticultural practices where insects or disease affect plants after planting.
- D. Refer to Section 01562 - Tree and Plant Protection, Section 02921 - Hydromulch Seeding and Section 02922 - Sodding for additional maintenance requirements.

END OF SECTION

Section 01755

STARTING SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Starting systems.
- B. Demonstration and instructions.
- C. Testing, adjusting and balancing.

1.02 UNIT PRICES

- A. No separate payment will be made for Work performed under this Section. Include cost of Work performed under this Section in pay item of which this work is component.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 PREPARATION

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify City Engineer 7 days prior to startup of each item.
- C. Verify each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or other damage causing conditions.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by equipment or system manufacturer.
- E. Verify wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision in accordance with manufacturer's instructions.

- G. When specified in individual specification sections, require manufacturer to provide authorized representative to be present at site to inspect, check and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit written report that equipment or system has been properly installed and is functioning correctly.

3.02 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to City Engineer two weeks prior to date of Substantial Completion.
- B. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with City Engineer in detail to explain aspects of operation and maintenance.
- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed-upon times, at equipment location.
- D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- E. At a minimum, Contractor will demonstrate the following:
 - 1. Products and procedures to be used in maintaining various surfaces, e.g., counter tops, toilet partitions, tile floors and carpeting;
 - 2. Procedures to set and maintain landscape irrigation system;
 - 3. Procedures to set and maintain security and fire alarm systems;
 - 4. Procedures to set and maintain HVAC systems.

3.03 TESTING, ADJUSTING AND BALANCING

- A. Contractor shall appoint, employ and pay for services of independent firm to perform testing, adjusting and balancing.
- B. Submit reports by independent firm to City Engineer indicating observations and results of tests and indicating compliance or non-compliance with specified requirements and requirements of Contract.

END OF SECTION

Section 01770

CLOSEOUT PROCEDURES

PART 1 G E N E R A L

1.1 SECTION INCLUDES

- A. Substantial Completion Procedures.
- B. Closeout procedures for final submittals, operation and maintenance data, warranties, spare parts and maintenance materials.
- C. Texas Department of Licensing and Regulation (TDLR) inspection for ADA compliance.

1.2 SUBSTANTIAL COMPLETION

- A. Comply with Document 00700 - General Conditions regarding substantial completion when Contractor considers the Work, or portion thereof designated by City and Engineer, to be substantially complete.
- B. Insure the following items have been completed when included in the Work, prior to presenting a list of items to be inspected by Project Manager for issuance of a Certificate of Substantial Completion:
 - 1. Cutting, plugging, and abandoning of water, wastewater, and storm sewer lines, as required by specifications for each item;
 - 2. Construction of, and repairs to, pavement, driveways, sidewalks, and curbs and gutters;
 - 3. Sodding and hydromulch seeding, unless waived by City and Engineer in writing;
 - 4. General clean up including pavement markings, transfer of services, successful testing and landscape;
 - 5. Installation of all bid items included in Document 00405 and
 - 6. Any additional requirements in Section 01110 - Summary of Work.

- C. Assist Project Manager with inspection of Contractor's list of items and complete or correct the items, including items added by project Manager, within a time period of 30 days or as mutually agreed.
- D. Should Project Manager's inspection show failure of Contractor to comply with substantial completion requirements, including those items in Paragraph 1.02 B. of this specification, Contractor shall complete or correct the items, before requesting another inspection by Project Manager.

1.3 CLOSEOUT PROCEDURES

- A. Comply with Document 00700 - General Conditions regarding Final Completion and Final Payment when Work is complete and ready for City and Engineer's final inspection.
- B. Provide Project Record Documents in accordance with Section 01785 - Project Record Documents.
- C. Complete or correct items on punch list, with no new items added. Address new items during warranty period.
- D. City will occupy portions of Work as specified in other Sections.

1.4 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. For facilities, clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Clean equipment and fixtures to sanitary condition.
- D. Clean or replace filters of operating equipment.
- E. Clean debris from roofs, gutters, down spouts, and drainage systems.
- F. Clean site; sweep paved areas, rake landscaped surfaces clean.
- G. Remove waste and surplus materials, rubbish, and temporary construction facilities from site following final test of utilities and completion of Work.

1.5 ADJUSTING

- A. Adjust operating equipment to ensure smooth and unhindered operation. Value of this testing and adjusting is 5 percent of Lump Sum Price in Schedule of Values for item being tested.

1.6 OPERATION AND MAINTENANCE DATA

- A. Submit operations and maintenance data as noted in Section 01330 - Submittal Procedures.
- B. Five percent of lump sum amount of each piece of equipment as indicated in Schedule of Unit Price Work or Schedule of Values shall be paid after required O&M data submissions are received and approved by City and Engineer.

1.7 WARRANTIES

- A. Provide one original and two copies of each warranty from subcontractors, suppliers, and manufacturers.
- B. Provide Table of Contents and assemble warranties in 3-ring/D binder with durable plastic cover.
- C. Submit warranties prior to final progress payment.
- D. Warranties shall commence in accordance with requirements in Document 00700 - General Conditions.

1.8 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual Specification sections.
- B. Deliver to location within City limits as directed by City and Engineer; obtain receipt prior to final Payment Application.

1.9 TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR) INSPECTION

- A. Contact TDLR's Houston Regional Office, 5425 Polk Street, Houston, Texas, 77023, telephone 713-924-6303, fax 713-921-3106, to schedule an inspection for ADA compliance prior to final completion.
- B. Provide results of TDLR's inspection to City prior to final inspection.

1.10 FINAL PHOTOS

- A. Provide per Specification Section 01322 - Construction Photographs for Facility Projects.

1.11 PROJECT RECORD DOCUMENTS

- A. Provide per Specification Section 01785 - Project Record Documents.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01782

OPERATIONS AND MAINTENANCE DATA

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Submittal requirements for equipment and facility operating and maintenance manuals

1.2 MEASUREMENT AND PAYMENT

1. Value of approved equipment operations and maintenance manuals is 5 percent of individual equipment value as indicated in Schedule of Unit Price Work or Schedule of Values. This amount can be included in next progress payment after approval of submitted manual.

1.3 SUBMITTALS

1. Conform to requirements of Section 01330 - Submittal Procedures. Submit list of operation and maintenance manuals and parts manuals to be provided.
2. Submit documents, bound in 8-1/2x11-inch text pages, 3ring/D binders with durable plastic covers.
3. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project and subject matter of binder when multiple binders are required.
4. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
5. Contents: Prepare Table of Contents for each volume, with each Product or system description identified.

1. Part 1: Directory, listing names, addresses and telephone numbers of Architect/Engineer, Contractor, Subcontractors and major equipment suppliers.

2. Part 2: Operation and maintenance instructions, arranged by system. For each category, identify names, addresses and telephone numbers of subcontractors and suppliers. Identify following:
 1. Significant design criteria
 2. List of equipment
 3. Parts list for each component
 4. Operating instructions
 5. Maintenance instructions for equipment and systems
 6. Maintenance instructions for special finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents
3. Part 3: Project documents and certificates, including following:
 1. Shop drawings and product data
 2. Air and water balance reports
 3. Certificates
 4. Photocopies of warranties
6. Within one month prior to placing equipment or facility in service, submit one original and two copies of operation and maintenance manual and parts manual for review.
7. Submit one original and two copies of completed volumes in final form 10 days prior to final inspection. This will be returned after final inspection, with City and Engineer comments. Revise content of documents as required prior to final submittal.
8. Revise and resubmit final volumes (three each) within 10 days after final inspection.

1.4 EQUIPMENT OPERATION AND MAINTENANCE DATA

1. Furnish operation and maintenance manuals for equipment. Operation and maintenance manual must contain all information required for City to operate, maintain and repair equipment. Manual must be prepared by equipment manufacturer, furnished to City and Engineer and, as minimum, contain following:
 1. Equipment functions, normal operating characteristics and limiting conditions
 2. Assembly, installation, alignment, adjustment and checking instructions
 3. Operating instructions for start-up, normal operation, regulation and control, normal shutdown and emergency shutdown

4. Lubrication and detailed maintenance instructions. Maintenance instructions are to include detailed drawings giving location of each maintainable part and lubrication point and detailed instructions on disassembly and reassembly of equipment
 5. Troubleshooting guide
 6. Complete spare parts list with predicted life of parts subject to wear, lists of spare parts recommended on hand for both initial start-up and for normal operating inventory, and local or nearest source of spare parts availability
 7. Outline, cross-section and assembly drawings; engineering data; wiring diagram
 8. Test data and performance curves
-
2. Furnish parts manuals for equipment. Manual must be prepared by equipment manufacturers, furnished to City and Engineer and, as minimum, contain following:
 1. Detailed drawings giving location of each maintainable part
 2. Complete spare parts list with predicted life of parts subject to wear, lists of spare parts recommended on hand for both initial start-up and for normal operating inventory, and local or nearest source of spare parts availability

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01785

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Maintenance and Submittal of Record Documents and Samples.

1.2 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Maintain one record copy of documents at site in accordance with Document 00700 - General Conditions.
- B. Store Record Documents and samples in field office when field office is required by Contract, or in secure location. Provide files, racks, and secure storage for Record Documents and samples.
- C. Label each document "PROJECT RECORD" in neat, large, printed letters.
- D. Maintain Record Documents in clean dry and legible condition. Do not use Record Documents for construction purposes.
- E. Keep Record Documents and Samples available for inspection by City and Engineer.
- F. Bring Record Documents to progress review meetings for viewing by City and Engineer.

1.3 RECORDING

- A. Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- B. Contract Drawings and Shop Drawings: Legibly mark each item to record actual construction, or "as built" conditions, including:
 - 1. Measured depths of elements of foundation in relation to finish first floor datum

2. Measured horizontal locations and elevations of underground utilities and appurtenances, referenced to permanent surface improvements
 3. Elevations of underground utilities referenced to City of Tomball bench mark utilized for Project
 4. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction
 5. Field changes of dimension and detail
 6. Changes made by modifications
 7. Details not on original Contract Drawings
 8. References to related shop drawings and modifications
- C. Record information with red felt-tip marking pen on set of blue line opaque drawings.
- D. For large diameter water mains, legibly mark specifications and addenda to record:
1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
 2. Changes made by change order or field order.
 3. Other matters not originally specified.
- E. Legibly annotate shop drawings to record changes made after review.

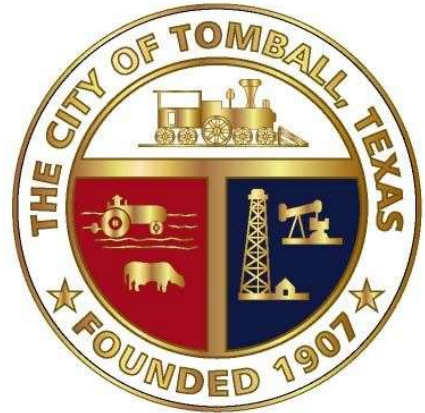
1.4 SUBMITTALS

- A. At Contract closeout, deliver Project Record Documents to City and Engineer.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION



City of Tomball

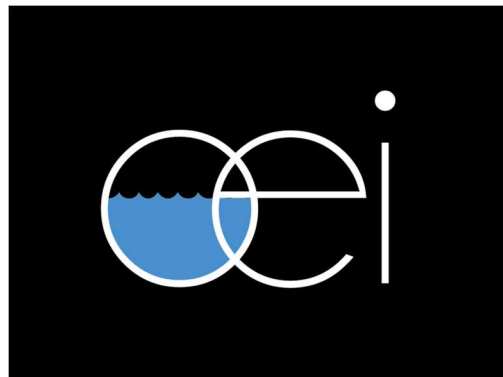
Rudolph Rd. Water Line Extension

Material and Equipment Specifications

City of Tomball Job #2024-02

OEI Job # 1057.23.01

October 2023



DIVISION 2 – Site Work

- 02085 – Valve Boxes, Meter Boxes and Meter Vaults
- 02233 – Clearing and Grubbing
- 02260 – Trench Safety System
- 02317 – Excavation and Backfill for Utilities
- 02320 – Utility Backfill Materials
- 02321 – Cement Stabilized Sand
- 02447 – Augering Pipe and Conduit
- 02501 – Ductile Iron Pipe and Fittings
- 02502 – Steel Pipe and Fittings
- 02503 – Copper Tubing
- 02505 – High Density Polyethylene (HDPE) Solid and Profile Wall Pipe
- 02506 – Polyvinyl Chloride (PVC) Pipe
- 02511 – Water Lines
- 02512 – Water Tap and Service Line Installation
- 02513 – Wet Connections
- 02514 – Disinfection of Water Lines
- 02515 – Hydrostatic Testing of Pipelines
- 02516 – Cut, Plug and Abandonment of Water Lines
- 02521 – Gate Valves
- 02525 – Tapping Sleeves and Valves

02526 – Water Meters

02527 – Polyurethane Coatings on Steel or Ductile Iron Pipe

02528 – Polyethylene Wrap

02605 – Conductive Trace Wire for Nonmetallic Pipe Installation

02911 – Topsoil

02922 – Sodding

DIVISION 3 – Concrete

03315 – Concrete for Utility Construction

EXTRA SPECIFICATIONS

04000 – Boring or Tunneling Pipe

Section 02085

VALVE BOXES, METER BOXES AND METER VAULTS

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Valve boxes for water service.
- B. Meter boxes for water service.
- C. Meter vaults for water service.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. No separate payment will be made for valve boxes under this Section. Include payment in unit price for Section 02511 - Water Lines.
 - 2. No separate payment will be made for meter boxes under this Section. Include payment in unit price for Section 02512 - Water Tap and Service Line Installation.
 - 3. Payment for each size of meter vaults is on unit price basis per vault. Payment will be made for each vault installed, regardless of depth.
 - 4. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ASTM A 48 - Standard Specification for Gray Iron Castings.
- B. ASTM D 256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics.
- C. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.

- D. ASTM D 648 - Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
- E. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- 6. ASTM D 2240 - Standard Test Method for Rubber Property-Durometer Hardness.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit manufacturers product data for the following items for approval:
 - 1. Each type of valve box and lid.
 - 2. Each type of meter box and cover.
 - 3. Each type of meter vault frame and cover.
- C. Submit design calculations and shop drawings for precast vault elements, sealed by an Engineer registered in State of Texas.
- D. Submit shop drawings for cast-in-place meter vaults for approval if proposed construction varies from Drawings.
- E. Submit manufacturer's certification that plastic meter boxes meet requirements of Paragraph 2.05, Plastic Meter Boxes.

PART 2 PRODUCTS

2.01 VALVE BOXES

- A. Provide Type A, cast-iron/ductile-iron, slide-type, valve boxes as manufactured by Sigma, Lone Star **or approved equal**. Design of valve box shall minimize stresses on valve imposed by loads on box lid.
- B. Cast letter "W" into lid, 2 inch in height and raised 3/32 inch, for valves serving potable water lines.
- C. Coat boxes, bases, and lids by dipping in hot bituminous varnish.

D. Riser Pipe.

1. Provide 6-inch PVC, SDR 26, riser pipes in accordance with Section 02506 - Polyvinyl Chloride Pipe.
2. Provide single section of pipe.

E. Concrete for valve box placement:

1. For locations in new concrete pavement, provide strength and mix design of new pavement.

2.02 METER BOXES

A. Provide meter boxes for 3/4-inch through 1-inch meters of the following materials:

1. Non-traffic bearing locations: Cast iron, concrete or plastic.
2. Traffic bearing locations: Cast iron.

B. Extensions: Meter box extensions 3 inches and 6 inches in height shall be available from manufacturer as standard item.

2.03 CAST-IRON METER BOXES

A. Cast-Iron Boxes: Clean and free from sand blow-holes or other defects conforming to requirements of ASTM A 48. Bearing surfaces shall be machined so that covers seat evenly in frames.

B. Boxes and lids shall have dipped, coal-tar-pitch, varnish finish.

C. Provide lock-type meter boxes when required by Drawings. Lock mechanisms shall work with ease.

2.04 CONCRETE METER BOXES

A. Concrete Meter Boxes: Made of Class A concrete, with minimum 4000 psi compressive strength, conforming to requirements of Section 03315 - Concrete for Utility Construction. Construct to dimensions shown on Drawings.

B. Castings: Free from fractures, large or deep cracks, blisters or surface roughness or any other defects that may affect serviceability.

2.05 PLASTIC METER BOXES

- A. Plastic Meter Boxes: Made of high density polyethylene conforming to the following ASTM standards:

ASTM	REQUIREMENT
D 256	Impact Strength = 1.9 ft.-lb./inch (Izod, Notched)
D 256	Impact Strength = 6.4 ft.-lb./inch (Izod, Un-Notched)
D 638	Tensile Strength (2.0 min.) = 3400 psi
D 648	Deflection Temperature = 170 degrees F
D 2240	Shore D, Hardness, 55-65 Impact Strength, Falling Dart Method, 160 inch-lb.
D 790	Flexural Modulus = 90,000 psi

- B. Meter boxes shall meet the following test requirements:
1. Static Load: Not less than 2500 pounds using 6-inch disc with direct compression exerted at center of top of meter box with solid plastic lid.
 2. Deflection: Not less than 1000 pounds load required to deflect top edge of meter box c- inch.
- C. Meter box body, without lid, shall weigh approximately 7 pounds.

2.06 METER VAULTS

- A. Meter vaults may be constructed of precast concrete, cast-in-place concrete or common brick masonry unless a specific type of construction is required by Drawings.
- B. Concrete for Meter Vaults: Class A concrete, conforming to requirements of Section 03315 - Concrete for Utility Construction with minimum compressive strength of 4000 psi at 28 days.
- C. Reinforcing steel for meter vaults: Conform to requirements of Section 03315 Concrete for Utility Construction.
- D. Grates and Covers: Conform to requirements of Section 02084 - Frames, Grates, Rings, and Covers.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Obtain approval from City and Engineer for location of meter vault.
- B. Verify lines and grade are correct.
- C. Verify compacted subgrade will support loads imposed by vaults.

3.02 VALVE BOXES

- A. Install riser pipe with suitable length for depth of cover indicated on Drawings or to accommodate actual finish grade.
 - 1. Install with bell on top of valve
 - 2. Place riser pipe in plumb, vertical position
- B. Install valve box and riser piping plumbed in a vertical position. Provide 6-inches telescoping freeboard space between riser pipe top butt end, and interior contact flange of valve box, for vertical movement damping. Riser (bell end of pipe) shall rest on valve.
- C. After valve box has been set, aligned, and adjusted so that lid is level with final grade, pour a 24-inch by 24-inch by 8-inch-thick concrete block around valve box for asphalt pavement only. Center valve box horizontally within concrete block.
- D. Paint covers of new valve boxes in fluorescent orange when installed. **After completion and acceptance by City, repaint covers black.**

3.03 METER BOXES

- A. Install cast iron or plastic boxes in accordance with manufacturers instructions.
- B. Construct concrete meter boxes to dimensions shown on Drawings.
- C. Adjust top of meter boxes to conform to cover elevations specified in Paragraph 3.05, Frame and Cover for Meter Vaults.
- D. **Do not locate under paved areas unless approved by City and Engineer. Use approved traffic- type box with cast iron lid when meter must be**

located in paved areas.

3.04 METER VAULTS

- A. Construct concrete meter vaults to dimensions shown on Drawings. **Do not cast in presence of water.** Make bottom uniform. Verify lines and grades are correct and compacted subgrade will support loads imposed by vaults.
- B. Precast Meter Vaults:
 - 1. Install precast vaults in accordance with manufacturers recommendations. Set level on a minimum 3-inch-thick bed of sand conforming to requirements of Section 02320 - Utility Backfill Materials.
 - 2. Seal lifting holes with cement-sand mortar or non-shrink grout.
- C. Meter Vault Floor Slab:
 - 1. Construct floor slabs of 6-inch-thick reinforced concrete. Slope floor 3 inch per foot toward sump. Make sump 12 inches in diameter, or 12 inches square, and 4 inches deep, unless other dimensions are required by Drawings. Install dowels at maximum of 18 inches, center-to-center for keying walls to floor slab.
 - 2. Precast floor slab elements may be used for precast vault construction
- D. Cast-in-Place Meter Vault Walls:
 - 1. Key walls to floor slab and form to dimensions shown on Drawings. Minimum wall thickness shall be 4 inches.
 - 2. Cast walls monolithically. One cold joint will be allowed when vault depth exceeds 12 feet.
 - 3. Set frame for cover in concrete

3.05 FRAME AND COVER FOR METER VAULTS

- A. Set cast iron frame in a mortar bed and adjust elevation of cover as follows:

1. In unpaved areas, set top of meter box or meter vault cover 2 to 3 inches above natural grade
2. In paved areas, set top of meter box or meter vault cover flush with adjacent concrete but no higher than 2-inch

3.06 BACKFILL

- A. Provide bank run sand in accordance with Section 02320 - Utility Backfill Materials and backfill and compact in accordance with Section 02317 - Excavation and Backfill for Utilities.
- B. In unpaved areas, slope backfill around meter boxes and vaults to provide a uniform slope 1- to-5 slope from top to natural grade.
- C. In paved areas, slope concrete down from meter box or vault to meet adjacent paved area.

END OF SECTION

Section 02233

CLEARING AND GRUBBING

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Removing surface debris and rubbish.
- B. Clearing site of plant life and grass.
- C. Removing trees and shrubs.
- D. Removing root system of trees and shrubs.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. Payment for clearing and grubbing is on per acre basis.
 - 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REGULATORY REQUIREMENTS

- A. Conform to applicable codes for disposal of debris.
- B. Coordinate clearing work with utility companies.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N

3.01 PREPARATION

- A. Verify that existing plant life and features designated to remain are identified and

tagged.

3.02 PROTECTION

- A. Protect following from damage or displacement:
 - 1. Living trees located 3 feet or more outside of intersection of side slopes and original ground line.
 - 2. Plants other than trees and landscape features designated to remain.
 - 3. Utilities designated to remain.
 - 4. Benchmarks, monuments, and existing structures designated to remain.

3.03 CLEARING

- A. Remove stumps, main root ball, and root system to:
 - 1. Depth of 24 inches below finished subgrade elevation in area bounded by lines two feet behind back of curbs.
 - 2. Depth of 24 inches below finished surface of required cross section for other areas.
- B. Clear undergrowth and deadwood without disturbing subsoil.
- C. Remove vegetation from topsoil scheduled for reuse.

3.04 REMOVAL

- A. Remove debris, rubbish, and extracted plant material life from site in accordance with City requirements set forth in Section 01576 - Waste Material Disposal.

END OF SECTION

Section 02260

TRENCH SAFETY SYSTEM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Trench safety system for construction of trench excavations.
- B. Trench safety system for structural excavations, which fall under provisions of State and Federal trench safety laws.

1.02 UNIT PRICES

- A. Measurement for trench safety systems used on trench excavations is on a linear foot basis measured along centerline of trench, including manholes and other line structures.
- B. No payment shall be made for trench safety systems for structural excavations under this section. Include payment for trench safety system in applicable structure installation sections.
- C. Payment for auger pits will be based on the actual length but shall be no greater than 40% of the linear footage of total length augered.
- D. Refer to Section 01270 - Measurement and Payment for unit price procedures.

1.03 DEFINITIONS

- A. Trench. Narrow excavation (in relation to its depth) made below surface of ground. In general, depth is greater than width, but width of trench (measured at bottom) is not greater than 15 feet.
- B. Trench safety system requirements shall apply to larger open excavations if erection of structures or other installations limits space between excavation slope and installation to dimensions equivalent of a trench as defined.
- C. Trench safety systems include but are not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, dewatering, or diversion of water to provide adequate drainage. Trench safety system is Contractor's methods and means of construction.

- D. Trench safety program is set of safety procedures governing presence and activities of individuals working in and around trench excavations.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit trench safety program specifically for construction of trench excavation. Design trench safety program in accordance with OSHA 29 CFR standards.
- C. Trench safety system and special designs containing deviations from OSHA standards to be sealed by a Professional Engineer registered by State of Texas.**
- D. Review of trench safety system by City and Engineer shall only be in regards to compliance with this specification and **shall not constitute approval by City and Engineer nor relieve Contractor of obligations under State and Federal trench safety laws.**
- E. Submit trench safety system certification that trench safety system shall not be subjected to loads exceeding those which system was designed to withstand according to available construction and geotechnical information. When trench box is used in a manner other than what is indicated and certified in manufacturer's technical data, submit trench box manufacturer certifications of proposed usage.

1.05 REGULATORY REQUIREMENTS

- A. Install and maintain trench safety systems in accordance with detail specifications set out in provision of Excavations, Trenching, and Shoring, Federal Occupation Safety and Health Administration (OSHA) Standards, 29CFR, Part 1926, Subpart P, as amended, including Final Rule, published in Federal Register Vol. 54, No. 209 on October 31, 1989. Sections that are incorporated into these specifications by reference include Sections 1926-650 through 1926-652.
- B. Reproduction of OSHA standards included in "Subpart P - Excavations" from Federal Register Vol. 54, No. 209 is available upon request to Contractors bidding on City projects. City assumes no responsibility for accuracy of reproduction. Obtain copy of this section of Federal Register.
- C. Legislation enacted by Texas Legislature regarding Trench Safety Systems, is

hereby incorporated, by reference, into these specifications. Refer to Texas Health and Safety Code Ann., '756.021 (Vernon 1991).

1.06 INDEMNIFICATION

- A. Contractor to indemnify and hold harmless City, its employees, and agents, from any and all damages, costs (including, without limitation, legal fees, court costs, and cost of investigation), judgments or claims by anyone for injury or death of persons resulting from collapse or failure of trenches constructed under this Contract.
- B. Contractor acknowledges and agrees that this indemnity provision provides indemnity for City, its employees, and agents, in case City is negligent either by act or omission in providing for trench safety, including, but not limited to safety program and design reviews, inspections, failures to issue stop work orders, and hiring of Contractor.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install and maintain trench safety systems in accordance with provisions of OSHA 29 CFR.**
- B. Install specially designed trench safety systems in accordance with Contractor's trench excavation safety program for locations and conditions identified in program.
- C. A competent person, as identified in Contractor's Trench Safety Program, to verify that trench boxes and other pre-manufactured systems are certified for actual installation conditions.

3.02 INSPECTION

- A. Contractor, or Contractor's independently retained consultant, to make daily inspections of trench safety systems to ensure that installed systems and operations meet OSHA 29 CFR and other personnel protection regulations requirements.**

- B. If evidence of possible cave-ins or slides are apparent, immediately stop work in trench and move personnel to safe locations until necessary precautions have been taken to safeguard personnel entering trench.
- C. Maintain permanent record of daily inspections.

3.03 FIELD QUALITY CONTROL

- A. Verify specific applicability of selected or specially designed trench safety systems to each field condition encountered on project.

END OF SECTION

Section 02317

EXCAVATION AND BACKFILL FOR UTILITIES

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Excavation, trenching, foundation, embedment, and backfill for installation of utilities, including manholes and other pipeline structures.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. No additional payment will be made for trench excavation, embedment and backfill under this Section. Include cost in unit price for installed underground piping, sewer, conduit, or duct work.
 2. No separate or additional payment will be made for surface water control, ground water control, or for excavation drainage. Include in unit price for installed piping, sewer, conduit, or duct work.
 3. When City and Engineer directs Contractor to overexcavate trench bottom, Contractor will be paid by unit price bid per linear foot under bid item - 6" Overexcavation of Trench Bottom. **No payment will be paid if City, Engineer OR City Inspector does not direct Contractor to overexcavate trench bottom.**
 4. No overexcavation will be measured or paid when unsuitable conditions result from inadequate or non-functioning dewatering system. **Overexcavation caused by incorrect dewatering shall be performed at Contractor's expense.**
 5. No additional payment will be made for critical locations. Include cost for unit price for work requiring critical location.
 6. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for Work in this Section is included in total Stipulated Price.

1.03 DEFINITIONS

- A. Pipe Foundation: Suitable and stable native soils that are exposed at trench sub grade after excavation to depth of bottom of bedding as shown on Drawings, or foundation backfill material placed and compacted in over-excavations.
- B. Pipe Bedding: Portion of trench backfill that extends vertically from top of foundation up to level line at bottom of pipe, and horizontally from one trench sidewall to opposite sidewall.
- C. Haunching: Material placed on either side of pipe from top of bedding up to springline of pipe and horizontally from one trench sidewall to opposite sidewall.
- D. Initial Backfill: Portion of trench backfill that extends vertically from springline of pipe (top of haunching) up to level line 12 inches above top of pipe, and horizontally from one trench sidewall to opposite sidewall.
- E. Pipe Embedment: Portion of trench backfill that consists of bedding, haunching and initial backfill.
- F. Trench Zone: Portion of trench backfill that extends vertically from top of pipe embedment up to pavement sub grade or up to final grade when not beneath pavement.
- G. Unsuitable Material: Unsuitable soil materials are the following:
 - 1. Materials that are classified as ML, CL-ML, MH, PT, OH, and OL according to ASTM D 2487.
 - 2. Materials that cannot be compacted to required density due to either gradation, plasticity, or moisture content.
 - 3. Materials that contain large clods, aggregates, stones greater than 4 inches in any dimension, debris, vegetation, waste or any other deleterious materials.
 - 4. Materials that are contaminated with hydrocarbons or other chemical contaminants.
- H. Suitable Material: Suitable soil materials are those meeting specification requirements. Materials mixed with lime or cement that can be compacted to required density and meeting requirements for suitable materials may be

considered suitable materials, unless otherwise indicated.

- I. Backfill: Suitable material meeting specified quality requirements, placed, and compacted under controlled conditions.
- J. Ground Water Control Systems: Installations external to trench, such as well points, eductors, or deep wells. Ground water control includes dewatering to lower ground water, intercepting seepage, which would otherwise emerge from side or bottom of trench excavation, and depressurization to prevent failure or heaving of excavation bottom.
- K. Surface Water Control: Diversion and drainage of surface water runoff and rainwater away from trench excavation. Rainwater and surface water accidentally entering trench shall be controlled and removed as part of excavation drainage.
- L. Excavation Drainage: Removal of surface and seepage water in trench by sump pumping and using drainage layer, as defined in ASTM D 2321, placed on foundation beneath pipe bedding or thickened bedding layer of Class I material.
- M. Trench Conditions are defined with regard to stability of trench bottom and trench walls of pipe embedment zone. Maintain trench conditions that provide for effective placement and compaction of embedment material directly on or against undisturbed soils or foundation backfill, except where structural trench support is necessary.
 - 1. Dry Stable Trench: Stable and substantially dry trench conditions exist in pipe embedment zone as result of typically dry soils or achieved by ground water control (dewatering or depressurization) for trenches extending below ground water level.
 - 2. Stable Trench with Seepage: Stable trench in which ground water seepage is controlled by excavation drainage.
 - a. Stable Trench with Seepage in Clayey Soils: Excavation drainage is provided in lieu of or to supplement ground water control systems to control seepage and provide stable trench sub grade in predominately clayey soils prior to bedding placement.
 - b. Stable Wet Trench in Sandy Soils: Excavation drainage is provided in embedment zone in combination with ground water control in predominately sandy or silty soils.

3. Unstable Trench: Unstable trench conditions exist in pipe embedment zone if ground water inflow or high-water content causes soil disturbances, such as sloughing, sliding, boiling, heaving or loss of density.
- N. Sub-trench: Sub-trench is special case of benched excavation. Sub-trench excavation below trench shields or shoring installations may be used to allow placement and compaction of foundation or embedment materials directly against undisturbed soils. Depth of sub-trench depends upon trench stability and safety as determined by Contractor.
- O. Trench Dam: Placement of low permeability material in pipe embedment zone or foundation to prohibit ground water flow along trench.
- P. Over-Excavation and Backfill: Excavation of sub grade soils with unsatisfactory bearing capacity or composed of otherwise unsuitable materials below top of foundation as shown on Drawings and backfilled with foundation backfill material.
- Q. Foundation Backfill Materials: Natural soil or manufactured aggregate of controlled gradation, and geotextile filter fabrics as required, to control drainage and material separation. Foundation backfill material is placed and compacted as backfill to provide stable support for bedding. Foundation backfill materials may include concrete seal slabs.
- R. Trench Safety Systems include both protective systems and shoring systems as defined in Section 02260 - Trench Safety Systems.
- S. Trench Shield (Trench Box): Portable worker safety structure moved along trench as work proceeds, used as protective system and designed to withstand forces imposed on it by cave- in, thereby protecting persons within trench. Trench shields may be stacked if so designed or placed in series depending on depth and length of excavation to be protected.
- T. Shoring System: Structure that supports sides of an excavation to maintain stable soil conditions and prevent cave-ins, or to prevent movement of ground affecting adjacent installations or improvements.
- U. Special Shoring: Shoring system meeting special shoring as specified in Paragraph 1.08, Special Shoring Design Requirements, for locations identified on Drawings.

1.04 REFERENCES

- A. ASTM D 558 - Standard Test Methods for Moisture-Density Relations of Soil Cement Mixtures.
- B. ASTM D 698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft).
- C. ASTM D 1556 - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method.
- D. ASTM D 2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications.
- E. ASTM D 2487 - Standard Classification of Soils for Engineering Purposes.
- F. ASTM D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- G. ASTM D 3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
- H. ASTM D 4318 - Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- I. TxDOT Tex-101-E - Preparing Soil and Flexible Base Materials for Testing.
- J. TxDOT Tex-110-E - Particle Size Analysis of Soils.
- K. Federal Regulations, 29 CFR Part 1926, Standards-Excavation, Occupational Safety and Health Administration (OSHA).

1.05 SCHEDULING

- A. Schedule work so that pipe embedment can be completed on same day that acceptable foundation has been achieved for each section of pipe installation, manhole, or other structures.

1.06 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit planned typical method of excavation, backfill placement and compaction

02317-5

including:

1. Trench widths.
 2. Procedures for foundation and pipe zone bedding placement, and trench backfill compaction.
 3. Procedures for assuring compaction against undisturbed soil when pre-manufactured trench safety systems are proposed.
- C. Submit backfill material sources and product quality information in accordance with requirements of Section 02320 - Utility Backfill Materials.
- D. Submit trench excavation safety program in accordance with requirements of Section 02260 - Trench Safety System. Include designs for special shoring meeting requirements defined in Paragraph 1.08, Special Shoring Design Requirements.
- E. Submit record of location of utilities as installed, referenced to survey control points. Include locations of utilities encountered or rerouted. Give stations, horizontal dimensions, elevations, inverts, and gradients.
- F. Submit 11-inch by 17-inch or 12-inch by 18-inch copy of Drawing with plotted utility or obstruction location titled A Potential Obstruction Report to Engineer.**

1.07 TESTS

- A. Testing and analysis of backfill materials for soil classification and compaction during construction will be performed by an independent laboratory provided by City in accordance with requirements of Section 01454 - Testing Laboratory Services and as specified in this Section.
- B. Perform backfill material source qualification testing in accordance with requirements of Section 02320- Utility Backfill Materials.

1.08 SPECIAL SHORING DESIGN REQUIREMENTS

- A. Have special shoring designed or selected by Contractor's Professional Engineer to provide support for sides of excavations, including soils and hydrostatic ground water pressures as applicable, and to prevent ground movements affecting adjacent installations or improvements such as structures, pavements, and utilities. Special shoring may be a pre-manufactured system

selected by Contractor's Professional Engineer to meet project site requirements based on manufacturer's standard design.

PART 2 P R O D U C T S

2.01 EQUIPMENT

- A. Perform excavation with hydraulic excavator or other equipment suitable for achieving requirements of this Section.
- B. Use only hand-operated tamping equipment until minimum cover of 12 inches is obtained over pipes, conduits, and ducts. Do not use heavy compacting equipment until adequate cover is attained to prevent damage to pipes, conduits, or ducts.
- C. Use trench shields or other protective systems or shoring systems, which are designed and operated to achieve placement and compaction of backfill directly against undisturbed native soil.
- D. Use special shoring systems where required which may consist of braced sheeting, braced soldier piles and lagging, slide rail systems, or other systems meeting requirements as specified in Paragraph 1.08, Special Shoring Design Requirements.

2.02 MATERIAL CLASSIFICATIONS

- A. Embedment and Trench Zone Backfill Materials: Conform to classifications and product descriptions of Section 02320 - Utility Backfill Materials.
- B. Concrete Backfill: Conform to requirements for Class B concrete as specified in Section 03315 - Concrete for Utility Construction.
- C. Concrete for Trench Dams: Concrete backfill or 3 sack premixed (bag) concrete.
- D. Timber Shoring Left in Place: Untreated oak.

PART 3 E X E C U T I O N

3.01 STANDARD PRACTICE

- A. Install flexible pipe, including "semi-rigid" pipe, to conform to standard practice

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described in ASTM D 2321, and as described in this Section. Where an apparent conflict occurs between standard practice and requirements of this Section, this Section governs.

- B. Install rigid pipe to conform with standard practice described in ASTM C 12, and as described in this Section. Where an apparent conflict occurs between standard practice and requirements of this Section, this Section governs.

C. Classification of material will be as approved by City and Engineer.

3.02 PREPARATION

- A. Establish traffic control to conform with requirements of Section 01555 - Traffic Control and Regulation. Maintain barricades and warning lights for streets and intersections affected by Work, and is considered hazardous to traffic movements.
- B. Perform work to conform with applicable safety standards and regulations. Employ trench safety system as specified in Section 02260 - Trench Safety Systems.
- C. Immediately notify agency or company owning any existing utility line, which is damaged, broken, or disturbed. **Obtain approval from City and Engineer and agency for any repairs or relocations, either temporary or permanent.**
- D. Perform Potential Obstruction Investigation at critical locations as identified in Drawings. Locate existing utilities minimum of 7 working days ahead of pipe laying activities. This 7-day period will be based on expected pipe laying rate. Submit to City and Engineer for approval, horizontal and vertical alignment dimensions for connection ends, tied into project baseline, signed and sealed by R.P.L.S. **Notify City and Engineer in writing immediately upon identification of obstruction.** In event of failure to identify obstruction in minimum of 7 days, Contractor will not be entitled to extra cost for downtime including, but not limited to, payroll, equipment, overhead, demobilization and remobilization, until 7 days has passed from time City and Engineer is notified of obstruction.

3.03 POTENTIAL OBSTRUCTION INVESTIGATION

- A. Horizontal and vertical location of various underground lines shown on Drawings, including but not limited to water lines, gas lines, storm sewers, sanitary sewers, telecommunication lines, electric lines or power ducts, pipelines, concrete and

debris, are based on best information available but are only approximate locations. At critical locations shown on Drawings, field verify horizontal and vertical locations of such lines within zone 2 feet vertically and 4 feet horizontally of proposed work. Verify location of existing utilities minimum of 7 working days in advance of pipe laying activities based on daily pipe laying rate. Use extreme caution and care when uncovering these lines.

- B. Notify involved utility companies of date and time that investigation excavation will occur and request that their respective utility lines be marked in field. Comply with utility or pipeline company requirements that their representative be present during excavation. Provide City and Engineer with 48 hours' notice prior to field excavation or related work.
- C. Survey vertical and horizontal locations of obstructions relative to project baseline and datum and plot on 12-inch by 18-inch copy of Drawings.

3.04 PROTECTION

- A. Protect and support above-grade and below-grade utilities, which are to remain.
- B. Restore damaged permanent facilities to pre-construction conditions unless replacement or abandonment of facilities are indicated on Drawings.
- C. Take measures to minimize erosion of trenches. **Do not allow water to pond in trenches. Where slides, washouts, settlements, or areas with loss of density or pavement failures or potholes occur, repair, recompact, and pave those areas at no additional cost to City.**

3.05 EXCAVATION

- A. Except as otherwise specified or shown on Drawings, install underground utilities in open cut trenches with vertical sides.
- B. Perform excavation work so that pipe, conduit, and ducts can be installed to depths and alignments shown on Drawings. Avoid disturbing surrounding ground and existing facilities and improvements.
- C. Determine trench excavation widths using following schedule as related to pipe outside diameter (O.D.). Maximum trench width shall be minimum trench width plus 24 inches.

Nominal Pipe Size, Inches	Minimum Trench Width, Inches
Less than 18	O.D. + 18
18 to 30	O.D. + 24
Greater than 30	O.D. + 36

- D. Use sufficient trench width or benches above embedment zone for installation of well point headers or manifolds and pumps where depth of trench makes it uneconomical or impractical to pump from surface elevation. Provide sufficient space between shoring cross braces to permit equipment operations and handling of forms, pipe, embedment and backfill, and other materials.
- E. Upon discovery of unknown utilities, badly deteriorated utilities not designated for removal, or concealed conditions, discontinue work at that location. **Notify City and Engineer and obtain instructions before proceeding.**
- F. Shoring of Trench Walls.
 - 1. Install Special Shoring in advance of trench excavation or simultaneously with trench excavation, so that soils within full height of trench excavation walls will remain laterally supported at all times.
 - 2. For all types of shoring, support trench walls in pipe embedment zone throughout installation. Provide trench wall supports sufficiently tight to prevent washing trench wall soil out from behind trench wall support.
 - 3. Leave sheeting driven into or below pipe embedment zone in place to preclude loss of support of foundation and embedment materials, unless otherwise directed by City and Engineer. Leave rangers, walers, and braces in place as long as required to support sheeting, which has been cut off, and trench wall in vicinity of pipe zone.
 - 4. Employ special methods for maintaining integrity of embedment or foundation material. Before moving supports, place and compact embedment to sufficient depths to provide protection of pipe and stability of trench walls. As supports are moved, finish placing and compacting embedment.
 - 5. If sheeting or other shoring is used below top of pipe embedment zone, do not disturb pipe foundation and embedment materials by subsequent

removal. Maximum thickness of removable sheeting extending into embedment zone shall be equivalent of 1-inch-thick steel plate. As sheeting is removed, fill in voids left with grouting material.

- G. Use of Trench Shields. When trench shield (trench box) is used as worker safety device, the following requirements apply:
1. Make trench excavations of sufficient width to allow shield to be lifted or pulled freely, without damage to trench sidewalls.
 2. Determine if soil conditions indicate side walls will remain in place long enough to allow movement of trench shield.
 3. Move trench shields so that pipe, and backfill materials, after placement and compaction, are not damaged nor disturbed, nor degree of compaction reduced.
 4. When required, place, spread, and compact pipe foundation and bedding materials beneath shield. For backfill above bedding, lift shield as each layer of backfill is placed and spread. Place and compact backfill materials against undisturbed trench walls and foundation.
 5. Maintain trench shield in position to allow sampling and testing to be performed in safe manner.
 6. Conform to applicable Government regulations.
- H. Voids under paving area outside shield will require removal of pavement, consolidation and replacement of pavement in accordance with Contract Documents. Repair damage resulting from failure to provide adequate supports.
- I. Place sand or soil behind shoring or trench shield to prevent soil outside shoring from collapsing and causing voids under pavement. Immediately pack suitable material in outside voids following excavation to avoid caving of trench walls.
- J. Coordinate excavation within 15 feet of pipeline with company's representative. Support pipeline with methods agreed to by pipeline company's representative. Use small, rubber-tired excavator, such as backhoe, to do exploratory excavation. Bucket that is used to dig in close proximity to pipelines shall not have teeth or shall have guard installed over teeth to approximate bucket without teeth. Excavate by hand within 1 foot of pipeline company's line. Do not use larger excavation equipment than normally used to dig trench in vicinity of pipeline until pipelines have been uncovered and fully exposed. Do not place

large excavation and hauling equipment directly over pipelines unless approved by pipeline company's representative.

- K. When, during excavation to uncover pipeline company's pipelines, screwed collar or an oxy- acetylene weld is exposed, discuss with pipeline company's representative and determine methods of supporting collar or weld during excavation and later backfilling operations. It will be necessary to provide supports for collar or welds. When collar is exposed, request pipeline company to provide welder in a timely manner to weld ends of collar prior to backfilling of excavation.

3.06 HANDLING EXCAVATED MATERIALS

- A. Use only excavated materials, which are suitable as defined in this Section and conforming with Section 02320 - Utility Backfill Materials. Place material suitable for backfilling in stockpiles at distance from trench to prevent slides or cave-ins.
- B. When required, provide additional backfill material conforming with requirements of Section 02320 - Utility Backfill Materials.
- C. **Do not place stockpiles of excess excavated materials on streets and adjacent properties. Protect excess stockpiles for use on site. Excavate trench so that pipe is centered in trench. Do not obstruct sight distance for vehicles utilizing roadway or detours with stockpiled materials.**

3.07 GROUND WATER CONTROL - NOT USED

3.08 TRENCH FOUNDATION

- A. Excavate bottom of trench to uniform grade to achieve stable trench conditions and satisfactory compaction of foundation or bedding materials.
- B. When bottom of excavation becomes wet due to presence of groundwater and dewatering system is not required and if directed by City and Engineer, overexcavate an additional 6 inches to depth of 1 foot below bottom of pipe. Place non-woven geotextile fabric and then compact 12 inches of crushed stone in one lift on top of fabric. Compact crushed stone with four passes of vibratory-type compaction equipment. **City and Engineer may require removal of unstable or unsuitable material by Contractor, even though Contractor has not determined material to be unsuitable.**

- C. Place trench dams in Class I foundations in line segments longer than 100 feet between manholes and not less than one in every 500 feet of pipe placed. Install additional dams as needed to achieve workable construction conditions. **Do not place trench dams closer than 5 feet from manholes.**

3.09 PIPE EMBEDMENT, PLACEMENT, AND COMPACTION

- A. Remove loose, sloughing, caving, or otherwise unsuitable soil from bottoms and sidewalls of trenches immediately prior to placement of embedment materials.
- B. Place embedment including bedding, haunching, and initial backfill as shown on Drawings.
- C. For pipe installation, manually spread embedment materials around pipe to provide uniform bearing and side support when compacted. Protect flexible pipe from damage during placing of pipe zone bedding material. Perform placement and compaction directly against undisturbed soils in trench sidewalls, or against sheeting which is to remain in place.
- D. Do not place trench shields or shoring within height of embedment zone unless means to maintain density of compacted embedment material are used. If moveable supports are used in embedment zone, lift supports incrementally to allow placement and compaction of material against undisturbed soil.
- E. Place geotextile to prevent particle migration from in-situ soil into open-graded (Class I) embedment materials or drainage layers.
- F. Do not damage coatings or wrappings of pipes during backfilling and compacting operations. When embedding coated or wrapped pipes, do not use crushed stone or other sharp, angular aggregates.
- G. Place haunching material manually around pipe and compact it to provide uniform bearing and side support. If necessary, hold small-diameter or lightweight pipe in place during compaction of haunch areas and placement beside pipe with sandbags or other suitable means.
- H. Place electrical conduit, if used, directly on foundation without bedding.
- I. Shovel in-place and compact embedment material using pneumatic tampers in restricted areas, and vibratory-plate compactors or engine-powered jumping jacks in unrestricted areas. Compact each lift before proceeding with placement of next lift. **Water tamping is not allowed.**

- J. For water lines construction embedment, use bank run sand, concrete sand, gem sand, pea gravel, or crushed limestone as specified in Section 02320 - Utility Backfill Material. For water lines adhere to the following subparagraph numbers 1 and 2; for utility installation other than water, adhere to numbers 3 and 4 below:

1. Class I, II and III Embedment Materials:

- a. Maximum 6 inches compacted lift thickness.
- b. Compact to achieve minimum of 95 percent of maximum dry density as determined according to ASTM D 698.
- c. Moisture content to be within -3 percent to +5 percent of optimum as determined according to ASTM D 698, **unless otherwise approved by City and Engineer.**

2. Cement Stabilized Sand:

- a. Maximum 6 inches compacted thickness.
- b. Compact to achieve minimum of 95 percent of maximum dry density as determined according to ASTM D 698.
- c. Moisture content to be on dry side of optimum as determined according to ASTM D 698 but sufficient for effective hydration.

3. Class I Embedment Materials.

- a. Maximum 6-inches compacted lift thickness.
- b. Systematic compaction by at least two passes of vibrating equipment. Increase compaction effort as necessary to effectively embed pipe to meet deflection test criteria.
- c. Moisture content as determined by Contractor for effective compaction without softening soil of trench bottom, foundation, or trench walls.

4. Class II Embedment and Cement Stabilized Sand.

- a. Maximum 6-inches compacted thickness.
- b. Compaction by methods determined by Contractor to achieve minimum of

95 percent of maximum dry density as determined according to ASTM D 698 for Class II materials and according to ASTM D 558 for cement stabilized materials.

- c. Moisture content of Class II materials within 3 percent of optimum as determined according to ASTM D 698. Moisture content of cement stabilized sands on dry side of optimum as determined according to ASTM D 558 but sufficient for effective hydration.

- K. Place trench dams in Class I embedment in line segments longer than 100 feet between manholes, and not less than one in every 500 feet of pipe placed. Install additional dams as needed to achieve workable construction conditions. **Do not place trench dams closer than 5 feet from manholes.**

3.10 TRENCH ZONE BACKFILL PLACEMENT AND COMPACTION

- A. Place backfill for pipe or conduits and restore surface as soon as practicable. Leave only minimum length of trench open as necessary for construction.
- B. Where damage to completed pipe installation work is likely to result from withdrawal of sheeting, leave sheeting in place. Cut off sheeting 1.5 feet or more above crown of pipe. Remove trench supports within 5 feet from ground surface.
- C. For water lines, backfill in trench zone, including auger pits, with bank run sand, select fill, or random backfill material as specified in Section 02320 - Utility Backfill materials.
- D. When shown on Drawings, random backfill of suitable material may be used in trench zone for trench excavations outside pavements.
- E. Place trench zone backfill in lifts and compact. Fully compact each lift before placement of next lift.

1. Class I, II, III or IV or combination thereof (Random Backfill):

- a. Maximum 9-inches compacted lift thickness.
- b. Compact by vibratory equipment to minimum of 95 percent of maximum dry density determined according to ASTM D 698.
- c. Moisture content within zero percent to +5 percent of optimum determined according to ASTM D 698, unless otherwise approved by City and Engineer.

2. Cement-Stabilized Sand:
 - a. Maximum lift thickness determined by Contractor to achieve uniform placement and required compaction, but do not exceed 12 inches.
 - b. Compact by vibratory equipment to minimum of 95 percent of maximum dry density determined according to ASTM D 558.
 - c. Moisture content on dry side of optimum determined according to ASTM D 558 but sufficient for cement hydration.
3. Select Backfill:
 - a. Place in maximum 8-inch loose layers.
 - b. Compaction by equipment providing tamping or kneading impact to minimum of 95 percent of maximum dry density determined according to ASTM D 698.
 - c. Moisture content within 2 percent below or 5 percent above optimum determined according to ASTM D 698, unless approved by City and Engineer.
- F. Unless otherwise shown on Drawings, for trench excavations, random backfill of suitable material may be used in trench zone.
 1. Fat clays (CH) may be used as trench zone backfill outside paved areas at Contractor's option. When required density is not achieved, **at no additional cost to City**, rework, dryout, use lime stabilization or other approved methods to achieve compaction requirements, or use different suitable material.
 2. Maximum 9-inch compacted lift thickness for clayey soils and maximum 12-inch lift thickness for granular soils.
 3. Compact to minimum of 90 percent of maximum dry density determined according to ASTM D 698.
 4. Moisture content as necessary to achieve density.
- G. For electric conduits, remove form work used for construction of conduits before placing trench zone backfill.

3.11 MANHOLES, JUNCTION BOXES AND OTHER PIPELINE STRUCTURES

- A. Meet requirements of adjoining utility installations for backfill of pipeline structures, as shown on Drawings.
- B. Use select fill for backfill. Existing material that qualifies as select material may be used, unless indicated otherwise on Drawings. Deposit backfill in uniform layers and compact each layer as specified. Maintain backfill material at no less than 2 percent below nor more than 5 percent above optimum moisture content, unless otherwise approved by City and Engineer. Place fill material in uniform 8-inch maximum loose layers. Compact fill to at least 98 percent of maximum Standard Proctor Density according to ASTM D 698 below paved areas. Compact to at least 95 percent around structures below unpaved areas.

3.12 FIELD QUALITY CONTROL

- A. Test for material source qualifications as defined in Section 02320 - Utility Backfill Materials.
- B. Provide excavation and trench safety systems at locations and to depths required for testing and retesting during construction **at no additional cost to City.**
- C. Tests will be performed on minimum of three different samples of each material type for plasticity characteristics, in accordance with ASTM D 4318, and for gradation characteristics, in accordance with Tex-101-E and Tex-110-E. Additional classification tests will be performed whenever there is noticeable change in material gradation or plasticity, **or when requested by City and Engineer.**
- D. At least three tests for moisture-density relationships will be performed initially for backfill materials in accordance with ASTM D 698, and for cement- stabilized sand in accordance with ASTM D 558. Perform additional moisture-density relationship tests once a month or whenever there is noticeable change in material gradation or plasticity.
- E. In-place density tests of compacted pipe foundation, embedment and trench zone backfill soil materials will be performed according to ASTM D 1556, or ASTM D 2922 and ASTM D 3017, and at following frequencies and conditions.
 - 1. Minimum of one test per 40 LF measured along pipe for compacted embedment and two tests per 40 LF measured along pipe for compacted trench zone backfill material.

2. A minimum of three density tests for each full shift of Work.
 3. Density tests will be distributed among placement areas. Placement areas are: foundation, bedding, haunching, initial backfill and trench zone.
 4. The number of tests will be increased if inspection determines that soil type or moisture content are not uniform or if compacting effort is variable and not considered sufficient to attain uniform density, as specified.
 5. Density tests may be performed at various depths below fill surface by pit excavation. Material in previously placed lifts may therefore be subject to acceptance/rejection.
 6. Two verification tests will be performed adjacent to in-place tests showing density less than acceptance criteria. Placement will be rejected unless both verification tests show acceptable results.
 7. Recompact placement will be retested at same frequency as first test series, including verification tests.
 8. Identify elevation of test with respect to natural ground.
 9. Record approximate depth of soil placed prior to compaction.
- F. Recondition, recompact, and retest at Contractor's expense if tests indicate Work does not meet specified compaction requirements. For hardened soil cement with nonconforming density, core and test for compressive strength at Contractor's expense.
- G. Acceptability of crushed rock compaction will be determined by inspection.

3.13 DISPOSAL OF EXCESS MATERIAL

- A. Dispose of excess materials in accordance with requirements of Section 01576 - Waste Material Disposal.

END OF SECTION

Section 02320

UTILITY BACKFILL MATERIALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Material Classifications.
- B. Utility Backfill Materials:

- 1. Concrete sand
- 2. Gem sand
- 3. Pea gravel
- 4. Crushed stone
- 5. Crushed concrete
- 6. Bank run sand
- 7. Select backfill
- 8. Random backfill

- C. Material Handling and Quality Control Requirements.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

- 1. No payment will be made for backfill material. Include payment in unit price for applicable utility installation.
- 2. Payment for backfill material, when included as separate pay item, is on cubic yard basis for material placed and compacted within theoretical trench width limits and thickness of material according to Drawings, **or as directed by City and Engineer.**

3. Refer to Section 01270 - Measurement and Payment for unit price procedures.

B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 DEFINITIONS

A. Unsuitable Material:

1. Materials classified as ML, CL-ML, MH, PT, OH, and OL according to ASTM D 2487.
2. Materials that cannot be compacted to required density due to either gradation, plasticity, or moisture content.
3. Materials containing large clods, aggregates, or stones greater than 4 inches in any dimension; debris, vegetation, or waste; or any other deleterious materials.
4. Materials contaminated with hydrocarbons or other chemical contaminants.

B. Suitable Material:

1. Materials meeting specification requirements.
2. Unsuitable materials meeting specification requirements for suitable soils after treatment with lime or cement.

C. Foundation Backfill Materials: Natural soil or manufactured aggregate meeting Class I requirements and geotextile filter fabrics as required, to control drainage and material separation. Foundation backfill material is placed and compacted as backfill where needed to provide stable support for structure foundation base. Foundation backfill materials may include concrete fill and seal slabs.

D. Foundation Base: Crushed stone aggregate with filter fabric as required, cement stabilized sand, or concrete seal slab. Foundation base provides smooth, level working surface for construction of concrete foundation.

E. Backfill Material: Classified soil material meeting specified quality requirements for designated application as embedment or trench zone backfill.

F. Embedment Material: Soil material placed under controlled conditions within

embedment zone extending vertically upward from top of foundation to an elevation 12 inches above top of pipe, and including pipe bedding, haunching and initial backfill.

- G. Trench Zone Backfill: Classified soil material meeting specified quality requirements and placed under controlled conditions in trench zone from top of embedment zone to base course in paved areas or to surface grading material in unpaved areas.
- H. Foundation: Either suitable soil of trench bottom, or material placed as backfill of over- excavation for removal and replacement of unsuitable or otherwise unstable soils.
- I. Source: Source selected by Contractor for supply of embedment or trench zone backfill material. Selected source may be project excavation, off-site borrow pits, commercial borrow pits, or sand and aggregate production or manufacturing plants.
- J. Refer to Section 02317 - Excavation and Backfill for Utilities for other definitions regarding utility installation by trench construction.

1.04 REFERENCES

- A. ASTM C 33 - Standard Specification for Concrete Aggregate.
- B. ASTM C 40 - Standard Test Method for Organic Impurities in Fine Aggregates for Concrete.
- C. ASTM C 123 - Standard Test Method for Lightweight Particles in Aggregate.
- D. ASTM C 131 - Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in Los Angeles Machine.
- E. ASTM C 136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- F. ASTM C 142 - Standard Test Method for Clay Lumps and Friable Particles in Aggregates.
- G. ASTM D 1140 - Standard Test Method for Amount of Material in Soils Finer Than No. 200 Sieve.

- H. ASTM D 2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- I. ASTM D 4318 - Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- J. ASTM D 4643 - Standard Test Method for Determination of Water (Moisture) Content of Soil by Microwave Oven Method.
- K. TxDOT Tex-110-E - Determining Particle Size Analysis of Soils.
- L. TxDOT Tex-460-A - Material Finer Than 75 Fm (No.200) Sieve In Mineral Aggregates (Decantation Test for Concrete Aggregates).

1.05 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit description of source, material classification and product description, production method, and application of backfill materials.
- C. Submit test results for samples of off-site backfill materials. Comply with Paragraph 2.03, Material Testing.
- D. Before stockpiling materials, submit copy of temporary easement or approval from landowner for stockpiling backfill material on private property.
- E. Provide delivery ticket, which includes source location for each delivery of material that is obtained from off-site sources or is being paid as specific bid item.

1.06 TESTS

- A. Perform tests of sources for backfill material in accordance with Paragraph 2.03B.
- B. Verification tests of backfill materials may be performed by City in accordance with Section 01454 - Testing Laboratory Services and in accordance with Paragraph 3.03.

PART 2 P R O D U C T S

2.01 MATERIAL CLASSIFICATIONS

- A. Classify materials for backfill for purpose of quality control in accordance with Unified Soil Classification Symbols as defined in ASTM D 2487. Material use and application is defined in utility installation specifications and Drawings either by class, as described in Paragraph 2.01B, or by product descriptions, as given in Paragraph 2.02.
- B. Class Designations Based on Laboratory Testing:
 - 1. Class I: Well-graded gravels and sands, gravel-sand mixtures, crushed well-graded rock, little or no fines (GW, SW):
 - a. Plasticity index: non-plastic.
 - b. Gradation: D_{60}/D_{10} - greater than 4 percent; amount passing No. 200 sieve - less than or equal to 5 percent.
 - 2. Class II: Poorly graded gravels and sands, silty gravels and sands, little to moderate fines (GM, GP, SP, SM):
 - a. Plasticity index: non-plastic to 4.
 - b. Gradations:
 - 1. Gradation (GP, SP): amount passing No. 200 sieve - less than 5 percent.
 - 2. Gradation (GM, SM): amount passing No. 200 sieve - between 12 percent and 50 percent.
 - 3. Borderline gradations with dual classifications (e.g., SP-SM): amount passing No. 200 sieve - between 5 percent and 12 percent.
 - 3. Class III: Clayey gravels and sands, poorly graded mixtures of gravel, sand, silt, and clay (GC, SC, and dual classifications, e.g., SP-SC):
 - a. Plasticity index: greater than 7.
 - b. Gradation: amount passing No. 200 sieve - between 12 percent and 50 percent.
 - 4. Class IVA: Lean clays (CL).

- a. Plasticity Indexes:
 1. Plasticity index: greater than 7, and above A line.
 2. Borderline plasticity with dual classifications (CL-ML): PI between 4 and 7.
 - b. Liquid limit: less than 50.
 - c. Gradation: amount passing No. 200 sieve - greater than 50 percent.
 - d. Inorganic.
5. Class IVB: Fat clays (CH)
- a. Plasticity index: above A line.
 - b. Liquid limit: 50 or greater.
 - c. Gradation: amount passing No. 200 sieve - greater than 50 percent.
 - d. Inorganic.
6. Use soils with dual class designation according to ASTM D 2487, and which are not defined above, according to more restrictive class.

2.02 PRODUCT DESCRIPTIONS

- A. Soils classified as silt (ML) silty clay (CL-ML with PI of 4 to 7), elastic silt (MH), organic clay and organic silt (OL, OH), and organic matter (PT) are not acceptable as backfill materials. These soils may be used for site grading and restoration in unimproved areas as approved by City and Engineer. Soils in Class IVB, fat clay (CH) may be used as backfill materials where allowed by applicable backfill installation specification. Refer to Section 02317 - Excavation and Backfill for Utilities.
- B. Provide backfill material that is free of stones greater than 6 inches, free of roots, waste, debris, trash, organic material, unstable material, non-soil matter, hydrocarbon or other contamination, conforming to following limits for deleterious materials:
 1. Clay lumps: Less than 0.5 percent for Class I, and less than 2.0 percent for Class II, when tested in accordance with ASTM C 142.
 2. Lightweight pieces: Less than 5 percent when tested in accordance with ASTM

C 123.

3. Organic impurities: No color darker than standard color when tested in accordance with ASTM C 40.
- C. Manufactured materials, such as crushed concrete, may be substituted for natural soil or rock products where indicated in product specification, and approved by City and Engineer, provided that physical property criteria are determined to be satisfactory by testing.
- D. Bank Run Sand: Durable bank run sand classified as SP, SW, or SM by Unified Soil Classification System (ASTM D 2487) meeting following requirements:
1. Less than 15 percent passing number 200 sieve when tested in accordance with ASTM D 1140. Amount of clay lumps or balls not exceeding 2 percent.
 2. Material passing number 40 sieve shall meet the following requirements when tested in accordance with ASTM D 4318:
 - b. Plasticity index: not exceeding 7.
- E. Concrete Sand: Natural sand, manufactured sand, or combination of natural and manufactured sand conforming to requirements of ASTM C 33 and graded within following limits when tested in accordance with ASTM C 136:

Sieve	Percent Passing
3/8"	100
No. 4	95 to 100
No. 8	80 to 100
No. 16	50 to 85
No. 30	25 to 60
No. 50	10 to 30
No. 100	2 to 10

- F. Gem Sand: Sand conforming to requirements of ASTM C 33 for coarse aggregates specified for number 8 size and graded within the following limits when tested in accordance with ASTM C 136:

Sieve	Percent Passing
d"	95 to 100
No. 4	60 to 80
No. 8	15 to 40

- G. Pea Gravel: Durable particles composed of small, smooth, rounded stones or pebbles and graded within the following limits when tested in accordance with ASTM C 136:

Sieve	Percent Passing
2 "	100
d "	85 to 100
No. 4	10 to 30
No. 8	0 to 10
No. 16	0 to 5

- H. Crushed Aggregates: Crushed aggregates consist of durable particles obtained from an approved source and meeting the following requirements:
1. Materials of one product delivered for same construction activity from single source, **unless otherwise approved by City and Engineer.**

2. Non-plastic fines.
3. Los Angeles abrasion test wear not exceeding 45 percent when tested in accordance with ASTM C 131.
4. Crushed aggregate shall have minimum of 90 percent of particles retained on No. 4 sieve with 2 or more crushed faces as determined by Tex-460-A, Part I.
5. Crushed stone: Produced from oversize plant processed stone or gravel, sized by crushing to predominantly angular particles from naturally occurring single source. Uncrushed gravel are not acceptable materials for embedment where crushed stone is shown on applicable utility embedment drawing details.
6. Crushed Concrete: Crushed concrete is an acceptable substitute for crushed stone as utility backfill. Gradation and quality control test requirements are same as crushed stone. Provide crushed concrete produced from normal weight concrete of uniform quality; containing particles of aggregate and cement material, free from other substances such as asphalt, reinforcing steel fragments, soil, waste gypsum (calcium sulfate), or debris.
7. Gradations, as determined in accordance with Tex-110-E.

Sieve	Percent Passing by Weight for Pipe Embedment by Ranges of Nominal Pipes Sizes		
	>15"	15" - 8"	<8"
1"	95 - 100	100	-
1.5"	60 - 90	90 - 100	100
2"	25 - 60	-	90 - 100
2.5"	-	20 - 55	40 - 70
No. 4	0 - 5	0 - 10	0 - 15
No. 8	-	0 - 5	0 - 5

- I. Select Backfill: Class III clayey gravel or sand or Class IV lean clay with plasticity

index between 7 and 20.

- J. Random Backfill: Any suitable soil or mixture of soils within Classes I, II, III and IV; or fat clay (CH) where allowed by applicable backfill installation specification. Refer to Section 02317 - Excavation and Backfill for Utilities.
- K. Cement Stabilized Sand: Conform to requirements of Section 02321 - Cement Stabilized Sand.

2.03 MATERIAL TESTING

- A. Source Qualification. Perform testing to obtain tests by suppliers for selection of material sources and products not from the project site. Test samples of processed materials from current production representing material to be delivered. Use tests to verify that materials meet specification requirements. Repeat qualification test procedures each time source characteristics change or there is planned change in source location or supplier. Include the following qualification tests, as applicable:
 - 1. Gradation. Report complete sieve analyses regardless of specified control sieves from largest particle through No. 200 sieve.
 - 2. Plasticity of material passing No. 40 sieve
 - 3. Los Angeles abrasion wear of material retained on No. 4 sieve
 - 4. Clay lumps
 - 5. Lightweight pieces
 - 6. Organic impurities
- B. Production Testing. Provide reports to City and Engineer from an independent testing laboratory that backfill materials to be placed in Work meet applicable specification requirements.
- C. Assist City and Engineer in obtaining material samples for verification testing at source or at production plant.

PART 3 EXECUTION

3.01 SOURCES

- A. Use of existing material in trench excavations is acceptable, provided applicable specification requirements are satisfied. When material encountered in trench excavations is not acceptable, provide from other source.
- B. **Identify off-site sources for backfill materials at least 14 days ahead of intended use so that City and Engineer may obtain samples for verification testing.**
- C. **Obtain City and Engineer's approval for each material source before delivery. When sources previously approved do not produce uniform and satisfactory products, furnish materials from other approved sources. Materials may be subjected to inspection or additional verification testing after delivery. Materials which do not meet requirements of specifications will be rejected. Do not use material, which, after approval, has become unsuitable for use due to segregation, mixing with other materials, or by contamination.**
- D. Bank run sand, select backfill, and random backfill, if available in project excavation, may be obtained by selective excavation and acceptance testing. Obtain additional quantities of these materials and other materials required to complete work from off-site sources.
- E. **City does not represent or guarantee that any soil found in excavation work will be suitable and acceptable as backfill material.**

3.02 MATERIAL HANDLING

- A. When backfill material is obtained from either commercial or non-commercial borrow pit, open pit to expose vertical faces of various strata for identification and selection of approved material to be used. Excavate selected material by vertical cuts extending through exposed strata to achieve uniformity in product.
- B. Establish temporary stockpile locations for practical material handling, control, and verification testing by City and Engineer in advance of final placement. **Obtain approval from landowner for storage of backfill material on adjacent private property.**
- C. When stockpiling backfill material near project site, use appropriate covers to eliminate blowing of materials into adjacent areas and prevent runoff containing sediments from entering drainage system.
- D. Place stockpiles in layers to avoid segregation of processed materials. Load

material by making successive vertical cuts through entire depth of stockpile.

3.03 FIELD QUALITY CONTROL

A. Quality Control

1. The City and Engineer may sample, and test backfill at:
 - a. Sources including borrow pits, production plants and Contractor's designated off-site stockpiles.
 - b. On-site stockpiles.
 - c. Materials placed in Work.
2. The City and Engineer may re-sample material at any stage of work or location if changes in characteristics are apparent.

END OF SECTION

Section 02321

CEMENT STABILIZED SAND

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cement stabilized sand material.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. No separate payment will be made for Work performed under this Section. Include cost of such work in Contract unit prices for items listed in bid form requiring cement stabilized sand.

2. Refer to Paragraph 3.03 H for material credit.

3. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ASTM C 33 - Standard Specification for Concrete Aggregates (Fine Aggregate).
- B. ASTM C 40 - Standard Test Method for Organic Impurities in Fine Aggregates for Concrete.
- C. ASTM C 94 - Standard Specification for Ready-Mixed Concrete.
- D. ASTM C 123 - Standard Test Method for Lightweight Particles in Aggregate.
- E. ASTM C 142 - Standard Test Method for Clay Lumps and Friable Particles in Aggregates.
- F. ASTM C 150 - Specification for Portland Cement.
- G. ASTM D 558 - Standard Test Method for Moisture-Density Relations of Soil Cement- Mixtures.

- H. ASTM D 1633 - Standard Test Method for Compressive Strength of Molded Soil-Cement Cylinders.
- I. ASTM D 2487 - Standard Test Method for Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- J. ASTM D 3665 - Standard Practice for Random Sampling of Construction Materials.
- K. ASTM D 4318 - Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit proposed target cement content and production data for sand-cement mixture in accordance with requirements of Paragraph 2.03.

1.05 DESIGN REQUIREMENTS

- A. Use sand-cement mixture producing minimum unconfined compressive strength of 100 pounds per square inch in 48 hours.
 - 1. Design will be based on strength specimens molded in accordance with ASTM D 558 at moisture content within 3 percent of optimum and within 4 hours of batching.
 - 2. Determine minimum cement content from production data and statistical history. Provide no less than 1.1 sacks of cement per ton of dry sand.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Cement: Type I Portland cement conforming to ASTM C 150.
- B. Sand: Clean, durable sand meeting grading requirements for fine aggregates of ASTM C 33, or requirements for bank run sand of Section 02320 - Utility Backfill Materials, and the following requirements:
 - 1. Classified as SW, SP, SW-SM, SP-SM, or SM by United Soil Classification System of ASTM D 2487.
 - 2. Deleterious materials:

- a. Clay lumps, ASTM C 142; less than 0.5 percent.
 - b. Lightweight pieces, ASTM C 123; less than 5.0 percent.
 - c. Organic impurities, ASTM C 40, color no darker than standard color.
3. Plasticity index of 4 or less when tested in accordance with ASTM D 4318.
- C. Water: Potable water, free of oils, acids, alkalies, organic matter or other deleterious substances, meeting requirements of ASTM C 94.

2.02 MIXING MATERIALS

- A. Add required amount of water and mix thoroughly in pugmill-type mixer.
- B. Stamp batch ticket at plant with time of loading. Reject material not placed and compacted within 4 hours after mixing.

2.03 MATERIAL QUALIFICATION

- A. Determine target cement content of material as follows:
 - 1. Obtain samples of sand-cement mixtures at production facility representing range of cement content consisting of at least three points.
 - 2. Complete molding of samples within 4 hours after addition of water.
 - 3. Perform strength tests (average of two specimens) at 48 hours and 7 days.
 - 4. Perform cement content tests on each sample.
 - 5. Perform moisture content tests on each sample.
 - 6. Plot average 48-hour strength vs. cement content.
 - 7. Record scale calibration date, sample date, sample time, molding time, cement feed dial settings, and silo pressure (if applicable).
- B. Test raw sand for following properties at point of entry into pug-mill:
 - 1. Gradation
 - 2. Plasticity index
 - 3. Organic impurities

4. Clay lumps and friable particles
 5. Lightweight pieces
 6. Moisture content
 7. Classification
- C. Present data obtained in format similar to that provided in sample data form attached to this Section.
- D. The target content may be adjusted when statistical history so indicates. For determination of minimum product performance use formula:

$$f = c \% 2 \text{ standard deviation}$$

PART 3 EXECUTION

3.01 PLACING

- A. Place sand-cement mixture in maximum 8-inch-thick loose lifts and compact to 95 percent of maximum density as determined in accordance with ASTM D 558, unless otherwise specified. Refer to related specifications for thickness of lifts in other applications. Target moisture content during compaction is -3 to 0 percent of optimum. Perform and complete compaction of sand-cement mixture within 4 hours after addition of water to mix at plant.
- B. Do not place or compact sand-cement mixture in standing or free water.**

3.02 FIELD QUALITY CONTROL

- A. Testing will be performed under provisions of Section 01454 - Testing Laboratory Services.
- B. Samples of delivered product will be taken in field at point of delivery for testing in accordance with ASTM D 3665.
- C. Prepare and mold four specimens (for each sample obtained) in accordance with ASTM D 558, Method A, without adjusting moisture content. Samples will be molded at approximately same time material is being used, but no later than 4 hours after water is added to mix. Test two sample sets a minimum of every 300 square yards placed or for that day's placement.

- D. After molding, specimens will be removed from molds and sealed in plastic bag or similar material to minimize moisture loss. Specimens will be cured at room temperature between 60- and 80-degrees F until tested.
- E. Specimens will be tested for compressive strength in accordance with ASTM D 1633, Method A. Two specimens will be tested at 48 hours plus or minus 2 hours and two specimens will be tested at 7 days plus or minus 4 hours.
- F. A strength test will be average of strengths of two specimens molded from same sample of material and tested at same age. Average daily strength will be average of strengths of all specimens molded for one day's production and tested at same age.
- G. Precision and Bias: Test results shall meet recommended guideline for precision in ASTM D 1633 Section 9.
- H. Reporting: Test reports shall contain, as a minimum, the following information:
 - 1. Supplier and plant number
 - 2. Time material was batched
 - 3. Time material was sampled
 - 4. Test age (exact hours)
 - 5. Average 48-hour strength
 - 6. Average 7-day strength
 - 7. Specification section number
 - 8. Compliance / non-compliance
 - 9. Mixture identification
 - 10. Truck and ticket numbers
 - 11. The time of molding
 - 12. Moisture content at time of molding
 - 13. Required strength
 - 14. Test method designations

15. Compressive strength data as required by ASTM D 1633

3.03 ACCEPTANCE

- A. Strength level of material will be considered satisfactory if:
 - 1. The average 48-hour strength is greater than 100 psi with no individual strength test below 70 psi.
- B. Material will be considered deficient when 7-day individual strength test (average of two specimens) is less than 100 psi but greater than 70 psi. See Paragraph 3.04 Adjustment for Deficient Strength.
- C. The material will be considered unacceptable and subject to removal and replacement at Contractor's expense when individual strength test has 7-day strength less than 70 psi.
- D. When moving average of three daily 48-hour averages falls below 100 psi, discontinue shipment to project until plant is capable of producing material, which exceeds 100 psi at 48 hours. **Total of five 48-hour strength tests shall be made in this determination with no individual strength tests less than 100 psi.**
- E. Testing laboratory shall notify Contractor, City and Engineer, and material supplier by facsimile of tests indicating results falling below specified strength requirements.

3.04 ADJUSTMENT FOR DEFICIENT STRENGTH

- A. When mixture produces 48-hour compressive strength less than 100 pounds per square inch, then Contractor has option to remove and replace material or request that City and Engineer have second set of samples broken at 7 days.
- B. When mixture produces 7-day compressive strength greater than or equal 100 pounds per square inch, then material will be considered satisfactory and bid price will be paid in full.
- C. When mixture produces 7-day compressive strength less than 100 pounds per square inch and greater than or equal to 70 pounds per square inch, material shall be accepted contingent on credit in payment. Compute credit by the following formula:

$$\text{Credit per Cubic Yard} = \frac{\$30.00 \times 2 (100 \text{ psi} - \text{Actual psi})}{100}$$

- D. When mixture produces 7-day compressive strength less than 70 pounds per square inch, then remove and replace cement-sand mixture and paving and other necessary work **at no cost to City.**

END OF SECTION

Section 02447

AUGERING PIPE AND CONDUIT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Installing water service pipe by methods of augering or casing by jacking and boring.
- B. Installing Telecommunication Conduit along or under Public Ways.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. No separate payment will be made for augering pipe for water lines under this Section. Include payment in unit price for Section 02511 - Water Lines.
 - 2. When open-cut construction is requested by Contractor for his convenience in areas designated for augering, and when approved in advance by City Engineer, such areas shall be paid for at Unit Price for Section 02511 - Water Lines. Payment includes necessary surface restoration and pavement repair.
 - 3. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 DEFINITIONS

- A. Dry Auger Method: Installation of steel casing by excavating soil at advancing end of casing and transporting spoil through casing by otherwise uncased auger, while advancing casing by jacking at same rate as auger excavation progresses.
- B. Slurry Auger Method: Installation of casing or pipe by first drilling small diameter pilot hole from shaft to shaft, followed by removing excess soil and installing pipe or conduit by pullback or jacking method.

1.04 REFERENCE STANDARDS

- A. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.
- B. ASTM D 648 - Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
- C. ASTM D 695 - Standard Test Method for Compressive Properties of Rigid Plastics.
- D. ASTM D 790 - Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

1.05 REGULATORY REQUIREMENTS

- A. Conform to TxDOT for installations under state highways. City will obtain required permits for State Highway crossings.
- B. Installations Under Railroads:
 - 1. Secure and comply with requirements of right-of-entry for crossing railroad company's easement or right-of-way from railroad companies affected. Comply with railroad permit requirements.
 - 2. Use dry auger method only.
 - 3. Damages due to delays caused by railroad requesting work to be done at hours, which will not inconvenience railroad, will be at no additional cost to City.
 - 4. Maintain equipment and excavations minimum 35-foot clearance from centerline of tracks.

1.06 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit product data for casing insulators for approval.
- C. Prior to commencement of work, furnish for City Engineer's approval, plan showing pit locations, size, depth, and areas for storage, material, and spoil handling. Approval of this plan does not relieve Contractor from responsibility to obtain specified results.

- D. Show actual pit locations dimensioned on as-built drawings so that they can be identified in field.
- E. Submit copy of executed railroad company rights of entry to City Engineer.

1.07 CRITERIA FOR SELECTION OF MATERIAL

- A. Contractor shall be responsible for selection of casing, pipe, and pipe joints to carry anticipated thrust of jacks or loads.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Piping and Fittings: As required by Specification or Drawings.
- B. Casings: Where shown on Drawings, in accordance with Section 02502 - Steel Pipe and Fittings.
- C. Casing Spacers: Where casings are shown on Drawings, use casing spacer width 8 inches for pipe sizes 4 to 14 inches; 12 inches for pipe sizes greater than 16 inches. Wood skids or concrete Adonuts® are not acceptable.
 - 1. For welded steel pipes 12 inches and smaller, use Pipeline Seal & Insulator Model PE, or approved equal.
 - 2. For other pipe materials, use Pipeline Seal & Insulator Model C8G-2 or approved equal for pipe sizes up to 12 inches.
 - 3. For all pipe sizes above 12 inches, use Pipeline Seal & Insulator Model C12G-2 or approved equal.
 - 4. Obtain approval for equal product in writing from City Engineer prior to bid.
 - 5. Use ISO-9002 registered casing spacer manufacturer or supplier. Submit copy of current certificate with submittal package.
- D. Casing End Seals: Provide Pipeline Seal and Insulator Model C, or approved equal.
- E. Casing Spacers (For Pipes Diameters 16 Inches or Greater): Bolt-on style with shell made of two sections of 14-gauge carbon steel, hot rolled, cleaned, and lined with

PVC liner, 0.090 inch thick with Durometer A 85-90 overlapping edges to secure liner to spacer; deep embossed flanges for added strength; coated prior to installation of liner and runner with fusion-bonded PVC powder of 14 to 20 mils thickness; electroplated studs, nuts, and washers.

1. Runners (For Pipe Diameters 16 Inches or Greater): Supported by 10-gauge carbon steel MIG risers welded to shell. Total length of weld beads shall be at least 50 percent of the length of the runner. Fill bolt holes with caulk or approved equal to provide a water-tight seal. Minimum requirements: Glass reinforced plastic conforming to the following tests:
 - a. Tensile Strength: ASTM D 638; 17,600 psi
 - b. Flexural Strength: ASTM D 790; 25,300 psi
 - c. Compression Strength: ASTM D 695; 18,000 psi
 - d. Deflection Temperature at 264 psi: ASTM D 648; 405 F
 - e. Polyethylene runners are not acceptable

PART 3 EXECUTION

3.01 LIMITS ON AUGER LENGTH

- A. Do not exceed 100 feet for length of auger hole without intermediate pit.
- B. Do not exceed 75 feet for length of auger hole for PVC pipe 12 inches and less in diameter without intermediate pit.
- C. Do not exceed 40 feet for length of auger hole for PVC pipe 14 inches to 24 inches in diameter without intermediate pit.

3.02 PREPARATION

- A. Conform to applicable provisions of Section 02233 - Clearing and Grubbing.
- B. Utility Relocations: Relocate utility lines clear of pit and zone of potential significant settlement or other ground disturbance.
- C. Install casings as required by Drawings, in accordance with this Section.
- D. Install temporary solid plug at open end of water line to prevent contamination.

3.03 TRAFFIC CONTROL

- A. Conform to applicable provisions of Section 01555 - Traffic Control and Regulation.
- B. Secure right-of-entry for crossing Railroad Company's easement or right-of-way.
- C. During construction operations, furnish, and maintain barricades and lights to safeguard traffic and pedestrians, until such time as backfill has been completed and removed from site. Provide additional barricades and lights as directed by City Engineer.

3.04 PITS

- A. Construct pits on segments of line and within right-of-way. Locate auger pits where there is minimum interference with traffic or access to property. Do not locate pits close to storm drainage channels, ditches, storm water lines, or culverts. Avoid pit locations near potentially contaminated areas.
- B. Pit Size: Size pits to provide adequate room to meet operational requirements for auger construction as well as structures indicated on Drawings. Provide minimum 6-inch space between pipe and walls of bore pit. Maximum allowable width of pit shall be 5 feet. Width of pit at surface shall not be less than at bottom. Maximum allowable length of pit shall be no more than 5 feet longer than one full joint of pipe and shall not exceed 25 feet.
- C. Excavate bore pits to finished grade at least 6 inches lower than grade indicated by stakes.
- D. Backfill in accordance with Section 02317 - Excavation and Backfill for Utilities.
- E. Auger pits that are excavated and backfilled as part of open-cut water line construction shall be in accordance with Section 02316 - Excavation and Backfill for Structures and Section 02317 - Excavation and Backfill for Utilities.
- F. Provisions for safety protection against traffic, and accidental or unauthorized entry, as specified in Section 02400 - Tunnel Shafts, shall be followed in

applicable situations.

- G. Install sheeting, lining, shoring, and bracing required for protection of workmen and public in accordance with Section 02260 - Trench Safety Systems.
- H. Provide groundwater control and drainage from pits while work is in progress and until pit is properly backfilled. Conform to requirements of Section 01578 - Control of Groundwater and Surface Water.

3.05 AUGERING (BORING)

- A. Auger from approved pit locations. Excavate for pits and install shoring as outlined above under Paragraph 3.04, Pits. Auger mechanically with use of pilot hole entire length of crossing and check for line and grade. Diameter of auger hole not to exceed pipe bell diameter plus 2 inches. Place excavated material outside working pit and dispose of as specified. Use water or other fluids in connection with boring operation only to lubricate cuttings; jetting is not permitted.
- B. In unconsolidated soil formations, gel-forming colloidal drilling fluid may be used. Fluid is to consist of at least 10 percent of high-grade processed bentonite and shall consolidate cuttings of bit, seal walls of hole, and shall furnish lubrication for subsequent removal of cuttings and installation of pipe.
- C. Depending on character of soil encountered during augering operation, conduct operations without interruption, insofar as practical, to prevent hole from collapsing or pipe from seizing up in hole before installation is complete.
- D. Allowable variation from line and grade shall be as specified under Paragraph 3.07, Jacking.
- E. Remove and replace pipe damaged in augering operations.
- F. Log horizontal and vertical position of bore hole for every 20 feet of installed conduit.

3.06 DRY AUGERING OF CASING

- A. Provide jacks, mounted on frame or against backstop, of capacity suitable for forcing excavating auger and casing through soil conditions to be encountered. Operate jacks so that even pressure is applied to casing.
- B. Provide steerable front section of casing to allow vertical grade adjustments. Provide water level or other means to allow monitoring of grade elevation of auger casing.
- C. Bentonite slurry may be used to lubricate casing during installation. Use of water to facilitate removal of spoil is permitted; however, water jetting for excavation of soil is not allowed when jacking casing.
- D. Tolerances from lines and grades shown on Drawings for gravity sewer pipe installed in casing are plus or minus 6 inches in horizontal alignment, and plus or minus 1-1/2 inches in elevation.

3.07 FILLING ANNULAR SPACE

- A. For installation of water line, block void space around pipe in augered hole with approximately 12 inches of packed clay or approved equal material to prevent bedding or backfill from entering void around pipe in augered hole when compacted. For pipe diameters 4 inches through 8 inches use minimum 2-cubic-foot clay; for pipe diameters 12 inches through 16 inches use minimum: -cubic- foot clay.

3.08 JACKING

- A. Comply with Section 02260 - Trench Safety for all pits, end trenches, and other excavations relating to work required by specifications. Dewater as required to provide safe working conditions.
- B. If grade of casing at jacking end is below ground surface, excavate pits or trenches for conducting jacking operations and for placing end joints of casing. Wherever end trenches are cut into sides of embankment or beyond it, sheath securely and brace such work to prevent earth caving.
- C. Make up only one joint at time in pit or trench prior to jacking.
- D. Do not interfere with operation of railroad, street, highway, or other facility, nor to weaken or damage embankment or structure.

- E. Use heavy-duty jacks sized for forcing casing through embankment. Use appropriate jacking head, usually of timber, and bracing between jacks and jacking head and jacking frame or backstop. Apply jacking pressure uniformly around ring of casing. Set casing to be jacked on guides, properly braced together, to support section of casing and to direct it in proper line and grade. Place jacking assembly in line with direction and grade of casing. Excavate embankment material just ahead of casing and remove material through casing. Force casing through embankment with jacks into excavated auger hole.
- F. Conform excavation for underside of casing to contour and grade of casing, for at least one third of circumference of casing. Provide clearance of not more than 2 inches for upper half of casing. Taper off upper clearance to zero at point where excavation conforms to contour of casing.
- G. Excavation may extend beyond end of casing depending on character of material, but shall not exceed 2 feet. Decrease advance excavation at direction of City Engineer, when character of material being excavated makes it desirable to keep advance excavation closer to end of casing.
- H. Jack casing from low or downstream end. Lateral or vertical variation in final position of casing from line and grade as shown on Drawings will be permitted only to extent of 1 inch in 10 feet, provided such variation is regular and only in one direction and that final grade of flow line is in direction indicated on Drawings.
- I. Use cutting edge of steel plate around head end of casing extending short distance beyond end of casing with inside angles or lugs to keep cutting edge from slipping back onto casing.
- J. Once jacking of casing is begun, carry on without interruption, insofar as practicable, to prevent casing from becoming firmly set in embankment.
- K. Remove and replace casing damaged in jacking operations.
- L. Backfill pits or trenches excavated to facilitate jacking operations immediately after completion of jacking of casing.
- M. Grout annular space between casing and excavated hole when loss of

embankment occurs or when clearance of 2 inches is exceeded.

3.09 SPACER INSTALLATION

- A. There must be no inadvertent metallic contact between casing and carrier pipe. Place spacers to ensure that carrier pipe is adequately supported throughout length, particularly at ends, to offset settling, and possible electrical shorting unless otherwise approved by City. Place end spacer within 6 inches of end of casing pipe, regardless of size of casing and carrier pipe or type of spacer used. Spacing between spacers depends largely on load bearing capabilities of pipe coating and flexibility of pipe.
- B. Grade bottom of trench adjacent to each end of casing to provide firm, uniform, and continuous support for carrier pipe. When trench requires some backfill to establish final trench bottom grade, place backfill material in 6-inch lifts and compact to density of undisturbed soil.
- C. Install casing spacers in accordance with manufacturer's instructions. Take special care to ensure that sub-components are correctly assembled and evenly tightened, and that no damage occurs during tightening of insulators or carrier pipe insertion.
- D. Seal annulus between carrier pipe and casing with casing end seals at each end of casing.
- E. Insulator Spacing:
 - 1. Spacing shall be as shown on Drawing with maximum distance between spacers to be 10 feet for pipe sizes 4 to 14 inches and 8 feet for pipe sizes 16 to 30 inches.
 - 2. For ductile iron pipe or bell-and-spigot pipe, install spacers within one foot on each side of bell or flange and one in center of joint when 18- to 20-foot-long joints are used.
 - 3. If casing or carrier pipe is angled, bent, or dented, reduce spacing as directed by City Engineer. Provide casing with smooth, continuous interior surface.

3.10 SETTLEMENT MONITORING

- A. Monitor ground surface elevation along length of augering operation. Locate and record settlement monitoring points with respect to construction baseline and elevations. Record elevations to accuracy of 0.01 feet for each monitoring point location. Establish monitoring points at locations and by methods that protect them from damage by construction operations, tampering, or other external influences. As a minimum, locate survey points as follows:
 - 1. For road crossings: Centerline and each shoulder
 - 2. Railroads: Track subbase at centerline of each track.
 - 3. Utilities and pipelines: Directly above and 10 feet before and after utility or pipeline intersection
 - 4. Long bores under improved areas such as pavements: Ground surface elevations must be recorded on centerline ahead of augering operations at locations not to exceed 50 feet apart (including points located for roads, railroads, utilities, and pipelines), or at least 3 locations per augering drive.
- B. Reading Frequency and Reporting. Take settlement survey readings:
 - 1. Prior to auger excavation reaching point
 - 2. After auger reaches monitoring point in plan
 - 3. After grouting of ground supporting casing is complete
- C. Immediately report to City Engineer movement, cracking, or settlement, which is detected.
- D. Following substantial completion but prior to final completion, make final survey of monitoring points.

3.11 DISPOSAL OF EXCESS MATERIAL

- A. Conform to applicable provisions of Section 01576 - Waste Material Disposal.

END OF SECTION

Section 02501

DUCTILE IRON PIPE AND FITTINGS

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Ductile iron pipe and fittings for water lines, wastewater force mains, gravity sanitary sewers, and storm sewers.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

- 1. No separate payment will be made for ductile iron pipe and fittings under this Section, with the exception of extra fittings in place. Include cost in unit prices for work as specified in the following Sections, as applicable:

- a. Section 02511 - Water lines

- 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Extra Ductile Iron Compact Fittings in Place shall be for additional fittings required to complete job. This is not to exclude extension of pipe across driveway or intersection for purpose of terminating line in more advantageous position. This determination shall be at discretion of City and Engineer. This bid item includes additional fittings as may be necessary to complete job in conformance with intent of Drawings.

- C. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ANSI A 21.4 (AWWA C 104) - Standard for Cement-Mortar Lining for Ductile-Iron Pipe and Fittings, for Water.
- B. ANSI A 21.10 (AWWA C 110) - Standard for Ductile-Iron and Gray-Iron Fittings, 3-in. through 48-in.

- C. ANSI A 21.11 (AWWA C 111) - Standard for Rubber Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
- D. ANSI A 21.15 (AWWA C 115) - Standard for Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges.
- E. ANSI A21.16 (AWWA C 116) - Protective Fusion Bonded Epoxy Coating for the Interior and Exterior Surfaces of Ductile Iron and Grey iron Fittings for Water Supply Service.
- F. ANSI A 21.50 (AWWA C 150) - Standard for Thickness Design of Ductile-Iron Pipe.
- G. ANSI A 21.51 (AWWA C 151) - Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water and Other Liquids.
- H. ANSI A 21.53 (AWWA C 153) - Standard for Ductile Iron Compact Fittings, 3 inches through 24 inches and 54 inches through 64 inches for Water Service.
- I. ASME B 16.1 - Cast Iron Pipe Flanges and Flanged Fittings.
- J. ASTM D 1248 - Standard Specification Polyethylene Plastics Molding and Extrusion Materials for Wire and Cable.
- K. ASTM F 477 - Elastomeric Seals (gaskets) for Joining Plastic Pipe.
- L. ASTM G 62 - Standard Test Methods for Holiday Detection in Pipeline Coatings.
- M. AWWA C 102 - American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems.
- N. AWWA C 300 - Standard for Prestressed Concrete Pressure Pipe, Steel-Cylinder Type, for Water and other Liquids.
- O. AWWA C 600 - Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances.
- P. SSPC-SP 6 - Steel Structures Painting Council, Commercial Blast Cleaning.
- Q. American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering.
- R. American Association of State Highway Transportation Officials (AASHTO).

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. For pipes 24 inches and greater submit shop drawings signed and sealed by Professional Engineer registered in State of Texas showing the following:
 - 1. Manufacturer's pipe design calculations.
 - 2. Provide lay schedule of pictorial nature indicating alignment and grade, laying dimensions, fitting, flange, and special details, with plan and profile view of each pipe segment sketched, detailing pipe invert elevations, horizontal bends, restrained joints, and other critical features. Indicate station numbers for pipe and fittings corresponding to Drawings. **Do not start production of pipe and fittings prior to review and approval by City and Engineer.**
 - 3. Calculations and limits of thrust restraint.
 - 4. Class and length of joint.
- C. Submit manufacturer's certifications that ductile iron pipe and fittings meet provisions of this Section and have been hydrostatically tested at factory and meet requirements of ANSI A 21.51.
- D. Submit certifications that pipe joints have been tested and meet requirements of ANSI A 21.11.
- E. Submit affidavit of compliance in accordance with ANSI A21.16 for fittings with fusion bonded epoxy coatings or linings.

PART 2 PRODUCTS

2.01 DUCTILE IRON PIPE - NOT USED

2.02 JOINTS

- A. Joint Types: ANSI A 21.11 push-on; ANSI A 21.11 mechanical joint; or ANSI A 21.16 flanged end. Provide push-on joints unless otherwise indicated on the Drawings or required by these specifications. For bolted joints, conform to

requirements of AWWA C111; provide minimum 304 stainless steel for restraint joints.

- B. Where restrained joints for buried service are required by Drawings, provide one of the following, **or approved equal**:

1. Super-Lock by Clow Corporation.
2. Flex-Ring or Lok-Ring by American Cast Iron Pipe Company.
3. TR-Flex or Field Lok by U.S. Pipe and Foundry Company.
4. One Bolt by One Bolt, Inc. (4 to 12 inches)
5. Sur-Grip by JCM Industries. (4 to 12 inches)

- C. Threaded or grooved-type joints which reduce pipe wall thickness below minimum required are not acceptable.

- D. Provide for restrained joints designed to meet test pressures required under Section 02515 - Hydrostatic Testing of Pipelines, as applicable. Provide restrained joints for test pressure or maximum surge pressure as specified, whichever is greater for water lines. **Do not use passive resistance of soil in determining minimum restraint lengths.**

- E. Bond rubber gasketed joints to provide electrical continuity along entire pipeline, except where insulating flanges are required by Drawings.

- F. Make curves and bends by deflecting joints. Do not exceed maximum deflection recommended by pipe manufacturer for pipe joints or restraint joints. **Submit details of other methods of providing curves and bends for consideration by City and Engineer.** When other methods are deemed satisfactory, **install at no additional cost to City.**

2.03 GASKETS:

- A. Furnish, when no contaminant is identified, plain rubber (SBR) gasket material in accordance with ANSI A21.11 or ASTM F 477 (One Bolt only); for flanged joints 1/8-inch-thick gasket in accordance with ANSI A 21.15.

2.04 FITTINGS

- A. Use fittings of same size as pipe. Reducers are not permitted to facilitate an off-size fitting. Reducing bushings are also prohibited. Make reductions in piping

size by reducing fittings. Line and coat fittings as specified for pipe they connect to.

- B. Push-on Fittings: ANSI A 21.10; ductile iron ANSI A 21.11 joints, gaskets, and lubricants; pressure rated at 250 psig.
- C. Flanged Fittings: ANSI 21.10; ductile iron ANSI A 21.11 joints, gaskets, and lubricants; pressure rated at 250 psig.
- D. Mechanical Joint Fittings: ANSI A 21.11; pressure rated at 250 psi.
- E. Ductile Iron Compact Fittings for Water lines: ANSI A 21.53; 4-inch through 12-inch diameter fusion bonded epoxy-lined or cement mortar lining.

2.05 COATINGS AND LININGS

- A. Water line Interiors: ANSI A21.4, cement lined with seal coat; ANSI A 21.16 fusion bonded epoxy coating for interior.
- B. Exterior:
 - 1. Water Lines
 - a. Tunnel, Casing or Auger Holes: Conform to requirements of ASTM D 16, ASTM D 1737, SSPC-PA 2, SSPC-PA 3, SSPC-PS Guide 17.00, SSPC-SP 1, SSPC-SP 10.
 - b. Direct Bury: Conform to requirements of ASTM D 16, ASTM D 1737, SSPC-PA 2, SSPC-PA 3, SSPC-PS Guide 17.00, SSPC-SP 1, SSPC-SP 10.
 - C. Polyethylene Wrap: For buried water lines not cathodically protected and sanitary sewers, including point repairs, provide polyethylene wrap unless otherwise specified or shown. Conform to requirements of Section 02528 - Polyethylene Wrap.
 - D. For flanged joints in buried service, provide petrolatum wrapping system, Denso, or equal, for the complete joint and alloy steel fasteners. Alternatively, provide bolts made of Type 304 stainless steel.

2.06 MANUFACTURERS

- A. Use pre-approved manufacturers listed in City of Tomball approved products.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Conform to installation requirements of Sections 02511 - Water Lines, except as modified in this Section.
- B. Install in accordance with AWWA C 600 and manufacturer's recommendations.
- C. Install all ductile iron pipe in polyethylene wrap, unless cathodic protection is provided. **Do not use polyethylene wrap with a cathodic protection system.**
- D. Holiday Testing.
 - 1. Polyurethane: Conform to AWWA C 210, Section 5.3.3.1. Follow coating manufacturer's recommendation. Conduct inspection any time after coating has reached initial cure.
 - 2. Fusion Bonded Epoxy: Conform to requirements for new fittings in ANSI A 21.16.

3.02 FIELD REPAIR OF COATINGS

- A. Polyurethane
 - 1. Repair Procedure - Holidays:
 - a. Remove traces of oil, grease, dust, dirt, and other deleterious materials.
 - b. Roughen area to be patched by sanding with rough grade sandpaper (40 grit).
 - c. Apply one coat of repair material described above. Work repair material into scratched surface by brushing.
 - 2. Repair Procedure - Field Cuts or Large Damage:
 - a. Remove burrs from field cut ends or handling damage and smooth out edge of polyurethane coating.
 - b. Remove traces of oil, grease, dust, dirt, and other deleterious materials.

- c. Roughen area to be patched with rough grade sandpaper (40 grit). Feather edges and include overlap of 1 inch to 2 inches of roughened polyurethane in area to be patched.
 - d. Apply thick coat of repair material described above. Work repair material into scratched surface by brushing. Feather edges of repair material into prepared surface. Cover at least 1 inch of roughened area surrounding damage, or adjacent to field cut.
- 3. Repair Procedure - Thermite Brazed Connection Bonds:
 - a. Remove polyurethane coating with power wire brush from area on metal surface, which is to receive thermite, brazed connection.
 - b. Grind metal surface to shiny metal with power grinder and coarse grit grinding wheel.
 - c. Apply thermite-brazed connection using equipment, charge and procedure recommended by manufacturer of thermite equipment.
 - d. After welded surface has cooled to temperature below 130 degrees F, apply protective coating repair material to weld, exposed pipe surface and damaged areas of polyurethane coating.
 - e. Do not cover or backfill freshly repaired areas of coating at thermite-brazed connection until repair material has completely cured. Allow material to cure in conformance with manufacturer's recommendations.**
- B. Fusion Bonded Epoxy: Conform to requirements for new fittings in ANSI A 21.16.

END OF SECTION

Section 02502

STEEL PIPE AND FITTINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Steel pipe and fittings for water lines for aerial crossings, aboveground piping, and encasement sleeves. Do not bury steel pipe, unless it is large diameter water line.
- B. Specifications identify requirements for small-diameter less than or equal to 20 inches.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. No payment will be made for steel pipe and fittings under this Section. Refer to Section 02511 - Water Lines for measurement and payment.
 - 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. AASHTO - Standard Specifications for Highway Bridges.
- B. ASME B 16.1 - Cast-Iron Pipe Flanges and Flanged Fittings.
- C. ASTM A 36 - Standard Specification for Carbon Structural Steel.
- D. ASTM A 105 - Standard Specification for Carbon Steel Pipe Forgings for Piping Applications.
- E. ASTM A 106 - Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service.

- F. Supply Service.
- G. ASTM A 135 - Standard Specification for Electric-Resistance-Welded Steel Pipe.
- H. ASTM A 139 - Standard Specification for Electric-Fusion (ARC) - Welded Steel Pipe (NPS 4 and Over).
- I. ASTM A 1011 - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
- J. AWWA C 200 - Standard for Steel Water Pipe 6 in. and Larger.
- K. AWWA C 206 - Standard for Field Welding of Steel Water Pipe.
- L. AWWA C 207 - Standard for Steel Pipe Flanges for Waterworks Service - Sizes 4 in. through 144 in.
- M. AWWA C 210 - Standard for Liquid Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipelines.
- N. SSPC Good Painting Practice, Volume 1.
- O. SSPC SP 1 - Surface Preparation Specification No. 1 Solvent Cleaning.
- P. SSPC SP 5 - Joint Surface Preparation Standard White Blast Cleaning.
- Q. SSPC SP 6 - Surface Preparation Specification No. 6 Commercial Blast Cleaning.
- R. SSPC SP 10 - Surface Preparation Specification No. 10 Near-White Blast Cleaning.
- S. SSPC VIS 1 - Visual Standard for Abrasive Blast Cleaned Steel.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures. For aerial crossings and above ground piping, include lay schedule of new pipe and fittings indicating alignment and grade, laying dimensions, lining and coating systems, proposed welding procedures, fabrication, fitting, flange, and special details. Show station numbers for pipe and fittings corresponding to Drawings.

- B. Submit manufacturer's certifications that pipe and fittings have been hydrostatically tested at factory in accordance with AWWA C 200.
- C. Submit manufacturer's affidavits that coatings and linings comply with applicable requirements of this Section and:
 - 1. Polyurethane coatings were applied in strict accordance with manufacturer's recommendation and allowed to cure at temperature 5 degrees above dew point.
 - 2. Linings were applied and allowed to cure at temperature above 32° F.
- D. Linings were applied and allowed to cure at temperature above 32° F.

1.05 QUALITY CONTROL

- A. Prior to start of work, provide proof of certification of qualification for welders employed for type of work, procedures and positions involved. Provide welder qualifications in accordance with AWWA C 206.
- B. Shop-applied coatings and linings; provide services of an independent coating and lining inspection service or testing laboratory with qualified coating inspectors. Perform inspection by NACE trained inspectors under supervision of NACE Level III Certified Coatings Inspector verifying compliance with same requirements specified in Paragraph 3.03.
- C. Coatings: Measure temperature and dew point of ambient air before applying coatings. Inspect physical dimensions and overall condition of coatings. Inspect for visible surface defects, thickness, and adhesion of coating to surface and between layers.
- D. Final Inspection:
 - 1. Before shipment, inspect each finished pipe, fitting, special and accessory for markings, metal thickness, coating thickness, lining thickness (if shop applied), joint dimensions, and roundness.
 - 2. Inspect for coating placement and defects. Test exterior coating for holidays.

- a. Inspect linings for thickness, pitting, scarring, and adhesion.
- E. Inspect linings for thickness, pitting, scarring, and adhesion performance of their specific duties.

PART 2 PRODUCTS

2.01 STEEL PIPE

- A. Manufacture pipe with nominal diameter 20 inches and less but more than 2 inches to conform to ASTM A106 or A 53 Grade B, standard weight.
- B. Provide steel pipe and encasement sleeves designed and manufactured in conformance with AWWA C 200 and AWWA M 11 except as modified herein. Steel to be minimum of ASTM A 36, ASTM A 1011 Grade 36, ASTM A 53 Grade B, ASTM A 135 Grade B, or ASTM A 139 Grade B.
- C. Minimum Allowable Steel-Wall Thickness: Inside clear diameter to be minimum of nominal diameter of pipe specified.

CARRIER PIPE			
Nom Pipe Size (In.)	Min. Wall		Approx. Wt. Per Lin. Ft. Uncoated (Lb.)
	O.D. (In.)	Thick. (In.)	
4	4.50	0.250	11.35
6	6.625	0.280	18.97
8	8.625	0.322	28.55
10	10.75	0.365	40.48
12	12.75	0.375	49.56
16	16.00	0.375	62.58
20	20.00	0.375	78.60

Notes:

1. Review pipe and fitting design for conditions exceeding those specified herein.

2. Provide pipe with wall thickness of no less than listed in table above.

MINIMUM DIAMETER CASING PIPE (ENCASEMENT SLEEVES)			
Corres p. Casing Pipe Size (In.)	Min. Wall		Approx. Wt. Per Lin. Ft. Uncoated (Lb.)
	O.D (In.)	Thick (In.)	
8	8.625	0.219	19.64
10	10.75	0.219	24.60
12	12.75	0.219	29.28
16	16.00	0.219	36.86
18	18.00	0.25	47.39
20	20.00	0.250	52.73
24	24.00	0.250	63.41

Notes:

1. Provide casing pipe with wall thickness of no less than listed in table above.
2. Casing pipe: AWWA C 200 new uncoated welded steel.
3. Verify casing diameter required with dimensions of casing spacer.
4. Provide pipe sections in lengths of no less than 16 feet except as required for special sections, and no greater than 40 feet.
5. Provide short sections of steel pipe no less than 4-feet in length unless indicated on Drawings or specifically permitted by City Engineer.
6. Fittings: Factory forged for sizes 4 inches through 20 inches; long radius bends; beveled ends for field butt welding; wall thickness equal to or greater than pipe to which fitting is to be welded unless otherwise shown on Drawings.
7. Joints:
 - a. Standard field joint for steel pipe and encasement sleeve: AWWA C 206. Single- welded, butt joint.
 - b. Provide mechanically coupled or flanged joints for valves and fittings, as shown on Drawings. Flanges: AWWA C 207, Class D; same diameter and drilling as Class 125 cast iron flanges ASME B 16.1. Maintain electrically isolated flanged joints between steel and cast iron by using epoxy-coated bolts, nuts, washers and insulating type gasket.
 - c. Elbows to be standard weight seamless elbows per ASTM A106, Grade A or B.

- d. Flanges for pipe 20 inches in diameter and smaller shall be ANSI 150 lb. flat face, slip on or weld neck flanges, meeting ASTM A105 requirements. Where flanges are to join to valves with raised face flanges, use ANSI 150 lb. raised flange.
- e. Provide same coating for exposed portions of nuts and bolts as flanges, which they secure.
- 8. Fabricate flanges with over-size bolt holes, with flanges drilled in pairs, to accommodate insulating sleeves.

2.02 INTERNAL LINING SYSTEMS FOR STEEL PIPE, ALL INSTALLATIONS

- A. Supply steel pipe with epoxy lining, capable of conveying water at temperatures not greater than 140 degrees F. Provide linings conforming to American National Standards Institute/National Sanitation Foundation (ANSI/NFS) Standard 61 and certification to be from organization accredited by ANSI. Unless otherwise noted, coat exposed (wetted) steel parts of flanges, blind flanges, bolts, access manhole covers, etc., with epoxy lining, as specified.
- B. Epoxy Lining AWWA C 210, White, or approved equal for shop and field joint applied, except as modified in this Section. Provide material from same manufacturer. For Pipe larger than 2 inches in diameter protect interior surface with liquid two-part chemically cured epoxy primer specified for interior surfaces.

Surface Preparation 2.0 to 3.0 mils surface profile	SSPC-5 (64) White Blast Clean
Prime Coat 4.0 to 6.0 mils DFT	ACRO 4460 NSF Certified Epoxy - Buff, or approved equal
Intermediate Coat 4.0 to 6.0 mils DFT	ACRO 4460 NSF Certified Epoxy - Buff, or approved equal
Finish Coat 4.0 to 6.0 mils DFT	ACRO 4460 NSF Certified Epoxy - White, or approved equal

Notes:

- 1. Total allowable dry film thickness for system:
 - a. Minimum: 12.0 mils.

- b. Maximum: 18.0 mils.
- c. Minimum field adhesion: 700 psi.
- 2. Dry film thicknesses for approved alternate products in accordance with product manufacturer's recommendations.
- 3. Lining system may consist of three or more coats of same approved alternate epoxy lining without use of separate primer.

2.03 EXTERNAL COATING SYSTEM FOR STEEL PIPE INSTALLED ABOVEGROUND AND IN VAULTS (EXPOSED)

- A. Provide 3-coat epoxy/polyurethane coating system as designated below. Provide material from same manufacturer.

Surface Preparation 2.0 to 3.0 mils surface profile	SSPC SP 10 Near White Blast Clean
Prime Coat 2.0 to 4.0 mils DFT	ACRO 4422 Inhibitive Epoxy Primer, or approved equal
Intermediate Coat 4.0 to 6.0 mils DFT	ACRO 4460 Chemical Resistant Epoxy, or approved equal
Finish Coat 1.5 to 2.5 mils DFT	ACRO 4429 Polyurethane, or approved equal

- B. Total Allowable Dry Film Thickness (DFT) for System:

- 1. Minimum: 7.5 mils.
- 2. Maximum: 12.5 mils.
- 3. Clean bare pipe free from mud, mill lacquer, oil, grease, or other contaminant. Inspect and clean surfaces according to SSPC-SP-1 to remove oil, grease, and loosely adhering deposits prior to blast cleaning. Remove visible oil and grease spots by solvent wiping. Use only approved safety solvents, which do not leave residue. Use preheating to remove oil, grease, mill scale, water, and ice provided pipe is preheated in uniform

manner to avoid distortion.

4. Remove surface imperfections such as slivers, scabs, burrs, weld spatter, and gouges, presence of metallic defects may be cause for rejection of pipe.

PART 3 EXECUTION

3.01 PIPING INSTALLATION

- A. Conform to applicable provisions of Section 02511 - Water lines, except as modified in this Section.
- B. Comply with the following:
 1. Bedding and Backfilling: Conform to requirements of Section 02317 - Excavation and Backfill for Utilities.
 2. For pipes with coating: Do not roll or drag pipe on ground, move pipe in such a manner as not to damage pipe or coating. Carefully inspect pipe for abrasions and repair damaged coating before pipe is installed.
- C. Static Electricity:
 1. Properly ground steel pipeline during construction as necessary to prevent build-up of static electricity.
 2. Electrically test where required after installation is complete.
- D. Use adequate surveying methods and procedures and employ competent surveying personnel at times to ensure that pipe joints are laid to line and grade and within stipulated tolerances. Measure and record in form approved by City Engineer, survey data for pipe laid each day and submit copy of data to City Engineer at end of that day.

3.02 EXTERNAL COATING SYSTEM FOR STEEL PIPE INSTALLED ABOVE GROUND AND IN VAULTS (EXPOSED) AND EPOXY INTERNAL LINING SYSTEM.

- A. Safety: Paints, coatings, and linings specified in this Section are hazardous materials. Vapors may be toxic or explosive. Protective equipment, approved by appropriate regulatory agency, is mandatory for personnel involved in painting, coating, and lining operations.

B. Workmanship:

1. Application: By qualified and experienced workers who are knowledgeable in surface preparation and application of high-performance industrial coatings.
2. Paint Application Procedures: SSPC Good Painting Practices, Volume 1.

C. Surface Preparation:

1. Prepare surfaces for painting by using abrasive blasting.
2. Schedule cleaning and painting so that detrimental amounts of dust or other contaminants do not fall on wet, newly painted surfaces. Protect surfaces not intended to be painted from effects of cleaning and painting operations.
3. Prior to blasting, clean surfaces to be coated or lined of grease, oil and dirt by steaming or detergent cleaning in accordance with SSPC SP 1.
4. Metal and Weld Preparation: Remove surface defects such as gouges, pits, welding and torch-cut slag, welding flux and spatter by grinding to 1/4-inch minimum radius.
5. Abrasive Material:
 - a. Blast only as much steel as can be coated same day of blasting.
 - b. Use sharp, angular, properly graded abrasive capable of producing depth of profile specified herein. Transport abrasive to job site in moisture-proof bags or airtight bulk containers. Copper slag abrasives are not acceptable.
 - c. After abrasive blast cleaning, verify surface profile with replica tape such as Tes-Text Coarse or Extra Coarse Press-O-Film Tape, or approved equal. Furnish tapes to City Engineer.
 - d. Do not blast if metal surface may become wet before priming commences, or when metal surface is less than 5 degrees F above dew point.
6. Evaluate degree of cleanliness for surface preparation with use of SSPC Pictorial Surface Preparation Standards for Painting Steel Surfaces, SSPC-Vis 1.

7. Remove dust and abrasive residue from freshly blasted surfaces by brushing or blowing with clean, dry air. Test cleanliness by placing 3/4-inch by 4-inch piece of clear Scotch type tape on blasted surface, then removing and placing tape on 3x5 white index card. Reclean areas exhibiting dust or residue.

D. Coating and Lining Application:

1. Environmental Conditions: Do not apply coatings or linings when metal temperature is less than 50 degrees F; when ambient temperature is less than 5 degrees F above dew point; when expected weather conditions are such that ambient temperature will drop below 40 degrees F within 6 hours after application; or when relative humidity is above 85 percent. Measure relative humidity and dew point by use of sling psychrometer in conjunction with U.S. Department of Commerce Weather Bureau Psychrometric Tables. Provide dehumidifiers for field-applied coatings and linings to maintain proper humidity levels.
2. Application Procedures:
 - a. Apply in accordance with manufacturer's recommendations and requirements of this Section. Provide finish free of runs, sags, curtains, pinholes, orange peel, fish eyes, excessive over spray, or delaminations.
 - b. Thin materials only with manufacturer's recommended thinners. Thin only amount required to adjust viscosity for temperature variations, proper atomization and flow-out. Mix material components using mechanical mixers.
 - c. Discard catalyzed materials remaining at end of day.
3. Thoroughly dry pipe before primer is applied. Apply primer immediately after cleaning surface. Apply succeeding coats before contamination of undersurface occurs.
4. Cure a minimum of 24 hours at 77 degrees F before successive coats are applied. During curing process, provide force air ventilation in volume sufficient to maintain solvent vapor levels below published threshold limit value. Apply successive coats within recoat threshold time as recommended by coating or lining manufacturer on printed technical data sheets or through written communications. Brush blast joints of pipe which have been shop

primed with ACRO 4460, or approved equal, and are to receive intermediate and finish coats in field prior to application of additional coats. After interior coatings are applied, provide forced air ventilation in sufficient volume and for sufficient length of time to ensure proper curing before filling pipe with water.

5. Testing of Coatings and Linings:
 - a. Inspect pipe for holidays and damage to coating:
 - b. If test indicates no holidays and coating is damaged, remove damaged layers of coating and repair in accordance with coating manufacturers recommendations.
 - c. Perform holiday test in accordance with NACE Standard Recommended Practice, RPO 188-90, Discontinuity (Holiday) Testing of Protective Coatings.
 - d. Begin testing of completed coating after coating has sufficiently cured, usually one to 5 days. Consult coating manufacturer for specific curing schedule.
 - e. Perform adhesion test on pipe in accordance with ASTM D 4541.
 - f. For coating thickness of 20 mils or less, test with wet sponge low-voltage holiday detector. For coating thickness in excess of 20 mils, test with high-voltage holiday detector. Perform electrical holiday test with 60-cycle current audio detector. Select test voltage as suggested in table below.

MINIMUM VOLTAGES FOR HIGH VOLTAGE SPARK TESTING

Total Dry Film Thickness (mils)	Suggested Inspection (V)
8 to 11	1,500
12 to 15	2,000
16 to 20	2,500
21 to 40	3,000
41 to 55	4,000
56 to 80	6,000

3.03 JOINTS AND JOINTING

A. Welded Joints:

1. Conform to requirements of Section 02511 - Water Lines.

B. Field weld to be full penetration butt welded joints for steel pipe and encasement sleeves for entire circumference.

C. Employ an independent certified testing laboratory, approved by City Engineer, to perform weld acceptance tests on welded joints. Include cost of such testing in contract unit price bid for water line. Furnish copies of test reports to City Engineer for review. Test by X-ray methods for butt welds, for 100 percent of joint welds. City Engineer has final decision as to suitability of welds tested.

D. Flanged Joints: Conform to requirements of Section 02511 - Water Lines.

E. Joint Grouting and Testing: Conform to requirements of Section 02511 - Water Lines.

3.04 COATING AND LININGS INSPECTION RESPONSIBILITIES

A. Contractor is responsible for quality control of coatings and linings applications and testing and inspection stipulated in this Section. City Engineer is responsible for quality assurance and reserves the right to inspect or acquire services of an independent third-party inspector who is fully knowledgeable and qualified to inspect surface preparation and application of high-performance coatings at all phases of coatings and linings work, field- or shop-applied. Contractor is responsible for proper application and performance of coatings and linings whether or not City Engineer provides such inspection.

END OF SECTION

Section 02503

COPPER

TUBING

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Copper tubing for water service lines.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. No payment will be made for copper tubing under this Section. Include cost in unit price for water taps and service lines.
2. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ASTM B 88 - Standard Specification for Seamless Copper Water Tube.
- B. AWWA C 800 - Standard for Underground Service Line Valves and Fittings.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit certified test results of ASTM B 88.
- C. Submit manufacturer's testing certification that copper tubing conforms to requirements of ASTM B 88. Number of samples for testing of each size of tubing is modified as follows:

1. For each 7500 feet of tubing: 1 sample

2. For each set of tubing less than 7500 feet: 1 sample

PART 2 PRODUCTS

2.01 MATERIALS

- A. Provide Type K annealed, seamless, copper tubing: -inch to 2-inch in diameter conforming to requirements of ASTM B 88.
- B. Provide: -inch and 1-inch tubing in coils of minimum 60 feet in length, and 12-inch and 2-inch tubing in coils 40 feet in length.
- C. Provide tubing manufactured in United States of America. Tubing shall be inspected and tested by laboratory designated by City and Engineer at point of manufacture or locally. Furnish tubing, at no additional cost to designated testing laboratory along with mill compliance certificates.
- D. Provide flared or compression-type brass fittings for use with Type K annealed copper tubing in accordance with AWWA C 800.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Conform to installation requirements of Section 02512 - Water Tap and Service Line Installation, except as modified in this Section.

3.02 JOINTS

- A. Minimum joint spacing for: -inch and 1-inch tubing shall be 60 feet and for 12-inch and 2-inch tubing shall be 40 feet.
- B. Cut copper tubing squarely by using cutting tools designed specifically for purpose and avoid procedures that cause pipe to bend or pipe walls to flatten.
- C. After tubing has been cut, but before flaring, use reamer to remove inside rolled lip from tubing. Expand flared ends by use of flaring tool using care to avoid splitting, crimping, or over stressing metal. Provide at least 10 inches of straight pipe adjacent to fittings.
- D. When compression fittings are used, cut copper tubing squarely prior to insertion

into fitting. Assemble in accordance with manufacturer's recommended procedure.

3.03 BENDS

- A. Bend tubing by using appropriately sized bending tool. No kinks, dents, flats, or crimps shall be permitted. Cut out and replace damaged section. Install no bends with radius smaller than radius of coil of tubing as packaged by manufacturer. Copper tubing shipped in straight lengths conform to the following:

1. For 2-inch diameter: Maximum of one 45-degree bend per 4-foot section.
2. For 12-inch diameter: Maximum of one 45-degree bend per 3-foot section.

END OF SECTION

Section 02505

HIGH DENSITY POLYETHYLENE (HDPE)
SOLID AND PROFILE WALL PIPE

PART 1 G E N E R A L

1.1 SECTION INCLUDES

1. High density polyethylene (HDPE) pipe for gravity sewers and drains, including fittings.
2. High density polyethylene (HDPE) pipe for sanitary sewer force mains, including fittings.
3. High density polyethylene (HDPE) pipe drains and fittings, for gravity storm sewers 12 inches through 48 inches.

1.2 MEASUREMENT AND PAYMENT

1. Unit Prices.
 1. No separate payment will be made for HDPE pipe under this Section. Include cost in unit prices for work, as specified in following sections:
 1. Section 02531 - Gravity Sanitary Sewers.
 2. Section 02532 - Sanitary Sewer Force Mains.
 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
2. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.3 REFERENCES

1. AASHTO M 294 - Standard Specification for Corrugated Polyethylene Drainage Pipe, 18" - 48" diameter.
2. AASHTO Section 18 - Soil Thermoplastic Pipe Interaction Systems.
3. AASHTO Section 30 - Standard Practice for Underground Installation of

Thermoplastic Pipe for Sewer and Other Gravity Flow Applications.

4. ASTM D 618 - Standard Practice for Conditioning Plastics for Testing.
 5. ASTM D 1248 - Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable.
 6. ASTM D 2321 - Standard Recommended Practice for Underground Installation of Flexible Thermoplastic Pipe.
 7. ASTM D 2657 - Standard Practice for Heat Fusion Joining Polyolefin Pipe and Fittings.
 8. ASTM D 2837 - Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials.
 9. ASTM D 3035 - Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter.
 10. ASTM D 3212 - Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
 11. ASTM D 3350 - Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.
 12. ASTM F 477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
 13. ASTM F 714 - Standard Specification for Polyethylene Plastic (PE) Pipe (SDR-PR) Based on Outside Diameter.
 14. ASTM F 894 - Standard Specification for Polyethylene (PE) Large-Diameter Profile Wall Sewer and Drain Pipe.
- 1.4 SUBMITTALS
1. Conform to requirements of Section 01330 - Submittal Procedures.
 2. Submit shop drawings showing design of pipe and fittings, laying dimensions, fabrication, fittings, flanges, and special details.

1.5 QUALITY CONTROL

1. Provide manufacturer's certificate of conformance to Specifications.
2. Furnish pipe and fittings that are homogeneous throughout and free from visible cracks, holes, foreign inclusions, or other injurious defects. Provide pipe as uniform as commercially practical in color, opacity, density, and other physical properties.
3. City Engineer reserves right to inspect pipes or witness pipe manufacturing. Inspection shall in no way relieve manufacturer of responsibilities to provide products that comply with applicable standards and these Specifications.
 1. Manufacturer's Notification: Should City Engineer wish to witness manufacture of specific pipes, manufacturer shall provide City Engineer with minimum three weeks notice of when and where production of those specific pipes will take place.
 2. Failure to Inspect. Approval of products or tests is not implied by City Engineer's decision not to inspect manufacturing, testing, or finished pipes.

1.6 QUALIFICATIONS

1. Manufacturer: Company specializing in manufacturing the products specified in this section with documented experience of minimum 5 years of pipe installations that have been in successful, continuous service for same type of service as proposed Work.

PART 2 PRODUCTS

1.7 GENERAL

1. For sewer pipe provide HDPE pipe as follows:
 1. NEW CONSTRUCTION PIPE
PRODUCTS GRAVITY SANITARY
SEWER
DIRECT BURY

HIGH DENSITY POLYETHYLENE (HDPE)
SOLID AND PROFILE WALL PIPE

INSTALLATION SPEC NO.	GENERIC NAME	TRADE NAME OR MANUFACTURER	ASTM OR AASHTO	SDR (NUMERIC MAXIMUM)	PIPE STIFFNESS (NUMERIC MINIMUM)	SIZE RANGE
02505	Solid Wall Polyethylene (HDPE)	Chevron Plexco Phillips 66 Quail Poly Pipe	ASTM F-714	DR 17 DR 21	115 46	8" - 10" 12" - 48"
02531	Polyethylene Profile Wall	Spirolite	ASTM F-894	n/a	46	18" - 120"

2. REHABILITATION CONSTRUCTION PIPE PRODUCTS SPLITTING OF SANITARY SEWER

INSTALLATION SPEC NO.	GENERIC NAME	TRADE NAME OR MANUFACTURER	ASTM	SDR (NUMERIC MAXIMUM)	PIPE STIFFNESS (NUMERIC MINIMUM)	SIZE RANGE
02550	Solid Wall Poly	Chevron Plexco <u>Quail Poly Pipe</u> <u>AmeriFlow by NAPCO</u> <u>AmeriFlow by KWH</u>	F-714	DR 21	46	8" - 48" <u>3" - 12"</u> <u>14" - 63"</u>
02550	Polyethylene Profile Wall	Spirolite	F-894	n/a	46	18" - 120"

3. For Residential Driveway Culverts provide HDPE as follows:
 1. N-12 and N-12 HC by Advanced Drainage Systems, Inc. (ADS).
 2. Sure-Lok F477 by Hancor, Inc.
3. Furnish solid wall pipe with plain end construction for heat joining (butt fusion) conforming to ASTM D 2657. Utilize controlled temperatures and pressures for joining to produce fused leak-free joint.
4. Furnish profile-wall gravity sewer pipe with bell-and-spigot end construction conforming to ASTM D 3212. Joining will be accomplished with elastomeric gasket in accordance with manufacturer's recommendations. Use integral bell-and-spigot gasketed joint designed so that when assembled, elastomeric gasket, contained in machined groove on pipe spigot, is compressed radially in pipe bell to form positive seal. Design joint to avoid displacement of gasket when installed in accordance with manufacturer's recommendations.
5. Furnish solid wall pipe for sanitary sewer force mains with minimum working pressure rating of 150 psi, and with inside diameter equal to or greater than nominal pipe size indicated on Drawings.
6. Furnish corrugated polyethylene pipe (CPP) for gravity storm sewer pipe. Joints shall be installed such that connection of pipe sections will form continuous line free from irregularities in flow line. Suitable joints are:
 1. Integral Bell and Spigot. Bell shall overlap minimum of two corrugations of spigot end when fully engaged.
 2. Exterior Bell and Spigot. Bell shall be fully welded to exterior of pipe and overlap spigot end so that flow lines and ends match when fully engaged.
7. Jointing:
 1. Gaskets:
 1. Meet requirements of ASTM F 477. Use gasket molded into circular form or extruded to proper section and then spliced into circular form. When no contaminant is identified, use gaskets of properly cured, high-grade elastomeric compound. Basic

polymer shall be natural rubber, synthetic elastomer, or blend of both.

2. Pipes allowed to be installed in potentially contaminated areas, where free product is found near elevation of proposed sewer, shall have the following gasket materials for noted contaminants:

CONTAMINANT	GASKET MATERIAL REQUIRED
Petroleum (diesel, gasoline)	Nitrile Rubber
Other Contaminants	As recommended by pipe manufacturer

2. Lubricant. Use lubricant for assembly of gasketed joints which has no detrimental effect on gasket or on pipe, in accordance with manufacturer's recommendations.

1.8 MATERIALS FOR SANITARY SEWER

1. Pipe and Fittings: High density, high molecular weight polyethylene pipe material meeting requirements of Type III, Class C, Category 5, Grade P34, as defined in ASTM D 1248. Material meeting requirements of cell classification in accordance with ASTM D 3350 are also suitable for making pipe products under these specifications.
2. Other Pipe Materials: Materials other than those specified in Paragraph 2.02A, Pipe and Fittings, may be used as part of profile construction, e.g., as core tube to support shape of profile during processing, provided that these materials are compatible with base polyethylene material and are completely encapsulated in finished product and in no way compromise performance of pipe products in intended use. Examples of suitable material include polyethylene and polypropylene.

1.9 MATERIALS FOR RESIDENTIAL DRIVEWAY CULVERTS

1. Pipe and Fittings: High density, high molecular weight polyethylene HDPE virgin compound material meeting requirements of cell class outlined in AASHTO M 294, AASHTO MP7 and ASTM D 3350.
2. Types: CPP shall meet one or both of following:
 1. Type S: Outer corrugated wall with smooth inner liner.

2. Type D: Inner and outer smooth walls braced circumferentially or spirally with projections or ribs.
3. Lubricant: Use lubricant for assembly of gasketed joints, which has no detrimental effect on gasket or on pipe, in accordance with manufacturer's recommendations.

1.10 TEST METHODS FOR SANITARY SEWER

1. Conditioning. Conditioning of samples prior to and during tests are subject to approval by City Engineer. When referee tests are required, condition specimens in accordance with Procedure A in ASTM D 618 at 73.4 degrees F plus or minus 3.6 degrees F and 50 percent relative humidity plus or minus 5 percent relative humidity for not less than 40 hours prior to test. Conduct tests under same conditions of temperature and humidity unless otherwise specified.
2. Flattening. Flatten three specimens of pipe, prepared in accordance with Paragraph 2.05A, in suitable press until internal diameter has been reduced to 40 percent of original inside diameter of pipe. Rate of loading shall be uniform and at 2 inches per minute. Test specimens, when examined under normal light and with unaided eye, shall show no evidence of splitting, cracking, breaking, or separation of pipe walls or bracing profiles.
3. Joint Tightness. Test for joint tightness in accordance with ASTM D 3212, except replace shear load transfer bars and supports with 6-inch-wide support blocks that can be either flat or contoured to conform to pipe's outer contour.
4. Purpose of Tests. Flattening and joint tightness tests are not intended to be routine quality control tests, but rather to qualify pipe to a specified level of performance.

1.11 TEST METHODS FOR RESIDENTIAL DRIVEWAY CULVERTS

1. Pipe stiffness at 5% deflection, when determined in accordance with ASTM D 2412, shall be as specified in Section 7.4 of AASHTO M 294.
2. Minimum inner wall thickness shall be as specified in Section 7.2.2 of AASHTO M 294.

1.12 MARKING

1. Mark each standard and random length of pipe in compliance with these Specifications with following information:
 1. Pipe size.
 2. Pipe class.
 3. Production code.
 4. Material designation.

PART 3 EXECUTION

1.13 INSTALLATION

1. Conform to requirements of following Sections:
 1. Section 02550 - Sliplining Sanitary Sewers.
 2. Section 02531 - Gravity Sanitary Sewers.
 3. Section 02532 - Sanitary Sewage Force Mains.
 4. Section 02533 - Acceptance Testing for Sanitary Sewers.
2. Install pipe in accordance with the manufacturer's recommended installation procedures.
3. HDPE pipe is not approved in applications requiring augering of pipe.
4. Bedding and backfill: Conform to requirements of Section 02317 - Excavation and Backfill for Utilities.

END OF SECTION

Section 02506

POLYVINYL CHLORIDE PIPE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Polyvinyl chloride pressure pipe for water distribution, in nominal diameters 4 inches through 20 inches.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. No separate payment will be made for PVC pipe under this Section. Include cost in unit price for work included as specified in the following sections:
 - a. Section 02511 - Water Lines
 - 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ANSI A 21.16 (AWWA C 116) - Protective Fusion Bonded Epoxy Coating for the Interior and Exterior Surfaces of Ductile Iron and Grey Iron Fittings for Water Supply Service.
- B. ASTM D 1248 - Standard Specification for Polyethylene Plastics Molding and Extrusion Materials.
- C. ASTM D 1784 - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
- D. ASTM D 2241 - Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
- E. ASTM D 2444 - Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling

Weight).

- F. ASTM D 3139 - Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
- G. ASTM F 477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
- H. AWWA C 110 - American National Standard for Ductile-Iron and Gray-Iron Fittings, 3 Inches Through 48 Inches for Water.
- I. AWWA C 111 - American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
- J. AWWA C 900 - Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 Inches Through 12 Inches for Water Distribution.
- K. AWWA C 905 - Standard for Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 In. through 48 In., for Water Transmission and Distribution.
- L. AWWA C 909 - Standard for Molecularly-Oriented Polyvinyl Chloride (PVCO) Pressure Pipe, 4 Inches through 12 Inches (100mm through 300 mm), for Water Distribution.
- M. PPI TR3 - Policies and Procedures for Developing Recommended Hydrostatic Design Stresses for Thermoplastic Pipe Materials.
- N. UNI-B-13 - Recommended Standard Performance Specification for Joint Restraint Devices for Use with Polyvinyl Chloride Pipe.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit shop drawings showing design of new pipe and fittings indicating alignment and grade, laying dimensions, fabrication, fittings, flanges, and special details.

1.05 QUALITY CONTROL

- A. Submit manufacturer's certifications that PVC pipe and fittings meet requirements

of this Section and AWWA C 900, AWWA C 909 and AWWA C 905 for pressure pipe applications.

- B. Submit manufacturer's certification that PVC pressure pipe for water lines and force mains has been hydrostatically tested at factory in accordance with AWWA C 900, AWWA C 909 and AWWA C 905, and this Section.
- C. When foreign manufactured material is proposed for use, have material tested for conformance to applicable ASTM requirements by certified independent testing laboratory located in United States. Certification from other source is not acceptable. Furnish copies of test reports to City and Engineer for review. **Cost of testing paid by Contractor.**

PART 2 PRODUCTS

2.01 MATERIAL

- A. Use PVC compounds in manufacture of pipe that contain no ingredient in amount that has been demonstrated to migrate into water in quantities considered to be toxic.
- B. Furnish PVC pressure pipe manufactured from Class 12454-A or Class 12454-B virgin PVC compounds as defined in ASTM D 1784. Use compounds qualifying for rating of 4000 psi for water at 73.4 F per requirements of PPI TR3. Provide pipe, which is homogeneous throughout, free of voids, cracks, inclusions, and other defects, uniform as commercially practical in color, density, and other physical properties. Deliver pipe with surfaces free from nicks and scratches with joining surfaces of spigots and joints free from gouges and imperfections, which could cause leakage.
- C. PVC Restrained Pipe: Must be listed on City's current Product Approval List.
 - 1. Pipe Material:
 - a. DR 18: For restrained joints where shown on Drawings.
 - b. DR 14: For alternate to offset pipe sections shown on Drawings. **Do not use PVC for offset sections with depth of cover greater than 20 feet or less than 4 feet. Do not use PVC in potentially petroleum contaminated areas.**

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D. Water Service.

1. Provide self-extinguishing PVC pipe that bears Underwriters' Laboratories mark of approval and is acceptable without penalty to Texas State Fire Insurance Committee for use in fire protection lines.
2. Bear National Sanitation Foundation Seal of Approval (NSF-PW).

E. Gaskets:

1. Gaskets shall meet requirements of ASTM F 477. Use elastomeric factory-installed gaskets to make joints flexible and watertight.
2. Flat Face Mating Flange: Full faces 1/8-inch thick ethylene propylene (EPR) rubber.
3. Raised Face Mating Flange: Flat ring 1/8-inch ethylene propylene (EDR) rubber, with filler gasket between OD of raised face and flange OD to protect flange from bolting moment.

F. Lubricant for rubber-gasketed joints: Water soluble, non-toxic, non-objectionable in taste and odor imparted to fluid, non-supporting of bacteria growth, having no deteriorating effect on PVC or rubber gaskets.

G. Use single manufacturer to furnish PVC pipe. When approved PVC system is used as alternate to offset pipe section, a second manufacturer may be used.

H. Do not use PVC in potentially or known contaminated areas.

I. Do not use PVC in areas exposed to direct sunlight.

2.02 WATER SERVICE PIPE

- A. Pipe 4-inch through 12-inch: AWWA C 900, AWWA C 909, Class 150, DR 18; AWWA C 900, Class 200, DR 14 as alternate to offset pipe sections; nominal 20-foot lengths; cast-iron equivalent outside diameters.
- B. Pipe 14-inches through 20-inches: AWWA C 905; Class 235; DR 18; nominal 20-foot lengths; cast-iron equivalent outside diameter.
- C. Provide pipe manufactured by J-M Manufacturing Company, North American, Diamond Plastics Corporation, I-Pex, Certain Teed Corporation or Uponor

ETI.

- D. Make curves and bends by deflecting joints. **Do not exceed maximum deflection recommended by pipe manufacturer. Submit details of other methods of providing curves and bends for review by City and Engineer.**
- E. Hydrostatic Test: AWWA C 900, AWWA C 905, AWWA C 909, ANSI A 21.10 (AWWA C 110); at point of manufacture; submit manufacturer's written certification.

2.03 GRAVITY SEWER PIPE - NOT USED

2.04 SANITARY SEWER FORCE MAIN PIPE - NOT USED

2.05 BENDS AND FITTINGS FOR PVC PRESSURE PIPE

- A. Bends and Fittings: ANSI A 21.10 or ANSI A 21.53, ductile iron; ANSI A 21.11 single rubber gasket push-on type joint; minimum 150 psi pressure rating. Certa-Lok PVC restrained joints, 250 psi, may be provided for up to 12 inches in diameter (water or sanitary).
- B. Fittings: JCM 610/620 Sur-Grip Fitting Restrainer by JCM Industries, Inc. or Series 500 Fitting Restrainer by Ebba Iron, Inc., One Bolt by One Bolt, Inc. **or approved equal**. Integral restrained joint fittings and pipe do not require secondary restraint.

PART 3 EXECUTION

3.01 PROTECTION

- A. Store pipe under cover out of direct sunlight and protect from excessive heat or harmful chemicals in accordance with manufacturer's recommendations.

3.02 INSTALLATION

- A. Conform to requirements of Section 02511 - Water Lines, as applicable.
- B. Install PVC water service pipe to clear utility lines and have minimum depth of cover below property line grade of street, unless otherwise required by Drawings:

11 Water service pipe 12 inches in diameter and smaller 4 feet of cover.

12 Water service pipe 16 inches in diameter and larger 5 feet of cover.

- C. Avoid imposing strains that will overstress or buckle pipe when lowering pipe into trench.
- D. Hand shovel pipe bedding under pipe haunches and along sides of pipe barrel and compact to eliminate voids and ensure side support.
- E. Store PVC pipe under cover out of direct sunlight. Protect pipe from excessive heat or harmful chemicals. Prevent damage by crushing or piercing.
- F. Allow PVC pipe to cool to ground temperature before backfilling when assembled out of trench to prevent pullout due to thermal contraction.

3.03 PVC RESTRAINED MECHANISM: CERTA-LOK OR YELOMINE

- A. Do not apply lubricant to spline or pipe or coupling spline grooves.
- B. Do not use excessive force while inserting the spline through coupling.
- C. Insert spline until it is fully seated around circumference of pipe.
- D. Field Cutting of Pipe Ends:
 - 1. Perform by workers certified by manufacturer.
 - 2. Use a PVC pipe cutter and provide square ends.
 - 3. Use manufacturer approved power routing and grooving tool to field fabricate required pipe groove.

END OF SECTION

Section 02511

WATER LINES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Installation of water lines.
- B. Specifications identify requirements for both small diameter water lines and large diameter water lines. When specifications for large diameter water lines differ from those for small diameter water lines, large diameter specifications will govern for large diameter pipe.

1.2 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. Payment for water lines installed by bore or open-cut, augered with or without casing, aerial crossing, pipe offset section or within limits of Potentially Petroleum Contaminated Area (PPCA) is on linear foot basis for each size of pipe installed. Separate pay items are used for each type of installation.
 - 1. Mains: Measure along axis of pipe and include fittings and valves.
 - 2. Branch Pipe: Measure from axis of water line to end of branch.
 - 2. Payment for interconnection is on lump sum basis for each interconnection identified on Drawings. Payment will include tapping sleeve and valves piping, connections, and other related work necessary for construction as shown on Drawings or specified herein.
 - 3. Payment for removal of existing internal elliptical or dished head plug is on unit price basis for each internal elliptical or dished head plug removed. Payment will include deletion of plug, drainage or dewatering of water lines, repair of damaged linings, rechlorination and items incidental to operation.
 - 4. Payment for plug and clamp is on a unit price basis for each size of pipe.

5. Payment for drainline connection with service manhole is on unit price basis for each drainline shown on drawings. Payment includes valve, access manhole and connection.
 6. When directed by City and Engineer to install extra fittings as required to avoid unforeseen obstacles, payment will be based on the following:
 1. Each extra fitting requested by City and Engineer and delivered to jobsite will be paid according to unit price for "Extra Fittings in Place."
 2. Payment will include and be full compensation for items necessary for installation and operation of water line.
 7. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.3 REFERENCES

- A. ANSI A 21.11/AWWA C111 - Standard for Rubber-Gasket Joints for Ductile - Iron Pressure Pipe and Fittings.
- B. ANSI/NSF Standard 61 - Drinking Water System -Health Components.
- C. ASTM A 36 - Standard Specification for Carbon Structural Steel
- D. ASTM A 536 - Standard Specification for Ductile Iron Castings
- E. ASTM A 126 - Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
- F. ASTM B 21 - Standard Specification for Naval Brass Rod, Bar, and Shapes.
- G. ASTM B 98 - Standard Specification for Copper-Silicon Alloy Rod, Bar, and Shapes.
- H. ASTM B 301 - Standard Specification for Free-Cutting Copper Rod and Bar.
- I. ASTM B 584 - Standard Specification for Copper Alloy Sand Casting for

General Application.

- J. ASTM E 165 - Standard Test Method for Liquid Penetrant Examination.
- K. ASTM E 709 - Standard Guide for Magnetic Particle Examination.
- L. ASTM F 1674 - Standard Test Method for Joint Restraint Products for Use with PVC Pipe.
- M. AWWA C 206 - Standard for Field Welding of Steel Water Pipe.
- N. AWWA C 207 - Standard for Steel Pipe Flanges for Waterworks Service - Sizes 4 Inches through 144 Inches.

1.4 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Conform to submittal requirements of applicable Section for type of pipe used.

PART 2 PRODUCTS

1.5 PIPE MATERIALS

- A. Install pipe materials which conform to following:
 - 1. Section 02501 - Ductile Iron Pipe and Fittings.
 - 2. Section 02506 - Polyvinyl Chloride Pipe.
- B. Conform to American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 61 and have certified by an organization accredited by ANSI.
- C. Type of pipe materials used are Contractor's option unless specifically identified on Drawings.
- D. Provide minimum of 3/8 inch inside joint recess between ends of pipe in straight pipe sections.

1.6 WELDED JOINT PROTECTION FITTING

- A. Cylindrical Corrosion Barrier manufactured by CCB Int'l Inc., **or approved equal.**
- B. O-rings: Conform to National Sanitary Foundation requirements.

1.7 RESTRAINED JOINTS

- A. Ductile-Iron Pipe: See Section 02501 - Ductile Iron Pipe and Fittings.
- B. PVC Pipe: See Section 02506 - Polyvinyl Chloride Pipe.
- C. Prestressed Concrete Cylinder Pipe, Bar-Wrapped Pipe and Steel Pipe: Welded joints (see Paragraph 3.06D).
- D. Restrained Joints where required on DIP and PVC pipe:
 - 1. Restraint devices: Manufacture of high strength ductile iron, ASTM A 536 up to 24 inches, and ASTM A 36 for sizes greater than 30 inches. Working pressure rating twice that of design test pressure.
 - 2. Bolts and connecting hardware: High strength low alloy material in accordance with ANSI A21.11/AWWA C111.

1.8 COUPLINGS AND APPURTENANCES FOR LARGE DIAMETER WATERLINE

- A. Flexible (Dresser-type) Couplings.
 - 1. Install where shown on Drawings or where allowed by City and Engineer for Contractor's convenience. Use galvanized flexible couplings when installed on galvanized pipe, which is cement lined, or when underground. Provide gaskets manufactured from Neoprene or Buna-N.
 - 2. For steel pipe; sleeve-type flexible couplings, Dresser Style 38, Rockwell Type 411, or approved equal. Thickness of middle ring equal to or greater than thickness of pipe wall.
 - 3. Flanged adapter couplings for steel pipe; Dresser Style 128, Rockwell Type 913, or approved equal.
 - 4. Use Type 316 stainless steel bolts, nuts and washers where flexible

couplings are installed underground. Coat entire coupling with 20-mil of T.C. Mastic as manufactured by Tape Coat Company, Inc., Bitumastic 50 as manufacturer by The Carboline Company, or approved equal.

- B. Victaulic Joints. Make joint with Victaulic Style 77 coupling fitted with Grade H molded synthetic rubber gasket.
- C. Flap Valves: Provide on discharge of manhole drainline as shown on Drawings.
 - 1. Body and Flap: ASTM A 126-B cast iron.
 - 2. Seats: ASTM B 21-CA482 or ASTM B 301-CA145 bronze.
 - 3. Resilient Seat: Buna-N.
 - 4. Hinge Arms: ASTM B 584-CA865 high tensile bronze.
 - 5. Hinge pins: ASTM B 98-CA655 silicon bronze.
 - 6. Provide Rodney Hunt Series FV-AC, or approved equal.

PART 3 EXECUTION

1.9 PREPARATION

- A. Conform to applicable installation specifications for types of pipe used.
- B. Employ workmen who are skilled and experienced in laying pipe of type and joint configuration being furnished. Provide watertight pipe and pipe joints. Lay pipe with bell ends facing in direction of laying.
- C. Lay pipe to lines and grades shown on Drawings. Use adequate surveying methods and equipment; employ personnel competent in use of this equipment. Horizontal and vertical deviations from alignment as indicated on Drawings shall not exceed 0.10 feet. Measure and record "as-built" horizontal alignment and vertical grade at maximum of every 50 feet on record drawings.
- D. Confirm that nine feet minimum separation from gravity sanitary sewers and manholes or separation of four feet minimum from force mains as specified in this Section in all directions unless special design is provided on Drawings:
 - 1. Water line crossing above gravity sanitary sewer or force main with

no leaks: Minimum 2-foot vertical clearance.

- E. Where above clearances cannot be attained, and special design has not been provided on Drawings, obtain direction from City and Engineer before proceeding with construction.
- F. Inform City and Engineer if unmetered sprinkler or fire line connections exist which are not shown on Drawings. **Make transfer only after approval by City and Engineer.**
- G. Keep pipe trenches free of water, which might impair pipe-laying operations. Prevent pipe bells from coming in contact with sub grade. Grade pipe trenches to provide uniform support along bottom of pipe. Excavate for bell holes for proper sealing of pipe joints after bottom has been graded and in advance of placing pipe. Lay not more than nominal city block length of not more than 300 feet of pipe in trench ahead of backfilling operations. Cover or backfill laid pipe if pipe laying operations are interrupted and during non- working hours. Place backfill carefully and simultaneously on each side of pipe to avoid lateral displacement of pipe and damage to joints. If adjustment of pipe is required after it has been laid, remove and re-lay as new pipe.
- H. City of Tomball Utility Operations Division will handle, at no cost to Contractor, operations involving opening and closing valves for wet connections and for chlorination. Contractor is responsible for handling necessary installations and removal of chlorination and testing taps and risers.
- I. If asbestos-cement (A.C.) pipe is encountered, follow safety practices outlined in Asbestos-Cement Pipe Producers Association publication, "Recommended Work Practices for A/C Pipe". Strictly adhere to "recommended practices" contained in this publication and make them "mandatory practices" for this Project.
- J. For pipe diameters 36 inches and greater, clearly mark each section of pipe and fitting with unique designation on inside of pipe. Locate unique identifying mark minimum of five feet away from either end of each section of pipe. Provide one unique identifying mark in middle of each fitting. Place markings at consistent locations. Use permanent black paint and minimum letter height of 4 inches to mark designations.
- K. Laying Large diameter Water Line
 - 1. Lay not more than 50 feet of pipe in trench ahead of backfilling operations.

2. Dig trench proper width as shown. When Contractor's operations cause trench width below top of pipe to become 4 feet wider than specified, install higher class of pipe or improved bedding, as determined by City and Engineer. No additional payment will be made for higher class of pipe or improved bedding.
 3. Prevent damage to coating when placing backfill. Use backfill material free of large rocks or stones, or other material, which could damage coatings.
 4. Before assembling couplings, lightly coat pipe ends and outside of gaskets with cup grease or liquid vegetable soap to facilitate installation. Groove pipe to manufacturer's specifications.
 5. When installing water line below existing water line provide an approved repair clamp sized for existing water line on site.
 6. Prior to proceeding with critical tie-ins submit sequence of work based on findings from "critical location" effort.
- L. Contractor is responsible for assuring chosen manufacturer fulfills requirements for extra fittings and, therefore, is responsible for costs due to downtime if requirements are not met.
- M. **Do not remove plugs or clamps during months of peak water demands; June, July and August, unless otherwise approved by City and Engineer.**
- 1.10 HANDLING, CLEANING AND INSPECTION
- A. Handling:
1. Place pipe along project site where storm water or other water will not enter or pass through pipe.
 2. Load, transport, unload, and otherwise handle pipe and fittings to prevent damage of any kind. Handle and transport pipe with equipment designed, constructed and arranged to prevent damage to pipe, lining and coating. **Do not permit bare chains, hooks, metal bars, or narrow skids or cradles to come in contact with coatings. Where required, provide pipefittings with sufficient interior strutting or cross**

bracing to prevent deflection under their own weight.

3. Hoist pipe from trench side into trench by means of sling of smooth steel cable, canvas, leather, nylon or similar material.
 4. For large diameter water lines, handle pipe only by means of sling of canvas, leather, nylon, or similar material. Sling shall be minimum 36 inches in width. Do not tear or wrinkle tape layers.
 5. Use precautions to prevent injury to pipe, protective linings and coatings.
 1. Package stacked pipe on timbers. Place protective pads under banding straps at time of packaging.
 2. Pad fork trucks with carpet or other suitable material. Use nylon straps around pipe for lift when relocating pipe with crane or backhoe.
 3. Do not lift pipe using hooks at each end of pipe.
 4. Do not place debris, tools, clothing, or other materials on pipe.
 6. Repair damage to pipe or protective lining and coating before final acceptance.
 7. For cement mortar line and coated steel pipe and PCCP, permit no visible cracks longer than 6 inches, measured within 15 degrees of line parallel to pipe longitudinal axis of finished pipe, except:
 1. In surface laitance of centrifugally cast concrete.
 2. In sections of pipe with steel reinforcing collars or wrappers.
 3. Within 12 inches of pipe ends.
 8. Reject pipe with visible cracks (not meeting exceptions) and remove from project site.
- B. Cleaning: Thoroughly clean and dry interior of pipe and fittings of foreign matter before installation and keep interior clean until Work has been accepted. Keep joint contact surfaces clean until jointing is completed. **Do**

not place debris, tools, clothing, or other materials in pipe. After pipe laying and joining operations are completed, clean inside of pipe and remove debris.

- C. Inspection: Before installation, inspect each pipe and fitting for defects. **Reject defective, damaged or unsound pipe and fittings and remove them from site.**

1.11 EARTHWORK

- A. Conform to applicable provisions of Section 02317 - Excavation and Backfilling for Utilities.
- B. Bedding: Use bedding materials in conformance with Section 02320 - Utility Backfill Materials.
- C. Backfill: Use bank run sand or earth or native soil as specified in Section 02320 - Utility Backfill Materials. Backfill excavated areas in same day excavated. When not possible, cover excavated areas using steel plates on paved areas and other protective measures elsewhere.
- D. Place material in uniform layers of prescribed maximum loose thickness and wet or dry material to approximately optimum moisture content. Compact to prescribed density. Field density tests may be made at frequency determined by City and Engineer. **Water tamping is not allowed.**
- E. Pipe Embedment: Including 6-inch pipe bedding and backfill to 12 inches above top of pipe.

1.12 PIPE CUTTING

- A. Cut pipe 12 inches and smaller with standard wheel pipe cutters. Cut pipe larger than 12 inches in manner approved by City and Engineer. Make cuts smooth and at right angles to axis of pipe. Bevel plain end with heavy file or grinder to remove sharp edges.

1.13 PIPING INSTALLATION

- A. Do not lay pipe unless sub grade is free of water. Make adjustments of pipe to line and grade by scraping away sub grade or filling in with granular material. Wedging or blocking up bell will not be acceptable.

- B. Do not install pipe at greater depth than its design allows.
- C. Protection of Pipeline: Securely place stoppers or bulkheads in openings and in end of line when construction is stopped temporarily and at end of each day's work.
- D. Perform critical location to determine actual horizontal and vertical location of existing pipe and other utilities that may affect tie-in connection. **For large diameter water lines, submit to City and Engineer horizontal and vertical dimensions signed and sealed by Registered Professional Land Surveyor, prior to submitting portion of proposed water line lay schedule for tie-in.** Refer to Section 02317 - Excavation and Backfill for Utilities for additional requirements at critical locations.
- E. Perform following additional procedures when working on plant sites.
 - 1. Seventy-two hours prior to each plant shut down or connection, schedule coordination meeting with City and Engineer and Water Production personnel. At this meeting, present proposed sequencing of Work and verification of readiness to complete Work as required and within time permitted. **Do not proceed with Work until City and Engineer agrees key personnel, equipment and materials are on hand to complete Work.**
 - 2. Prior to fully excavating around existing piping, excavate as minimal as possible to confirm type and condition of existing joints. Verify size, type, and condition of pipe prior to ordering materials or fully mobilizing for Work.
 - 3. **Do not proceed with connections to existing piping and identified critical stages of work unless approved by City and Engineer and City's Water Production Division operator is present to observe.**
 - 4. **Coordinate with City's Water Production Division operators to obtain reduction in operating pressures prior to performing connections to existing piping.**
 - 5. Make connections to existing piping only when two valves are closed off between connection and source of water pressure. **Do not make connection relying solely on one valve, unless otherwise approved by City and Engineer.**

6. Perform critical stages of Work identified on Drawings at night or during low water demand months as specified in Section 01110 - Summary of Work.
 7. Excavation equipment used on plant sites to have smooth bucket, no teeth or side cutters.
 8. Before each "dig" with mechanical excavator, probe ground to determine potential obstructions. Repeat procedure until existing pipe is located or excavation reaches desired elevation. Perform excavations within one foot to existing piping by hand methods.
 9. Provide adequate notice to pipe manufacturer's representative when connecting or modifying existing prestressed or pretension concrete cylinder pipe.
 10. Provide field surveyed (horizontal and vertical elevations) "as-builts" of new construction and existing underground utilities encountered. Submit in accordance with Section 01330 - Submittal Procedures.
 11. No night work or plant shut down will be scheduled to begin two working days before or after designated City Holidays.
- F. For tie-ins to existing water lines, provide necessary material on hand to facilitate connection prior to shutting down existing water line.

1.14 JOINTS AND JOINTING

- A. Rubber Gasketed Bell-and-Spigot Joints for Concrete Cylinder Pipe, Bar Wrapped Pipe PVC, Steel, and DIP:
1. After rubber gasket is placed in spigot groove of pipe, equalize rubber gasket cross section by inserting tool or bar recommended by manufacturer under rubber gasket and moving it around periphery of pipe spigot.
 2. Lubricate gaskets with nontoxic water-soluble lubricant before pipe units are joined.
 3. Fit pipe units together in manner to avoid twisting or otherwise displacing or damaging rubber gasket.
 4. After pipe sections are joined, check gaskets to ensure that no displacement of gasket has occurred. If displacement has occurred,

remove pipe section and remake joint as for new pipe. Remove old gasket, inspect for damage, and replace, if necessary, before remaking joint.

5. Where preventing movement of 16-inch diameter or greater pipe is necessary due to thrust, use restrained joints.
 1. Include buoyancy conditions for soil unit weight when computing thrust restraint calculations.
 - 2. Do not include passive resistance of soil in thrust restraint calculations.**
6. Provide means to prevent full engagement of spigot into bell as shown on Drawings. Means may consist of wedges or other types of stops as approved by City and Engineer.
- B. Flanged Joints where required on Concrete Cylinder Pipe, Bar Wrapped Pipe, Ductile Iron Pipe, or Steel Pipe: **NOT USED**
- C. Welded Joints (Concrete Cylinder Pipe, Bar Wrapped Pipe, Steel Pipe): **NOT USED**
- D. Harnessed Joints (Concrete Cylinder Pipe, Bar Wrapped Pipe): **NOT USED**
- E. Restrained Joints
 1. Installation.
 - a. Install restrained joints mechanism in accordance with manufacturer=s recommendations.
 - b. Examine and clean mechanism; remove dirt, debris, and other foreign material.
 - c. Apply gasket and joint NSF 61 FDA food grade approved lubricant.
 - d. Verify gasket is evenly seated.
 - e. Do not over stab pipe into mechanism.
 2. For existing water lines and water lines less than 16 inches in diameter, restrain pipe joints with concrete thrust blocks or provide restrained joints.

3. Prevent any lateral movement of thrust restraints throughout pressure testing and operation. Place 2500 psi concrete conforming to Section 03315 - Concrete for Utility Construction, for blocking at each change in direction of existing water lines, to brace pipe against undisturbed trench walls. Finish placement of concrete blocking, made from Type I cement, 4 days prior to hydrostatic testing of pipeline. Test may be made 2 days after completion of blocking if Type II cement is used.
 4. Thrust restraint lengths shown on Drawings are minimum anticipated lengths. These lengths are based on deflections indicated and on use of prestressed concrete cylinder pipe. Adjustments in deflections or use of other pipe material may result in reduction or increase of thrust lengths. Perform calculations by pipe manufacturer to verify proposed thrust restraint lengths. Submit calculations for all pipe materials sealed by a registered Professional Engineer in State of Texas for review by City and Engineer. **Make adjustments in thrust restraint lengths at no additional cost to City.**
 5. Passive resistance of soil will not be permitted in calculation of thrust restraint.
 6. Use minimum 16-foot length of pipe in and out of joints made up of beveled pipe where restraint joint lengths are not identified on Drawings. Otherwise, provide restraint joints for a minimum length of 16 feet on each side of beveled joints.
- F. Joint Grout (Concrete Cylinder Pipe, Bar Wrapped Pipe, Steel Pipe): **NOT USED**
- G. Joint Testing: In addition to testing individual joints with feeler gauge approximately 1/2 inch wide and 0.015-inch thick, use other joint testing procedure approved or recommended by pipe manufacturer which will help ensure watertight installation prior to backfilling. **These tests shall be made at no additional cost to City.**
- H. Make curves and bends by deflecting joints or other method as recommended by manufacturer and approved by City and Engineer. Submit details of other methods of providing curves and bends, which exceed manufacturer's recommended deflection prior to installation.
1. Deflection of pipe joints shall not exceed maximum deflection recommended by pipe manufacturer, unless otherwise indicated on Drawings.

2. If deflection exceeds that specified but is less than 5 percent, repair entire deflected pipe section such that maximum deflection allowed is not exceeded.
 3. If deflection is equal to or exceeds 5 percent from that specified, remove entire portion of deflected pipe section and install new pipe.
 4. Replace, repair, or reapply coatings and linings as required.
 5. Assessment of deflection may be measured by City and Engineer at location along pipe. Arithmetical averages of deflection or similar average measurement methods will not be deemed as meeting intent of standard.
 6. When rubber gasketed pipe is laid on curve, join pipe in straight alignment and then deflect to curved alignment.
- I. Closures Sections and Approved Field Modifications to Steel, Concrete Cylinder Pipe, Bar Wrapped Pipe and Fittings:
1. Apply welded-wire fabric reinforcement to interior and exterior of exposed interior and exterior surfaces greater than 6 inches in diameter. Welded-wire fabric: minimum W1; maximum spacing 2 inches by 4 inches; 3/8 inch from surface of steel plate or middle third of lining or coating thickness for mortar thickness less than 3/4 inch.
 2. Fill exposed interior and exterior surfaces with non-shrink grout.
 3. For pipe diameters 36 inches and greater, perform field welds on interior and exterior of pipe.
 4. For large diameter water lines, provide minimum overlap of 4 inches of butt strap over adjacent piece on butt-strap closures.

1.15 CATHODIC PROTECTION APPURTENANCES

- A. Where identified on Drawings, modify pipe for cathodic protection as detailed on Drawings and specified. Unless otherwise noted, provide insulation kits at connections to existing water system or at locations to isolate one type of cathodic system from another type, between water line, access manhole piping and other major openings in water line, or as shown on Drawings.

- B. Bond joints for pipe installed in tunnel or open cut, except where insulating flanges are provided. Weld strap or clip between bell and spigot of each joint or as shown on Drawings. No additional bonding required where joints are welded for thrust restraint. **Repair coatings as specified by appropriate AWWA standard, as recommended by manufacturer, and as approved by City and Engineer.**
- C. Bonding Strap or Clip: Free of foreign material that may increase contact resistance between wire and strap or clip.

1.16 SECURING, SUPPORTING AND ANCHORING

- A. Support piping as shown on Drawings and as specified in this Section, to maintain line and grade and prevent transfer of stress to adjacent structures.
- B. Where shown on Drawings, anchor pipe fittings and bends installed on water line by welding consecutive joints of pipe together to distance each side of fitting. Restrained length, as shown on Drawings, assumes that installation of pipe and subsequent hydrostatic testing begin upstream and proceed downstream, with respect to normal flow of water in pipe. If installation and testing differ from this assumption, submit for approval, revised method of restraining pipe joints upstream and downstream of device used to test against (block valve, blind flange, or dished head plug).
- C. Use adequate temporary blocking of fittings when making connections to distribution system and during hydrostatic tests. Use sufficient anchorage and blocking to resist stresses and forces encountered while tapping existing water line.

1.17 POLYETHYLENE WRAP FOR DUCTILE IRON PIPE

- A. Double wrap pipe and appurtenances (except fire hydrants and fusion bond or polyurethane coated fittings) with 8-mil polyethylene film.
- B. Conform to requirements of Section 02528 - Polyethylene Wrap.

1.18 CLEANUP AND RESTORATION

- A. Provide cleanup and restoration crews to work closely behind pipe laying crews, and where necessary, during chlorination, testing, service transfers, abandonment of old water lines, backfill and surface restoration.

- B. Upon completion of section not exceeding 4000 feet per crew, chlorinate and pressure test. Begin transfer of services no later than 7 calendar days after successful completion of chlorination and pressure testing.
- C. After transfer of services, but no later than 21 calendar days after successful completion of chlorination and pressure testing, begin abandonment of old water lines, including resodding and placement of sidewalks and pavements.
- D. Do not begin construction of additional sections if above conditions are not met.
- E. For large diameter water lines, do not install more than 2000 feet of water line, without previous 2000 feet being cleaned up and site fully restored. Schedule paving crews so repaving work will not lag behind pipe laying work by more than 1000 feet. Failure to comply with this requirement will result in "Notice of Nonconformance".
- F. Complete site restoration within 30 days from date water line is successfully disinfected and hydrostatically tested, **unless extended in writing by City and Engineer.**
- G. For projects involving multiple subdivisions or locations, limit water line installation to maximum of two project site locations.

1.19 CLEANING PIPING SYSTEMS

- A. Remove construction debris or foreign material and thoroughly broom clean and flush piping systems. Provide temporary connections, equipment and labor for cleaning. **City must inspect water line for cleanliness prior to filling.**

1.20 DISINFECTION OF WATER LINES

- A. Conform to requirements of Section 02514 - Disinfection of Water Lines.

1.21 FIELD HYDROSTATIC TESTS

- A. Conform to requirements of Section 02515 - Hydrostatic Testing of Pipelines.

END OF SECTION

Section 02512

WATER TAP AND SERVICE LINE INSTALLATION

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Tapping existing mains and furnishing and installing new service lines for water.
- B. Relocation of existing small water meters.
- C. Specifications identify requirements for both small-diameter (less than or equal to 20 inches) water lines and large-diameter (greater than 20 inches) water lines. When specifications for large-diameter water lines differ from those for small-diameter water lines, paragraphs for large-diameter water lines will govern for large-diameter pipe.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. Payment for water taps and poly service lines: $\frac{3}{4}$ inch through 2 inch is on unit price basis for each installation.
 - 2. Payment for water taps and service lines 12 inch through 2 inch is on unit price basis for each installation.
 - 3. Payment for installation includes locating water line, tap installation and connection to meter and restoring site.
 - 4. Payment for each small meter includes labor, materials, and equipment to relocate existing small meter.
 - 5. No additional payment will be made for bedding, backfill, compaction, push under pavement, etc.
 - 6. Refer to Section 01270 - Measurement and Payment for unit price procedures
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. AWWA C 800 - Standard for Underground Service Line Valves and Fittings.
- B. AWWA C 900 - Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. Through 12 in., for Water Distribution.

1.04 DEFINITIONS

- A. Short Side Connection: Service line connecting proposed curb stop, located inside water meter box, to water line on same side of street.
- B. Long Side Connection: Service line connecting proposed curb stop, located inside water meter box, to water line on opposite side of street or from center of streets where supply line is located in street center such as boulevards and streets with esplanades. Distance not to exceed 60 linear feet (at right angles to water line).
- 2. Extra Long Side Connection: Service line connecting proposed curb stop, located inside water meter box, to water line on opposite side of street or from center of streets where supply line is located in street center such as boulevards and streets with esplanades. Distance greater than or equal to 60 linear feet (at right angles to water line).

PART 2 PRODUCTS

2.01 MATERIALS

- A. Copper Tubing: In accordance with Section 02503 - Copper Tubing. Polybutylene tubing is not permitted.
- B. Corporation Stops: AWWA C 800 as modified in this Section:
 - 1. Inlet End: AWWA standard thread
 - 2. Valve Body: Tapered plug type, O-ring seat ball type, or rubber seat ball type
 - 3. Outlet End: Flared-copper connection for use with Type K, soft copper or compression type fitting
- C. Provide taps for water line types and sizes in accordance with pipe tapping schedule located at end of this Section.

- D. Dual Strap Saddles: Red brass body and straps; ductile-iron; vinyl-coated body and straps; or ductile-iron, vinyl-coated body and stainless-steel straps.
- E. Taps for PVC Water Lines: Use dual-strap or single, wide-band strap saddles which provide full support around circumference of pipe and bearing area of sufficient width along axis of pipe, 2 inches minimum, ensuring that pipe will not be distorted when saddle is tightened. Romac Series 101N wide-band, stainless steel tapping saddle with AWWA standard thread (Mueller thread), **or approved equal.**
- F. Taps for Steel Pipe: Not allowed, unless specifically approved by City and Engineer. Use saddle only when tap is approved on steel pipe.
- G. Curb Stops and Brass Fittings: AWWA C 800 as modified in this Section.
 - 1. Inlet End: Flared copper connection or compression-type fitting
 - 2. Valve Body: Straight-through or angled, meter-stop design equipped with following:
 - a. O-ring seal straight plug type
 - b. Rubber seat ball type
 - 3. Outlet End: Female, iron-pipe thread or swivel-nut, meter-spud thread on 1/2-inch and 1-inch stops and 2-hole flange on 1 1/2-inch and 2-inch sizes.
 - 4. Fittings: Mueller or approved equal. Use same size open-end wrenches and tapping machines as used with respective Mueller fittings.
 - 5. Factory Testing of Brass Fittings:
 - a. Submerge in water for 10 seconds at 85 psi with stop in both closed and open positions.
 - b. Reject fitting that shows air leakage. City and Engineer may confirm tests locally. Entire lot from which samples were taken will be rejected when random sampling discloses unsatisfactory fittings.
- H. Angle Stops: In accordance with AWWA C 800; ground-key, stop type with bronze lock-wing head stop cap; inlet and outlet threads conform to application

tables of AWWA C 800; and inlets flared connection or Mueller 110 compression.

1. Outlet for 1/2-inch and 1-inch size: Meter swivel nut with saddle support.
 2. Outlet for 1 1/2-inch through 2-inch size: O-ring sealed meter flange, iron pipe threads.
- I. Fittings: In accordance with AWWA C 800 and following:
1. Castings: Smooth, free from burrs, scales, blisters, sand holes, and defects which would make them unfit for intended use.
 2. Nuts: Smooth cast and have symmetrical hexagonal wrench flats.
 3. Flare-Joint Fittings: Smooth cast. Machine seating surfaces for metal-to-metal seal to proper taper or curve, free from pits or protrusions.
 4. Thread fittings, of all types, shall have N.P.T. or AWWA threads, and protect male threaded ends in shipment by plastic coating, or approved equal.
 5. Compression tube fittings shall have Buna-N beveled gasket.
 6. Stamp of manufacturer's name or trademark and of fitting size on body.

PART 3 EXECUTION

3.01 GENERAL

- A. For service lines and lateral connections larger than those allowed in Pipe Tapping Schedule, branch connections and multiple taps may be used. Space corporation stops minimum of 2 feet apart.
- B. Tapped collars of appropriate sizes: Approved in new construction only provided they are set at right angles to proposed meter location.
- C. Use tapping machine manufactured for pressure tapping purposes for 2-inch and smaller service taps on pressurized water lines.
- D. Locate water meters one foot inside street right-of-way, or when this is not

feasible, one foot on curb side of sidewalk. Contact City and Engineer when major landscaping or trees conflict with service line and meter box location. No additional payment will be made for work on customer side of meter.

- E. New location and installation of existing small meter shall conform to requirements of this Section.

3.02 SERVICE INSTALLATION

- A. Set service taps at right angles to proposed meter location and locate taps in upper pipe segment within 45 degrees of pipe spring line.
- B. Install service lines in open-cut trench in accordance with Section 02317 - Excavation and Backfill for Utilities. Install service lines under paved roadways, other paved areas and areas indicated on Drawings in bored hole in accordance with Paragraph 3.01G.
- C. Lay service lines with minimum of 30 inches of cover as measured from top of curb or, in absence of curbs, from centerline elevation of crowned streets or roads. Provide minimum of 18 inches of cover below flow line of ditches to service lines.
- D. Service lines across existing street (push-unders): Pull service line through prepared hole under paving. Use only full lengths of tubing. Take care not to damage copper tubing when pulling it through hole. Compression-type union is only permitted when span underneath pavement cannot be accomplished with a full standard length of tubing. Use one compression-type union for each full length of tubing.
- E. Maintain service lines free of dirt and foreign matter.
- F. Install service lines so that top of meter will be 4 to 6 inches below finished grade.
- G. Anticipate existing sanitary sewers to have cement stabilized sand backfill to bottom of pavement. Include cost of such crossings in unit price for services.

3.03 CURB STOP INSTALLATION

- A. Set curb stops or angle stops at outer end of service line inside of meter box. Secure opening in curb stop to prevent unwanted material from entering. In close quarters, make S-curve in field. Do not flatten tube. In 1/2-inch and 1-inch services,

install meter coupling, swivel-nut, or curb stop ahead of meter. Install straight meter coupling on outlet end of meter.

3.04 SEQUENCE OF OPERATIONS

- A. Open trench for proposed service line in accordance with Section 02317 - Excavation and Backfill for Utilities.
- B. Install curb stop on meter end of service line.
- C. With curb stop open and prior to connecting service line to meter in slack position, open corporation stop and flush service line thoroughly. Close curb stop, leaving corporation stop in full-open position.
- D. Check service line for apparent leaks. Repair leaks before proceeding.
- E. Schedule inspection with City and Engineer prior to backfilling. After inspection, backfill in accordance with Section 02317 - Excavation and Backfill for Utilities.
- F. Install meter box centered over meter with top of lid flush with finished grade. Meter box: Refer to Section 02085 - Valve Boxes, Meter Boxes, and Meter Vaults.

END OF SECTION

Table 02512-1

PIPE TAPPING SCHEDULE				
WATERLINE TYPE AND DIAMETER	SERVICE SIZE			
	3/4"	1"	1-1/2"	2"
4" Cast Iron or Ductile Iron	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
4" Asbestos Cement	WBSS	WBSS	DSS, WBSS	DSS, WBSS
4" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" and 8" Cast Iron or Ductile Iron	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" and 8" Asbestos Cement	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" and 8" Cast Iron or Ductile Iron	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" and 8" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" Cast Iron or Ductile Iron	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" Asbestos Cement	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
16" and Up Cast Iron or Ductile Iron	DWBSS	DWBSS	DWBSS	DWBSS
16" and Up Asbestos Cement	DWBSS	DWBSS	DWBSS	DWBSS
16" and Up PVC (AWWA C900)	DWBSS	DWBSS	DWBSS	DWBSS

DSS - DUAL STRAP SADDLES
WBSS - WIDE BAND STRAP SADDLES
DWBSS - DUAL WIDE BAND STRAP SADDLES

Section 02513

WET CONNECTIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wet connections for new water lines and service lines to existing water lines.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. Payment for wet connections shown on Drawings is on unit price basis for each wet connection. Separate payment will be made for each size of water line.
2. No compensation will be given for extra work or for damages occurring as result of incomplete shutoff.
3. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. AWWA C 800 - Standard for Underground Service Line Valves and Fittings.

1.04 DEFINITIONS

- A. Wet connections consist of isolating sections of pipe to be connected with installed valves, draining isolated sections, and completing connections.
- B. Connection of 2-inch or smaller lines, which may be referred to on Drawings as "2-inch standard connections" or "gooseneck connections" will be measured as 2-inch wet connections. This item is not to be used as part of 2-inch service line.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Pipe shall conform to requirements of the applicable portions of Sections 02501 through 02528 related to piping materials and to water distribution.
- B. Corporation cocks and saddles shall conform to requirements of Section 02512 - Water Tap and Service Line Installation.
- C. Valves shall conform to requirements of Section 02521 - Gate Valves.
- D. Brass fittings shall conform to requirements of AWWA C 800.

PART 3 EXECUTION

3.01 CONNECTION OPERATIONS

- A. Plan wet connections in manner and at hours with least inconvenience public.
Notify City and Engineer at least 72 hours in advance of making connections.
- B. **Do not operate valves on water lines in use by City.** City of Tomball Utility Operations Division will handle, at no cost to Contractor, operations involving opening and closing valves for wet connections.
- C. Conduct connection operations when Inspector is at job site. Connection work shall progress without interruption until complete once existing water lines have been cut or plugs have been removed for making connections.

3.02 2-INCH WET CONNECTIONS

- A. Tap water line. Use corporation cocks, saddles, copper tubing as required for line and grade adjustment, and brass fittings necessary to adapt to existing water line. Use 2-inch valves when indicated on Drawings for 2-inch copper gooseneck connections.

END OF SECTION

Section 02514

DISINFECTION OF WATER LINES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Disinfection of potable water lines.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. No separate payment will be made for disinfection of water lines under this Section. Include cost in unit price of water lines being disinfected.
2. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Adjusting Payment for Retesting.

1. Subsequent disinfection operations which may be necessary due to nonconforming or incomplete construction will be charged to Contractor. Charges will be deducted from retainage amounts when construction estimates are processed for final payment.
2. Total charge will consist of base charge of \$135.00 plus footage charge based on number of feet of specified diameter pipe in construction project. Footage charge is as follows:

Size of Pipe	Charge per Linear Foot
2-inch to 4-inch	\$0.03
6-inch	\$0.04
8-inch	\$0.05
10-inch to 12-inch	\$0.07
16-inch to 20-inch	\$0.09
24-inch to 30-inch	\$0.13
32-inch to 48-inch	\$0.16
54-inch	\$0.20
60-inch	\$0.22
66-inch	\$0.31
72-inch to 84-inch	\$0.40
90-inch to 96-inch	\$0.58
108-inch	\$0.75
120-inch or larger	\$1.00

- C. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. AWWA C 651 - Standard for Disinfecting Water Mains.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 CONDUCTING DISINFECTION

- A. Promptly disinfect water lines constructed before tests are conducted on water lines and before water lines are connected to City water distribution system.
- B. Water for disinfection and flushing will be furnished by City without charge.
- C. Unless otherwise provided in Contract Documents, City will conduct disinfection operations assisted by Contractor.
- D. Coordinate chlorination operations through City and Engineer.

3.02 PREPARATION

- A. Provide temporary blind flanges, cast-iron sleeves, plugs, necessary service taps, copper service leads, risers and jumpers of sizes, location and materials, and other items needed to facilitate disinfection of new water lines prior to connection to City water distribution system. Normally, each valved section of water line requires two each 3/4-inch taps. A 2-inch minimum blow-off is required for water lines up to and including 6-inch diameter.
- B. Use fire hydrants as blow-offs to flush newly constructed water lines 8-inch diameters and above. Where fire hydrants are not available on water lines, install temporary blow-off valves and remove promptly upon successful completion of disinfection and testing.
- C. Slowly fill each section of pipe with water in manner approved by City and Engineer. Average water velocity when filling pipeline should be less than one foot per second and shall not, under any circumstance, exceed 2 feet per second. Before beginning disinfection operations, expel air from pipeline.

- D. Backfill excavations immediately after installation of risers or blow-offs.
- E. Install blow-off valves at end of water line to facilitate flushing of dead-end water lines. Install permanent blow-off valves according to Drawings.

3.03 DISINFECTION BY CITY PERSONNEL

- A. Correct problems that may prevent disinfection operations prior to advising City and Engineer to perform disinfection work. When disinfection work cannot be performed due to covered up valves, missing valve stacks, inoperative fire hydrants or other nonconforming construction, charges will be levied against Contractor for each trip made by City personnel.
- B. Notify and coordinate with City and Engineer minimum of 72 hours before disinfection work is to be performed. Assist City personnel during disinfection operations.

3.04 DISINFECTION BY CONTRACTOR

- A. The following procedure will be used when disinfection by Contractor is required by Contract Documents:
 - 1. Use not less than 100 parts of chlorine per million parts of water.
 - 2. Introduce chlorinating material to water lines in accordance with AWWA C 651.
 - 3. After contact period of not less than 24 hours, flush system with clean water until residual chlorine is no greater than 1.0 parts per million parts of water.
 - 4. Open and close valves in lines being sterilized several times during contact period.
 - 5. If chemical compound is used for sterilizing agent, place in pipes as directed by City and Engineer.

3.03 BACTERIOLOGICAL TESTING

- A. After disinfection and flushing of water lines, bacteriological tests will be performed by City or testing laboratory in accordance with Section 01454 - Testing Laboratory Services. When test results indicate need for additional disinfection of water lines based upon Texas Department of Health requirements, assist City with additional disinfection operations.

3.06 COMPLETION

- A. Upon completion of disinfection and testing, remove risers except those approved for use in subsequent hydrostatic testing, and backfill excavation promptly.

END OF SECTION

Section 02515

HYDROSTATIC TESTING OF PIPELINES

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Field hydrostatic testing of newly installed water pipelines.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. No payment will be made for hydrostatic testing of pipelines under this Section. Include cost in unit price of pipelines being tested.
 - 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N

3.01 PREPARATION

- A. Disinfect water system pipelines prior to hydrostatic testing.
- B. Hydrostatically test newly installed water pipelines after disinfection, when required, and before connecting to City water distribution system.
- C. Water for testing will be charged to Contractor in accordance with City Ordinances. Prior to hydrostatic testing, provide a transient meter and have it tested, approved, and sealed by City's Department of Public Works and Engineering meter repair shop. **Cost to certify Contractor's meter will be at no additional cost to City.**

- D. For large diameter water lines, test pipelines in lengths between valves, or plugs, of not more than 4400 feet.
- E. Test small diameter pipelines in lengths between valves, or plugs, of not more than 1500 feet.
- F. Conduct hydrostatic tests in presence of City Inspector.

3.02 TEST PROCEDURES

- A. Furnish, install, and operate connections, pump, meter and gages necessary for hydrostatic testing.
- B. Allow pipeline to sit minimum of 24 hours from time it is initially disinfected until testing begins, to allow pipe wall or lining material to absorb water. Periods of up to 7 days may be required for mortar lining to become saturated.
- C. For small diameter pipelines, expel air and apply minimum test pressure of 125 psi. For large diameter water lines, expel air and apply minimum test pressure of 150 psi.
- D. Begin test by 9:00 a.m., **unless otherwise approved by City and Engineer.** Maintain test pressure for 8 hours. When large quantity of water is required to maintain pressure during test, discontinue testing until cause of water loss is identified and corrected.
- E. Keep valves inside pressure reducing stations closed during hydrostatic pressure test.

3.03 ALLOWABLE LEAKAGE FOR WATERLINES

- A. During hydrostatic tests, no leakage will be allowed for sections of water lines consisting of welded joints.
- B. Maximum allowable leakage for water lines with rubber gasketed joints: 3.19 gallons per inch nominal diameter per mile of pipe per 24 hours while testing.
- C. For meter run installation, when Work cannot be isolated and line fails pressure test, visual inspection of Work by City and Engineer for leakage during pressure test may be used to fulfill requirements of this section.

3.04 CORRECTION FOR FAILED TESTS

- A. Repair joints showing visible leaks on surface regardless of total leakage shown on test. Check valves and fittings to ensure that no leakage occurs that could affect or invalidate test. Remove cracked or defective pipes, fittings, and valves discovered during pressure test and replace with new items.
- B. City and Engineer may require failed lines to be disinfected after repair and prior to retesting. Conduct and pay for subsequent disinfection operations in accordance with requirements of Section 02514 - Disinfection of Water Lines. Pay for water required for additional disinfection and retesting.
- C. Repeat test until satisfactory results are obtained.

3.05 COMPLETION

- A. Upon satisfactory completion of testing, remove risers remaining from disinfection and hydrostatic testing, and backfill excavation promptly.

END OF SECTION

Section 02516

CUT, PLUG AND ABANDONMENT OF WATER LINES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cut, plug and abandonment of water lines.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. Payment for cut, plug, and abandonment of water lines is on a unit price basis for each cut, plug, and abandonment performed. Separate payment will be made for each size of water line.
2. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit product data for proposed plugs and clamps for approval.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Concrete for reaction blocks: Class B conforming to requirements of Section 03315 - Concrete for Utility Construction.
- B. Plugs and clamps: Applicable for type of pipe to be plugged.

PART 3 EXECUTION

3.01 APPLICATION

- A. Do not begin cut, plug and abandonment operations until replacement water line has been constructed, disinfected, and tested, and service lines have been transferred to replacement water line.
- B. Install plug, clamp, and concrete reaction block and make cut at location shown on Drawings.
- C. Main to be abandoned shall not be valved off and shall not be cut or plugged other than at supply water line or as shown on Drawings.
- D. After water line to be abandoned has been cut and plugged, check for other sources feeding abandoned water line. When sources are found, notify City and Engineer immediately. Cut and plug abandoned water line at point of other feed as directed by City and Engineer.
- E. Plug or cap ends or openings in abandoned water line in manner approved by City and Engineer.
- F. Remove and dispose of surface identifications such as valve boxes and fire hydrants. Valve boxes in improved streets, other than shell, may be filled with concrete after removing cap.
- G. Backfill excavations in accordance with Section 02317 - Excavation and Backfill for Utilities.

END OF SECTION

Section 02521

GATE VALVES

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Gate valves.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. No separate payment will be made for gate valves 20 inches in diameter and smaller under this Section. Include payment in unit price for water lines.
2. Payment for gate valves 24 inches to 36 inches in diameter is on a unit price basis. Unit price includes cost of required box for gate valves.
3. Payment for 2-inch blow-off valve with box is on a unit price basis for each installation.
4. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ASTM A 307 - Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile.
- B. ASTM B 62 - Standard Specification for Composition Bronze or Ounce Metal Casting.
- C. ASTM D 429 - Standard Test Methods for Rubber Property-Adhesion to Rigid Substrates.

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- D. ASTM B 763 - Standard Specification for Copper Alloy Sand Casting for Valve Application.
- E. AWWA C 500 - Standard for Metal-Seated Gate Valves for Water Supply Service.
- F. AWWA C 509 - Standard for Resilient-Seated Gate Valves for Water Supply Service.
- G. AWWA C 515- Standard for Reduced Wall, Resilient- Seated Gate Valves for Water Supply Service.
- H. AWWA C 550 - Standard for Protective Epoxy Interior Coatings for Valves and Hydrants.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit manufacturer's product data for proposed valves for approval.
- 4. Provide detailed drawings of gearing mechanism for 20-inch and larger gate valves.

1.05 QUALITY CONTROL

- A. Submit manufacturer's affidavit that gate valves are manufactured in the United States and conform to stated requirements of AWWA C 500, AWWA C 509, AWWA C 515, and this Section, and that they have been satisfactorily tested in the United States in accordance with AWWA C 500, AWWA C 509, and AWWA C 515.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Gate Valves: AWWA C 500, AWWA C 509, AWWA C 515 and additional requirements of this Section. Direct bury valves and those in subsurface vaults open clockwise; aboveground and plant valves open counterclockwise.
- B. If type of valve is not indicated on Drawings, use gate valves as line valves for sizes 20-inches and smaller. When type of valve is indicated, no substitute is allowed.
- C. Gate Valves 1-1/2 Inches in Diameter and Smaller: 125 psig; bronze; rising-

stem; single- wedge; disc type; screwed ends; such as Crane No. 428, or approved equal.

- D. Coatings for Gate Valves 2 Inches and Larger: AWWA C 550; Indurall 3300 or approved equal, non-toxic, imparts no taste to water, functions as physical, chemical, and electrical barrier between base metal and surroundings, minimum 8-mil-thick, fusion-bonded epoxy. Prior to assembly of valve, apply protective coating to interior and exterior surfaces of body.
- E. Gate Valves 2 Inches in Diameter: Iron body, double gate, non-rising stem, 150-pound test, 2-inch square nut operating clockwise to open.
- F. Gate Valves 4 Inches to 12 Inches in Diameter: Non-directional, standard-wall resilient seated (AWWA C 509), parallel seat double disc (AWWA C 500), or reduced-wall resilient seated gate valves (AWWA C 515), 200 psig pressure rating, bronze mounting, push-on bell ends with rubber joint rings, and nut-operated unless otherwise specified. Provide standard-wall resilient seated valves manufactured by American Darling AFC-500, US Pipe Metroseal 200, or approved equal. Provide reduced-wall resilient seated valves manufactured by American Flow Control Series 2500 or approved equal. Provide double disc valves manufactured by American Darling 52, Clow F-6102, or approved equal. Comply with following requirements unless otherwise specified in Drawings:
 - 1. Design: Fully encapsulated rubber wedge or rubber seat ring mechanically attached with minimum 304 stainless-steel fasteners or screws; threaded connection isolated from water by compressed rubber around opening.
 - 2. Body: Cast or ductile iron, flange bonnet and stuffing box together with ASTM A 307 Grade B bolts. Manufacturer's initials, pressure rating, and year manufactured shall be cast in body.
 - 3. Bronze: Valve components in waterway to contain no more than 15 percent zinc and not more than 2 percent aluminum.
 - 4. Stems: ASTM B 763 bronze, alloy number 995 minimum yield strength of 40,000 psi; minimum elongation in 2-inches of 12 percent, non-rising.
 - 5. O-rings: For AWWA C 500, Section 3.12.2. For AWWA C 509, Sections 2.2.6 and 4.8.2. For AWWA C 515, Section 4.2.2.5.
 - 6. Stem Seals Consist of three O-rings, two above and one below thrust collar

with anti- friction washer located above thrust collar for operating torque.

7. Stem Nut: Independent or integrally cast of ASTM B 62 bronze.
 8. Resilient Wedge: Molded, synthetic rubber, vulcanized and bonded to cast or ductile iron wedge or attached with 304 stainless steel screws tested to meet or exceed ASTM D 429 Method B; seat against epoxy-coated surface in valve body.
 9. Bolts: AWWA C 500 Section 3.4, AWWA C 509 Section 4.4 or AWWA C 515 Section 4.4.4; stainless steel; cadmium plated, or zinc coated.
- G. Gate Valves 14 to 24 inches in Diameter: AWWA C 500; parallel seat double disc, or AWWA C 515; reduced-wall, resilient seated gate valves; push-on bell ends with rubber rings and nut- operated unless otherwise specified. Provide reduced-wall resilient seated valves with 250 psig pressure rating and manufactured by American Flow Control Series 2500, **or approved equal**. Provide double disc valves with 150 psig pressure rating and manufactured by American Darling 52, Clow F-6102, **or approved equal**. Comply with following requirements unless otherwise specified on Drawings:
1. Body: Cast iron or ductile iron; flange together bonnet and stuffing box with ASTM A 307 Grade B bolts. Cast following into valve body manufacturers initials, pressure rating, and year manufactured. When horizontally mounted, equip valves greater in diameter than 12 inches with rollers, tracks, and scrapers.
 2. O-rings: For AWWA C 500, Section 3.12.2. For AWWA C 515, Section 4.2.2.5.
 3. Stems: ASTM B 763 bronze, alloy number 995 minimum yield strength of 40,000 psi; minimum elongation in 2-inches of 12 percent, non-rising.
 4. Stem Nut: Machined from ASTM B 62 bronze rod with integral forged thrust collar machined to size; non-rising.
 5. Stem Seals: Consist of three O-rings, two above and one below thrust collar with anti- friction washer located above thrust collar for operating torque.
 6. Bolts: AWWA C 500 Section 3.4 or AWWA C 515 Section 4.4.4; stainless steel; cadmium plated, or zinc coated.
 7. Discs: Cast iron with bronze disc rings securely peened into machined dovetailed grooves.

8. Wedging Device: Solid bronze or cast-iron, bronze-mounted wedges. Thin plates or shapes integrally cast into cast-iron surfaces are acceptable. Other moving surfaces integral to wedging action shall be bronze monel or nickel alloy-to-iron.
 9. Bronze Mounting: Built as integral unit mounted over, or supported on, cast-iron base and of sufficient dimensions to be structurally sound and adequate for imposed forces.
 10. Gear Cases: Cast iron; furnished on 18-inch and larger valves and of extended type with steel side plates, lubricated, gear case enclosed with oil seal or O-rings at shaft openings.
 11. Stuffing Boxes: Located on top of bonnet and outside gear case.
- H. Gate Valves 20 Inches and Larger: Provide AWWA C 515; reduced-wall, resilient seated gate valves. Furnish with spur or bevel gearing.
1. Mount valves horizontally if proper ground clearance cannot be achieved by normal vertical installation. For horizontally mounted gate valves, provide bevel operation gear mounted vertically for above ground operation.
 2. Provide resilient wedge type valves rated for 250 p.s.i.g.
 3. Use valve body, bonnet, wedge, and operator nut constructed of ductile iron. Fully encapsulate exterior of ductile iron wedge with rubber.
 4. Ensure wedge is symmetrical and seals equally well with flow in either direction.
 5. Provide ductile iron operator nut with four flats at stem connection to apply even input torque to the stem.
 6. Provide high strength bronze stem and nut.
 7. Provide pressure O-rings as gaskets.
 8. Provide stem sealed by three O-rings. Top two O-rings are to be replaceable with valve fully open at full rated working pressure.
 9. Provide thrust washers to the thrust collar for easy valve operation.

- I. Valves 4 Inches through 12 Inches for Installation in Vertical Pipe Lines: Double disc, square bottom.
- J. Valves 14 Inches and Larger for Installation in Horizontal Pipe Lines: Equipped with bronze shoes and slides.
- K. Gate Valves Installed at Greater than 4-foot Depth: Provide non-rising, extension stem having coupling sufficient to attach securely to operating nut of valve. Upper end of extension stem shall terminate in square wrench nut no deeper than 4 feet from finished grade. Support extension stem with an arm attached to wall of manhole or structure that loosely holds extension stem and allows rotation in the axial direction only.
- L. Gate Valves in Factory Mutual (Fire Service) Type Meter Installations: Conform to provisions of this specification; outside screw and yoke valves; carry label of Underwriters' Laboratories, Inc.; flanged, Class 125; clockwise to close.
- M. Gate Valves for Tapping Steel Pipe: Provide double disc gate valve. Resilient wedge gate valve not permitted unless otherwise approved by City and Engineer.
- N. Provide flanged joints when valve is connected to steel or PCCP.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Earthwork. Conform to applicable provisions of Section 02317 - Excavation and Backfilling for Utilities.
- B. Operation. Do not use valves for throttling without prior approval of manufacturer.

3.02 SETTING VALVES AND VALVE BOXES

- A. Remove foreign matter from within valves prior to installation. Inspect valves in open and closed positions to verify that parts are in satisfactory working condition.
- B. Install valves and valve boxes where shown on Drawings. Set valves plumb and as detailed. Center valve boxes on valves. Carefully tamp earth around each valve box for minimum radius of 4 feet, or to undisturbed trench face when less than 4 feet. Install valves completely closed when placed in water line.

- C. For pipe section of each riser, use only 6- inch, ductile iron Class 51, or DR18 PVC pipe cut to proper length. Riser must be installed to allow complete access for operation of valve. Assemble and brace box in vertical position as indicated on Drawings.

3.03 DISINFECTION AND TESTING

- A. Assist City and City Inspector with disinfection of valves and appurtenances as required by Section 02514 - Disinfection of Water Lines and test as required by Section 02515 - Hydrostatic Testing of Pipelines.
- B. Double-Disc Gate Valves: **NOT USED**
- C. Solid-Wedge Gate Valves: Apply hydrostatic pressure equal to twice rated working pressure of valve with both ends bulkhead and gate open. Valve shall show no leakage through metal, flanged joints, or stem seals. Test at rated working pressure, applied through bulkheads alternately to each side of closed gate with opposite side open for inspection. Valve shall show no leakage through metal, flanged joints, or stem-seals. **Do not exceed leakage rate of 1 oz/hr/inch of nominal valve size.**
- D. Repair or replace valves which exceed leakage rate.

3.04 PAINTING OF VALVES

- A. Paint valves in vaults, stations, and above ground using ACRO Paint No. 2215, or approved equal.

END OF SECTION

Section 02525

TAPPING SLEEVES AND VALVES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Tapping sleeves and valves for connections to existing water system.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

- 1. Payment is on unit price basis for each tap installed.
- 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- 3. For water lines 4-inches and greater, **no payment will be made until coupon (cut out portion of pipe tapped) is delivered to City.**

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. AWWA C 110 - Standard for Ductile-Iron and Gray-Iron Fittings, 3 in. through 48 in., for Water and other Liquids.
- B. AWWA C 200 - Standard for Steel Water Pipe - 6 in. and Larger.
- C. AWWA C 207 - Standard for Steel Pipe Flanges for Waterworks Service - Sizes 4 in. through 144 in.
- D. AWWA C 500 - Standard for Metal Seated Gate Valves, for Water Supply Service.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit results of tapping sleeves NPT test opening.

- C. Submit manufacturer's affidavit as required in Section 02521 - Gate Valves.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Ship steel sleeves in wooden crates that provide protection from damage to epoxy coating during transport and storage.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Tapping Sleeves:

1. Tapping Sleeve Bodies: AWWA C 110 cast or ductile iron or AWWA C 200 carbon steel in two sections to be bolted together with high-strength, corrosion-resistant, low-alloy steel bolts with mechanical joint ends.
2. Branch Outlet of Tapping Sleeve:
 - a. Flanged, machined recess, AWWA C 207, Class D, ANSI 150 pound drilling.
 - b. Gasket: Affixed around recess of tap opening to prevent rolling or binding during installation.
3. Use cast iron split sleeve where fire service from 6-inch water line is approved.

- B. Welded-steel tapping-sleeve bodies may be used in lieu of cast or ductile iron bodies for following sizes and with following restrictions:

1. Flange: AWWA C 207, Class D, ANSI 150 pound drilling.
2. Gasket: Affixed around recess of tap opening to prevent rolling or binding during installation.
3. Steel sleeves are restricted to use on pipe sizes 6 inches and larger.
4. Body: Heavy, welded-steel construction; top half grooved to retain neoprene O-ring seal permanently against outside diameter of pipe.
5. Bolts: AWWA C 500 Section 3.5; coated with 100 percent vinyl resin or

- corrosive resistant material.
 6. Steel Sleeves Finish: Fusion-bonded epoxy coated to minimum 12-mil thickness.
 7. Finished Epoxy Coat: Free of laminations and blisters; and remain pliant and resistant to impact with non-peel finish.
 8. Steel tapping sleeves shall be Smith Blair No. 622, JCM No. 412, or approved equal.
 9. Tapping Sleeves: Provide with 3/4-inch NPT test opening for testing prior to tapping. Provide 3/4-inch bronze plug for opening.
 10. Do not use steel sleeves for taps greater than 75 percent of pipe diameter.
- C. Tapping Valves: Meet requirements of Section 02521 - Gate Valves with following exceptions:
1. Inlet Flanges:
 - a. AWWA C 110; Class 125.
 - b. AWWA C 110; Class 150 and higher: Minimum 8-hole flange.
 2. Outlet: Standard mechanical or push-on joint to fit any standard tapping machine.
 3. Valve Seat Opening: Accommodate full-size shell cutter for nominal size tap without contact with valve body; double disc.
- D. Valve Boxes: Standard Type A valve boxes conforming to requirements of Section 02085
- Valve Boxes, Meter Boxes, and Meter Vaults.

PART 3 EXECUTION

3.01 APPLICATION

- A. Install tapping sleeves and valves at locations and of sizes shown on Drawings. Install sleeve so valve is in horizontally level position unless otherwise indicated on Drawings.
- B. Clean tapping sleeve, tapping valve, and pipe prior to installation and in

accordance with manufacturer's instructions.

- C. Hydrostatically test installed tapping sleeve to 150 psig for minimum of 15 minutes. Inspect sleeve for leaks, and remedy leaks prior to tapping operation.
- D. When tapping concrete pressure pipe, size on size, use shell cutter one standard size smaller than water line being tapped.
- E. Do not use Large End Bell (LEB) increasers with next size tap unless existing pipe is asbestos-cement.**

3.02 INSTALLATION

- A. Verify outside diameter of pipe to be tapped prior to ordering sleeve.
- B. Tighten bolts in proper sequence so that undue stress is not placed on pipe.
- C. Align tapping valve properly and attach to tapping sleeve. Insert insulation sleeves into flange holes of tapping valve and pipe. Make insertions of sleeves on pipe side of tapping valve. Do not damage insulation sleeves during bolt tightening process.
- D. Make tap with sharp, shell cutter:
 - 1. For 12-inch and smaller tap, use minimum cutter diameter one-half inch less than nominal tap size.
 - 2. For 16-inch and larger tap, use manufacturer's recommended cutter diameter.
- E. Withdraw coupon and flush cuttings from newly-made tap.
- F. Wrap:
 - 1. For 12-inch and smaller tap, wrap completed tapping sleeve and valve in accordance with Section 02528 - Polyethylene Wrap.
 - 2. For 16-inch and larger tap, apply coal tar epoxy around completed tapping sleeve and valve. The coal tar epoxy shall be applied with minimum of two (2) coats. Each coat of coal tar epoxy shall have minimum dry film thickness of 16 mils.
- G. Place concrete thrust block behind tapping sleeve (not over tapping sleeve and valve).

H. Request City inspection of installation prior to backfilling.

I. Backfill in accordance with Section 02317 - Excavation and Backfill for Utilities.

END OF SECTION

Section 02526

WATER METERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Water meters, submeters, and fire service meters.

1.02 MEASUREMENT AND PAYMENT

A. Unit Prices

1. Measurement for water meters is on unit price basis for installation of each meter type and size.
2. Payment includes vault, piping and appurtenances necessary for complete installation of meter.
3. Measurement for relocating and reinstalling meter with new box is on unit price basis for each meter relocated and reinstalled.
4. No separate payment for adjustment of meter or meter box unless otherwise shown in Drawings.
5. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work is in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ASME B 16.1 - Cast-Iron Pipe Flanges and Flanged Fittings.
- B. AWWA C 510 - Standard for Double Check Valve Backflow - Prevention Assembly.
- C. AWWA C 700 - Standard for Cold-Water Meters - Displacement Type.
- D. AWWA C 701 - Standard for Cold-Water Meters - Turbine Type for Customer Service.

- E. AWWA C 702 - Standard for Cold-Water Meters - Compound Type.
- F. AWWA C 703 - Standard for Cold-Water Meters - Fire Service Type.
- G. AWWA Manual M6 - Water Meters - Selection, Installation, Testing, and Maintenance.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit written certification of calibration and test results.
- C. Submit manufacturer's certification that meters meet applicable requirements of this Specification Section.
- D. Submit accuracy registration test certification from manufacturer for each 3-inch through 10-inch diameter meter.

1.05 QUALITY CONTROL

- A. Submit manufacturer's warranty against defects in materials and workmanship for one year from date of Substantial Completion.
- B. Provide vendor's unconditional guarantee that performance of each meter meets applicable AWWA standards and AWWA Manual M6 as follows:

- 1. Displacement type: 10 years from installation or register registration shown below, whichever comes first

Size	Registration (million gallons)
5/8", 3/4"	1.5
1"	2.5
1-1/2"	5.0
2"	10.5

- 2. Turbine type: 1 year from date of installation
- 3. Compound type: 1 year from date of installation

4. Fire service type: 1 year from date of installation

Operations of hermetically sealed register, 5/8-inch to 2-inch diameter, shall be unconditionally guaranteed for 15 years.

- C. Provide manufacturer's unconditional guarantee for each sealed register against leakage, fogging, discoloration and stoppage for 15 years from date of installation.
- D. Vendor may replace meters that become defective within guarantee period with meters that comply with this Specification. City will return defective meters to vendor at expense. Meters repaired or replaced under this guarantee must meet accuracy limits for new meters upon receipt and accuracy limits for remaining period of initial guarantee.

1.06 EASEMENT REQUIREMENTS

- A. Install two-inch and smaller water meters and shut-off valves (stop boxes) at right-of-way line when possible. Otherwise, install within 5 foot by 5-foot water meter easement.
- B. Except for ten-inch fire service compound water meters, install three-inch and larger water meters within minimum of 10 foot by 20-foot water meter easement.
- C. Install ten-inch fire service proportional or compound water meters within minimum of 10 foot by 25-foot water meter easement.
- D. Locate water meter easements contiguous with public right-of-way unless approved by City and Engineer. Provide minimum fifteen-foot-wide access easement when not contiguous with public right-of-way.

PART 2 PRODUCTS

2.01 GENERAL

- A. Provide meters of type and size as indicated on Drawings, unless otherwise indicated.
- B. Provide bolted split casings. Main casings of meters and external fasteners: Copper alloy with minimum 75 percent copper for 5/8 inch to 2 inches, bronze or cast iron, hot-dipped galvanized or epoxy coating for 3 inches and larger.

- C. Straightening Vanes: Non-corrosive material compatible with case material.
- D. Intermediate gear train shall not come into contact with water and shall operate in suitable lubricant.
- E. Registers: Automatic Meter Reading (AMR) type that provides pulse, contact closure, piezo switch or encoder generated output signal, compatible with City's radio and telephone AMR systems. Provide minimum 12-foot wire when permanently connected to register. Lens: impact resistant. Register box: tamper resistant by means of tamper screw or plug: Register: permanently sealed, straight reading, center-sweep test hand, magnetic driven, U.S. gallons. Digits: 6, black in color with lowest registering three digits (below 1,000-gallon registration) having contrasting digit and background color. Register capacity of meters: 9.99 million gallons for 5/8 inch to 2 inches and 999.999 million gallons for 3 inches and larger.
- F. Connections: 5/8 inch to 1 inch: threads at each end; 1-1/2 to 2 inches: two-bolt oval flanges each end; 3 inches and larger: flange at each end.
- G. Stamp manufacturer's meter serial number on outer case. Stamp manufacturer's meter serial number on outside of register lid when provided. Manufacturer's serial numbers shall be individual and not duplicated.
- H. Meters: Equip with AMR type register to connect to City of Tomball's AMR system. Compound Meter manufactured by: Badger, Hershey Products, Neptune, Sensus or approved equal. Turbine Meters shall be manufactured by Badger, Hershey Products, Neptune, Sensus or approved equal. Fire service Meters shall be manufactured by Hershey Products, Neptune, Sensus or approved equal. Displacement meters shall be Badger, Neptune, Hershey, Kent, Sensus, or approved equal.
- I. Manufacturing Quality Control shall permit successful interchangeability from one meter to another of same size including registers, measuring chambers and units, discs or pistons as units, change gears, bolts, nuts, and washers without affecting accuracy of new meter.
- J. For water meter vaults provide:
 - 1. 1/4" steel or aluminum with stainless steel hinge pins. Door shall open to 90 degrees and automatically lock in that position.
 - 2. Use meter vault covers manufactured by Bilco, Halliday Products,

Pennsylvania Insert Corporation, or approved equal.

2.02 METER APPLICATIONS

A. Sizes 5/8" to 2" Meters: Displacement type (except for constant flow where 2-inch turbine may apply).

B. Sizes 3" and above Meters:

1. Turbines:

Processing plants
Manufacturing
facilities
Lawn sprinkler
systems
Effluent water in treatment
plants
Booster (pump)
stations
Level controlled tank filling
operations
Fire hydrants
(transients)
Inter-systems sale or
transfer
Sewer
credit/sub-meter

2. Compounds:

Multi-family
dwellings
Motels and hotels
Hospitals
Schools
Restaurants
Office
buildings
Dormitories, nursing homes, department stores, shopping malls, and other
commercial establishments

Note: Provide fire service type for sizes larger than 6 inches.

3. Fire Service Type: For designated fire protection lines. Provide proportional or compound type fire service meter assembly (AWWA C 703) when customer

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elects to use combination of potable and fire protection services in lieu of separate domestic meters and fire services.

2.03 MATERIALS

A. Cold-Water Meters:

1. Displacement Type: AWWA C 700; sizes 5/8 inch up to and including 2 inches; oscillating disc or piston of magnetic drive type; bolted split-case design, with either being removable.
2. Turbine Type: AWWA C 701; Class II; sizes 3 inches through 10 inches; flanged; straight-through measuring chamber; rotor construction: polypropylene or similar non-rubber material with specific gravity of approximately 1.0, equipped with near frictionless replaceable bearings in turbine working against rotor shaft positioned thrust bearing. Transient/Fire Hydrant Meter Inlet: Female fitting for attachment to hose nozzle with National Standard Fire hose thread. Outlet: 2-inch nipple with National Pipe Thread. Include restriction plate to limit flow through meter to 400 gpm at 65 psi.
3. Compound Type: AWWA C 702; sizes 2 inches through 6 inches. Measuring chambers: For use in continuous operation; separate units of copper alloy (minimum 84 percent copper) or approved polymer material, inert in corrosive potable water; with centering device for proper positioning. Measuring pistons: Non-pilot type with division plates of rubber covering vulcanized to stainless steel or other approved material of sufficient thickness to provide minimum piston oscillation noise. Measuring discs: Flat or conical type, one piece, mounted on monel or 316 stainless steel spindle. Measuring chamber strainer screen area: Twice area of main case inlet.
4. Fire-Service Type: sizes 4 inches through 10 inches; turbine-type, compound type, proportional type; AWWA C 703, with separate check valve conforming to AWWA C 510. Determine size of fire meter by adding fire flow and domestic flow.

2.04 STRAINERS

- A. Displacement Potable Water Meters 5/8 inch through 2 inches: Self-straining by means of annular space between measuring chamber and external case or with strainer screens installed in meter. Provide rigid screens which fit snugly, are easy to remove, with effective straining area at least double that of main case inlet.
 - B. Potable Water Meters 2-inch diameter and larger: Equip with separate external
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strainer with bronze body for diameters less than 8 inches. Eight-inch diameter and larger may be cast iron, hot-dipped galvanized or epoxy coating. Strainers: Bolted to inlet side of meter, detachable from meter, easily removable lid. Strainer screen: Made of rounded cast bronze, stainless steel wire, having nominal screen size of 3-1/2 mesh-per-inch (U.S. Series) not less than 45 percent clear area.

- C. Provide separate external strainers (when required by meter manufacturer) approved for use in fire service metered connections by Underwriters Laboratories. Bodies: Cast iron or copper alloy. Ends: Flanged in accordance with ASME B 16.1, Class 125. Provide stainless steel basket. Strainers shall be detachable from meter. Manufacturers shall be by Badger, Hershey, Neptune, Sensus, or approved equal.

2.05 CONNECTIONS AND FITTINGS

- A. Provide pipe for connections in accordance with Section 02501 - Ductile Iron Pipe and Fittings and Section 02506 - Polyvinyl Chloride Pipe. Use restrained joints and flanged joints only.
- B. Fittings:
 - 1. For meters 2 inches and smaller: Same type of fittings as Outlet End fittings for Curb Stop in accordance with Section 02512 - Water Tap and Service Line Installation.
 - 2. For meters 3 inches and larger: Restrained ductile iron; push-on bell joints or mechanical joint fittings between water line and meter vault; Class 125 flanged inside meter vaults; cement mortar lined and sealed.

2.06 LAYING LENGTHS

- A. Minimum laying lengths for meter and standard strainer shall be as shown on Drawings.

PART 3 EXECUTION

3.01 TAPPING AND METER SERVICE INSTALLATION

- A. Refer to Section 02525 - Tapping Sleeves and Valves for tapping requirements.
- B. Meter Service Line:

1. Use pipe and fittings conforming to requirements of Section 02501 - Ductile Iron Pipe and Fittings, or Section 02506 - Polyvinyl Chloride Pipe.
2. Limit pulling and deflecting of joints to limits recommended by manufacturer.
3. Make vertical adjustments with offset bends where room will permit. Minimize amount of bends.
4. Provide minimum of ten pipe diameters of straight pipe length upstream and downstream of meter vault.

3.02 METER FITTING HOOKUP

- A. Support meter piping and meter, level and plumb, during installation. Support meters 3 inches and larger with concrete at minimum of two locations.
- B. Use round flanged fittings inside meter box or vault except for mechanical joint to flange adapter. Provide full-face 1/8-inch black neoprene or red rubber gasket material on flanged joints. Provide bolts and nuts made from approved corrosion-resistant material.
- C. Tighten bolts in proper sequence and to correct torque.
- D. Visually check for leaks under normal operating pressure following installation. Repair or replace leaking components.

3.03 METER BOX AND VAULT INSTALLATION

1. Conform to requirements of Section 02085 - Valve Boxes, Meter Boxes, and Meter Vaults.
2. Perform adjustment to existing meter in accordance with Section 02085 - Valve Boxes, Meter Boxes, and Meter Vaults.

3.04 TESTING

- A. Accuracy registration tests will be conducted in accordance with latest revision of AWWA standard for type and size of meter.

1. Tests will be run by City of Tomball on meters prior to installation at City's meter repair shop. Meters 2 inches and smaller will be tested at random at City's discretion. All 3 inches and larger meters will be tested.
2. Accuracy of displacement meters during guarantee period shall be as follows:
 - a. Initial period: of 18 months from date of shipment or 12 months from date of installation: 98.5% to 101.5% at standard and minimum flow rates; 98% to 101% at low flow rates.
 - b. Second period: AWWA new meter accuracy as tested below.

GUARANTEE PERIOD				TEST FLOW RATE
<u>Meter Size</u>	<u>Age of Meter Years</u>	<u>or</u>	<u>Million* Gallons</u>	<u>Minimum Rate (gpm)</u>
5/8"	>1 to <5		0.5	1/4
1"	>1 to <5		1.0	3/4
1-1/2"	>1 to <5		2.5	1-1/2
2"	>1 to <5		5.5	2

* Total registration.

- c. Third period: AWWA new meter accuracy for standard flow rates and AWWA repair meter accuracy for minimum flow rate as tested below.

GUARANTEE PERIOD				TEST FLOW RATE		
<u>Meter Size</u>	<u>Age of Meter Years</u>	<u>or</u>	<u>Million* Gallons</u>	<u>Standard Flow Rates (gpm)</u>	<u>and</u>	<u>Minimum Rate (gpm)</u>
5/8"	>5 to <10		1.5	2-15		1/4
1"	>5 to <10		2.5	4-40		3/4
1-1/2"	>5 to <10		5.0	8-50		1-1/2
2"	>5 to <10		10.0	15-100		2

* Total registration.

3. Minimal acceptable accuracy in percent of low flow registration for turbine meters:

<u>Meter Size</u> <u>(inches)</u>	<u>Minimum Flow</u> <u>(gpm)</u>	<u>% Accuracy Required</u>
2	3	95
3	5	95
4	15	95
6	20	95
8	20	95
10	30	95

END OF SECTION

Section 02527

POLYURETHANE COATINGS ON
STEEL OR DUCTILE IRON PIPE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Two-component polyurethane coating system for use as external coating for steel or ductile iron pipe.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. No separate payment will be made for work performed under this Section. Include cost of polyurethane coatings in contract unit prices for steel pipe or ductile iron pipe.
 - 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. AWWA C 210 - Standard for Liquid Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipelines.
- B. ASTM D 522 - Standard Test Method for Mandrel Bend Test of Attached Organic Coatings.
- C. SSPC-PA 2 - Measurement of Dry Paint Thickness with Magnetic Gauges.
- D. SSPC-PA Guide 3 - A Guide to Safety in Paint Application.
- E. SSPC-PS Guide 17.00 - Guide for Selecting Urethane Painting Systems.
- F. SSPC-PS10 - Near-White Blast Cleaning.

1.04 SAFETY

- A. Secure, from manufacturer, Material Safety Data Sheet (MSDS) for polyurethane coatings and repair materials listed in this Section.
- B. Safety requirements stated in this specification and in related sections apply in addition to applicable federal, state and local rules and regulations. Comply with instructions of coating manufacturer and requirements of insurance underwriters.
- C. Follow handling and application practices of SSPC-PA Guide 3; SSPC-PS Guide 17.00; Coating Manufacturer's Material Safety Data Sheet.

1.05 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit coating manufacturer's catalog sheets and technical information for approval, prior to delivery of pipe.
- C. Obtain from coating manufacturer and submit coating "affidavit of compliance" to requirements of this Section stating that coatings were applied in factory and in accordance with manufacturer's minimum requirements.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Use standard containers to prevent gelling, thickening deleteriously or forming of gas in closed containers within period of one year from date of manufacture.
- B. Label each container of separately packaged component clearly and durably to indicate date of manufacture, manufacturer's batch number, quantity, color, component identification and designated name or formula specification, number of coatings together with special instructions. **Do not use coating components older than one year.**
- C. Deliver coating materials to pipe manufacturer in sealed containers showing designated name, batch number, color, date of manufacture and name of coating manufacturer.
- D. Store material on site in enclosures, out of direct sunlight in warm, ventilated and dry area.

- E. Prevent puncture, inappropriate opening or other action which may lead to product contamination.

PART 2 PRODUCTS

2.01 COATING MATERIAL

- A. CORROPIPE II PW - TOUCHUP (two-component) **or approved equal**; mix in accordance with coating manufacturer's recommendations.
 - 1. For areas less than or equal to 6 inches in diameter, brush apply.
 - 2. For areas greater than 6 inches in diameter, spray apply.
- B. Coating System: Use Type V system which is 2-package polyisocyanate, polyol-cured urethane coating, mixed in 1:1 ratio at time of application. **Components shall be balanced viscosities in their liquid state and not require agitation during use.**
- C. Exterior Coating Material: CORROPIPE II-TX and Joint Coating Material CORROPIPE II- PW, manufactured by Madison Chemical Industries, Inc., 5673 Old Dixie Road, Forest Park, Georgia 30050, or approved equal.
- D. Internal Coating Material: Joint Coating Material CORROPIPE II-PW, manufactured by Madison Chemical Industries, Inc., 5673 Old Dixie Road, Forest Park, Georgia 30050, or approved equal.
- E. Cured Coating Properties:
 - 1. Conversion to Solids by Volume: 97 percent plus or minus 3 percent.
 - 2. Temperature Resistance: Minus 40 degrees F and plus 130 degrees F.
 - 3. Minimum Adhesion: 500 psi, when applied without primer to ductile iron pipe which has been blasted to comply with SSPC-SP 10.
 - 4. Cure Time: For handling in 1 minute at 120 degrees F, and full cure within 7 days at 70 degrees F.
 - 5. Maximum Specific Gravities: Polyisocyanate resin, 1.20. Polyol resin, 1.15.

6. Minimum Impact Resistance: 80 inch-pounds using 1-inch diameter steel ball where coating is applied at 30 mils to ductile iron pipe surface which has been blasted to SSPC No. 10 finish.
7. Minimum Tensile Strength: 2000 psi.
8. Hardness: 55 plus or minus 5 Shore D at 70 degrees F.
9. Flexibility Resistance: ASTM D 522 using 1-inch mandrel. Allow coating to cure for 7 days. Perform testing on test coupons held for 15 minutes at temperature extremes specified in this Paragraph.

2.02 REPAIR AND TOUCHUP MATERIAL

- A. CORROPIPE II PW (two-component, brush applied, or approved equal). Mix in accordance with coating manufacturer's recommendations.

PART 3 EXECUTION

3.01 SURFACE PREPARATION

- A. Remove deposits of oil, grease or other organic contaminants before blast cleaning by using solvent wash as specified in SSPC-PA Guide 3. Clean and dry surfaces making them completely dry, free of moisture, dust, grit, oil, grease or other deleterious substances prior to application of coating.
- B. Exterior and Interior Surfaces: SSPC-SP10, near-white metal blast cleaning. Blast with clean, hard, sharp cutting abrasives with no steel or cast iron shot in mix.
- C. Ductile Iron Pipe: Prior to start of production blasting, prepare specimens for white metal blast and near-white metal blast using equipment and abrasives proposed for work. During preparation of specimens, change blasting intensity and abrasive as necessary to provide degree of cleaning required by SSPC-SP10, except that color of blasted substrate is not expected to match color of blasted steel. After examination and concurrence by City and Engineer, production blasting may begin. Monitor and control production blasting so that production pipe surfaces match surface of approved blasting specimens.

3.02 THICKNESS

- A. External Coatings: Minimum DFT of 25 mils (0.025 inch).
- B. Internal Coatings: Minimum DFT of 35 mils.
- C. Thickness Determinations: Use Type 1 magnetic thickness gauge as described in SSPC-PA2 specification. Individual readings below 90 percent of specified minimum are not acceptable. Average individual spot readings (consisting of three-point measurements within 3 inches of each other) less than 95 percent of minimum are not acceptable. Average of all spot readings less than minimum thickness specified are not acceptable.

3.03 FACTORY APPLICATION OF POLYURETHANE COATING

- A. Equipment: Two-component, 1:1 mix ratio, heated airless spray unit.
- B. Temperature: Minimum 5 degrees F above dew point temperature. Temperature of surface shall not be less than 60 degrees F during application.
- C. Humidity: Heating of pipe surfaces may be required to meet requirements of Paragraph 2.01E, Cured Coating Properties, when relative humidity exceeds 80 percent.
- D. Do not thin or mix resins; use as received. Store resins at temperature above 55 degrees F at all times.
- E. Application: Conform to coating manufacturer's recommendations. Apply directly to substrate to achieve specified thickness. Multiple-pass, one-coat application process is permitted provided maximum allowable recoat time specified by coating manufacturer is not exceeded.
- F. Recoat only when coating has cured less than maximum time specified by coating manufacturer. When coating has cured for more than recoat time, brush-blast or thoroughly sand coating surface. Blow-off cleaning using clean, dry, high pressure compressed air.
- G. Cure at ambient temperature above 0 degrees F. Do not handle pipe until coating has been allowed to cure as follows:

Ambient Temperature	Minimum Full Cure Time
Over 70 degrees F	7 days
50 to 70 degrees F	9 days
0 to 50 degrees F	12 days

3.04 JOINTS

- A. Apply coating to unlined pipe surfaces including inside of bell socket and outside of spigot.
- B. Coating thickness on sealing areas of spigot end of pipe exterior: Minimum 8 mils (0.008 inch), maximum of 10 mils (0.010 inch). Maximum 10 mils may be exceeded in spigot end provided maximum spigot diameter as specified by pipe manufacturer is not exceeded.

3.05 INSPECTION

- A. City Inspector may inspect coatings at coating applicator's facilities.
- B. Secure approval of surface preparation by coating manufacturer's representative prior to coating application.
- C. Holiday Inspection: Conform to AWWA C 210, Section 5.3.3.1. Follow coating manufacturer's recommendation. Conduct inspection any time after coating has reached initial cure. Repair in accordance with Paragraph 3.07, Repair and Field Touchup.

3.06 PIPE INSTALLATION

- A. When required by City and Engineer, provide services of manufacturer's representative for period of not less than 2 weeks at beginning of actual pipe laying operations to advise Contractor regarding installation including but not limited to handling and storing, cleaning and inspecting, coatings repairs, and general construction methods as to how they may affect pipe coatings.
- B. Use nylon straps, padded lifts and padded storage skids. Field cuts should be kept to minimum. Repair damage to coating due to handling or construction practices. See Section 02501 - Ductile - Iron Pipe and Fittings.
- C. Just before each section of pipe is to be placed into trench, conduct visual

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and holiday inspection. Repair defects in coating system before pipe is installed.

3.07 REPAIR AND FIELD TOUCHUP

- A. Apply repair and touchup materials in conformance with factory application of polyurethane coating requirements specified in this Section, excluding equipment requirements.
- B. Repair Procedure - Holidays:
 - 1. Remove traces of oil, grease, dust, dirt, and other deleterious materials
 - 2. Roughen area to be patched by sanding with rough grade sandpaper (40 grit).
 - 3. Apply one coat of repair material described above. Work repair material into scratched surface by brushing.
- C. Repair Procedure - Field Cuts or Large Damage:
 - 1. Remove burrs from field cut ends or handling damage and smooth out edge of polyurethane coating.
 - 2. Remove traces of oil, grease, dust, dirt, and other deleterious materials
 - 3. Roughen area to be patched with rough grade sandpaper (40 grit). Feather edges and include overlap of 1 inch to 2 inches of roughened polyurethane in area to be patched.
 - 4. Apply thick coat of repair material described above. Work repair material into scratched surface by brushing. Feather edges of repair material into prepared surface. Cover at least 1 inch of roughened area surrounding damage, or adjacent to field cut.
- D. Repair Procedure - Thermite Brazed Connection Bonds:
 - 1. Remove polyurethane coating with power wire brush from area on metal surface, which is to receive thermite, brazed connection.
 - 2. Grind metal surface to shiny metal with power grinder and coarse grit grinding wheel.
 - 3. Apply thermite-brazed connection using equipment, charge and procedure

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- recommended by manufacturer of thermite equipment.
4. After welded surface has cooled to temperature below 130 degrees F, apply protective coating repair material to weld, exposed pipe surface and damaged areas of polyurethane coating.
 5. **Do not cover or backfill freshly repaired areas of coating at thermite-brazed connection until repair material has completely cured. Allow material to cure in conformance with manufacturer's recommendations.**

END OF SECTION

Section 02528

POLYETHYLENE WRAP

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Polyethylene wrap to be used in open-cut construction for cast iron and ductile iron pipe when cathodic protection system is not required by Drawings.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. No separate payment will be made for polyethylene wrap. Include cost of polyethylene wrap in unit price for pipes and fittings to be wrapped.
 - 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCE

- A. ASTM D 1248 - Standard Specification for Polyethylene Plastics Molding and Extrusion Materials For a Wire and Cable.
- B. AWWA C 105 - Standard for Polyethylene Encasement for Ductile-Iron Pipe System.

1.03 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit product data for proposed film and tape for approval.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Polyethylene Film: Tubular or sheet form without tears, breaks, holidays, or defects; conforming with requirements of AWWA C 105, 2.5 to 3 percent carbon black content, either low- or high-density:

1. Low-density polyethylene film. Low-density polyethylene film shall be manufactured of virgin polyethylene material conforming to following requirements of ASTM D 1248.

- a. Raw material.

1. Type: I
2. Class: C (black)
3. Grade: E-5
4. Flow rate (formerly melt index): 0.4 g/10 minute, maximum
5. Dielectric strength: Volume resistivity, 10^{15} ohm-cm, minimum

- b. Physical properties.

1. Tensile strength: 1200 psi, minimum
2. Elongation: 300 percent, minimum
3. Dielectric strength: 800 V/mil thickness, minimum

- c. Thickness: Low-density polyethylene film shall have normal thickness of 0.008 inch. Minus tolerance on thickness is 10 percent of nominal thickness.

2. High-density, cross-laminated polyethylene film. High-density, cross laminated polyethylene film shall be manufactured of virgin polyethylene material conforming to following requirements of ASTM D 1248

- a. Raw material.

1. Type: III

2. Class: C (black)
3. Grade: P33
4. Flow rate (formerly melt index): 0.4 to 0.5g/10 minute, maximum
5. Dielectric strength: Volume resistivity, 10^{15} ohm-cm, minimum

b. Physical properties.

1. Tensile strength: 5000 psi, minimum
2. Elongation: 100 percent, minimum
3. Dielectric strength: 800 V/mil thickness, minimum

c. Thickness: Film shall have nominal thickness of 0.004 inch. Minus tolerance of thickness is 10 percent of nominal thickness.

- B. Polyethylene Tape: Provide 3-inch-wide, plastic-backed, adhesive tape; Paleocene No. 900, Scotchwrap No. 50, or approved equal.

PART 3 EXECUTION

3.01 PREPARATION

- A. Remove lumps of clay, mud, and cinders from pipe surface prior to installation of polyethylene encasement. Prevent soil or embedment material from becoming trapped between pipe and polyethylene.
- B. Fit polyethylene film to contour of pipe to effect snug, but not tight fit; encase with minimum space between polyethylene and pipe. Allow sufficient slack in contouring to prevent stretching polyethylene where it bridges irregular surfaces, such as bell-spigot interfaces, bolted joints, or fittings, and to prevent damage to polyethylene due to backfilling operations. Secure overlaps and ends with adhesive tape to hold polyethylene encasement in place until backfilling operations are complete.
- C. For installations below water table or in areas subject to tidal actions, seal both ends of polyethylene tube with adhesive tape at joint overlap.

3.02 INSTALLATION

A. Tubular Type (Method A):

1. Cut polyethylene tube to length approximately 2 feet longer than pipe section. Slip tube around pipe, centering tube to provide 1-foot overlap on each adjacent pipe section, and bunching it accordion-fashion lengthwise until it clears pipe ends.
2. Lower pipe into trench and make up pipe joint with preceding section of pipe. Make shallow bell hole at joints to facilitate installation of polyethylene tube.
3. After assembling pipe joint, make overlap of polyethylene tube. Pull bunched polyethylene from preceding length of pipe, slip it over end of adjoining length of pipe, and secure in place. Then slip end of polyethylene from adjoining pipe section over end of first wrap until it overlaps joint at end of preceding length of pipe. Secure overlap in place. Take up slack width at top of pipe to make snug, but not tight, fit along barrel of pipe, securing fold at quarter points.
4. Repair cuts, tears, punctures, or other damage to polyethylene. Proceed with installation of next section of pipe in same manner.

B. Tubular Type (Method B):

1. Cut polyethylene tube to length approximately 1 foot shorter than pipe section. Slip tube around pipe, centering it to provide 6 inches of bare pipe at each end. Take up slack width at top of pipe to make snug, but not tight, fit along barrel of pipe, securing fold at quarter points; secure ends.
2. Before making up joint, slip 3-foot length of polyethylene tube over end of preceding pipe section, bunching in accordion-fashion lengthwise. After completing joint, pull 3-foot length of polyethylene over joint, overlapping polyethylene previously placed on each adjacent section of pipe by at least 1 foot; make each end snug and secure.
3. Repair cuts, tears, punctures, or other damage to polyethylene. Proceed with installation of next section of pipe in same manner.

C. Sheet Type:

1. Cut polyethylene sheet to length approximately 2 feet longer than pipe section. Center length to provide 1-foot overlap on each adjacent pipe section, bunching sheet until it clears pipe ends. Wrap polyethylene around pipe so that sheet circumferentially overlaps top quadrant of pipe. Secure cut edge of polyethylene sheet at intervals of approximately 3 feet.
2. Lower wrapped pipe into trench and make up pipe joint with preceding section of pipe. Make shallow bell hole at joints to facilitate installation of polyethylene. After completing joint, make overlap and secure ends.
3. Repair cuts, tears, punctures, or other damage to polyethylene. Proceed with installation of next section of pipe in same manner.

D. Pipe-shaped Appurtenances: Cover bends, reducers, offsets, and other pipe-shaped appurtenances with polyethylene in same manner as pipe.

E. Odd-shaped Appurtenances: When it is not practical to wrap valves, tees, crosses, and other odd-shaped pieces in tube, wrap with flat sheet or split length of polyethylene tube by passing sheet around appurtenance and encasing it. Make seams by bringing edges together, folding over twice, and taping down. Tape polyethylene securely in place at valve stem and other penetrations.

F. Openings in Encasement: Create openings for branches, service taps, blowoffs, air valves, and similar appurtenances by making X-shaped cut in polyethylene and temporarily folding back film. After appurtenance is installed, tape slack securely to appurtenance and repair cut, as well as other damaged area in polyethylene, with tape. Service taps may also be made directly through polyethylene, with resulting damaged areas being repaired as specified.

G. Junctions between Wrapped and Unwrapped Pipe: Where polyethylene-wrapped pipe joins adjacent pipe that is not wrapped, extend polyethylene wrap to cover adjacent pipe for distance of at least 3 feet. Secure end with circumferential turns of tape. Wrap service lines of dissimilar metals with polyethylene or suitable dielectric tape for minimum clear distance of 3 feet away from cast or ductile iron pipe.

3.03 REPAIRS

- A. Repair cuts, tears, punctures, or damage to polyethylene with adhesive tape or with short length of polyethylene sheet or cut open tube, wrapped around pipe to cover damaged area, and secured in place.

END OF SECTION

Section 02605

CONDUCTIVE TRACE WIRE FOR NONMETALLIC PIPE INSTALLATION

PART 1 GENERAL

1.01 SUMMARY

- A. This section covers the requirements for installation of a conductive trace wire with underground, nonmetallic pipe.

1.02 MEASUREMENT AND PAYMENT

- A. Work performed under this section shall be paid for under the lump sum bid price or included in the unit price for pipe installation as applicable, unless otherwise indicated on the Bid Form.

1.03 SYSTEM DESCRIPTION

- A. Install electrically continuous trace wire, with access points as described herein, to be used for locating nonmetallic pipe with an electronic pipe locator after installation.

PART 2 PRODUCTS

2.01 TRACE WIRE

- A. Trace wire to be twelve (12) gauge minimum solid copper with thermoplastic insulation recommended for direct burial. Wire connectors to be 3M DBR, or approved **equal** and shall be watertight and provide electrical continuity.

PART 3 EXECUTION

3.01 ERECTION/INSTALLATION/APPLICATION AND/OR CONSTRUCTION

- A. Trace wire shall be installed in the same trench and inside bored holes and casing with nonmetallic pipe during pipe installation. It shall be secured to the pipe, as required, to insure that the wire remains directly adjacent to the pipe. The trace wire shall be securely bonded together at all wire joints with an approved

watertight connector to provide electrical continuity, and it shall be accessible at all new water valve boxes, water meter boxes, fire hydrants, sewer manholes, sewer cleanouts, gas valves and gas meter risers as applicable to the utility line being installed. At manholes, the wire shall be installed from the exterior of the manhole to the interior by installing the wire underneath the manhole frame. For lines with more than 5 feet of cover, the wire shall be installed directly over the pipe at a depth of 5 feet. If the spacing of valves and meters is greater than one mile, the trace wire shall be looped up in a 2" PVC pipe to be located at the right-of-way fence line or at a cross fence line, as applicable, for protection. A cap shall be placed on the 2" pipe when used, but it shall not be solvent welded onto the pipe. Where access points for trace wire on gas lines exceeds 500', install test lead boxes such that maximum access point spacing is 500'.

3.02 TESTING

- A. Contractor shall perform a continuity test on all trace wire in the presence of the Director of Public Works (DPW) or the designated representative of the DPW.**

3.01 REPAIR/RESTORATION

- A. If the trace wire is found to be not continuous after testing, Contractor shall repair or replace the failed segment of the wire.

END OF SECTION

Section 02911

TOPSOIL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Furnishing and placing topsoil for finish grading and for seeding, sodding, and planting.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. No separate payment will be made for topsoil under this Section. Include payment in Section 02922 - Sodding.
 - 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

PART 2 PRODUCTS

2.01 TOPSOIL

- A. Topsoil shall be fertile, friable, natural sandy loam surface soil obtained from excavation or borrow operations having following characteristics:
 - 1. pH value of between 5.5 and 6.5
 - 2. Liquid limit: 50 or less
 - 3. Plasticity index: 20 or less
 - 4. Gradation: maximum of 10 percent passing No. 200 sieve
- B. Topsoil shall be reasonably free of subsoil, clay lumps, weeds, non-soil materials, and other litter or contamination. Topsoil shall not contain roots, stumps, and stones larger than 2 inches.

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- C. Obtain topsoil from naturally well-drained areas where topsoil occurs at minimum depth of 4 inches and has similar characteristics to that found at placement site.
Do not obtain topsoil from areas infected with growth of, or reproductive parts of nut grass or other noxious weeds.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Excavate topsoil for esplanades and areas to receive grass or landscaping from areas to be further excavated. Stockpile in area approved by City and Engineer.
- B. Stockpile topsoil to depth not exceeding 8 feet. Cover to protect from erosion.

3.02 PLACEMENT

- A. Place no topsoil until sub grade has been approved. For areas to be seeded or sodded, scarify or plow existing material to minimum depth of 4 inches, or as indicated on Drawings. Remove vegetation and foreign inorganic material. Place 4 inches of topsoil on loosened material and roll lightly with appropriate lawn roller to consolidate topsoil.
- B. Increase depth of topsoil to 6 inches when placed over sand bedding and backfill materials specified in Section 02320 - Utility Backfill Material.
- C. For areas to receive shrubs or trees, excavate existing material and place topsoil to depth and dimensions shown on Drawings.
- D. Remove spilled topsoil from curbs, gutters, and paved areas and dispose of excess topsoil in accordance with requirements of Section 01576 - Waste Material Disposal.
- E. Place topsoil to promote good drainage and compact with light roller. Water topsoil after placement until saturated for minimum depth 6 inches, fill in and recompact areas of settlement.

3.03 PROTECTION

- A. Protect topsoil from wind and water erosion until planting is completed.

END OF SECTION

Section 02922

SODDING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Restoration of existing lawn areas disturbed by construction shall be by installation of new sod.
- B. Planting of sod within areas designated on Drawings or areas designated onsite during construction for purpose of surface stabilization, channel stabilization or vegetation buffer strips.
- C. Sod is defined as blocks, squares, strips of turf grass, and adhering soil used for vegetative planting. To be placed edge to edge for complete coverage.
- D. Lawn is defined as ground covered with fine textured grass kept neatly mowed.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. Payment for sodding is on square yard basis.
 - 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.

1.04 QUALITY ASSURANCE

- A. **Sod only when weather and soil conditions are deemed by City and Engineer to be suitable for proper placement.**
- B. Water and fertilize new sod.

- C. Guarantee sod to be growing 30 days after substantial completion.
- D. Maintenance Period:
 - 1. Begin maintenance immediately after each section of grass sod is installed and continue for 30 day period from date of substantial completion.
 - 2. Resod unacceptable areas.
 - 3. Water, fertilize, control disease and insect pests, mow, edge, replace unacceptable materials, and perform other procedures consistent with good horticultural practice to ensure normal, vigorous and healthy growth. Install disease control within guidelines set forth by Structural Pest Control Board of the State of Texas.
- E. **Notify City and Engineer 10 days before end of maintenance period for inspection.**

PART 2 PRODUCTS

2.01 SOD

- A. Species: Bermuda (Cynodon Dactylon), Buffalo (Buchloe Dactyloides), or St. Augustine (Stenotaphrum Secundatum) Gulf Coast variety to **match existing sod**.
- B. Contents: 95 percent permanent grass suitable to climate in which it is to be placed; not more than 5 percent weeds and undesirable grasses; good texture, free from obnoxious grasses, roots, stones and foreign materials.
- C. Size: 12 inch wide strips, uniformly 2 inches thick with clean-cut edges.
- D. Sod is to be supplied and maintained in healthy condition as evidenced by grass being normal green color.

2.02 FERTILIZER

- A. Available nutrient percentage by weight: 12 percent nitrogen, 4 percent phosphoric acid, and 8 percent potash; or 15 percent nitrogen, 5 percent phosphoric acid, and 10 percent potash.

2.03 WEED AND INSECT TREATMENT

- A. Provide acceptable treatment to protect sod from weed and insect infestation. Submit treatment method to City and Engineer for approval. Install insect and disease control within guidelines set forth by Structural Pest Control Board of the State of Texas.

2.04 WATER

- A. Potable, available on-site through Contractor's water trucks. Contractor may use City of Tomball hydrants when water use is measured through Contractor's meter. **Do not use private resident's water.**

2.05 BANK SAND

- A. Free of clay lumps, roots, grass, salt or other foreign material.

PART 3 EXECUTION

3.01 PREPARATION

- A. Verify that soil placement and compaction have been satisfactorily completed. Verify that soil is within allowable range of moisture content.
- B. Topsoil shall be free of weeds and foreign material immediately before sodding.
- C. **Do not start work until conditions are satisfactory. Do not start work during inclement or impending inclement weather.**
- D. Rake areas to be sodded smooth, free from unsightly variations, bumps, ridges or depressions.
- E. Spread 2-inch layer of bank sand over areas to be sodded prior to planting of sod.
- F. Apply fertilizer at rate of 25 pounds per 1000 square feet. Apply after raking soil surface and not more than 48 hours prior to laying sod. Mix thoroughly into upper 2 inches of soil. Lightly water to aid in dissipation of fertilizer.

3.02 APPLICATION

- A. Full Sodding: Lay sod with closely fitted joints leaving no voids and with ends of sod strips staggered. Lay sod within 24 hours of harvesting.

- B. On slopes 2:1 and steeper, lay sod perpendicular to slope and secure every row with wooden pegs at maximum 2 feet on center. Drive pegs flush with soil portion of sod.
- C. Prior to placing sod, on slopes 3:1 or where indicated, place Hold/Gro or Roll Lite or equal over topsoil. Securely anchor in place with posts sunk firmly into ground at maximum 16 feet on center along pitch of slope and equal to width of wire mesh horizontally across slopes.
- D. After sod is laid, irrigate thoroughly to secure 6-inch minimum penetration into soil below sod.
- E. Tamp and roll sod with approved equipment to eliminate minor irregularities and to form close contact with soil bed immediately after planting and watering.
Submit type of tamping and rolling equipment to be used to City and Engineer for approval, prior to construction.

3.03 MAINTENANCE

- A. Watering:
 - 1. Water lawn areas once a day with minimum 2-inch water for first 3 weeks after area is sodded.
 - 2. After 3-week period, water twice a week with: inch of water each time unless comparable amount has been provided by rain.
 - 3. Make weekly inspections to determine moisture content of soil unless soil is in frozen condition.
 - 4. Water in afternoon or at night to enable soil to absorb maximum amount of water with minimum evaporation.
- B. Mowing:
 - 1. Mow sod at intervals, which will keep grass height from exceeding 32 inches.
 - 2. Set mower blades at 22 inches.
 - 3. Do not remove more than one-half of grass leaf surface.
 - 4. Mow sodded areas requiring mowing within 1 month after installation with lightweight rotary type mower. Mow sod only when dry and not in saturated or soft condition.

5. Remove grass clippings during or immediately after mowing.

C. Fertilizer and Pest Control:

1. Evenly spread fertilizer composite at rate of 40 pounds per 5000 square feet or as recommended by manufacturer. **Do not place fertilizer until 2 weeks after placement of sod.**
2. Restore bare or thin areas by topdressing with mix of 50 percent sharp sand and 50 percent sphagnum peat moss.
3. Apply mixture 3 to 2 inch thick.
4. Treat areas of heavy weed and insect infestation as recommended by treatment manufacturer.

- D. Restrict all traffic from sodded areas until sod is established or for minimum 10 days during growing season. Use wood lath and plastic tape to cordon sodded areas. Maintain tape and lath throughout for minimum 30 days during growing season.

3.04 CLEANUP

- A. During course of planting, remove excess and waste materials; keep lawn areas clean and take precautions to avoid damage to existing structures, plants, grass, and streets.
- B. Remove barriers, signs, and other Contractor material and equipment from project site at termination of establishment period.
- C. Dispose of unused materials and rubbish in accordance with Section 01576 - Waste Material Disposal.

END OF SECTION

Section 03315

CONCRETE FOR UTILITY CONSTRUCTION

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Cast-in-place concrete work for utility construction or rehabilitation, such as slabs on grade, small vaults, site-cast bases for precast units, and in-place liners for manhole rehabilitation.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. No payment will be made for concrete for utility construction under this Section. Include cost in applicable utility structure.
 - 2. Obtain services of and pay for certified testing laboratory to prepare design mixes.
 - 3. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ACI 117 - Standard Tolerances for Concrete Construction and Materials.
- B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete.
- C. ACI 302.1R - Guide for Concrete Floor and Slab Construction.
- D. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete.
- E. ACI 308 - Standard Practice for Curing Concrete.
- F. ACI 309R - Guide for Consolidation of Concrete.

- G. ACI 311 - Guide for Concrete Plant Inspection and Field Testing of Ready-Mix Concrete.
- H. ACI 315 - Details and Detailing of Concrete Reinforcement.
- I. ACI 318 - Building Code Requirements for Reinforced Concrete and Commentary.
- J. ACI 544 - Guide for Specifying, Mixing, Placing, and Finishing Steel Fiber Reinforced Concrete.
- K. ASTM A 82 - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
- L. ASTM A 185 - Standard Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement.
- M. ASTM A 615 - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- N. ASTM A 767 - Standard Specifications for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement.
- O. ASTM A 775 - Standard Specification for Epoxy-Coated Reinforcing Steel Bars.
- P. ASTM A 820 - Standard Specification for Steel Fibers for Fiber-Reinforced Concrete.
- Q. ASTM A 884 - Specification for Epoxy-Coated Steel Wire and Welded Wire Fabric for Reinforcement.
- R. ASTM C 31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
- S. ASTM C 33 - Standard Specification for Concrete Aggregates.
- T. ASTM C 39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- U. ASTM C 42 - Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
- V. ASTM C 94 - Standard Specification for Ready-Mixed Concrete.

- W. ASTM C 138 - Standard Test Method for Unit Weight Yield and Air Content (Gravimetric) of Concrete.
- X. ASTM C 143 - Standard Test Method for Slump of Hydraulic Cement Concrete.
- Y. ASTM C 150 - Standard Specification for Portland Cement.
- Z. ASTM C 172 - Standard Practice for Sampling Freshly Mixed Concrete.
- AA. ASTM C 173 - Standard Test Method for Air Content of Freshly Mixed Concrete by Volumetric Method.
- BB. ASTM C 231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
- CC. ASTM C 260 - Standard Specification for Air-Entraining Admixtures for Concrete. AD. ASTM C 309 - Standard Specifications for Liquid Membrane-Forming Compounds for Curing Concrete.
- DD. ASTM C 494 - Standard Specification for Chemical Admixtures for Concrete.
- EE. ASTM C 595 - Standard Specification for Blended Hydraulic Cements.
- FF. ASTM C 685 - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing.
- GG. ASTM C 1064 - Standard Test Method for Temperature of Freshly Mixed Portland Cement Concrete.
- HH. ASTM C 1077 - Standard Practice for Laboratory Testing of Concrete and Concrete Aggregate for Use in Construction and Criteria for Laboratory Evaluation.
- II. CRSI MSP-1 - Manual of Standard Practice.
- JJ. CRSI - Placing Reinforcing Bars.
- KK. Federal Specification SS-S-210A - Sealing Compound, Preformed Plastic, for Expansion Joints and Pipe Joints
- LL. NRMCA - Concrete Plant Standards.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit proposed mix design and test data for each type and strength of concrete in Work.
- C. Submit laboratory reports prepared by independent testing laboratory stating that materials used comply with requirements of this Section.
- D. Submit manufacturer's mill certificates for reinforcing steel. Provide specimens for testing when required by City and Engineer.
- E. Submit certification from concrete supplier that materials and equipment used to produce and deliver concrete comply with this Specification.
- F. When required on Drawings, submit shop drawings showing reinforcement type, quantity, size, length, location, spacing, bending, splicing, support, fabrication details, and other pertinent information.
- G. For waterstops, submit product information sufficient to indicate compliance with this Section, including manufacturer's descriptive literature and specifications.

1.06 HANDLING AND STORAGE

- A. Cement: Store cement off the ground in well-ventilated, weatherproof building.
- B. Aggregate: Prevent mixture of foreign materials with aggregate and preserve gradation of aggregate.
- C. Reinforcing Steel: Store reinforcing steel to protect it from mechanical injury and formation of rust. Protect epoxy-coated steel from damage to coating.

PART 2 PRODUCTS

2.01 CONCRETE MATERIALS

- A. Cementitious Material:

1. Portland Cement: ASTM C 150, Type II, unless use of Type III is authorized by City and Engineer; or ASTM C 595, Type IP. For concrete in contact with sewage use Type II cement.
 2. When aggregates are potentially reactive with alkalis in cement, use cement not exceeding 0.6 percent alkali content in form of $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$.
- B. Water: Clean, free from harmful amounts of oils, acids, alkalis, or other deleterious substances, and meeting requirements of ASTM C 94.
- C. Aggregate:
1. Coarse Aggregate: ASTM C 33. Unless otherwise indicated, use following ASTM standard sizes: No. 357 or No. 467; No. 57 or No. 67, No. 7. Maximum size: Not larger than 1/5 of narrowest dimension between sides of forms, nor larger than 3/4 of minimum clear spacing between reinforcing bars.
 2. Fine Aggregate: ASTM C 33.
 3. Determine potential reactivity of fine and coarse aggregate in accordance with Appendix to ASTM C 33.
- D. Air Entraining Admixtures: ASTM C 260.
- E. Chemical Admixtures:
1. Water Reducers: ASTM C 494, Type A.
 2. Water Reducing Retarders: ASTM 494, Type D.
 3. High Range Water Reducers (Superplasticizers): ASTM C 494, Types F and G.
- F. Prohibited Admixtures: Admixtures containing calcium chloride, thiocyanate, or materials that contribute free chloride ions in excess of 0.1 percent by weight of cement.
- G. Reinforcing Steel:
1. Use new billet steel bars conforming to ASTM A 615, ASTM A 767, or ASTM A 775, grade 40 or grade 60, as shown on Drawings. Use deformed bars except where smooth bars are specified. When placed in work, keep steel free of dirt,

scale, loose or flaky rust, paint, oil or other harmful materials.

2. Where shown, use welded wire fabric with wire conforming to ASTM A 185 or ASTM A 884. Supply gauge and spacing shown, with longitudinal and transverse wires electrically welded together at points of intersection with welds strong enough not to be broken during handling or placing.
3. Wire: ASTM A 82. Use 162-gauge minimum for tie wire, unless otherwise indicated.

H. Fiber:

1. Fibrillated Polypropylene Fiber:
 - a. Addition Rate: 1.5 pounds of fiber per cubic yard of concrete.
 - b. Physical Properties:
 1. Material: Polypropylene
 2. Length: 2 inch or graded
 3. Specific Gravity: 0.91
 - c. Acceptable Manufacturer: W. R. Grace Company, Fibermesh, or approved equal.
2. Steel Fiber: Comply with applicable provisions of ACI 544 and ASTM A 820.
 - a. Ratio: 50 to 200 pounds of fiber per cubic yard of concrete.
 - b. Physical Properties
 1. Material: Steel
 2. Aspect Ratio (for fiber lengths of 0.5-to-2.5-inch, length divided by diameter or equivalent diameter): 30:1 to 100:1
 3. Specific Gravity: 7.8
 4. Tensile Strength: 40-400 ksi.
 5. Young's Modulus: 29,000 ksi

6. Minimum Average Tensile Strength: 50,000 psi
7. Bending Requirements: Withstand bending around 0.125-inch diameter mandrel to angle of 90 degrees, at temperatures not less than 60 degrees F, without breaking

- I. Curing Compounds: Type 2 white-pigmented liquid membrane-forming compounds conforming to ASTM C 309.

2.02 FORM WORK MATERIALS

- A. Lumber and Plywood: Seasoned and of good quality, free from loose or unsound knots, knot holes, twists, shakes, decay and other imperfections which would affect strength or impair finished surface of concrete. Use S4S lumber for facing or sheathing. Forms for bottoms of caps: At least 2-inch (nominal) lumber, or: inch form plywood backed adequately to prevent misalignment. For general use, provide lumber of 1-inch nominal thickness or form plywood of approved thickness.
- B. Form work for Exposed Concrete Indicated to Receive Rubbed Finish: Form or form-lining surfaces free of irregularities; plywood of 3-inch minimum thickness, preferably oiled at mill.
- C. Chamfer Strips and Similar Moldings: Redwood, cypress, or pine that will not split when nailed and which can be maintained to true line. Use mill-cut molding dressed on all faces.
- D. Form Ties: Metal or fiberglass of approved type with tie holes not larger than 1/2 inch in diameter. Do not use wire ties or snap ties.
- E. Metal Forms: Clean and in good condition, free from dents and rust, grease, or other foreign materials that tend to disfigure or discolor concrete in gauge and condition capable of supporting concrete and construction loads without significant distortion. Countersink bolt and rivet heads on facing sides. Use only metal forms, which present smooth surface and which line up properly.

2.03 PRODUCTION METHODS

- A. Use either ready-mixed concrete conforming to requirements of ASTM C 94, or concrete produced by volumetric batching and continuous mixing in accordance with ASTM C 685.

2.04 MEASUREMENT OF MATERIALS

- A. Measure dry materials by weight, except volumetric proportioning may be used when concrete is batched and mixed in accordance with ASTM C 685.
- B. Measure water and liquid admixtures by volume.

2.05 DESIGN MIX

- A. Use design mixes prepared by certified testing laboratory in accordance with ASTM C 1077 and conforming to requirements of this section.
- B. Proportion concrete materials based on ACI 211.1 to comply with durability and strength requirements of ACI 318, Chapters 4 and 5, and this specification. Prepare mix design of Class A concrete so minimum cementitious content is 564 pounds per cubic yard. **Submit concrete mix designs to City and Engineer for review.**
- C. Proportioning on basis of field experience or trial mixtures in accordance with requirements at Section 5.3 of ACI 318 may be used, **when approved by City and Engineer.**
- D. Classification:

CLASS	TYPE	MINIMUM COMPRESSIVE STRENGTH (LBS/SQ. IN.)		MAXIMUM W/C RATIO	AIR CONTENT (PERCENT)	CONSISTENCY RANGE IN SLUMP (INCHES)
		7-DAY	28-DAY			
A	Structural	3200	4000	0.4 5	4± 1	2 to 4*
B	Pipe Block Fill, Thrust Block	----	1500	----	4± 1	5 to 7

*When ASTM C 494, Type F or Type G admixture is used to increase workability, this range may be 6 to 9.

- E. Add steel or polypropylene fibers only when called for on Drawings or in another section of these Specifications.
- F. Determine air content in accordance with ASTM C 138, ASTM C 173 or ASTM C 231.

- G. Use of Concrete Classes: Use classes of concrete as indicated on Drawings and other Specifications. Use Class B for unreinforced concrete used for plugging pipes, seal slabs, thrust blocks, trench dams, tunnel inverts and concrete fill unless indicated otherwise. Use Class A for all other applications.

2.06 PVC WATERSTOPS

- A. Extrude from virgin polyvinyl chloride elastomer. **Use no reclaimed or scrap material. Submit waterstop manufacturer's current test reports and manufacturer's written certification that material furnished meets or exceeds Corps of Engineers Specification CRD-C572 and other specified requirements.**

- B. Flat Strip and Center-Bulb Waterstops:

1. Thickness: not less than d inch
2. Acceptable Manufacturers:
 - a. Kirkhill Rubber Co., Brea, California
 - b. Water Seals, Inc., Chicago, Illinois
 - c. Progress Unlimited, Inc., New York, New York
 - d. Greenstreak Plastic Products Co., St. Louis, Missouri
 - e. Approved equal.

2.07 RESILIENT WATERSTOP

- A. Resilient Waterstop: Where shown on Drawings; either bentonite or adhesive-type material.
- B. Bentonite Waterstop:
 1. Material: 75 percent bentonite, mixed with butyl rubber-hydrocarbon containing less than 1.0 percent volatile matter, and free of asbestos fibers or asphaltics.

2. Manufacturer's rated temperature ranges: For application, 5 to 125 degrees F; in service, -40 to 212 degrees F.
3. Cross-sectional dimensions, unexpanded waterstop: 1 inch by: inch
4. Provide with adhesive backing capable of producing excellent adhesion to concrete surfaces.

C. Adhesive Waterstop:

1. Preformed plastic adhesive waterstop at least 2 inches in diameter.
2. Meets or exceeds requirements of Federal Specification SS-S-210A.
3. Supplied wrapped completely by 2-part protective paper.
4. Submit independent laboratory tests verifying that material seals joints in concrete against leakage when subjected to minimum of 30-psi water pressure for at least 72 hours.
5. Provide primer, to be used on hardened concrete surfaces, from same manufacturer who supplies waterstop material.
6. Acceptable Manufacturer: Synko-Flex Preformed Plastic Adhesive Waterstop, Synko- Flex Products, Inc.; or approved equal.

PART 3 EXECUTION

3.01 FORMS AND SHORING

- A. Provide mortar-tight forms sufficient in strength to prevent bulging between supports. Set and maintain forms to lines designated such that finished dimensions of structures are within tolerances specified in ACI 117. Construct forms to permit removal without damage to concrete. Forms may be given slight draft to permit ease of removal. Provide adequate clean out openings. Before placing concrete, remove extraneous matter from within forms.
- B. Install rigid shoring having no excessive settlement or deformation. Use sound timber in shoring centering. Shim to adjust and tighten shoring with hardwood timber wedges.

- C. Design Loads for Horizontal Surfaces of Forms and Shoring: Minimum fluid pressure, 175 pounds per cubic foot; live load, 50 pounds per square foot. Maximum unit stresses: 125 percent of allowable stresses used for form materials and for design of support structures.
- D. Back form work with sufficient number of studs and wales to prevent deflection.
- E. Re-oil or lacquer liner on job before using. Facing may be constructed of inch plywood made with waterproof adhesive backed by adequate studs and wales. In such cases, form lining will not be required.
- F. Unless otherwise indicated, form outside corners and edges with triangular: inch chamfer strips (measured on sides).
- G. Remove metal form ties to depth of at least: inch from surface of concrete. Do not burn off ties. Do not use pipe spreaders. Remove spreaders, which are separate from forms as concrete is being placed.
- H. Treat facing of forms with approved form coating before concrete is placed. When directed by City and Engineer, treat both sides of face forms with coating. Apply coating before reinforcement is placed. Immediately before concrete is placed, wet surface of forms which will come in contact with concrete.

3.02 PLACING REINFORCEMENT

- A. Place reinforcing steel accurately in accordance with approved Drawings. Secure steel adequately in position in forms to prevent misalignment. Maintain reinforcing steel in place using approved concrete and hot-dip galvanized metal chairs and spacers. Place reinforcing steel in accordance with CRSI Publication "Placing Reinforcing Bars." Request inspection of reinforcing steel by City and Engineer and obtain acceptance before concrete is placed.
- B. Minimum spacing center-to-center of parallel bars: 22 times nominal bar diameter. Minimum cover measured from surface of concrete to face of reinforcing bar unless shown otherwise on Drawings: 3 inches for surfaces cast against soil or sub grade, 2 inches for other surfaces.
- C. Detail bars in accordance with ACI 315. Fabricate reinforcing steel in accordance with CRSI Publication MSP-1, "Manual of Standard Practice." Bend reinforcing steel to required shape while steel is cold. Excessive irregularities in bending will be cause for rejection.
- D. **Do not splice bars without written approval of City and Engineer.** Approved bar bending schedules or placing drawings constitute written approval. Splice

and development length of bars shall conform to ACI 318, Chapters 7 and 12, and as shown on Drawings. Stagger splices or locate at points of low tensile stress.

3.03 EMBEDDED ITEMS

- A. Install conduit and piping as shown on Drawings. Accurately locate and securely fasten conduit, piping, and other embedded items in forms.
- B. Install waterstops as specified in other sections and according to manufacturer's instructions. Securely position waterstops at joints as indicated on Drawings. Protect waterstops from damage or displacement during concrete placing operations.

3.04 BATCHING, MIXING AND DELIVERY OF CONCRETE

- A. Measure, batch, mix, and deliver ready-mixed concrete in accordance with ASTM C 94, Sections 8 through 11. Produce ready-mixed concrete using automatic batching system as described in NRMCA Concrete Plant Standards, Part 2 - Plant Control Systems.
- B. Measure, mix and deliver concrete produced by volumetric batching and continuous mixing in accordance with ASTM C 685, Sections 6 through 8.
- C. Maintain concrete workability without segregation of material and excessive bleeding. **Obtain approval of City and Engineer before adjustment and change of mix proportions.**
- D. Ready-mixed concrete delivered to site shall be accompanied by batch tickets providing information required by ASTM C 94, Section 16. Concrete produced by continuous mixing shall be accompanied by batch tickets providing information required by ASTM C 685, Section 14.
- E. When adverse weather conditions affect quality of concrete, postpone concrete placement. Do not mix concrete when air temperature is at or below 40 degrees F and falling. Concrete may be mixed when temperature is 35 degrees F and rising. Take temperature readings in shade, away from artificial heat. Protect concrete from temperatures below 32 degrees F until concrete has cured for minimum of 3 days at 70 degrees F or 5 days at 50 degrees F.
- F. Clean, maintain and operate equipment so that it thoroughly mixes material as required.

- G. **Hand-mix only when approved by City and Engineer.**

3.05 PLACING CONCRETE

- A. Give sufficient advance notice to City and Engineer (at least 24 hours prior to commencement of operations) to permit inspection of forms, reinforcing steel, embedded items and other preparations for placing concrete. **Place no concrete prior to City and Engineer approval.**
- B. Schedule concrete placing to permit completion of finishing operations in daylight hours. However, when necessary to continue after daylight hours, light site as required. When rainfall occurs after placing operations are started, provide covering to protect work.
- C. Use troughs, pipes and chutes lined with approved metal or synthetic material in placing concrete so that concrete ingredients are not separated. Keep chutes, troughs and pipes clean and free from coatings of hardened concrete. **Allow no aluminum material to be in contact with concrete.**
- D. Limit free fall of concrete to 4 feet. **Do not deposit large quantities of concrete at one location so that running or working concrete along forms is required. Do not jar forms after concrete has taken initial set; do not place strain on projecting reinforcement or anchor bolts.**
- E. Use tremies for placing concrete in walls and similar narrow or restricted locations. Use tremies made in sections, or provide in several lengths, so that outlet may be adjusted to proper height during placing operations.
- F. Place concrete in continuous horizontal layers approximately 12 inches thick. Place each layer while layer below is still plastic.
- G. Compact each layer of concrete with concrete spading implements and mechanical vibrators of approved type and adequate number for size of placement. When immersion vibrators cannot be used, use form vibrators. Apply vibrators to concrete immediately after depositing. Move vibrator vertically through layer of concrete just placed and several inches into plastic layer below. Do not penetrate or disturb layers previously placed which have partially set. **Do not use vibrators to aid lateral flow concrete. Closely supervise consolidation to ensure uniform insertion and duration of immersion.**
- H. Handling and Placing Concrete: Conform to ACI 302.1R, ACI 304R and ACI 309R.

3.06 WATERSTOPS

- A. Embed waterstops in concrete across joints as shown. Waterstops shall be continuous for extent of joint; make splices necessary to provide continuity in accordance with manufacturer's instructions. Support and protect waterstops during construction operations; repair or replace waterstops damaged during construction.
- B. Install waterstops in concrete on one side of joints, leaving other side exposed until next pour. When waterstop will remain exposed for 2 days or more, shade and protect exposed waterstop from direct rays of sun during entire exposure and until exposed portion of waterstop is embedded in concrete.
- C. Splicing PVC Waterstops:
 - 1. Splice waterstops by heat-sealing adjacent waterstop sections in accordance with manufacturer's printed instructions.
 - 2. Butt end-to-end joints of two identical waterstop sections may be made in forms during placement of waterstop material.
 - 3. Prior to placement in form work, prefabricate waterstop joints involving more than two ends to be joined together, angle cut, alignment change, or joining of two dissimilar waterstop sections, allowing not less than 24-inch-long strips of waterstop material beyond joint. Upon inspection and approval by City and Engineer, install prefabricated waterstop joint assemblies in formwork, and butt-weld ends of 24-inch strips to straight- run portions of waterstop in forms.
- D. Setting PVC Waterstops:
 - 1. Correctly position waterstops during installation. Support and anchor waterstops during progress of work to ensure proper embedment in concrete and to prevent folding over of waterstop by concrete placement. Locate symmetrical halves of waterstops equally between concrete pours at joints, with center axis coincident with joint openings. Thoroughly work concrete in joint vicinity for maximum density and imperviousness.
 - 2. Where waterstop in a vertical wall joint does not connect with any other waterstop, and is not intended to be connected to waterstop in future concrete placement, terminate waterstop 6 inches below top of wall.

- E. Replacement of Defective Field Joints: Replace waterstop field joints showing evidence of misalignment, offset, porosity, cracks, bubbles, inadequate bond or other defects with products and joints complying to Specifications.
- F. Resilient Waterstop:
 - 1. Install resilient waterstop in accordance with manufacturer's instructions and recommendations.
 - 2. **When requested by City and Engineer, provide technical assistance by manufacturer's representative in field at no additional cost to City.**
 - 3. Use resilient waterstop only where complete confinement by concrete is provided; do not use in expansion or contraction joints.
 - 4. Where resilient waterstop is used in combination with PVC waterstop, lap resilient waterstop over PVC waterstop minimum of 6 inches and place in contact with PVC waterstop. Where crossing PVC at right angles, melt PVC ribs to form smooth joining surface.
 - 5. At free top of walls without connecting slabs, stop resilient waterstop and grooves (where used) 6 inches from top in vertical wall joints.
- 6. Bentonite Waterstop:
 - a. Locate bentonite waterstop as near as possible to center of joint and extend continuous around entire joint. Minimum distance from edge of waterstop to face of member: 5 inches.
 - b. Where thickness of concrete member to be placed on bentonite waterstop is less than 12 inches, place waterstop in grooves at least: inch deep and 13 inches wide formed or ground into concrete. Minimum distance from edge of waterstop placed in groove to face of member: 2.5 inches.
 - c. **Do not place bentonite waterstop when waterstop material temperature is below 40 degrees F. Waterstop material may be warmed so that it remains above 40 degrees F during placement but means used to warm it shall in no way harm material or its properties. Do not install waterstop where air temperature falls outside manufacturer's recommended range.**
 - d. Place bentonite waterstop only on smooth and uniform surfaces; grind

concrete smooth when necessary to produce satisfactory substrate, or bond waterstop to irregular surfaces using epoxy grout which completely fills voids and irregularities beneath waterstop material. Prior to installation, wire brush concrete surface to remove laitance and other substances that may interfere with bonding of epoxy.

- e. In addition to adhesive backing provided with waterstop, secure bentonite waterstop in place with concrete nails and washers at 12 inch maximum spacing.

7. Adhesive Waterstop:

- a. With wire brush thoroughly clean concrete surface on which waterstop is to be placed and then coat with primer.
- b. If surface is too rough to allow waterstop to form complete contact, grind to form adequately smooth surface.
- c. Install waterstop with top protective paper left in place. Overlap joints between strips minimum of 1 inch and cover back over with protective paper.
- d. **Do not remove protective paper until just before final formwork completion. Place concrete immediately. time that waterstop material is uncovered prior to concrete placement shall be minimized and shall not exceed 24 hours.**

3.07 CONSTRUCTION JOINTS

A. Definitions:

- 1. Construction joint: Contact surface between plastic (fresh) concrete and concrete that has attained initial set.
- 2. Monolithic: **Manner of concrete placement to reduce or eliminate construction joints; joints other than those indicated on Drawings will not be permitted without written approval of City and Engineer.** Where so approved, make additional construction joints with details equivalent to those indicated for joints in similar locations.
- 3. Preparation for Construction Joints: Roughen surface of concrete previously placed, leaving some aggregate particles exposed. Remove laitance and loose materials by sandblasting or high-pressure water blasting. Keep surface

wet for several hours prior to placing of plastic concrete.

3.08 CURING

- A. Comply with ACI 308. Cure by preventing loss of moisture, rapid temperature change and mechanical injury for period of 7 curing days when Type II or IP cement has been used and for 3 curing days when Type III cement has been used. Start curing as soon as free water has disappeared from concrete surface after placing and finishing. A curing day is any calendar day in which temperature is above 50 degrees F for at least 19 hours. Colder days may be counted when air temperature adjacent to concrete is maintained above 50 degrees F. In continued cold weather, when artificial heat is not provided, removal of forms and shoring may be permitted at end of calendar days equal to twice required number of curing days.

However, leave soffit forms and shores in place until concrete has reached specified 28-day strength, **unless directed otherwise by City and Engineer.**

- B. Cure formed surfaces not requiring rubbed-finished surface by leaving forms in place for full curing period. Keep wood forms wet during curing period. Add water as needed for other types of forms. Or, at Contractor's option, forms may be removed after 2 days and curing compound applied.

C. Rubbed Finish:

1. At formed surfaces requiring rubbed finish, remove forms as soon as practicable without damaging surface.
2. After rubbed-finish operations are complete, continue curing formed surfaces by using either approved curing/sealing compounds or moist cotton mats until normal curing period is complete.

D. Unformed Surfaces: Cure by membrane curing compound method.

1. After concrete has received final finish and surplus water sheen has disappeared, immediately seal surface with uniform coating of approved curing compound, applied at rate of coverage recommended by manufacturer or as directed by City and Engineer. Do not apply less than 1 gallon per 180 square feet of area. Provide satisfactory means to properly control and check rate of application of compound.
2. Thoroughly agitate compound during use and apply by means of approved mechanical power pressure sprayers equipped with atomizing nozzles. For application on small miscellaneous items, hand-powered spray equipment

may be used. Prevent loss of compound between nozzle and concrete surface during spraying operations.

3. Do not apply compound to dry surface. When concrete surface has become dry, thoroughly moisten surface immediately prior to application. At locations where coating shows discontinuities, pinholes or other defects, or when rain falls on newly coated surface before film has dried sufficiently to resist damage, apply additional coat of compound at specified rate of coverage.

3.09 REMOVAL OF FORMS AND SHORING

- A. Remove forms from surfaces requiring rubbing only as rapidly as rubbing operation progresses. Remove forms from vertical surfaces not requiring rubbed-finish when concrete has aged for required number of curing days. When curing compound is used, do not remove forms before 2 days after concrete placement.
- B. Leave soffit forms and shores in place until concrete has reached specified 28-day strength, unless directed otherwise by City and Engineer.

3.10 DEFECTIVE WORK

- A. Immediately repair defective work discovered after forms have been removed. When concrete surface is bulged, uneven, or shows excess honeycombing or form marks, which cannot be repaired satisfactorily through patching, remove and replace entire section.

3.11 FINISHING

- A. Patch honeycomb, minor defects and form tie holes in concrete surfaces with cement mortar mixed one part cement to two parts fine aggregate. Repair defects by cutting out unsatisfactory material and replacing with new concrete, securely keyed and bonded to existing concrete. Finish to make junctures between patches and existing concrete as inconspicuous as possible. Use stiff mixture and thoroughly tamp into place. After each patch has stiffened sufficiently to allow for greatest portion of shrinkage, strike off mortar flush with surface.
- B. Apply rubbed finish to exposed surfaces of formed concrete structures as noted on Drawings. After pointing has set sufficiently, wet surface with brush and perform first surface rubbing with No. 16 carborundum stone, **or approved equal**. Rub sufficiently to bring surface to paste, to remove form marks and projections, and to produce smooth, dense surface. Add cement to form surface paste as necessary. Spread or brush material, which has been ground to paste,

uniformly over surface and allow to reset. In preparation for final acceptance, clean surfaces and perform final finish rubbing with No. 30 carborundum stone or approved equal. After rubbing, allow paste on surface to reset; then wash surface with clean water. Leave structure with clean, neat and uniform-appearing finish.

- C. Apply wood float finish to concrete slabs.

3.12 FIELD QUALITY CONTROL

- A. Testing shall be performed under provisions of Section 01454 - Testing Laboratory Services.

- B. Unless otherwise directed by City and Engineer, following minimum testing of concrete is required. Testing shall be performed by qualified individuals employed by approved independent testing agency and conform to requirements of ASTM C 1077.

1. Take concrete samples in accordance with ASTM C 172.
2. Make one set of four compression test specimens for each mix design at least once per day and for each 150 cubic yards or fraction thereof. Make, cure and test specimens in accordance with ASTM C 31 and ASTM C 39.
3. When taking compression test specimens, test each sample for slump according to ASTM C 143, for temperature according to ASTM C 1064, for air content according to ASTM C 231, and for unit weight according to ASTM C 138.
4. Inspect, sample and test concrete in accordance with ASTM C 94, Section 13, 14, and 15, and ACI 311-5R.

- C. Test Cores: Conform to ASTM C 42.

- D. Testing High Early Strength Concrete: When Type III cement is used in concrete, specified 7 day and 28-day compressive strengths shall be applicable at 3 and 7 days, respectively.

- E. If 7-day or 3-day test strengths (as applicable for type of cement being used) fail to meet established strength requirements, extended curing or resumed curing on those portions of structure represented by test specimens may be required. **When additional curing fails to produce required strength, strengthening or replacement of portions of structure which fail to develop required strength may be required by City and Engineer, at no additional cost to City.**

3.13 PROTECTION

- A. **Protect concrete against damage until final acceptance by City.**
- B. Protect fresh concrete from damage due to rain, hail, sleet, or snow. Provide protection while concrete is still plastic, and whenever precipitation is imminent or occurring.
- C. Do not backfill around concrete structures or subject them to design loadings until components of structure needed to resist loading are complete and have reached specified 28-day compressive strength, **except as authorized otherwise by City and Engineer.**

END OF SECTION

Section 04000

BORING OR TUNNELING OF PIPE

PART 1 GENERAL

1.1 General

This section of the specifications governs the furnishing and installation of pipe by methods of jacking, boring, or tunneling

1.2 Measurement and Payment

- A. Boring and casing installation will be measured and paid for separately. As per the appropriate bid item.
- B. The price bid per lump sum foot shall be full compensation for all excavation, boring, steel casing and installation, and for all equipment, machinery, labor, superintendence, and incidentals necessary to complete the work.

PART 2 PRODUCTS

2.1 Steel Pipe Casing

Casing shall be steel pipe conforming to either ASTM, A139, Grade B or ASTM A 252, Grade 2, depending on the required size as shown on the plans. Wall thickness shall be determined from the following table:

Thickness & Size	Specifications
0.250" (thru 24" dia.)	ASTM A139, Grade B
0.312" (26" dia. or larger)	ASTM A252, Grade 2

Steel pipe may be new or used, of the size and dimension as specified or shown on the plans.

2.2 Casing Spacers

Casing spacers shall be projection type stainless steel spacers constructed of preformed sections of high-density polyethylene. Projection type spacers

shall be "RACI" type spacers as marketed by Public Works Marketing, Inc., 11524 Grissom Ln., Dallas, Texas 75229, phone 1-800-517-0395, or approved equal.

PART 3 EXECUTION

3.1 General

If the grade of the pipe at the boring or tunneling end is below the ground surface, suitable pits or trenches shall be excavated for the purpose of boring or tunneling operations and for placing end joints of the pipe. Excavations greater than five (5) feet in depth shall have trench safety systems.

Where pipe is required to be installed under railroad embankments, highways, streets, or other facilities by boring or tunneling methods, construction shall be made in such a manner that will not interfere with the operation of the railroad, street, highway or other facility and shall not weaken or damage any embankment or structure.

Pipe damaged in the boring or tunneling process shall be repaired in place to the satisfaction of the Engineer. Pipe damaged beyond repair will be removed and replaced. Repair or removal and replacement of damaged pipe shall be done at the Contractor's expense.

3.2 Boring

The boring shall proceed from a pit provided for the boring equipment and workmen. The location of the pit shall be approved by the Engineer. The boring shall be done mechanically either using a pilot hole or the auger method.

A. Pilot Hole Method

An approximate two (2) inch pilot hole shall be bored the entire length of the crossing and shall be checked for line and grade on the opposite end of the bore from the work pit. This pilot hole shall serve as the centerline of the larger diameter hole to be bored.

B. Auger Method (Jack & Bore)

A steel encasement pipe of the appropriate diameter equipped with a cutter head to mechanically perform the excavation shall be used. Augers shall be sufficient diameter to convey the excavated material to the work pit.

Excavated material shall be disposed of by the Contractor, as approved by the Engineer. The use of water or other fluids in connection with the boring operation will be permitted only to the extent necessary to lubricate cuttings; jetting will not be permitted.

In unconsolidated soil formations, a gel-forming colloidal drilling fluid consisting of at least ten (10) percent of high grade carefully processed bentonite may be used to consolidate cuttings of the bit, seal the walls of the hole, and furnish lubrication for subsequent removal of cuttings and immediate installation of the pipe.

The excavation for the underside of the pipe, for at least one-third of the circumference of the pipe, shall conform to the contour and grade of the pipe. Over-excavation to provide not more than two (2) inches of clearance may be provided for the upper half of the pipe. This clearance shall be tapered to zero at the point where the excavation conforms to the contour of the pipe. Over excavation in excess of one (1) inch shall be pressure grouted the entire length of the installation.

The distance that the excavation shall extend beyond the end of the pipe depends on the character of the material, but shall not exceed two (2) feet. This distance shall be decreased when directed by the Engineer.

Preferably, the pipe shall be bored from the low or downstream end, unless approved otherwise by Engineer. The final position of the pipe shall not vary from the line and grade as shown on the plans, or established by the Engineer, by more than one (1) inch in ten (10) feet. The variation shall be regular and in one direction and the final flow line shall be in the direction of the plans.

The minimum depth of cover for encased lines at any point, including ditch bottoms, shall be twenty-four (24) inches.

Markers shall be placed at the crossing of the right-of-way designating the type of utility line that crosses and owner of said line. The marker shall be constructed of a material that shall not be easily destroyed. The

Engineer shall approve the submitted marker before installation. No marker shall exceed six (6) feet in height.

3.3 Joints

If several lengths of steel pipe are required to complete the bore, each joint shall be welded around the full circumference of the pipe prior to jacking the casing into the bored hole. No other method of jointing shall be acceptable, unless approved in writing by the Engineer.

3.4 Location of Bore Pits

The location of the pit shall be approved by the Engineer. Pits shall be located at least thirty (30) feet from all freeway and other high-speed (exceeding 40 mph) highways except as follows:

1. Sixteen (16) feet for high-speed highways with current average daily traffic volumes of 750 vehicles per day or less;
2. Sixteen (16) feet for ramps; or
3. Ten (10) feet for low-speed (40 mph or less) highways.

For urban (curbed) highway cross sections, all borings shall extend beneath travel and parking lanes and extend beyond the back of curb plus one of the following:

1. Thirty (30) feet from high-speed (exceeding 40 mph) facilities; or
2. Three (3) feet from low-speed (40 mph or less) facilities, plus any additional width to clear an existing sidewalk.
3. For Boring of Railroad confirm location of bore pit with railroad owner.

The casing shall be installed immediately after the boring is completed.

3.5 Casing Spacers

Casing spacers shall be used to install carrier pipe inside the encasement pipe. To provide support around the periphery of the pipe should the pipe twist as it is pushed through the casing, the spacers shall be of a projection type that has a minimum number of projections around the circumference totaling the number of diameter inches. For example, 8" pipe shall have a minimum of 8 projections and 12" pipe shall have a minimum of 12 projections. Casing spacers shall fasten tightly onto the carrier pipe so that the spacers do not move during installation. Casing spacers will be spaced every 6 1/2 feet with double spacers on each end of the casing. The casing spacers shall provide a minimum safety factor of 2 to 1 to support the service load. Spacers shall have a minimum height that clears the pipe bell.

3.6 Backfill

Backfilling of exposed casing and pipe material in and around the bore pit shall be executed as specified in Section 31 23 16.13 of these Specifications.

3.7 Permits

Where applicable, the Owner will obtain and require permits from the State Department of Highways and Public Transportation for installation of utility lines which are located on or across their right-of-way. It shall be the Contractor's duty and responsibility to coordinate with the Highway Department the time of making the crossings and the manner of handling traffic.

END OF SECTION

City Council Meeting

Agenda Item

Data Sheet

Meeting Date: December 18, 2023

Topic:

Approve an agreement with Bull-G Construction, LLC. for Project Number 2017-10012, Rudolph Road sanitary sewer extension for the City of Tomball, for a not-to-exceed amount of \$217,885 (Bid No. 2024-03), approve the expenditure of funds therefor, and authorize the City Manager to execute any and all documents related to the purchases. These expenditures are included in the fiscal year 2023-2024 capital budget.

Background:

The proposed agreement with Bull-G Construction, LLC to complete the sanitary sewer extension along Rudolph Road. Bull-G was selected through the competitive sealed bid process (Bid No. 2024-03), which allowed for interested parties to submit sealed bids to complete the proposed project and a total of four bids were received. After reviewing all submitted bids and reference checks, Bull-G Construction, LLC was deemed the lowest responsible bidder and provided the best value to the City based on the proposed scope of work. The selection and discussions were held in accordance with the City's adopted Procurement Policy and Manual and state procurement law.

This item authorizes an agreement with Bull-G Construction, LLC to complete the sanitary sewer extension along Rudolph Road for an amount not-to-exceed \$217,885, included in the adopted fiscal year 2023-2024 capital budget.

Project Element	Total Contracts	Remaining Contract Amount
Engineering – GLS (Sanitary)	\$47,313.03	\$0.00
Engineering – OEI (Water)	\$80,000.00	\$28,286.16
Acquisition Services – Threshold	\$18,834.76	\$0.00
Acquisition	\$45,385.73	\$0.00
Surveying	\$22,620.50	\$0.00
Proposed Construction (Sewer)	\$217,885.00	Contract Pending
Proposed Construction (Water)	\$333,198.00	Contract Pending
Project Budget \$803,965.00	Total Contracts \$765,237.02	Remaining Funding \$38,727.98

Origination: Public Management

Recommendation:

Staff recommends approving an agreement with Bull-G Construction, LLC for the sanitary sewer extension along Rudolph Road for an amount no-to-exceed \$217,885.

Party(ies) responsible for placing this item on agenda: Meagan Mageo, Project Manager

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: #400-741-6409

If no, funds will be transferred from account # _____ To account # _____

Signed	<u>Meagan Mageo</u>	Approved by	_____
	Staff Member		City Manager
	Date		Date

APPARENT LOW BIDDERS

City of Tomball Rudolph Road Sanitary Sewer Extension

ID: City of Tomball Project No. 2024-03

Bid Summary	
Engineers Estimate	No Estimate
Total Bids	4
AMLT \$	\$32,044.50
AMLT %	14.71%
Average Bid	\$372,237.88

	Bidder	BASE BID
1	Bull-G Construction <i>Submitted: 11/16/2023 2:41:37 PM</i>	\$217,885.00
2	ISJ Underground Utilities, LLC <i>Submitted: 11/16/2023 2:03:33 PM</i>	\$249,929.50
3	Reddico Construction Company, Inc. <i>Submitted: 11/16/2023 1:02:16 PM</i>	\$492,172.00
4	AR TurnKee Construction Company Inc. <i>Submitted: 11/16/2023 2:31:38 PM</i>	\$528,965.00

Bids opened at: 11/16/2023 3:00:39 PM

Document 00520

AGREEMENT

Project: Rudolph Road Sanitary Sewer Extension

Project Location: Rudolph Road (Key Map No.C-100)

Project Bid No: 2024-02

E&P Project No: 2017-10012

The City: The City of Tomball, County of Harris, Texas (the "City")
and

Contractor: Bull-G Construction, LLC

(Address for Written Notice) 8519 Cedel Drive, Houston, Texas 77055

Email Address: ildiaz.bullg@gmail.com

Public Works Director is: Drew Huffman

(Address for Written Notice) 501 James Street, Tomball, Texas 77375

Email Address: dhuffman@tomballtx.gov

THE CITY AND CONTRACTOR AGREE AS FOLLOWS:

ARTICLE 1

THE WORK OF THE CONTRACT

1.1 Contractor shall perform the Work in accordance with the Contract.

ARTICLE 2

CONTRACT TIME

2.1 Contractor shall achieve Date of Substantial Completion within 60 days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

2.2 The Parties recognize that time is of the essence for this Agreement and that the City will suffer financial loss if the Work is not completed within the Contract Time. Parties also recognize delays, expense, and difficulties involved in proving in a legal or arbitration proceeding actual loss suffered by the City if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Parties

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06-16-2011

agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay the City the amount stipulated in Document 00800 – Supplementary Conditions, for each day beyond Contract Time.

**ARTICLE 3
CONTRACT PRICE**

3.1 Subject to terms of the Contract, the City will pay Contractor in current funds for Contractor's performance of the Contract, Contract Price of \$217,885.00, which includes Alternates, if any, accepted below.

3.2 The City accepts Alternates as follows:

Alternate No. 1 Not Applicable

**ARTICLE 4
PAYMENTS**

4.1 The City will make progress payments to Contractor as provided below and in the General Conditions.

4.2 The Period covered by each progress payment is one calendar month ending on the [] 10th, [] 20th, or [X] last day of the month.

4.3 The Schedule of Values established as provided in paragraph 2.07.A of the General Conditions will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed. The City will make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as provided below in paragraphs 4.3.1 and 4.3.2.

4.3.1 Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or City may withhold, in accordance with paragraph 14.02 of the General Conditions:

a. For contracts under \$400,000.00, 90% of Work completed (with the balance being retainage).

For contracts over \$400,000.00, 95% of Work completed (with the balance being retainage.)

b. For contracts under \$400,000.00, 90% (with the balance being retainage) and for contracts over \$400,000.00, 95% (with the balance being retainage) of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to the City as provided in paragraph 14.02 of the General Conditions).

4.3.2 Upon Substantial Completion, the City shall pay an amount sufficient to increase total payments to Contractor to 95% of the Work completed, less such amounts as Engineer shall determine in accordance with paragraph 14.02.B.5 of the General Conditions and less 100% of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the Certificate of Substantial Completion.

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06-16-2011

4.4 Final payment, constituting entire unpaid balance of Contract Price, will be made by the City to Contractor as provided in the General Conditions.

ARTICLE 5
CONTRACTOR REPRESENTATIONS

5.1 Contractor represents:

5.1.1 Contractor has examined and carefully studied Contract documents and other related data identified in Bid Documents.

5.1.2 Contractor has visited the site and become familiar with and is satisfied as to general, local, and site conditions that may affect cost, progress, and performance of the Work.

5.1.3 Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.

5.1.4 Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in Contract documents and (2) reports and drawings of a hazardous environmental condition, if any, at the site which has been identified in Contract documents.

5.1.5 Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including applying specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract to be employed by Contractor, and safety precautions and programs incident thereto

5.1.6 Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for performance of the Work at Contract Price, within Contract Time, and in accordance with the Contract.

5.1.7 Contractor is aware of general nature of work to be performed by the City and others at the site that relates to the Work as indicated in Contract documents.

5.1.8 Contractor has correlated information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract.

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06-16-2011

5.1.9 Contractor has given City Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract, and written resolution thereof by City Engineer is acceptable to Contractor.

5.1.10 Contract documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 6

MISCELLANEOUS PROVISIONS

6.1 The Contract may be terminated by either Party as provided in Conditions of the Contract.

6.2 The Work may be suspended by the City as provided in Conditions of the Contract.

6.3 Contractor further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An "undocumented worker" shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States.

6.4 In accordance with Chapter 2270, Texas Government Code, a government entity may not enter into a contract with a company for goods or services unless the company covenants and agrees that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. Furthermore, the contractor is prohibited from engaging in business with Iran, Sudan or Foreign Terrorist Organizations.

6.5 When conducting activities for the City of Tomball, contractor will adhere to the City's Storm Water Management Plan and permit issued by the Texas Commission on Environmental Quality.

ARTICLE 7

ENUMERATION OF CONTRACT DOCUMENTS

7.1 The following documents are incorporated into this Agreement:

7.1.1 Document 00700 - General Conditions

7.1.2 Document 00800 - Supplementary Conditions

7.1.3 General Requirements.

7.1.4 Divisions 02 through 16 of Specifications attached hereto or incorporated by reference in Document 00010 - Table of Contents.

7.1.5 Drawings listed in Document 00015 - List of Drawings and bound separately.

7.1.6 Addenda which apply to the Contract, are as follows:

Addendum No. 1, dated []

Addendum No. 2, dated []

Addendum No. 3, dated []

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06-16-2011

7.1.7 Other documents:

<u>Document No.</u>	<u>Title</u>
[X] 00410B	Bid Form – Part B
[X] 00500	Form of Business
[X] 00501	Resolution of Corporation (if a corporation)
[X] 00610	Performance Bond
[X] 00611	Statutory Payment Bond
[X] 00612	One-year Maintenance Bond
[X] 00620	Affidavit of Insurance (with the Certificate of Insurance attached)
[] 00800	Exhibit A, Wage Rates
[] 00821	Wage Rate for Building Construction
[] 00830	Trench Safety Geotechnical Information

ARTICLE 8**SIGNATURES**

8.1 This Agreement is executed in two originals and is effective on _____.

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06-16-2011

CONTRACTOR:

By: Beatriz Rios
Name: BEATRIZ RIOS
Title: MANAGER
Date: 12/04/2023
Tax Identification Number: 85-3122313

(If Joint Venture)

By: _____
Name: _____
Title: _____
Date: _____
Tax Identification Number: _____

ATTEST/SEAL:

[SEAL]

Attest: 

Date: _____

CITY OF TOMBALL, TEXAS:

By: _____
City Manager

ATTEST/SEAL:

Date: _____

[SEAL]

Attest: _____
City Secretary

Date: _____

END OF DOCUMENT



City of Tomball

**PROJECT MANUAL
RUDOLPH ROAD SANITARY SEWER EXTENTION
HARRIS COUNTY, CITY OF TOMBALL, STATE OF TEXAS
PROJECT No.: 2017-10012**

VOLUME 1 OF 1

Divisions 001 through 003

May 2018

Prepared by:



**GOODWIN • LASITER • STRONG
ENGINEERING • ARCHITECTURE • INTERIOR DESIGN • SURVEYING**

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TBPE FIRM REGISTRATION NO. 413
TBPLS FIRM REGISTRATION NO. 10110900
GLS No. 161011

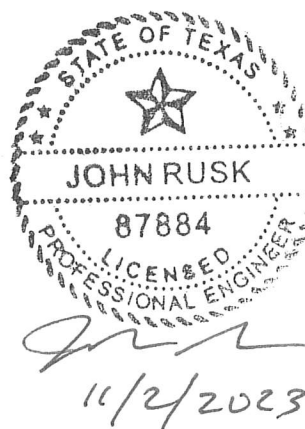
Document 00010

TABLE OF CONTENTS

NOTE: Documents listed "for filing" are to be provided by Bidder and are not included in this Project Manual unless indicated for example only. The Document numbers and titles hold places for actual documents to be submitted by Contractor during Bid, post-bid, or construction phase of the Project. Documents in the 200, 300 and 400 series of Division 00, except for Document 00410B – Bid Form, Part B, are not part of the Contract.

<u>Doc. No.</u>	<u>Document Title</u>	<u>Doc. Date</u>
INTRODUCTORY INFORMATION		
00010	Table of Contents	11-18-2009
00015	List of Drawings	02-01-2008
BIDDING REQUIREMENTS		
00100	Invitation to Bidders	11-18-2009
INSTRUCTIONS TO BIDDERS		
00200	Instructions to Bidders	11-18-2009
00210	Supplementary Instructions to Bidders	02-01-2008
00220	Request for Bid Information	02-01-2008
INFORMATION AVAILABLE TO BIDDERS		
00320	Geotechnical Information	02-01-2008
00330	Existing Conditions	02-01-2008
00340	Environmental Information	02-01-2008
BID FORMS AND SUPPLEMENTS		
00410	Bid Form, Parts A & B	02-01-2008
00430	Bidder's Bond (For filing; Example Form)	02-01-2008
00453	Bidder's Statement of Residency	02-01-2008
00455	Affidavit of Ownership or Control	02-01-2008
POST-BID PROCEDURES		
00495	Post-bid Procedures	02-01-2008
CONTRACTING REQUIREMENTS		

00010-1
11-18-2009



<u>No.</u>	<u>Document Title</u>	<u>Doc. Date</u>
AGREEMENT		
00500	Form of Business	02-01-2008
00501	Resolution of Corporation	02-01-2008
00520	Agreement	02-01-2008
BONDS AND CERTIFICATES		
00600	List of Proposed Subcontractors and Suppliers, Part A	02-01-2008
00601	Drug Policy Compliance Agreement	02-01-2008
00602	Contractor's Drug Free Workplace Policy (For filing)	
00604	History of OSHA Actions and List of On-the-job Injuries	02-01-2008
00607	Certification Regarding Debarment, Suspension, and Other Responsibility Matters	02-01-2008
00610	Performance Bond	02-01-2008
00611	Statutory Payment Bond	02-01-2008
00612	One-year Maintenance Bond	02-01-2008
00620	Affidavit of Insurance (with attached Certificates of Insurance)	02-01-2008
00622	Name and Qualifications of Proposed Superintendent (For filing)	
GENERAL CONDITIONS		
00700	General Conditions	
SUPPLEMENTARY CONDITIONS		
00800	Supplementary Conditions	
00820	Wage Scale for Engineering Construction	02-01-2008
00821	Wage Scale for Building Construction	02-01-2008
00830	Trench Safety Geotechnical Information	02-01-2008
ADDENDA AND MODIFICATIONS		
00931	Request for Information (Example only)	02-01-2008
SPECIFICATIONS		
DIVISION 1 - GENERAL REQUIREMENTS		
01110	Summary of Work	02-01-2008
01145	Use of Premises	02-01-2008
01230	Alternates	02-01-2008
01255	Change Order Procedures	02-01-2008

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01270	Measurement and Payment	02-01-2008
01292	Schedule of Values	02-01-2008
01312	Coordination and Meetings	02-01-2008
01321	Construction Photographs	02-01-2008
01322	Construction Photographs for Facility Projects	02-01-2008
01325	Construction Schedule	02-01-2008
01326	Construction Schedule (Bar Chart)	02-01-2008
01330	Submittal Procedures	02-01-2008
01340	Shop Drawings, Product Data, and Samples	02-01-2008
01410	TPDES Requirements (with Attachments)	09-08-2009
01422	Reference Standards	02-01-2008
01450	Contractor's Quality Control	02-01-2008
01452	Inspection Services	02-01-2008
01454	Testing Laboratory Services	02-01-2008
01502	Mobilization	02-01-2008
01504	Temporary Facilities and Controls	02-01-2008
01506	Diversion Pumping	02-01-2008
01520	Temporary Field Office	02-01-2008
01555	Traffic Control and Regulation	02-01-2008
01562	Tree and Plant Protection	02-01-2008
01570	Diverting Flow	02-01-2008
01572	Pollution Source Controls on Construction Projects	02-01-2008
01573	Managing Overland Flow	02-01-2008
01574	Trapping Sediment in Channelized Flow	02-01-2008
01575	Stabilized Construction Exit	02-01-2008
01576	Waste Material Disposal	02-01-2008
01577	Protecting Inlets	02-01-2008
01578	Control of Ground Water	02-01-2008
01579	Trapping Sediment During Site Dewatering	02-01-2008
01580	Project Identification Signs	02-01-2008
01581	Excavation in Public Way Permit Signs	02-01-2008
01610	Basic Product Requirements	02-01-2008
01630	Product Substitution Procedures	02-01-2008
01725	Field Surveying	02-01-2008
01731	Cutting and Patching	02-01-2008
01732	Procedure for Water Valve Assistance (with Attachments)	02-01-2008
01733	Procedure for New Water Line Disinfection	02-01-2008
01740	Restoration of Site Improvements	02-01-2008
01755	Starting Systems	02-01-2008
01770	Closeout Procedures	02-01-2008
01782	Operations and Maintenance Data	02-01-2008
01785	Project Record Documents	09-08-2009

Doc. No.	<u>Document Title</u>	<u>Doc. Date</u>
DIVISION 2 - SITE WORK		
02081	Cast-in-place Concrete Manholes	02-01-2008
02082	Precast Concrete Manholes	02-01-2008
02083	Fiberglass Manholes	02-01-2008
02084	Frames, Grates, Rings, and Covers	02-01-2008
02085	Valve Boxes, Meter Boxes, and Meter Vaults	09-08-2009
02086	Adjusting Manholes, Inlets, and Valve Boxes to Grade	02-01-2008
02087	Brick Manhole for Storm Sewers	02-01-2008
02221	Removing Existing Pavements and Structures	02-01-2008
02222	Abandonment of Sewers	02-01-2008
02233	Clearing and Grubbing	02-01-2008
02260	Trench Safety System	02-01-2008
02314	Excavation for Ditches, Channels and Detention Facilities	02-01-2008
02315	Roadway Excavation	02-01-2008
02316	Excavation and Backfill for Structures	02-01-2008
02317	Excavation and Backfill for Utilities	02-01-2008
02318	Extra Unit Price Work for Excavation And Backfill	02-01-2008
02319	Borrow	02-01-2008
02320	Utility Backfill Materials	02-01-2008
02321	Cement Stabilized Sand	02-01-2008
02330	Embankment	02-01-2008
02336	Lime-Stabilized Subgrade	02-01-2008
02337	Lime/Fly-Ash Stabilized Subgrade	02-01-2008
02338	Portland Cement Stabilized Subgrade	02-01-2008
02378	Riprap and Granular Fill	02-01-2008
02400	Tunnel Shafts	02-01-2008
02401	Common Tunnel Shafts	02-01-2008
02425	Tunnel Excavation and Primary Liner	02-01-2008
02426	Sewer Line in Tunnels	02-01-2008
02427	Plastic Liner for Large-Dia. Concrete Sewers and Structures	02-01-2008
02431	Tunnel Grout	02-01-2008
02441	Microtunneling and Pipe-Jacked Tunnels	02-01-2008
02447	Augering Pipe and Conduit	02-01-2008
02448	Pipe and Casing Augering for Sewers	02-01-2008
02465	Drilled Shaft Foundations	02-01-2008
02476	Caisson for Lift Station	02-01-2008
02501	Ductile Iron Pipe and Fittings	02-01-2008
02502	Steel Pipe and Fittings	02-01-2008
02503	Copper Tubing	02-01-2008
02504	Centrifugally Cast Fiberglass Pipe	02-01-2008
02505	High Density Polyethylene (HDPE) Solid and Profile Wall Pipe	02-01-2008
02506	Polyvinyl Chloride Pipe	02-01-2008

Doc. No.	<u>Document Title</u>	<u>Doc. Date</u>
02507	Prestressed Concrete Cylinder Pipe	02-01-2008
02508	Extra Strength Clay Pipe	02-01-2008
02511	Water Lines	02-01-2008
02512	Water Tap and Service Line Installation	02-01-2008
02513	Wet Connections	02-01-2008
02514	Disinfection of Water Lines	02-01-2008
02515	Hydrostatic Testing Of Pipelines	02-01-2008
02516	Cut, Plug, And Abandonment of Mains	02-01-2008
02517	Water Line in Tunnels	02-01-2008
02518	Steel Pipe and Fittings for Large-Diameter Water Lines	02-01-2008
02520	Fire Hydrants	11-10-2009
02521	Gate Valves	02-01-2008
02522	Butterfly Valves	02-01-2008
02523	Pressure Reducing Valves	02-01-2008
02524	Air Release and Vacuum Relief Valves	02-01-2008
02525	Tapping Sleeves and Valves	02-01-2008
02526	Water Meters	02-01-2008
02527	Polyurethane Coatings on Steel or Ductile Iron Pipe	02-01-2008
02528	Polyethylene Wrap	02-01-2008
02531	Gravity Sanitary Sewers	02-01-2008
02532	Sanitary Sewer Force Mains	02-01-2008
02533	Acceptance Testing for Sanitary Sewers	02-01-2008
02534	Sanitary Sewer Service Stubs or Reconnections	02-01-2008
02581	Street Lighting Conduit	02-01-2008
02605	Conductive Trace Wire for Nonmetallic Pipe Installations	02-01-2008
02611	Reinforced Concrete Pipe	02-01-2008
02612	Precast Reinforced Concrete Box Sewers	02-01-2008
02621	Geotextile	02-01-2008
02631	Storm Sewers	02-01-2008
02632	Cast-In-Place Inlets, Headwalls, and Wingwalls	02-01-2008
02633	Precast Concrete Inlets, Headwalls, and Wingwalls	02-01-2008
02641	Monolithic Reinforced Concrete Sewers	02-01-2008
02642	Corrugated Metal Pipe	02-01-2008
02643	Structural Plate Culvert Structures	02-01-2008
02684	Constructor Qualification Requirements	02-01-2008
02685	Natural Gas Distribution System	02-01-2008
02711	Hot Mix Asphalt Base Course	02-01-2008
02712	Cement Stabilized Base Course	02-01-2008
02713	Recycled Crushed Concrete Base Course	02-01-2008
02714	Flexible Base Course for Temporary Roads, Detours, Shoulders, and Driveways	02-01-2008
02741	Asphaltic Concrete Pavement	02-01-2008
02742	Prime Coat	02-01-2008
02743	Tack Coat	02-01-2008

Doc. No.	<u>Document Title</u>	<u>Doc. Date</u>
02751	Concrete Paving	02-01-2008
02752	Concrete Pavement Joints	02-01-2008
02753	Concrete Pavement Curing	02-01-2008
02754	Concrete Driveways	02-01-2008
02761	Colored Concrete for Medians and Sidewalks	02-01-2008
02762	Blast Cleaning of Pavement	02-01-2008
02764	Raised Pavement Markers	02-01-2008
02765	Temporary and Removable Reflectorized Pavement Markings	02-01-2008
02767	Thermoplastic Pavement Markings	02-01-2008
02771	Curb, Curb and Gutter, and Headers	02-01-2008
02772	Concrete Medians and Directional Islands	02-01-2008
02775	Concrete Sidewalks	02-01-2008
02811	Landscape Irrigation	02-01-2008
02911	Topsoil	02-01-2008
02915	Tree Planting	02-01-2008
02921	Hydromulch Seeding	02-01-2008
02922	Sodding	02-01-2008
02951	Pavement Repair And Resurfacing	02-01-2008

DIVISION 3 – CONCRETE

03315	Concrete for Utility Construction	02-01-2008
03316	Seal Slabs	02-01-2008

DIVISION 4 – MORTAR

04061	Mortar	02-01-2008
04210	Brick Masonry for Utility Construction	02-01-2008
04062	Unit Masonry System	02-01-2008

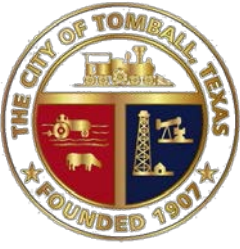
END OF DOCUMENT

Document 00015

LIST OF DRAWINGS

<u>Sheet No.</u>	<u>Drawing Title</u>
Cover Page	
C1.0	Project Notes & Information
C1.1	Overall Project Layout
C2.1	Sanitary Sewer Plan & Profile
C2.2	Sanitary Sewer Plan & Profile
C2.3	Sanitary Sewer Plan & Profile
C2.4	Sanitary Sewer Plan & Profile
C3.1	Project Details

END OF DOCUMENT



City of Tomball

Lori Klein Quinn
Mayor

David Esquivel
City Manager

NOTICE TO BIDDERS

The City of Tomball, Harris County, Texas is soliciting sealed bids for the **“Rudolph Road Sanitary Sewer Extension”**. The bid documents may be obtained for **no charge** by downloading them at www.civcastusa.com (account setup required) or at the office of Oller Engineering, Inc. (2901 Wilcrest Drive, Suite 550, Houston, Texas 77042) with a **\$150.00** non-refundable charge for each complete set of documents in electronic format obtained. Make checks payable to Oller Engineering, Inc.

Sealed bids shall be submitted via CivCast E-bidding, www.civcastusa.com, for **“E&P CIP No. 2017-10012; Project Bid Number 2024-03 – “Rudolph Road Sanitary Sewer Extension”**. Bids will be accepted until **3:00 p.m. CST on Thursday, November 16, 2023**.

An electronic pre-bid conference will be held on November 9, 2023, at 3:00 p.m., to familiarize the Bidders with the goals for this project. The information for the pre-bid conference will be posted on CivCast and sent out to all plan holders. The pre-bid conference is not mandatory.

Cashier's Check, Certified Check, or Bid Bond in an amount equal to ten percent (10%) of the total amount bid must accompany the BID. The Owner reserves the right to reject any or all bids or to accept any bid deemed advantageous to it and waive informalities in bidding. All bids received after the closing time designated will be returned unopened.

During the period between the Request for Proposal, submission date, and the contract award, respondents including their agents and/or representatives/owners, shall not directly or indirectly promote their proposal or bid to any member of the Tomball City Council or City staff except in the course of City-sponsored inquiries, briefings, interviews, and/or presentations requests. Violation of this provision may result in the rejection of the respondent's Proposal submittal.

The City of Tomball reserves the right to accept or to reject any bids, to waive technicalities and to make any investigation deemed necessary concerning the bidder's ability to provide the product(s) required, and to accept what in its judgment is the most advantageous bid. All bids received after the closing time designated will be returned unopened.

Section 00200

INSTRUCTIONS TO BIDDERS

1. DEFINITIONS

- A. Terms used in these Instructions to Bidders which are defined in the Standard General Conditions of the Construction Contract (General Conditions) have the meanings assigned to them in the General Conditions. Other terms used in the Bidding Documents and not defined elsewhere have the following meanings, which are applicable to both the singular and plural thereof:
1. Bidder: One who submits a bid directly to the Owner.
 2. Successful Bidder: The most qualified, responsible and responsive bidder to whom the Owner makes an award.
 3. Bidding Documents: The Notice to Bidders, Instructions to Bidders, Supplementary Conditions to General Conditions, Special Conditions (Underground Utilities), Special Conditions to the Agreement, Proposal and the Proposed Contract Documents (including Addenda issued prior to receipt of Bids).

2. PREPARATION OF BIDS

- A. Complete sets of bidding documents must be used in preparing bids. Neither the Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of bidding documents. Copies of bidding documents are made available only for the purpose of obtaining bids on the work and do not confer a license or grant for any other use.

3. QUALIFICATIONS OF BIDDERS

- A. Each bidder must submit with the bid a Financial and Experience Statement. The statement shall be filed with the proposal in a separate sealed envelope marked "Financial and Experience Statement".
- B. Financial statements from the three most qualified bidders will be retained by the Owner until award of the contract. NO FINANCIAL STATEMENT WILL BE READ ALOUD AT THE BID OPENING. Upon award of the contract, the statements of all unsuccessful bidders will be returned.
- C. Additional written evidence of qualifications, such as financial data, previous experience, present commitments, and other such data as may be called for by the OWNER.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- A. It is the responsibility of each Bidder before submitting a Bid to (a) examine the Contract Documents thoroughly, (b) visit the site to become familiar with local conditions that may

affect cost, progress, performance, or furnishing of the Work, (c) consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify ENGINEER of all conflicts, errors, or discrepancies in the Contract Documents discovered by the Bidder.

- B. Information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to OWNER and ENGINEER by owners of such Underground Facilities or others, and OWNER does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.
- C. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, underground facilities, and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions.
- D. Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies, and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work, and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.
- E. On request in advance, OWNER will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall clean up and restore the site to its former condition upon completion of such explorations.
- F. Failure to perform such investigations during the Bid period shall not relieve Bidder from responsibility for investigations, interpretations and proper use of available information in preparation of Bidder's proposal.
- G. The lands upon which the Work is to be performed, rights-of-way, and easements for access thereto and other lands designated for use by CONTRACTOR in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by CONTRACTOR. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by OWNER unless otherwise provided in the Contract Documents.
- H. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and such means, methods, techniques, sequences, or procedures of

construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

6. INTERPRETATION OF DOCUMENTS AND ADDENDA

- A. All questions about the meaning or intent of the Contract Documents must be submitted to the Engineer in writing at least ten (10) days prior to the opening of bids. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be issued by Addenda at least 48 hours prior to Bid Opening.
- B. Any interpretation of the Contract Documents will be made only by Addendum duly issued, and a copy of such addendum will be made available to each prospective bidder recorded by ENGINEER as having received a set of Contract Documents. Each Bidder is responsible for obtaining Addenda. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- C. Addenda may also be issued to modify the Contract Documents as deemed advisable by OWNER and ENGINEER.

7. BID SECURITY

- A. Each Bid shall be accompanied by Bid security made payable to OWNER in an amount of five percent of the Bidder's maximum Bid price and in the form of a bid bond, cashier's check, or certified check. Bid Bond shall have a "B+" rating from Best's Key Rating Guide, and shall be duly authorized by the State of Texas to execute Bid Security.
- B. The Bid security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required contract security, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security with 15 calendar days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the earlier of the seventh day after the Effective Date of the Agreement or the forty-sixth day after the Bid opening, whereupon Bid security furnished by such Bidders will be returned. Bid security with Bids which are not competitive will be returned within 7 days after the Bid opening.

8. CONTRACT TIME

- A. The number of days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment (the Contract Time) are set forth in the Agreement.

9. LIQUIDATED DAMAGES

- A. Provisions for liquidated damages, if any, are set forth in the Agreement.

10. SUBSTITUTE OR "OR EQUAL" ITEMS

- A. The Contract, if awarded, will be on the basis of materials and equipment described in the DRAWINGS or specified in the Specifications without consideration of possible substitute or "or equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ENGINEER, application for such acceptance will not be considered by ENGINEER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by ENGINEER is set forth in Paragraph 6.05 of the General Conditions and may be supplemented in the General Requirements (Division 1).

11. SUBCONTRACTORS, SUPPLIERS AND OTHERS

- A. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, and other person and organizations (including those who are to furnish the principal items of material and equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within 7 days after the Bid opening, submit to OWNER a list of all such Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person, or organization, either may, before the Notice of Award is given, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid price.
- B. If apparent Successful Bidder declines to make any such substitution, OWNER may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the Bid security of any Bidder. Any Subcontractor, Supplier, other person, or organization listed and to whom OWNER or ENGINEER does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06.B of the General Conditions.
- C. In Contracts where the Contract Price is on the basis of Cost of Work Plus a Fee, the apparent Successful Bidder, prior to the Notice of Award, shall identify in writing to OWNER those portions of the Work that such Bidder proposes to subcontract and after the Notice of Award may only subcontract other portions of the Work with OWNER'S written consent.
- D. No CONTRACTOR shall be required to employ any Subcontractor, Supplier, other person, or organization against whom CONTRACTOR has a reasonable objection.

12. BID FORMS

- A. All Bids shall be completely filled out on the specified bid forms without modification or provisions unless otherwise required.
- B. The Bids shall be completed in duplicate. The original shall be filed with the OWNER and the Bidder shall keep the duplicate.
- C. The Bids must be clearly and legibly filled out in ink or typed. In case of ambiguity or lack of clearness in stating the prices tendered or the condition of the Bid, the OWNER reserves the right to consider the most favorable construction thereof or to reject the Bid from further consideration.
- D. All Bids must be officially executed. Bids by Corporations must be executed in the corporate name by the president or vice president (or other corporate officer, accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or assistant secretary. The corporate address and state of incorporation must be shown below the signature. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature, and the official address of the partnership must be shown below the signature. All business entity names must be registered with the Secretary of State of Texas and appropriate office of registration.
- E. The Bid shall contain an acknowledgement of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

13. SUBMISSION OF BIDS

- A. Bids shall be submitted at the time and place indicated in the Notice to Bidders, and shall be enclosed in an opaque sealed envelope marked with the Project title, name and address of the Bidder and containing Bid security and other required documents. Bids will be securely kept unopened, until the specified time. The bids received after the specified time will not be considered. All incomplete Bids shall be considered non-responsive. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

14. MODIFICATION AND WITHDRAWAL OF BIDS

- A. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to opening of Bids.
- B. If, within 24 hours after Bids are opened, any Bidder files a duly signed, written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid,

that Bidder may withdraw its Bid and the Bid security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

15. OPENING OF BIDS

- A. Bids will be opened and read aloud publicly. An abstract of the amounts of the base Bids and major alternates (if any) will be made available to Bidders within 7 calendar days after the date of Bid opening.

16. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- A. The apparent Successful Bid and the next two lowest Bids will remain subject to acceptance for 60 calendar days after the day of the Bid opening. All other Bids will be released and the Bid security returned within 7 days. OWNER may, in its sole discretion, release any Bid and return the Bid security prior to that date.

17. AWARD OF CONTRACT

- A. Contract will be awarded on basis of low Base Bid. Selection of alternates or deductive Bid Items by the OWNER will not be used to displace the low Bidder.
- B. The Owner reserves the right to reject any and all bids, to waive any and all informalities not involving price, time or changes in the Work, to negotiate contract terms with the Successful Bidder, and to disregard all non conforming, non-responsive, unbalanced or conditional Bids. Also, OWNER reserves the right to reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- C. In evaluating Bids, OWNER will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- D. OWNER may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. OWNER also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

- E. OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to OWNER'S satisfaction within the prescribed time.
- F. Alternate bid items are included in the Bid Form. The Successful Bidder will be determined based on either the low Base Bid (Part C of the Bid), or the low Base Bid Plus Alternate Bid (Part E of the Bid), at the discretion of the OWNER.
- G. If the Contract is to be awarded, OWNER will give the Successful Bidder a Notice of Award within 60 calendar days after the day of the Bid opening.

18. CONTRACT SECURITY

- A. Paragraph 5.1 of the General Conditions and the Supplementary Conditions set forth OWNER'S requirements as to performance and payment Bonds. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required performance and payment Bonds.

19. INSURANCE CERTIFICATES

- A. The CONTRACTOR shall provide and maintain a minimum coverage as defined in the Contract Documents (Article 5 of the General Conditions). The companies providing the coverage shall be acceptable to the OWNER (Certificate of Insurance Section 00620).

20. SIGNING OF AGREEMENT

- A. When OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within 15 calendar days thereafter, CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement, and attached documents to OWNER with the required Bonds. Within 10 calendar days thereafter, OWNER shall deliver one fully signed counterpart to CONTRACTOR. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

21. PRE-BID CONFERENCE

- A. A pre-bid conference will be held at the time and place indicated in the Invitation to Bid (Section 00100). Representatives of OWNER and ENGINEER will be present to discuss the Project. All prospective bidders are encouraged to attend and participate in the conference. ENGINEER will notify all prospective Bidders of record of any such Addenda as ENGINEER considers necessary in response to questions arising at the conference.

22. SALES TAX

- A. Owner is exempt from Texas sales and use taxes pursuant to Texas Tax Code §151.309 as a political subdivision of the State of Texas. OWNER shall provide CONTRACTOR with a completed Texas Sales and Use Tax Exemption Certification as evidence of the applicability of such exemption and, accordingly, CONTRACTOR shall not collect Texas sales and use taxes from OWNER with respect to this Contract. CONTRACTOR and all Subcontractors to CONTRACTOR shall issue a Texas Sales and Use Tax Exemption Certification with respect to, and shall not pay Texas sales and use taxes on, all purchases of the following items that are exempt from Texas sales and use taxes pursuant to Texas Tax Code §151.311: (i) tangible personal property that will be incorporated into OWNER'S realty; (ii) tangible personal property that is necessary and essential for the performance of this Contract and is consumed entirely on the job site; and (iii) taxable services for use in the performance of this Contract that are performed at the job site and are either integral to the performance of this Contract or expressly required to be provided by this Contract. In addition, CONTRACTOR and all Subcontractors to CONTRACTOR (i) shall not include any provision for Texas sales and use taxes with respect to such exempt items in any bid or contract amount, and (ii) shall pass on to OWNER cost savings due to the exempt status of such exempt items. CONTRACTOR'S contracts with all Subcontractors to CONTRACTOR shall include the foregoing provision regarding the exemption from Texas sales and use taxes.

END OF SECTION

Document 00210

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

The following Paragraphs modify Document 00200 - Instructions to Bidders. Where a portion of the Instructions to Bidders is modified or deleted by these Supplementary Instructions, the unaltered portions of the Instructions to Bidders remains in effect.

BID DOCUMENTS: Add the following Paragraphs to this Section:

1. Bid Documents may be purchased at Goodwin Lasister Strong office located at ADDRESS, CITY, Texas with cash, check or money order for \$25.00 per set. A maximum of two sets will be sold to each prospective Bidder.

EXAMINATION OF DOCUMENTS, SITE, AND LOCAL CONDITIONS:

1. Work will be performed in public right-of-way & City easements. The site may be examined at any time during daylight hours.

2. SUBSTITUTION OF PRODUCTS:

- A. Where Bid Documents specify a specific Product with provision for consideration of substitutions (or equal), requests for prebid approval of substitutions will be considered from Bidders only if received by Project Manager 10 days or more prior to Bid Date.
- B. Requests for substitutions must provide complete information in order to determine acceptability of the Products, in accordance with provisions of Document 00700 - General Conditions.
- C. The City will consider requests for substitutions and, if approved, will issue an Addendum. Bidder shall base its Bid only on substitutions approved in Addenda. Substitutions, not listed in an Addendum, are not allowed.
- D. Bidder shall include in its Bid, costs of substitutions approved by Addenda.

BID SUBMISSION:

1. Project Coordinator will receive Bids at 501 James Street, Tomball, Texas until 10:00 a.m., local time on [Bid Date]. --- INSERT DATE WHEN KNOWN

Project No.

**SUPPLEMENTARY
INSTRUCTIONS TO BIDDERS**

2. Submit one copy of the executed offer on the bid forms provided, properly signed, with required Security Deposit, and other Supplements to Bid Forms, in a sealed, opaque envelope. On the outside of the envelope clearly identify the Certificate of Responsibility number, Bidders name, Project name, and the City's name. Bids submitted by mail shall be enclosed in a separate envelope addressed for mailing and identifying the enclosure as a bid.

PREBID MEETING:

1. A Pre-bid Meeting will be held at 3:00 p.m. CST on Thursday, November 9, 2023 to be hosted electronically via CivCast.

END OF DOCUMENT

REQUEST FOR BID INFORMATION

Phone _____ No. _____
Fax No. _____
Email Addr. _____

[illegible]

Attachments to this request: _____

(Type or Print Company Name)

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Document 00330

EXISTING CONDITIONS

1.1 DOCUMENT INCLUDES

- A. Topographic Survey

2.1 RELATED DOCUMENTS

- A. None

3.1 SUBSURFACE INVESTIGATION REPORT

- A. In the design and preparation of Contract documents for this Project, the City and Design Consultant have used information with respect to Underground Facilities and existing structures at or contiguous to the site, based on data furnished by the City and to the City or Design Consultant by owners of the Underground Facilities, as noted.
- B. Public and private utilities were marked in the field by utility owners. The topographic survey locates these marks in the field. Utilities not marked by respective owners and shown on plans are from utility maps provided and published.
- C. Neither the City nor Design Consultant is responsible for the accuracy or completeness of any such information or data.

4.1 UNDERGROUND FACILITIES REPORTS

- A. None

5.1 EXISTING STRUCTURES

- A. Contract documents indicate physical conditions in or relating to existing surface and subsurface structures which are at or contiguous to the site that were known to, and have been used by, the City and Design Consultant in preparation of Contract documents.

6.0 VIDEO TAPES OF SANITARY SEWER – NOT APPLICABLE

7.0 BIDDER RESPONSIBILITIES

- A. Bidder shall have full responsibility for reviewing and verifying information and data, for locating Underground Facilities and existing structures shown or indicated in the Contract documents, and for coordination of the Work with the owners of such Underground Facilities and existing structures during construction.

END OF DOCUMENT

Document 00410A

BID FORM – PART A

To: **The Honorable Mayor and City Council of the City of Tomball
City Hall**

Tomball, Texas

Project: Rudolph Road Sanitary Sewer Expansion
Project No.: 2017-10012
Bidder: _____

(Print or type full name of proprietorship, partnership, corporation, or joint venture.)

1.1 OFFER

- A. Total Bid Price:** Having examined the Project location and all matters referred to in Bid Documents for the Project, we, the undersigned, offer to enter into a Contract to perform the Work for the Total Bid Price shown on the signature page of this Document
- B. Security Deposit:** Included with the Bid is a Security Deposit in the amount of 10 percent of the Total Bid Price subject to terms described in Document 00200 – Instructions to Bidders.
- C. Period for Bid Acceptance:** This offer is open to acceptance and is irrevocable for 90 days from Bid Date. That period may be extended by mutual written agreement of the City and Bidder.
- D. Addenda:** All Addenda have been received. Modifications to Bid Documents have been considered and all related costs are included in the Total Bid Price.
- E. Bid Supplements:** The following documents are attached:
- ☒ Security Deposit (*as defined in Document 00200 – Instructions to Bidders*)
 - ☒ Document 00453 – Bidder's Statement of Residency
 - ☒ Document 00455 - Affidavit of Ownership or Control
 - ☐ Page 00809-63, Request for Contractor Clearance
 - ☐ Others as listed: _____

2.1 CONTRACT TIME

- A.** If offer is accepted, Contractor shall achieve Date of Substantial Completion within Ninety Working Days (90) days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

Document 00410B

BID FORM – PART B

1.1 TOTAL BID PRICE HAS BEEN CALCULATED BY BIDDER, USING THE FOLLOWING COMPONENT PRICES AND PROCESS (PRINT OR TYPE NUMERICAL AMOUNTS):**A. STIPULATED PRICE:****\$N/A**

(Total Bid Price; minus Base Unit Prices, Extra Unit Prices, Cash Allowances and All Alternates, if any)

B. BASE UNIT PRICE TABLE:

Item No.	Control No.	Item Description	Unit Measure	Unit Quantity	Unit Price	Total in figures
1		Mobilization, setup, & project overhead for all equipment, work on project, including related items & appurtenances, complete in place	LS	1	\$	\$
2		Traffic control and project phasing and related items & appurtenances, complete in place	LS	1	\$	\$
3		Field locate existing utilities and service lines for construction of the proposed improvements including related items and appurtenances, complete in place	LS	1	\$	\$
4		Stormwater pollution prevention plan including silt fencing, inlet protection, erosion control measures until ground cover established including related items and appurtenances, complete in place	LS	1	\$	\$
5		Site clean-up including hydro mulch of ROW and areas disturbed by construction including topsoil, final grading, and related items and appurtenances, complete in place	LS	1	\$	\$
6		8" SDR 26 PVC sewer line (depth \geq 8'), including related fittings, items and appurtenances, complete in place	LF	510	\$	\$
7		8" SDR 26 PVC sewer line (depth < 8'), including related fittings, items and appurtenances, complete in place	LF	1,270	\$	\$
8		8" SDR 26 PVC sewer line installed by dry bore, including related fittings, items and appurtenances, complete in place	LF	135	\$	\$
9		4'Ø Sanitary sewer manhole, including related items and appurtenances, complete in place	EA	6	\$	\$
10		Remove & dispose of existing 6" cleanout, including related items and appurtenances, complete in place	EA	1	\$	\$
11		Remove & dispose of existing 6" sanitary sewer line, including related items and appurtenances, complete in place	LF	26	\$	\$

Item No.	Control No.	Item Description	Unit Measure	Unit Quantity	Unit Price	Total in figures
12		Asphalt pavement repair, including related items and appurtenances, complete in place	LF	42	\$	\$
13		Concrete pavement repair, including related items and appurtenances, complete in place	LF	13	\$	\$
14		Gravel driveway repair, including related items and appurtenances, complete in place	LF	24	\$	\$
15		Driveway repair, including related items and appurtenances, complete in place	LF	50	\$	\$
16		Reroute & regrade existing ditch, including related items and appurtenances, complete in place	LS	1	\$	\$
17		10'x40' Flexamat, including related items and appurtenances, complete in place	LS	1	\$	\$
18		Rock rip-rap, including related items and appurtenances, complete in place	LF	35	\$	\$
19		14"Ø x 1/4" thick steel casing, including related items and appurtenances, complete in place	LF	195	\$	\$
20		Encase steel casing with concrete, including related items and appurtenances, complete in place	LF	60	\$	\$
<u>TOTAL BASE UNIT PRICES</u>					\$ _____	

C. EXTRA UNIT PRICE TABLE: NOT APPLICABLE**D. CASH ALLOWANCE TABLE: NOT APPLICABLE****E. ALTERNATES TABLE: NOT APPLICABLE****F. TOTAL BID PRICE:**

(Add Totals for Items A., B., C., D., and E. above)

\$ _____

2.0 SIGNATURES: By signing this Document, I agree that I have received and reviewed all Addenda and considered all costs associated with the Addenda in calculating the Total Bid Price.

Bidder: _____
(Print or type full name of your proprietorship, partnership, corporation, or joint venture.*)

****By:** _____
Signature Date

Name: _____
(Print or type name) Title

Address: _____
(Mailing)

(Street, if different)

Telephone and Fax Number: _____
(Print or type numbers)

* If Bid is a joint venture, add additional Bid Form signature sheets for each member of the joint venture.

****** Bidder certifies that the only person or parties interested in this offer as principals are those named above. Bidder has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding.

Footnotes for Basic Unit Price Table and Extra Unit Price Table:

- (1) Fixed Unit Price determined prior to Bid. Cannot be adjusted by the Bidder.
- (2) Minimum Bid Price determined prior to Bid. Can be increased by the Bidder by crossing out the Minimum and noting revised price on the line above.
- (3) Maximum Bid Price determined prior to Bid. Can be decreased by Bidder by crossing out the Maximum and noting revised price on the line above.
- (4) Fixed Range Unit Price determined prior to Bid. Unit Price can be adjusted by Bidder to any amount within the range defined by crossing out prices noted and noting revised price on the line above.

Note: This document constitutes a government record, as defined by § 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in § 37.10 of the Texas Penal Code.

END OF DOCUMENT

Document 00430

BIDDER'S BOND

THAT WE, _____, as Principal,
 _____ (Bidder),
 ("Bidder"), and the other subscriber hereto, _____, as Surety, do hereby
 acknowledge ourselves to be held and firmly bound to the City of Tomball, a municipal corporation, in the sum
 of _____ Dollars (\$ _____) (an amount
 equal to 10 percent of the Total Bid Price, including Cash Allowances and Alternates, if any, for the payment of
 which sum, well and truly to be made to the City of Tomball and its successors, the Bidder and Surety do bind
 themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Bidder has submitted on or about this day a proposal offering to perform the following:

 _____ (Project Name, Location and Number)
 in accordance with the Drawings, Specifications, and terms and conditions related thereto to which reference is
 hereby made.

NOW, THEREFORE, if the Bidder's offer as stated in the Document 00410 – Bid Form is accepted by the
 City, and the Bidder executes and returns to the City Document 00520 – Agreement, required by the City, on
 the forms prepared by the City, for the Work and also executes and returns the same number of the
 Performance, Payment and Maintenance Bonds (such bonds to be executed by a Corporate Surety authorized
 by the State Board of Insurance to conduct insurance business in the State of Texas, and having an
 underwriting limitation in at least the amount of the bond) and other submittals as required by Document 00495
 - Post-Bid Procedures, in connection with the Work, within the Contract Time, then this obligation shall become
 null and void; otherwise it is to remain in full force and effect.

If Bidder is unable to or fails to perform the obligations undertaken herein, the undersigned Bidder and
 Surety shall be liable to the City for the full amount of this obligation which is hereby acknowledged as the
 amount of damages which will be suffered by the City on account of the failure of such Bidder to perform such
 obligations, the actual amount of such damages being difficult to ascertain.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually
 received or, if earlier, on the third day following deposit in a United States Postal Service post office or
 receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective
 other Party at the address prescribed in the Contract documents, or at such other address as the receiving
 Party may hereafter prescribe by written notice to the sending Party.

IN WITNESS THEREOF, the Bidder and Surety have signed and sealed this instrument on the respective
 dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)

WITNESS: (if not a corporation)

By: _

Title:

ATTEST/SURETY WITNESS: (SEAL)

 (Name of Bidder)

By: _____ Name:

Name:

Title:

Date:

 (Full Name of Surety)

 (Address of Surety for Notice)

 (Telephone Number of Surety)

By: _

Title:

Date:

By: _____ Name:

Name:

Title:

Date:

END OF DOCUMENT

00430-1

02-01-08

Document 00453

BIDDER'S STATEMENT OF RESIDENCY

The City may not award a contract for general construction, services, or purchases to a Nonresident Bidder unless Nonresident's Bid is lower than the lowest Bid submitted by a responsible Texas Resident Bidder by the same amount that a Texas Resident bidder would be required to underbid the Nonresident Bidder to obtain a comparable contract in the state in which Nonresident's principle place of business is located.

1. This certifies that the Bidder, _____, is a State of Texas Resident Bidder as defined in TEX. GOVT. CODE ANN. § 2252.001(4) (Vernon 1994).

Signature

Title

"Texas Resident Bidder" means a bidder whose principal place of business is in this State, and includes a Contractor whose ultimate parent company or majority owner has its principal place of business in this State. *When bidder cannot sign 1, above, proceed to 2.*

2. a. is a resident of _____ and is a Nonresident Bidder as defined in
TEX. GOVT. CODE ANN. § 2252.001(3) (Vernon 1994).

Signature

Title

"Nonresident Bidder" means a bidder whose principal place of business is not in this State, but excludes a contractor whose ultimate parent company or majority owner has its principal place of business in this State.

- b. The State of _____ have a state statute giving
 Bidder's resident state Does or Does Not
 preference to resident bidders.

Signature

Title

If the answer to 2.b is that your state does have a statute giving preference to resident bidders, then you must provide a copy and proceed to 3.

3. A copy of the State of _____ statute is attached.

Signature

Title

Date _____

END OF DOCUMENT

Project No. _____

**AFFIDAVIT OF
OWNERSHIP OR CONTROL**

Orig. Dept.: _____

File/I.D. No.: _____

INSTRUCTION: Entities using an assumed name should disclose such fact to avoid rejection of the affidavit. The following format is recommended: Corporate/Legal Name d.b.a. Assumed Name.

Document 00455

AFFIDAVIT OF OWNERSHIP OR CONTROL

BEFORE ME, the undersigned authority, on this day personally appeared

_____(Full Name, hereafter "Affiant"),

_____(state title/capacity with Contracting Entity) of

_____(Contracting Entity's Corporate/Legal Name)

("Contracting Entity"), who being by me duly sworn on oath stated as follows:

1. Affiant is authorized to give this affidavit and has personal knowledge of the facts and matters herein stated.

2. Contracting Entity seeks to do business with the City in connection with

(describe project or matter) which is expected to be in an amount that exceeds \$25,000.

3. The following information is submitted in connection with the proposal, submission or bid of Contracting Entity in connection with the above described project or matter.

4. Contracting Entity is organized as a business entity as noted below (check box as applicable):

FOR PROFIT ENTITY:

- ☐ SOLE PROPRIETORSHIP
- ☐ CORPORATION
- ☐ PARTNERSHIP
- ☐ LIMITED PARTNERSHIP
- ☐ JOINT VENTURE
- ☐ LIMITED LIABILITY COMPANY
- ☐ OTHER (Specify type in space below)

NON-PROFIT ENTITY:

- ☐ NON-PROFIT CORPORATION
- ☐ UNINCORPORATED ASSOCIATION

Project No. _____

**AFFIDAVIT OF
OWNERSHIP OR CONTROL**

Orig. Dept.: _____

File/I.D. No.: _____

5. The information shown below is true and correct for the Contracting Entity and all owners of 5% or more of the Contracting Entity and, where the Contracting Entity is a non-profit entity, the required information has been shown for each officer. (NOTE: In all cases, use full names, local business and residence addresses and telephone numbers. Do not use post office boxes for any address. Inclusion of e-mail addresses is optional, but recommended. Attach additional sheets as needed.)

Contracting Entity

Name: _____

Business Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (____)_____

Email Address (optional) _____

Residence Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (____)_____

Email Address (optional) _____

5% Owner(s) (IF NONE, STATE "NONE.")

Name: _____

Business Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (____)_____

Email Address (optional) _____

Residence Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (____)_____

Email Address (optional) _____

6. Optional Information

Contracting Entity and/or _____ (Name of Owner or Non-Profit Officer) is actively protesting, challenging or appealing the accuracy and/or amount of taxes levied against _____ (Contracting Entity, Owner or Non-Profit Officer) as follows:

Orig. Dept.: _____

File/I.D. No.: _____

Project No. _____

**AFFIDAVIT OF
OWNERSHIP OR CONTROL**

Name of Debtor: _____

Tax _____

Account _____

Nos. _____

-

Case or _____

File _____

Nos. _____

Attorney/Agent Name _____

Attorney/Agent Phone No. (_____) _____

Tax Years _____

Status of Appeal (Describe) _____

Affiant certifies that he or she is duly authorized to submit the above information on behalf of the Contracting Entity, that Affiant is associated with the Contracting Entity in the capacity noted above and has personal knowledge of the accuracy of the information provided herein, and that the information provided herein is true and correct to the best of Affiant's knowledge and belief.

Affiant

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20____.

(Seal)

Notary Public

NOTE:

This affidavit constitutes a **government record** as defined by Section 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in Section 37.10 of the Texas Penal Code. Attach additional pages if needed to supply the required names and addresses.

END OF DOCUMENT

Document 00495

POST-BID PROCEDURES

1.1 DOCUMENT ADDRESSES

- A. Notice of Intent to Award.
- B. Monitoring Authority
- C. Failure of Bidder to comply with requirements.
- D. Notice to Proceed.

2.1 NOTICE OF INTENT TO AWARD

- A. The City will provide written Notice of Intent to Award to Low Bidder.

3.1 DEFINITIONS

- A. The "Monitoring Authority" for this Project is:
- B. The "Project Manager" for this Project is:

4.1 REQUIREMENTS OF BIDDER

- A. Within 10 days of receipt of Notice of Intent to Award, Low Bidder shall execute and deliver to Project Manager and Monitoring Authority, for the City's approval, documents indicated by an "X" below:
 - [X] Document 00600 - List of Proposed Subcontractors and Suppliers
 - [X] Executed Subcontract(s), Letter(s) of Intent, or documentation of good faith efforts to meet the goals
- B. Within 10 days of receipt of Notice of Intent to Award, Low Bidder shall execute and deliver to [Project Manager or Post-bid Coordinator], for the City's approval, documents indicated by an "X" below:
 - [X] Document 00500 - Form of Business
 - [X] Document 00501 - Resolution of Corporation
 - [X] Document 00520 – Agreement

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- [X] Document 00601 - Drug Policy Compliance Agreement
- [X] Document 00602 - Contractor's Drug-free Workplace Policy (*Contractor creates this document.*)
- [X] Document 00604 - History of OSHA Actions and List of On-the-job Injuries
- [X] Document 00605 - List of Safety Impact Positions (*Contractor completes this list. Do not submit if submitting Document 00606.*)
- [] Document 00606 - Contractor's Certification of No Safety Impact Positions (*Do not submit if submitting Document 00605.*)
- [X] Document 00607 - Certification Regarding Debarment, Suspension, and Other Responsibility Matters
- [X] Document 00610 - Performance Bond
- [X] Document 00611 - Statutory Payment Bond
- [X] Document 00612 - One-year Maintenance Bond
- [] Document 00613 - One-year Surface Correction Bond
- [X] Document 00620 - Affidavit of Insurance (*with Certificate of Insurance attached*)
- [X] Document 00622 - Name and Qualifications of Proposed Superintendent (*Contractor creates this document.*)

- C. On Bidder's written request, Project Manager may grant an extension of time, not to exceed 5 days, to furnish documents specified in Paragraphs 4.0.A and 4.0.B. If Bidder is required to resubmit documents specified in Paragraph 4.0.A or 4.0.B, Bidder shall do so within time limits provided in the request for resubmission.

5.1 FAILURE OF BIDDER TO COMPLY WITH REQUIREMENTS

- A. Should Bidder, on receipt of Notice of Intent to Award, fail to comply with requirements of this Document 00495 within stated time, the City may declare award in default and require forfeiture of the Security Deposit.
- B. After the City's written notice of default to Low Bidder, the City may award the Contract to Bidder whose offer is the next lowest bid, and Security Deposit of Bidder in default shall be forfeited to the City in accordance with provisions of Document 00200 - Instructions to Bidders.

6.1 NOTICE TO PROCEED

- A. Upon the City's execution of the Agreement and delivery to Contractor, City Engineer will give Document 00551 - Notice to Proceed to Contractor, which establishes Date of Commencement of the Work.

END OF DOCUMENT

Document 00500

FORM OF BUSINESS

Please mark the box describing your firm's form of business, fill in the requested information, and include the relevant attachments.

[] Corporation

Corporate

Name: _____

State of

Incorporation: _____

Mailing Address: _____

Type of Corporation: _____

Certificate of Assumed Name, if operating under a name different than that on the corporate charter (the Certificate must have been issued within the past 10 years to be valid)

*Certificate of Good Standing

*Certificate of Existence (if non-Texas corporation, Certificate of Authority)

[] Partnership/Joint Venture

Partnership/Joint

Venture

Name: _____

Mailing Address: _____

Type of Partnership/Joint Venture: _____

Copy of the Partnership or Joint Venture Agreement, **or**
Affidavit with the name of the partnership or joint venture, the names of the individual partners or participants in the joint venture, and a statement that the partnership or joint venture is in existence

Certificate of Assumed Name, (the Certificate must have been issued within the past 10 years to be valid)

If firm is a limited partnership, the Certificate of Limited Partnership

If any partner or joint venturer is a corporation, the above information relating to corporation must be included as to each sum partner or joint venturer.

[] Sole Proprietorship

Name: _____

Mailing Address: _____

Certificate of Assumed Name, if operating under a name different than that of the sole proprietor (the Certificate must have been issued within the past 10 years to be valid)

* Must be furnished upon request of the Director and must be less than 90 days old.

END OF DOCUMENT

Project No.

RESOLUTION OF CORPORATION

Document 00501

RESOLUTION OF CORPORATION

I hereby certify that it was RESOLVED by a quorum of the directors of

(Name of Corporation / Contractor)

on the _____ day of _____, 20____, that _____,
(Corporate Representative)

be, and hereby is, authorized to act on behalf of the Corporation, as its representative,
in all business transactions conducted in the State of Texas, and

That the above resolution was unanimously ratified by the Board of Directors at
said meeting and that the resolution has not been rescinded or amended and is now in
full force and effect; and

In authentication of the adoption of this resolution, I subscribe my name on this
_____ day of _____, 20____.

Secretary/Assistant Secretary

END OF DOCUMENT

Document 00520

AGREEMENT

Project: _____

Project Location: _____ Rudolph Road (Key Map No. [xxx-x]) _____

Project Bid No: _____

E&P Project No: _____

The City: The City of Tomball, County of Harris, Texas (the "City")

and

Contractor: _____

(Address for Written Notice) _____

Fax Number: _____

City Engineer is: _____

(Address for Written Notice) _____

Fax Number: _____

THE CITY AND CONTRACTOR AGREE AS FOLLOWS:

ARTICLE 1

THE WORK OF THE CONTRACT

1.1 Contractor shall perform the Work in accordance with the Contract.

ARTICLE 2

CONTRACT TIME

2.1 Contractor shall achieve Date of Substantial Completion within Ninety Days (90) after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

2.2 The Parties recognize that time is of the essence for this Agreement and that the City will suffer financial loss if the Work is not completed within the Contract Time. Parties also recognize delays, expense, and difficulties involved in proving in a legal or arbitration proceeding actual loss suffered by the City if the

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Work is not completed on time. Accordingly, instead of requiring any such proof, the Parties agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay the City the amount stipulated in Document 00800 – Supplementary Conditions, for each day beyond Contract Time.

ARTICLE 3

CONTRACT PRICE

3.1 Subject to terms of the Contract, the City will pay Contractor in current funds for Contractor's performance of the Contract, Contract Price of \$[Original Contract Price, in numbers only], which includes Alternates, if any, accepted below.

3.2 The City accepts Alternates as follows:

Alternate No. 1	<u>[Accepted, Not Accepted or Not Applicable]</u>
[Alternate No. 2	<u>[Accepted or Not Accepted]</u>
Alternate No. 3	<u>[Accepted or Not Accepted]</u>

ARTICLE 4

PAYMENTS

4.1 The City will make progress payments to Contractor as provided below and in the General Conditions.

4.2 The Period covered by each progress payment is one calendar month ending on the [] 10th, [] 20th, or [X] last day of the month.

4.3 The Schedule of Values established as provided in paragraph 2.07.A of the General Conditions will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed. The City will make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as provided below in paragraphs 4.3.1 and 4.3.2.

4.3.1 Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or City may withhold, in accordance with paragraph 14.02 of the General Conditions:

- a. For contracts under \$400,000.00, 90% of Work completed (with the balance being retainage).
For contracts over \$400,000.00, 95% of Work completed (with the balance being retainage.)
- b. For contracts under \$400,000.00, 90% (with the balance being retainage) and for contracts over \$400,000.00, 95% (with the balance being retainage) of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to the City as provided in paragraph 14.02 of the General Conditions).

4.3.2 Upon Substantial Completion, the City shall pay an amount sufficient to increase total payments to Contractor to 95% of the Work completed, less such amounts as Engineer shall determine in accordance with paragraph 14.02.B.5 of the General Conditions and less 100% of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the Certificate of Substantial Completion.

4.4 Final payment, constituting entire unpaid balance of Contract Price, will be made by the City to Contractor as provided in the General Conditions.

ARTICLE 5

CONTRACTOR REPRESENTATIONS

5.1 Contractor represents:

5.1.1 Contractor has examined and carefully studied Contract documents and other related data identified in Bid Documents.

5.1.2 Contractor has visited the site and become familiar with and is satisfied as to general, local, and site conditions that may affect cost, progress, and performance of the Work.

5.1.3 Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.

5.1.4 Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in Contract documents and (2) reports and drawings of a hazardous environmental condition, if any, at the site which has been identified in Contract documents.

5.1.5 Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including applying specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract to be employed by Contractor, and safety precautions and programs incident thereto

5.1.6 Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for performance of the Work at Contract Price, within Contract Time, and in accordance with the Contract.

5.1.7 Contractor is aware of general nature of work to be performed by the City and others at the site that relates to the Work as indicated in Contract documents.

5.1.8 Contractor has correlated information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract.

5.1.9 Contractor has given City Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract, and written resolution thereof by City Engineer is acceptable to Contractor.

5.1.10 Contract documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 6

MISCELLANEOUS PROVISIONS

6.1 The Contract may be terminated by either Party as provided in Conditions of the Contract.

6.2 The Work may be suspended by the City as provided in Conditions of the Contract.

ARTICLE 7

ENUMERATION OF CONTRACT DOCUMENTS

7.1 The following documents are incorporated into this Agreement:

7.1.1 Document 00700 - General Conditions

7.1.2 Document 00800 - Supplementary Conditions

7.1.3 General Requirements.

7.1.4 Divisions 02 through 16 of Specifications attached hereto or incorporated by reference in Document 00010 - Table of Contents.

MANDATORY

In the next paragraph, if a unique City Drawing number has been assigned, replace the "NNNNN" below with it. If not, remove the bracketed verbiage. Remove brackets and instructions when done. Change color of remaining text to black.

7.1.5 Drawings listed in Document 00015 - List of Drawings and bound separately.

7.1.6 Addenda which apply to the Contract, are as follows:

Addendum No. 1, dated [_____]

Addendum No. 2, dated [_____]

Addendum No. 3, dated [_____]

7.1.7 Other documents:

00520-4
06-16-2011

<u>Document No.</u>	<u>Title</u>
[X] 00410B	Bid Form – Part B
[X] 00500	Form of Business
[X] 00501	Resolution of Corporation (if a corporation)
[X] 00610	Performance Bond
[X] 00611	Statutory Payment Bond
[X] 00612	One-year Maintenance Bond
[X] 00620	Affidavit of Insurance (with the Certificate of Insurance attached)
[X] 00800	Exhibit A, Wage Rates
[] 00821	Wage Rate for Building Construction
[] 00830	Trench Safety Geotechnical Information

ARTICLE 8

SIGNATURES

8.1 This Agreement is executed in two originals and is effective on _____.

00520-5
06-16-2011

Project No. _____

AGREEMENT

CONTRACTOR:

(If Joint Venture)

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Tax Identification Number: _____

Tax Identification Number: _____

ATTEST/SEAL:

[SEAL]

Attest: _____

Date: _____

CITY OF TOMBALL, TEXAS:

By: _____
City Manager

Date: _____

ATTEST/SEAL:

[SEAL]

Attest: _____
City Secretary

Date: _____

END OF DOCUMENT

Project No. _____

**LIST OF PROPOSED
SUBCONTRACTORS AND SUPPLIERS**

Document 00600

**LIST OF PROPOSED SUBCONTRACTORS AND SUPPLIERS - PART A
SCHEDULE OF SUBCONTRACTORS AND SUPPLIERS**

PROJECT NAME: _____ DATE OF REPORT: _____
PROJECT NO.: _____

SUBCONTRACTOR OR SUPPLIER	ADDRESS	SCOPE OF WORK ²

- NOTES:**
1. RETURN PART B FOR ALL PROJECTS WITHIN THE SPECIFIED NUMBER OF DAYS AFTER RECEIPT OF NOTICE OF INTENT TO AWARD.
 2. DESCRIBE THE WORK TO BE PERFORMED, SUCH AS PAVING, ELECTRICAL, ETC.

CONTRACTOR SHALL EXECUTE CONTRACTS WITH APPROVED SUBCONTRACTORS AND SUPPLIERS WITHIN 30 DAYS AFTER THE DATE OF THE NOTICE TO PROCEED.

SIGNATURE: _____ COMPANY NAME: _____

NAME: _____ TITLE: _____
(Type or Print)

END OF DOCUMENT

00600-1
02-01-08

Project No. _____

**DRUG POLICY
COMPLIANCE AGREEMENT**

Document 00601

DRUG POLICY COMPLIANCE AGREEMENT

I, _____, _____,
Name Title

of _____
Contractor

have authority to bind Contractor with respect to its Bid, Proposal, or performance of any and all contracts it may enter into with the City of Tomball; and that by making this Agreement, I affirm that Contractor is aware of and by the time the Contract is awarded will be bound by and agree to designate appropriate safety impact positions for company employee positions, and to comply with the following requirements before the City issues a Notice to Proceed:

1. Develop and implement a written Drug Free Workplace Policy and related drug testing procedures for Contractor that meet the criteria and requirements established by the Mayor's Amended Policy on Drug Detection and Deterrence (Mayor's Drug Policy) and the Mayor's Drug Detection and Deterrence Procedures for Contractors (Executive Order No. _____).
2. Obtain a facility to collect urine samples consistent with Health and Human Services (HHS) guidelines and an HHS-certified drug-testing laboratory to perform drug tests.
3. Monitor and keep records of drug tests given and results; and upon request from the City of Tomball, provide confirmation of such testing and results.
4. Submit semi-annual Drug Policy Compliance Declarations.

I affirm on behalf of Contractor that full compliance with the Mayor's Drug Policy and Executive Order No. _____ is a material condition of the Contract with the City of Tomball,

I further acknowledge that falsification, failure to comply with or failure to timely submit declarations or documentation in compliance with the Mayor's Drug Policy or Executive Order No. _____ will be considered a breach of the Contract with the City and may result in non-award or termination of the Contract by the City.

Contractor

Title

Signature

Date

END OF DOCUMENT

00601-1

Document 00604

HISTORY OF OSHA ACTIONS AND LIST OF ON-THE-JOB INJURIES

Prior to award of the Contract, Low Bidder will be required to file the following with the City:

1. A history of all OSHA actions, advisories, etc., Contractor has received on all jobs worked in any capacity, prime or subcontractor. The history shall be for the two-year period preceding the Bid Date of the Project.
2. A list of all on-the-job injuries, accidents, and fatalities suffered by any present or former employees of Contractor during the same two-year period.
3. If less than the two-year period, give the date Contractor started doing business.

This information must be submitted to the City within the time period stated in Document 00498 - Notice of Intent to Award. An officer of the company must certify in a notarized statement that the information submitted is true and correct.

END OF DOCUMENT

Document 00607

**CERTIFICATION REGARDING DEBARMENT,
SUSPENSION, AND OTHER RESPONSIBILITY MATTERS**

Contractor certifies to the best of its knowledge and belief that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal, State, or local department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction: violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph 2 of this certification; and
4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Section 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to five years, or both.

Company:

Typed Name & Title of Authorized Representative

Signature of Authorized Representative

Date

I am unable to certify the above statements. My explanation is attached.

END OF DOCUMENT

00607-1
02-01-08

Document 00610

PERFORMANCE BOND

THAT WE, _____, as Principal, (the "Contractor"), and the other subscriber hereto, _____, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Tomball (the "City"), a municipal corporation, in the penal sum of \$_____ for the payment of which sum, well and truly to be made to the City, its successors and assigns, Contractor and Surety do bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a Contract in writing with the City for _____, _____, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

NOW THEREFORE, if the said Contractor shall faithfully and strictly perform the Contract in all its terms, provisions, and stipulations in accordance with its true meaning and effect, and in accordance with the Contract documents referred to therein and shall comply strictly with each and every provision of the Contract and with this Bond, then this obligation shall become null and void and shall have no further force and effect; otherwise the same is to remain in full force and effect. Should the Contractor fail to faithfully and strictly perform the Contract in all its terms, including but not limited to the indemnifications thereunder, the Surety shall be liable for all damages, losses, expenses and liabilities that the City may suffer in consequence thereof, as more fully set forth herein.

It is further understood and agreed that the Surety does hereby relieve the City or its representatives from the exercise of any diligence whatever in securing compliance on the part of the Contractor with the terms of the Contract, and the Surety agrees that it shall be bound to take notice of and shall be held to have knowledge of all acts or omissions of the Contractor in all matters pertaining to the Contract. The Surety understands and agrees that the provision in the Contract that the City will retain certain amounts due the Contractor until the expiration of 30 days from the acceptance of the Work is intended for the City's benefit, and the City will have the right to pay or withhold such retained amounts or any other amount owing under the Contract without changing or affecting the liability of the Surety hereon in any degree.

It is further expressly agreed by Surety that the City or its representatives are at liberty at any time, without notice to the Surety, to make any change in the Contract

documents and in the Work to be done thereunder, as provided in the Contract, and in the terms and conditions thereof, or to make any change in, addition to, or deduction from the Work to be done thereunder; and that such changes, if made, shall not in any way vitiate the obligation in this Bond and undertaking or release the Surety therefrom.

It is further expressly agreed and understood that the Contractor and Surety will fully indemnify and save harmless the City from any liability, loss, cost, expense, or damage arising out of Contractor's performance of the Contract.

If the City gives Surety notice of Contractor's default, Surety shall, within 45 days, take one of the following actions:

1. Arrange for Contractor, with consent of the City, to perform and complete the Contract; or
2. Take over and assume completion of the Contract itself, through its agents or through independent contractors, and become entitled to the payment of the balance of the Contract Price.

If the Surety fails to take either of the actions set out above, it shall be deemed to have waived its right to perform and complete the Contract and receive payment of the balance of the Contract Price and the City shall be entitled to enforce any remedies available at law, including but not limited to completing the Contract itself and recovering any cost in excess of the Original Contract Price from the Surety.

This Bond and all obligations created hereunder shall be performable in Harris County, Texas. This Bond is given in compliance with the provisions of Chapter 2253, Texas Government Code, as amended, which is incorporated herein by this reference.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other Party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

Project No.

PERFORMANCE BOND

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)

WITNESS: (if not a corporation)

Name of Contractor

By: _

Title:

By: _____

Name:

Name:

Title:

Date:

ATTEST/SURETY WITNESS:

(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _

Title:

Date:

By: _____

Name:

Name:

Title: Attorney-in-Fact

Date:

END OF DOCUMENT

Document 00611

STATUTORY PAYMENT BOND

THAT WE, _____, as Principal, hereinafter called Contractor and the other subscriber hereto, _____, as Surety, do hereby acknowledge ourselves to be held and firmly bound unto the City of Tomball, a municipal corporation, in the sum of \$ _____ for the payment of which sum, well and truly to be made to the City of Tomball, and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a contract in writing with the City of Tomball for _____, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein;

NOW, THEREFORE, if the said Contractor shall pay all claimants supplying labor and materials to him or a Subcontractor in the prosecution of the Work provided for in the Contract, then, this obligation shall be void; otherwise the same is to remain in full force and effect;

PROVIDED HOWEVER, that this Bond is executed pursuant to the provisions of Chapter 2253, Texas Government Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said Article to the same extent as if it were copied at length herein.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

Project No.

STATUTORY PAYMENT BOND

ATTEST, SEAL: (if a corporation)

WITNESS: (if not a corporation)

Name of Contractor

By: _

Title:

By: _____ Name:

Name:

Title:

Date:

ATTEST/SURETY WITNESS:

(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _

Title:

Date:

By: _____ Name:

Name:

Title: Attorney-in-Fact

Date:

END OF DOCUMENT

Document 00612

ONE-YEAR MAINTENANCE BOND

THAT WE, _____, as Principal, hereinafter called Contractor, and the other subscriber hereto, _____, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Tomball, a municipal corporation, in the sum of \$ _____, for the payment of which sum well and truly to be made to the City of Tomball and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a Contract in writing with the City of Tomball for _____, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

NOW THEREFORE, if the said Contractor shall comply with the provisions of Paragraph 13.07 of the General Conditions, and correct work not in accordance with the Contract documents discovered within the established one-year period, then this obligation shall become null and void, and shall be of no further force and effect; otherwise, the same is to remain in full force and effect.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)

WITNESS: (if not a corporation)

Name of Contractor

By: _

Title:

By: _____ Name:

Name:

Title:

00612-1
02-01-08

Project No.

ONE-YEAR MAINTENANCE BOND

Date:

ATTEST/SURETY WITNESS:

(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _

Title:

Date:

By: _____ Name:

Name:

Title: Attorney-in-Fact

Date:

END OF DOCUMENT

00612-2

02-01-08

Project No.

AFFIDAVIT OF INSURANCE

Document 00620

AFFIDAVIT OF INSURANCE

BEFORE ME, the undersigned authority, on this day personally appeared

_____, who
Affiant

being by me duly sworn on his oath stated that he is _____, of
Title

_____,
Contractor's Company Name

the Contractor named and referred to within the Contract documents; that he is fully competent and authorized to give this affidavit and that the attached original insurance certificate truly and accurately reflects the insurance coverage that is now available and will be available during the term of the Contract.

Affiant's Signature

SWORN AND SUBSCRIBED before me on _____.
Date

Notary Public in and for the State of TEXAS

Print or type Notary Public name

My Commission Expires: _____
Expiration Date

END OF DOCUMENT

00620-1
02-01-08

Document 00643

ESTIMATE AND CERTIFICATE FOR PAYMENT, UNIT PRICE WORK

Project Name: _____ Contract No.: [Contract Number]
Contractor: [Contractor's Company Name] Project No.: _____
Address: [Contractor's Company Address] Ordinance No.: [Contract Ordinance Number]

Estimate No. _____
Cut off Date: _____
Estimate Date: _____

Contract Date: _____
Start Date: _____
Current Contract Completion Date: _____
Substantial Completion Date: _____
Percentage: By Time 0.00% In Place 0.00%

CONTRACT TIME IN CALENDER DAYS

Original Contract Time: _____ Days
Approved Extensions: _____ Days
Total Contract Time: _____ Days
Days Used to Date: _____ Days
Days Remaining to Date: _____ Days

Date Insurance Exp. _____ Drug Policy Due _____

Current MWBE % _____ Schedule Update Received _____

CONTRACT AMOUNT TO DATE:

1. Original Contract Price:	_____	\$0.00
2. Approved Change Orders: No./Description	_____	Amount
_____	_____	\$0.00
_____	_____	\$0.00
_____	_____	\$0.00
_____	_____	\$0.00
_____	_____	\$0.00
_____	_____	\$0.00
Total Change Orders to Date:	+/-	\$0.00
TOTAL CONTRACT AMOUNT:		\$0.00

A. EARNINGS TO DATE:

1. Work Completed to Date: <u>0.00%</u> Complete	_____	\$0.00
2. Materials Stored on Site:	_____	\$0.00
3. Materials Stored in Place:	_____	\$0.00
4. Balance - Materials Accepted, Not in Work:	_____	\$0.00
TOTAL EARNINGS TO DATE:		\$0.00

B. DEDUCTIONS:

1. Retainage: <u>0.00%</u> of <u>\$0.00</u>	_____	\$0.00
2. Add: Retainage Deduction:	_____	\$0.00
3. Total Retainage:	_____	\$0.00
4. Liquidated Damages: _____ Days @	_____	\$0.00
5. Quality Control Retest Cost:	_____	\$0.00
6. Sunday/Holiday Overtime Cost:	_____	\$0.00
TOTAL DEDUCTIONS:		\$0.00

C. AMOUNT DUE THIS PERIOD:

1. Total Earnings to Date:	_____	\$0.00
2. Total Deductions:	_____	\$0.00
3. Total Payments Due:	_____	\$0.00
4. Less Previous Payments:	_____	\$0.00
5. Restoration Adjustment:	_____	\$0.00
TOTAL AMOUNT DUE THIS DATE:		\$0.00

Prepared By: _____ Date: _____ Checked By: _____ Date: _____

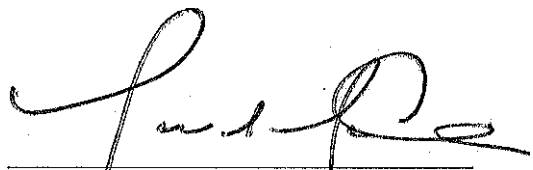
Submitted By: _____ Date: _____ Approved: _____ Date: _____

Approved: _____ Date: _____
Director, [Contracting Department]

END OF DOCUMENT

00643-1
02-01-08

The City of Tomball purchased rights (03/06/08) to utilize the Standard General Conditions of the Construction Contract prepared by Engineers Joint Contract Documents Committee (EJCDC) C-700, Copyright 2007 National Society of Professional Engineers. A copy of the EJCDC instruction and license agreement is attached for reference. A scanned copy of the EJCDC 00700 Standard General Conditions (2007) is also attached. Note that the City of Tomball has created required supplemental conditions included as Section 00800.

A handwritten signature in black ink, appearing to read 'Mark McClure', written over a horizontal line.

Mark . McClure, P.E.
Director of Engineering & Planning

**Engineers Joint Documents Committee
Design and Construction Related Documents
Instructions and License Agreement**

Instructions

Before you use any EJCDC document:

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4. Also note the instruction in the License Agreement about the EJCDC copyright.

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You should carefully read the following terms and conditions before using this document. Commencement of use of this document indicates your acceptance of these terms and conditions. If you do not agree to them, you should promptly return the materials to the vendor, and your money will be refunded.

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If you transfer possession of any copy, modification or merged portion of EJCDC Design and Construction Related Documents to another party, your license is automatically terminated.

Term:

The license is effective until terminated. You may terminate it at any time by destroying **EJCDC Design and Construction Related Documents** altogether with all copies, modifications and merged portions in any form. It will also terminate upon conditions set forth elsewhere in this Agreement or if you fail to comply with any term or condition of this Agreement. You agree upon such termination to destroy **EJCDC Design and Construction Related Documents** along with all copies, modifications and merged portions in any form.

Limited Warranty:

EJCDC warrants the CDs and diskettes on which **EJCDC Design and Construction Related Documents** is furnished to be free from defects in materials and workmanship under normal use for a period of ninety (90) days from the date of delivery to you as evidenced by a copy of your receipt.

There is no other warranty of any kind, either expressed or implied, including, but not limited to the implied warranties of merchantability and fitness for a particular purpose. Some states do not allow the exclusion of implied warranties, so the above exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

EJCDC does not warrant that the functions contained in **EJCDC Design and Construction Related Documents** will meet your requirements or that the operation of **EJCDC Design and Construction Related Documents** will be uninterrupted or error free.

Limitations of Remedies:

EJCDC's entire liability and your exclusive remedy shall be:

1. the replacement of any document not meeting EJCDC's "Limited Warranty" which is returned to EJCDC's selling agent with a copy of your receipt, or
2. if EJCDC's selling agent is unable to deliver a replacement CD or diskette which is free of defects in materials and workmanship, you may terminate this Agreement by returning EJCDC Document and your money will be refunded.

In no event will EJCDC be liable to you for any damages, including any lost profits, lost savings or other incidental or consequential damages arising out of the use or inability to use **EJCDC Design and Construction Related Documents** even if EJCDC has been advised of the possibility of such damages, or for any claim by any other party.

Some states do not allow the limitation or exclusion of liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you.

General:

You may not sublicense, assign, or transfer this license except as expressly provided in this Agreement. Any attempt otherwise to sublicense, assign, or transfer any of the rights, duties, or obligations hereunder is void.

This Agreement shall be governed by the laws of the State of Virginia. Should you have any questions concerning this Agreement, you may contact EJCDC by writing to:

Arthur Schwartz, Esq.
General Counsel

National Society of Professional Engineers
1420 King Street
Alexandria, VA 22314

Phone: (703) 684-2845
Fax: (703) 836-4875
e-mail: aschwartz@nspe.org

You acknowledge that you have read this agreement, understand it and agree to be bound by its terms and conditions. You further agree that it is the complete and exclusive statement of the agreement between us which supersedes any proposal or prior agreement, oral or written, and any other communications between us relating to the subject matter of this agreement.

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASSOCIATED GENERAL CONTRACTORS OF AMERICA

AMERICAN SOCIETY OF CIVIL ENGINEERS

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005
(202) 347-7474
www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
(800) 548-2723
www.asce.org

Associated General Contractors of America
2300 Wilson Boulevard, Suite 400, Arlington, VA 22201-3308
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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.1 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.2 Terminology

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.1 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.2 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.3 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.4 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.5 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.6 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.7 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on

Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.1 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.2 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.3 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.4 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification.

3.5 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.6 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.1 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.3 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and

contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.4 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the

consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.5 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.6 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.1 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.2 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also

meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.3 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.4 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

- a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.5 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.6 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.7 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.8 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.9 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's

interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.1 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.2 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.3 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.4 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.5 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
- b. Contractor certifies that, if approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

- c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.6 Concerning Subcontractors, Suppliers, and Others

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be

required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner,

Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.7 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.8 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.9 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought

by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and

shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is

required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
- b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
- c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
- d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 - 1. observations by Engineer;
 - 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. use or occupancy of the Work or any part thereof by Owner;
 - 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 - 6. any inspection, test, or approval by others; or
 - 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.1 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
1. written notice thereof will be given to Contractor prior to starting any such other work; and
 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.2 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.

- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.3 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.1 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.2 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.3 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.4 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.5 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.6 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.7 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.8 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.9 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.1 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.2 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or

continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.3 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.4 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.5 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.6 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.7 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.8 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.9 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not

exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.1 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.2 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.3 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
 - 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 - 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 - 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.4 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.5 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data

shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.1 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of

said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not

limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee*: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.2 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*:
 1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*:
 1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.3 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to

the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.1 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.2 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.3 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or

neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.1 *Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.2 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.3 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.4 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.5 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.6 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.7 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
 2. correct such defective Work; or
 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.8 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.9 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.1 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.2 *Progress Payments*

A. Applications for Payments:

- 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an

Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or

- involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
- b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
- a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.3 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.4 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before

final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.5 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.6 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.7 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying

documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.8 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.9 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.1 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.2 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 - 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 - 3. Contractor's repeated disregard of the authority of Engineer; or
 - 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
 - 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 - 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 - 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when

so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.3 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.4 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days

to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.1 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.1 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.2 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.3 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.4 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.5 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.6 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS
SECTION 00800

SUPPLEMENTARY CONDITIONS
(TO ACCOMPANY STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT,
EJCDC NO. C-700 [2007 EDITION] FOR CITY OF TOMBALL CONSTRUCTION PROJECTS)

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SECTION 00800

SUPPLEMENTARY CONDITIONS

PART I AMENDMENTS TO GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (General Conditions) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1 DEFINITIONS

SC-1.01

The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract (General Conditions) have the meanings assigned to them in the General Conditions.

Amend Paragraph 1.01.A.19, Engineer, of the General Conditions by adding the following to the end:

"For this project the following named persons, firms, or corporations have been utilized by ENGINEER to furnish services as a consultant with respect to the project (if blank, none have been utilized by the ENGINEER):

1. _____
2. _____
3. _____"

ARTICLE 2 PRELIMINARY MATTERS

SC-2.02

Amend the first sentence of Paragraph 2.02.A of the General Conditions to read as follows:

"Three (3) sets of the Contract Documents & Adobe .pdf file shall be furnished to the CONTRACTOR, at no charge, for construction purposes."

And so amended, Paragraph 2.02 remains in effect.

SC-2.03

Amend the third sentence of Paragraph 2.03.A of the General Conditions to read as follows:

"In no event will the Contract Time commence to run later than 90 days after the day of Bid opening or 30 days after the Effective Date of the Agreement, whichever is earlier, without the written agreement of the Contractor and Owner."

ARTICLE 4 AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS;
HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

SC-4.02

In the preparation of Drawings and Specifications, ENGINEER or ENGINEER's Consultants have relied upon:

4.2.A.1 The following reports of exploration and tests of subsurface conditions at the site of the Work (if blank, no reports or tests were used by ENGINEER or ENGINEER's Consultants):

1. _____
2. _____

The technical data contained in such reports upon which the CONTRACTOR may rely is _____.

4.2.A.2 The following drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities) which are at or contiguous to the site of Work:

1. _____
2. _____
3. _____

All of the information in such drawings constitutes technical data on which CONTRACTOR may rely with the following exceptions: _____

Copies of these reports and drawings that are not included with the Bidding Documents may be examined at the office of the ENGINEER during regular business hours. These reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which CONTRACTOR is entitled to rely as provided in GC-4.02.B and as identified and established above are incorporated therein by reference. CONTRACTOR is not entitled to rely upon other information and data utilized by ENGINEER.

SC-4.06

Delete Paragraph 4.06.G of the General Conditions in its entirety.

ARTICLE 5 BONDS AND INSURANCE

SC-5.01

Delete Paragraphs 5.01.A and 5.01.B of the General Conditions in their entirety and insert the following in their place:

"A. The Successful Bidder must furnish with the executed Contract Documents a Performance Bond and a Payment Bond on the forms furnished with the Contract Documents, each in the amount of 100% of the total Contract Price in accordance with Texas Local Government Code § 252.044 and Texas Government Code Ch. 2253. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. The surety company must be authorized to do business in Texas, which authorization must be recorded in the files of the State Board of Insurance. The surety company must be authorized to issue Payment and Performance Bonds in the amount required for the particular Contract, which authorization must be recorded in the files of the State Board of Insurance. The surety company must have a rating of at least "B" in the current Best's Key Rating Guide, or if the surety company does not have such a rating due to the length of time it has existed, the surety company must be eligible to participate in the surety bond guarantee program of the Small Business Administration and must be an approved surety listed in the current U.S. Department of Treasury Circular 570, and must meet all of the related rules and regulations of the Treasury Department. The person executing the Payment and Performance Bonds must be a licensed Texas local recording agent, and such licensing must be recorded in the files of the State Board of Insurance. The person executing the Payment and Performance Bonds must be authorized by the surety company to execute Payment and Performance Bonds on behalf of the company in the amount required for the Contract, and such authorization must be recorded in the files of the State Board of Insurance. The Contract shall not be in effect until such Bonds have been provided by the CONTRACTOR and accepted by the OWNER."

SC-5.04

The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

Worker's Compensation

- | | |
|---|-------------------------|
| (1) State: <u>Statutory</u> | |
| (2) Applicable Federal (e.g., Longshoreman's): <u>Statutory</u> | |
| (3) Employer's Liability: | |
| \$500,000 | Each Accident |
| \$500,000 | Disease - Policy Limit |
| \$500,000 | Disease - Each Employee |

Commercial General Liability

- | | |
|---|-------------|
| (1) General Aggregate Limit (other than products-completed operations) coverage must include Explosion, Collapse, and Underground Coverages | \$1,000,000 |
| (2) Products-Completed Operations Aggregate Limit | \$1,000,000 |
| (3) Each Occurrence Limit | \$ 500,000 |

Commercial Automobile Liability

\$500,000	Any One Loss or Accident
-----------	--------------------------

Umbrella Liability

\$1,000,000	Excess Limit
-------------	--------------

Shortages in coverage in any of the areas listed above may be covered by additional umbrella coverage.

The Contractor shall not commence work on any Contract in the City until the Contractor has obtained all the insurance required under this paragraph and such insurance has been approved by the City.

Workers' Compensation Insurance Coverage - Continued

A. Definitions:

Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (DWC-81, DWC-82, DWC-83, or DWC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

Duration of the project - includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

Persons providing services on the project ("subcontractor" in 406.096) - includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnished persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

- B. The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.
- C. The contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.
- D. If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.
- E. The contractor shall obtain from each person providing services on the project, and provide to the governmental entity:
 - (1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

- (2) no later than seven days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
- F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.
- G. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.
- H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Division of Workers' Compensation, Texas Department of Insurance, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.
- I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:
 - (1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
 - (2) provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
 - (3) provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (4) obtain from each other person with whom it contracts, and provide to the contractor:
 - (a) a certificate of coverage, prior to the other person beginning work on the project; and
 - (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
 - (6) notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision

of coverage of any person providing services on the project; and

- (7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.

- J. By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.
- K. The contractor's failure to comply with any of these provisions is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten days after receipt of notice of breach from the governmental entity.

SC-5.06

Delete Paragraphs 5.06, 5.07, and 5.08 of the General Conditions in their entirety.

SC-5.09

Delete Paragraph 5.09 of the General Conditions in its entirety and insert the following in its place:

- "A. If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR in accordance with Article 5 on the basis of its not complying with the Contract Documents, OWNER shall notify CONTRACTOR in writing. OWNER and CONTRACTOR shall each provide to the other such information in respect of insurance provided by each as the other may reasonably request."

ARTICLE 6 CONTRACTOR'S RESPONSIBILITIES

SC-6.02

Add Paragraph 6.02.C to the General Conditions to read as follows:

- "C. CONTRACTOR further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An "undocumented worker" shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States."

SC-6.06

Delete Paragraph 6.06.G of the General Conditions in its entirety and insert the following in its place:

"G. All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate Agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER."

Add a new paragraph immediately after Paragraph 6.06.G of the General Conditions which is to read as follows:

"6.06.H OWNER or ENGINEER may furnish to any such Subcontractor, Supplier, or other person or organization, to the extent practicable, information about amounts paid to CONTRACTOR in accordance with CONTRACTOR's Applications for Payment on account of the particular Subcontractor's, Supplier's, other person's, or other organization's Work."

SC-6.10

Delete Paragraph 6.10 of the General Conditions in its entirety and insert the following in its place:

"A. The CONTRACTOR's attention is directed to Paragraph No. 3 of Ruling No. 9, Repairmen and Contractors (as amended) issued by the Comptroller of Public Accounts. Reference Article 20.01 (T), Limited Sales, Excise, and Use Tax and to subsequent applicable legislation. The OWNER requires that no sales tax be paid on any materials incorporated into the completed Work on this Project. All Bidders and their respective Subcontractors must comply with Paragraph No. 3 of Ruling No. 9 by obtaining the necessary permit or permits from the State Comptroller allowing the purchase of materials for incorporation into this Project without having to pay the Limited Sales, Excise, and Use Tax at the time of purchase. Total materials cost should not include materials which are used up or consumed in performing the Work, but which do not become a part of this proposed Work."

SC-6.16

Amend the third sentence of Paragraph 6.16 of the General Conditions to read as follows:

"If ENGINEER and OWNER determine that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued."

And so amended, Paragraph 6.16 remains in effect.

SC-6.22

Amend Article 6 of the General Conditions by inserting the following Paragraph 6.22:

"6.22 LOSSES FROM NATURAL CAUSES:

- A. All loss or damage to the CONTRACTOR arising out of the nature of the Work to be done, or from the action of the elements, or from any unforeseen circumstance in the prosecution of the same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the Work, shall be sustained and borne by the CONTRACTOR at his own cost and expense."

ARTICLE 7 OTHER WORK AT THE SITE

SC-7.02

Delete Paragraphs 7.02.A and 7.02.B of the General Conditions in their entirety and insert the following in its place:

- "A. If OWNER contracts with others for the performance of other Work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors shall be the OWNER's Representative. The extent of the authority and responsibility of the OWNER's Representative will be as specified in the Contract Documents."
- "B. Should CONTRACTOR cause damage to work or property of any separate contractor at the site, or should any claim arising out of CONTRACTOR'S performance of the Work at the site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, ENGINEER'S Consultants, the Construction Coordinator, or any other person, CONTRACTOR shall promptly attempt to settle with such other contractor by agreement, or otherwise resolve the dispute by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER, ENGINEER, ENGINEER's Consultants, and the Construction Coordinator harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals, and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER, ENGINEER, ENGINEER's Consultants or the Construction Coordinator to the extent based on a claim arising out of CONTRACTOR's performance of the Work. Should a separate contractor cause damage to the Work or property of CONTRACTOR or should the performance of Work by any separate contractor at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER, ENGINEER, ENGINEER's Consultants, or the Construction Coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER, ENGINEER, ENGINEER's Consultants, or the Construction Coordinator on account of any such damage or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be CONTRACTOR's exclusive remedy with respect to OWNER, ENGINEER, ENGINEER's Consultants, and Construction Coordinator for any delay, disruption, interference, or hindrance caused by any separate contractor. This paragraph does not prevent recovery from OWNER, ENGINEER, ENGINEER's Consultant, or Construction Coordinator for activities that are their respective responsibilities."

ARTICLE 8 OWNER'S RESPONSIBILITIES

SC-8.02

Amend Paragraph 8.02 of the General Conditions to read as follows:

"In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer whose status under the Contract Documents shall be that of the former ENGINEER."

And so amended, Paragraph 8.02 remains in effect.

SC-8.06

Delete Paragraph 8.06 of the General Conditions in its entirety.

ARTICLE 9 ENGINEER'S STATUS DURING CONSTRUCTION

SC-9.01

Amend the second sentence of Paragraph 9.01 of the General Conditions to read as follows:

"The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and will not be changed except by written direction of OWNER."

And so amended, Paragraph 9.01 remains in effect.

SC-9.04

Delete the third sentence of Paragraph 9.04, Authorized Variations in Work, of the General Conditions in its entirety, and so amended, Paragraph 9.04 remains in effect.

ARTICLE 10 CHANGES IN THE WORK; CLAIMS

SC-10.03

Amend the first sentence of Paragraph 10.03.A of the General Conditions to read as follows:

"OWNER and CONTRACTOR shall, when appropriate, execute Change Orders recommended by ENGINEER (or Written Amendments) covering:"

And so amended, Paragraph 10.03 remains in effect.

SC-10.05

Amend the first sentence of Paragraph 10.05.B., Claims – Notice, of the General Conditions shall be amended by changing "30 days" to read "fourteen (14) calendar days"

Amend Paragraph 10.05.E by deleting it in its entirety.

And so amended, Paragraph 10.05 remains in effect.

ARTICLE 13 TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

SC-13.04

Amend the first sentence of Paragraph 13.04.B of the General Conditions to read as follows:

"If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request and with OWNER's written approval, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment."

And so amended, Paragraph 13.04 remains in effect.

SC-13.07

Delete Paragraph 13.07.D of the General Conditions in its entirety and insert the following in its place:

"D. Notwithstanding any other provision of this section or the Contract Documents to the contrary, this provision shall not serve to limit any causes of action which the OWNER may have against the CONTRACTOR for Defective Work or for otherwise failing to fulfill CONTRACTOR's obligations under the Contract Documents; nor shall this provision serve to limit the time in which such causes of action shall be asserted."

SC-13.09

Amend the second sentence of Paragraph 13.09.B of the General Conditions to read as follows:

"In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere."

And so amended, Paragraph 13.09 remains in effect.

ARTICLE 14 PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02

Amend Paragraph 14.02.D.1.b of the General Conditions to read as follows:

"Claims or Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;"

Add Paragraph 14.02.D.1.e to the General Conditions to read as follows:

"OWNER concludes that one or more of the events enumerated in Paragraph 14.02.B.2.a through 14.02.B.2.c have not occurred."

And so amended, Paragraph 14.02 remains in effect.

SC-14.03

Amend Paragraph 14.03.A of the General Conditions to read as follows:

"CONTRACTOR warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens or Claims."

And so amended, Paragraph 14.03 remains in effect.

SC-14.04

Insert prior to the first sentence of Paragraph 14.04.A of the General Conditions the following:

"Substantial completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the OWNER can occupy or utilize the Work for its intended use."

And so amended, Paragraph 14.04 remains in effect.

SC-14.07

Amend Paragraph 14.07.A.2(d) of the General Conditions to read as follows:

"complete and legally effective releases or waivers (satisfactory to OWNER) of all Claim or Lien rights arising out of or Claims or Liens filed in connection with the Work."

Amend Paragraph 14.07.A.3 of the General Conditions to read as follows:

"In lieu of the releases or waivers of Liens and Claims specified in Paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien or Claim could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien or Claim."

Amend Paragraph 14.07.C.1 of the General Conditions to read as follows:

"If OWNER concurs with ENGINEER's recommendation, thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR."

And so amended, Paragraph 14.07 remains in effect.

SC-14.09

Amend Paragraph 14.09.A.1 of the General Conditions to read as follows:

"a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens or Claims of laborers and materialmen, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and"

And so amended, Paragraph 14.09 remains in effect.

ARTICLE 15 SUSPENSION OF WORK AND TERMINATION

SC-15.02

Amend Paragraph 15.02.A.1 of the General Conditions to read as follows:

"CONTRACTOR's failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);"

Amend the first sentence of Paragraph 15.02.B of the General Conditions to read as follows:

"If one or more of the events identified in Paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site and take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient."

And so amended, Paragraph 15.02 remains in effect.

ARTICLE 16 DISPUTE RESOLUTION

SC-16.01

Amend Paragraph 16.01 A. of the General Conditions by deleting the second and third sentences in their entirety.

Amend Paragraph 16.01 B. of the General Conditions by deleting it in its entirety.

ARTICLE 17 MISCELLANEOUS

Amend "ARTICLE 17 MISCELLANEOUS PROVISIONS of the General Conditions to add the following provisions:

- 17.7 WAGE RATES. The prevailing wage rates for this project are included as Exhibit A to the Supplementary Conditions and are hereby made a part of the Contract Documents by reference. Wages not less than these rates must be paid on this project, including fringe benefits. The CONTRACTOR shall post the Prevailing Wage Rate Determination in a prominent and easily accessible location at the project site and shall abide by all associated laws and regulations pertaining thereto.
- 17.8 LIQUIDATED DAMAGES. The Owner will suffer financial loss in an amount that is difficult to quantify if the Project is not Substantially Completed on the date set forth in the Contract Documents. The Owner may assess liquidated damages against the Contractor (and its surety) in an amount equal to .5% of the Contract per week for each project, as fixed, agreed and liquidated damages and not a penalty, for each calendar day of delay until the Work is Substantially Completed. In the event liquidated damages are caused by the Contractor and another entity, the Owner may reasonably apportion damages. The right to assess liquidated damages is in addition to, and not in limitation of, any right or remedy available to the Owner."
- 17.9 VENUE. This Agreement is governed by the laws of the State of Texas. The parties agree that venue for any litigation arising out of this Agreement shall lie exclusively in the State and Federal Courts in Harris County, Texas.
- 17.10 NO THIRD PARTY BENEFICIARIES The signing parties to this agreement do not intend to confer any rights upon any persons not a party to this Contract; accordingly this contract shall not be construed to create any third party beneficiaries."

(SPACE INTENTIONAL)

PART II OTHER PROVISIONS

The following additional items are attached to this section.

1. Exhibit A, Wage Rates
2. Exhibit B, Worker's Compensation Insurance Coverage
3. Exhibit C, A Listing of the Duties, Responsibilities, and Limitations of Authority of the Resident Project Representative
4. Exhibit D, Addenda (if any)
5. Exhibit E, Change Order (form)
6. Exhibit F, Application for Payment (form)
7. Exhibit G, Storm Water Pollution Prevention Plan
8. Exhibit H, Conflict of Interest Questionnaire

END OF SECTION 00800

A. Duties and Responsibilities of RPR

1. Schedules:

Review the progress schedule, schedule of Shop Drawing submittals, and other required schedules prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.

2. Conferences and Meetings:

Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.

3. Liaison:

a. Serve as ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent, and assist in understanding of the Contract Documents, and assist ENGINEER in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's on-site operations.

b. Assist in obtaining from OWNER additional details or information when required for proper execution of the Work.

4. Shop Drawings and Samples:

a. Record date of receipt of Shop Drawings and samples.

b. Receive samples, which are furnished at the site by CONTRACTOR, and notify ENGINEER of availability of samples for examination.

c. Advise ENGINEER and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or sample if the submittal has not been approved by ENGINEER.

5. Review of Work, Rejection of Defective Work, Inspections, and Tests:

- a. Conduct on-site observations of the Work in progress to assist ENGINEER in determining if the Work is in general proceeding in accordance with the Contract Documents.
- b. Report to ENGINEER whenever RPR believes that any Work is unsatisfactory, faulty or defective, or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test, or approval required to be made; and advise ENGINEER of Work that RPR believes should be corrected or rejected, or should be uncovered for observation, or requires special testing, inspection, or approval.
- c. Verify that tests, equipment, and systems start-up and operating and maintenance training are conducted in the presence of appropriate personnel, and that CONTRACTOR maintains adequate records thereof; and observe, record, and report to ENGINEER appropriate details relative to the test procedures and start-ups.
- d. Accompany visiting inspectors, other than the OWNER's, representing public or other agencies having jurisdiction over the Project, record the result of these inspections, and report to ENGINEER.

6. Interpretation of Contract Documents:

Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to Contract clarifications and interpretations as issued by the ENGINEER.

7. Modifications:

Consider and evaluate CONTRACTOR's suggestions, for modifications in Drawings or Specifications and report with RPR's recommendations to ENGINEER. Transmit to CONTRACTOR decisions as issued by ENGINEER.

8. Records:

- a. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions of original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, ENGINEER's clarification and interpretations of the Contract Documents, progress reports, and other Project-related documents.
- b. Keep a diary or log book recording CONTRACTOR hours on the job site, weather conditions, data relative to questions of Work Directive Changes, Change Orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures, and send copies to ENGINEER.

- c. Record names, addresses, and telephone numbers of all contractors, subcontractors, and major Suppliers of materials and equipment.

9. Reports:

- a. Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the progress schedule and schedule of Shop Drawings and sample submittals.
- b. Consult with ENGINEER in advance of schedule of major tests, inspections, or start of important phases of the Work.
- c. Draft proposed Change Orders and Work Directive Changes, obtaining back-up material from CONTRACTOR, and recommend to ENGINEER Change Orders, Work Directive Changes, and Field Orders.
- d. Report immediately to OWNER and ENGINEER upon the occurrence of any accident.

10. Payment Requests:

Review Applications for Payment with CONTRACTOR for compliance with the established procedure for their submission and forward with recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of items, Work completed, and materials and equipment delivered at the site but not incorporated in the Work.

11. Certificates, Maintenance and Operation Manuals:

During the course of the Work, verify that certificates, maintenance and operation manuals, and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment for Work.

12. Completion:

- a. Before ENGINEER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring completion of correction.
- b. Conduct final inspection in the company of ENGINEER, OWNER, and CONTRACTOR, and prepare a final list of items to be completed or corrected.
- c. Observe that all items on final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance.

B. Limitations of Authority

Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment unless authorized by ENGINEER.
2. Shall not exceed limitations of authority as set forth in the Agreement or the Contract Documents.
3. Shall not undertake any of the responsibilities of CONTRACTOR, subcontractor, or CONTRACTOR's superintendent.
4. Shall not advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences, or procedures of construction unless such advice or directions are specifically required by the Contract Documents.
5. Shall not advise on, issue directions regarding, or assume control over safety precautions and programs in connection with the Work.
6. Shall not accept Shop Drawing or sample submittals from anyone other than CONTRACTOR.
7. Shall not authorize OWNER to occupy the Project in whole or in part.
8. Shall not participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by Owner.

EXHIBIT D

EXHIBIT D

Attach any and all Addendums

EXHIBIT G

Storm Water Pollution Prevention Plan

Refer to Plans and Specifications

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.

2 ☐ Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

☐

Yes

☐

No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐

Yes

☐

No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

☐

Yes

☐

No

D. Describe each employment or business relationship with the local government officer named in this section.

4

Signature of person doing business with the governmental entity

Date

Page 911

Adopted 06/29/2007

Document 00830

TRENCH SAFETY GEOTECHNICAL INFORMATION

1.1 DOCUMENT INCLUDES

- A. Trench Safety Geotechnical Information: Geotechnical information obtained for use in design of the trench safety system is included as an attachment to this document.

2.1 RELATED DOCUMENTS

- A. Section 02260 - Trench Safety Systems.

END OF DOCUMENT

Project No.

REQUEST FOR INFORMATION

Document 00931

REQUEST FOR INFORMATION

1. PROJECT No.: _____
2. RFI No.: _____
3. PROJECT NAME: _____
4. CONTRACTOR: [Contractor's Company Name] _____
5. CONTRACT No.: _____
6. SPECIFICATION Nos.: _____
7. DRAWING Nos.: _____
8. RESPONSE CODE: [] CRITICAL [] ROUTINE
9. DATE RESPONSE REQUIRED: _____
10. INFORMATION REQUIRED:

11. _____
CONTRACTOR (Signature) TITLE DATE

12. RESPONSE:

13. _____
PROJECTMANAGER (Signature) DATE

14. **If Contractor believes the response given in Item 12 requires an adjustment in Contract Price or Contract Time, Contractor shall submit a timely proposal so as not to delay Contractor's Work in accordance with General Conditions, Article 7 - Changes in the Work.**

END OF DOCUMENT

00931-1
02-01-08

Project No. _____

EXHIBIT E
CHANGE ORDER

Document 00941

CHANGE ORDER / C.O. No. _____

PROJECT: _____
CONTRACT No.: _____ PROJECT No.: _____

TO: [Contractor's Company Name]
Contractor and [Contractor's Address]
Address for Written Notice _____

REFERENCE RFIs/RFPs: _____

1.1 DESCRIPTION OF CHANGES

	CONTRACT CHANGE	
	AMOUNT	TIME
ITEM 1 SCOPE: <i>[Description of first change order item]</i>	\$0.00	0 Days
JUSTIFICATION: <i>[Justification for adding or deleting work described in "Item 1 Scope"]</i>		
ITEM 2 SCOPE:	\$0.00	0 Days
JUSTIFICATION:		
ITEM 3 SCOPE:	\$0.00	6 Days
JUSTIFICATION:		
TOTALS:	\$0.00	6 Days

1.2 ACCEPTANCE BY CONTRACTOR

Contractor agrees to perform change(s) included in this Change Order for the price and time indicated. The prices for changes include all costs associated with this Change Order.

Contractor Signature and Title Date

1.03 ACCEPTANCE BY THE CITY

Project Manager Date *[Director – Required for COs to Council]* Date

[Intermediate Authority, if needed] Date *[Mayor – Required for COs to Council]* Date

[Intermediate Authority, if needed] Date City Engineer Date

END OF DOCUMENT

cc: *[Design Consultant], [Owning Dept. Director], [Other Copy Addrees], [File(s)]*

00941-1
02-01-08

EXECUTIVE SUMMARY

C.O. No. _____ Contract No.: _____ Proj. No.: [File No.]

1.01	CONTRACT PRICE SUMMARY	DOLLAR AMOUNT	PERCENT
A.	Original Contract Price	\$1,000,000.00	100.00%
B.	Previous Change Orders	\$0.00	0.00%
C.	This Change Order	\$0.00	0.00%
D.	Contract Price	\$1,000,000.00	100.00%

Date of Commencement of the Work: Monday, September 30, 2002

1.2	CONTRACT TIME SUMMARY	DURATION	COMPLETION DATE
A.	Original Contract Time	180 Days	Friday, March 28, 2003
B.	Previous Change Orders	0 Days	Friday, March 28, 2003
C.	This Change Order	0 Days	
D.	Contract Time	180 Days	Friday, March 28, 2003

- 1.3 TOTAL VALUE OF INCREASES OUTSIDE OF GENERAL SCOPE OF WORK
- A. Including this Change Order, the following table is provided to track conditions related to Paragraph 7.1.2.3 of Document 00700 - General Conditions.

<u>CHANGE ORDER</u> <u>No.</u>	<u>AMOUNT ADDED</u>	<u>PERCENT OF</u> <u>ORIGINAL CONTRACT</u> <u>PRICE</u>
[1]	[\$0.00]	[0%]

TOTALS	\$0.00	0.0%
--------	--------	------

END OF SUMMARY

INSTRUCTIONS

PURPOSE: Change Orders are used to affect Modifications to the Contract. Prior to final payment, previously approved Work Change Directives can be combined into a summary Change Order to reconcile project cost accounting. When signed and dated by Contractor and City Engineer, document becomes an approved Change Order.

APPLICATION: This form is applicable to agreed on Modifications to the Contract including, but not limited to the following:

- . Additions or reductions (including deletions) of existing bid item quantities.
- . Increases or decreases in construction Contract Time.
- . Change in methods, material, etc., not covered by existing bid item quantities.
- . New work not covered by existing bid item quantities.
- . Price or schedule consideration for conditions not indicated by the Contract.

INSTRUCTIONS: Project Manager or Design Consultant prepares this form. The Executive Summary is for use by the City in analyzing the Change Order but is not a part of the Change Order. This form has two MS Excel tables imbedded in the MS Word document (Paragraphs 1.01 and 1.02 in the Executive Summary). Double click on any cell in these tables to make entries in spreadsheet mode. Click anywhere outside the spreadsheet to return to wordprocessing mode. Other tables in the Change Order and Executive Summary are MS Word tables, not imbedded Excel spreadsheets. Red colored text and numerals represent input fields. Black text and numerals are in cells with formulas or fixed text. Do not make entries in these cells. Following instructions correspond to blanks requiring input and paragraph numbers on form. Paragraph 1.02 of the Change Order form is completed by Contractor. All other items are completed by the City or Design Consultant. Paragraph 1.03 of the Change Order form is completed by administrative and approving authorities. Contractor shall provide all backup material to justify the costs of items enumerated in Paragraph 1.01 of the Change Order form.

CHANGE ORDER FORM:

1. Insert Change Order number and Contract number for the Project at the top of each page, following page one, if the Change Order must be longer than one page.
2. Insert Project name exactly as stated in the Agreement.
3. Insert Project number and other identifying numbers (e.g. CIP, Proj. No., AIP, File No.) for the Project.
4. Insert name of Contractor performing the Work and Contractor's address for notices. Address should be as shown in the Agreement unless changed by proper notice.
5. Insert applicable references to related RFIs and RFPs.
6. Paragraph 1.01: Insert brief descriptions of the changes, including reference to applicable Work Change Directives. Give justification to support change, cost of making change, and adjustment in Contract Time warranted by change. If more than one item is included, number each item. Extend the table to additional pages if necessary. Formulas are imbedded for totals but check the math when extending the table length.
7. Paragraph 1.02: Project Manager signs and dates and has other administrative authorities or representatives sign and date where indicated. Project Manager will substitute actual titles of these persons where red bracketed instructions are shown. Mayor's and Contracting Department Director's signature (and date) are only needed when the Change Order must go to City Council for funding prior to approval. City Engineer for Contracting Department (should be the same person designated in the Agreement) will only sign and date Paragraph 1.03 when funds are approved and in place for payment of additional work. City Engineer's signature and date signify approval of Change Order and is the only authorized approval authority of the City according to Document 00700 – General Conditions.
8. Insert appropriate list of "copy to" persons and file. Delete brackets and instructions. Change color of remaining text to black.

EXECUTIVE SUMMARY:

1. Paragraph 1.01: Insert (A) Original Contract Price, (B) cost of previous Change Orders and (C) cost of this Change Order in the price summary block. Other amounts and percentages in block are calculated by formula. Cost of this Change Order is calculated at the bottom of the table in Paragraph 1.01 of the Change Order form, when all items have been filled in BUT it does not automatically change the amount in Paragraph 1.01 C.
2. Paragraph 1.02: Insert Date of Commencement of Work (from Notice to Proceed), (A) original Contract Time, (B) additional days added from previous Change Orders and (C) days required for this Change Order in the time summary block. Other days and dates in block are calculated by formula. Days for this Change Order are calculated at the bottom of the table in Paragraph 1.01 of the Change Order form, when all items have been filled in BUT it does not automatically change the amount in Paragraph 1.02 C.
3. Paragraph 1.03 A: Project Manager will provide information from all previous Change Orders for this table (i.e. number, amount and percentage of Original Contract Price) so that it can be determined if Council Action is necessary. *NOTE: The conditions of Paragraph 7.1.2.3 of Document 00700 - General Conditions may make Council Action necessary even if funding is already available and even if the 5% contingency threshold has not yet been reached.*

City Council Meeting

Agenda Item

Data Sheet

Meeting Date: December 18, 2023

Topic:

Approve an agreement with MC Sandblasting and Painting, Inc. for Project Number 2023-10004, Pine Street elevated storage tank rehabilitation for the City of Tomball, for a not-to-exceed amount of \$229,400 (Bid No. 2024-05), approve the expenditure of funds therefor, and authorize the City Manager to execute any and all documents related to the purchases. These expenditures are included in the Fiscal Year 2023-2024 Capital Improvement Program budget

Background:

The proposed agreement with MC Sandblasting and Painting, Inc. to complete the rehabilitation project on the Pine Street elevated storage tank. MC Sandblasting and Painting, Inc. was selected through the competitive sealed bid process (Bid No. 2024-05), which allowed for interested parties to submit sealed bids to complete the proposed project and a total of 20 bids were received. After reviewing all submitted bids and reference checks, MC Sandblasting and Painting, Inc. was deemed the lowest responsible bidder and provided the best value to the City based on the proposed scope of work. The selection and discussions were held in accordance with the City's adopted Procurement Policy and Manual and state procurement law.

This item authorizes an agreement with MC Sandblasting and Painting, Inc. for the rehabilitation of the Pine Street elevated storage tank for an amount not-to-exceed \$229,400, included in the adopted fiscal year 2023-2024 capital budget.

Project Element	Total Contracts	Remaining Contract Amount
Engineering – OEI	\$73,943	\$49,129.02
Proposed Construction – MC Sandblasting	\$229,400	N/A
Project Budget \$850,000	Total Contracts \$303,343.00	Remaining Funding \$546,657.00

Origination: Public Management

Recommendation:

Staff recommends approving an agreement with MC Sandblasting and Painting, Inc. for the rehabilitation of the Pine Street elevated storage tank for an amount no-to-exceed \$229,400.

Party(ies) responsible for placing this item on agenda: Meagan Mageo, Project Manager

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: #400-613-6409
If no, funds will be transferred from account # _____ To account # _____

Signed Meagan Mageo Approved by _____
Staff Member Date City Manager Date

Bid Tabulation for (City of Tomball)



2901 Wilcrest Dr., Suite 550
Houston, TX 77042
806.993.6226

Bid Date November 16, 2023, 2:00 PM

PROJECT: City of Tomball - Pine St. Elevated Storage Tank Rehabilitation

OEI PROJECT NO.: 1030.23.05 / Tomball Project No. 2024-05

DATE: 11/22/2023

INITIALS: AV

Item No.	Description	Quantity	Unit	MC Sandblasting & Painting		O&A Classic Coating and Painting Corp		Viking Industrial Painting		Dixie Painting & Sandblasting, Inc.		Cor Iesu, LLC		Utility Service Co., Inc.		CTEX Construction Services LLC		Tank Pro, Inc.		NG Painting, LP		Andrade Staffing	
				Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total
Base Bid																							
1	General Terms and Conditions, Mobilization. (Not to Exceed 5% of total base bid), complete in-full.	1	JOB	\$2,700.00	\$2,700.00	\$8,000.00	\$8,000.00	\$18,000.00	\$18,000.00	\$10,000.00	\$10,000.00	\$10,000.00	\$10,000.00	\$16,000.00	\$16,000.00	\$15,000.00	\$15,000.00	\$11,938.00	\$11,938.00	\$1,000.00	\$1,000.00	\$8,000.00	\$8,000.00
2	Surface Preparation by Power Washing of Exterior Tank and Interior Dry Area. Above Ground Yard Piping Surface Preparation.	26,700	SF	\$0.55	\$14,685.00	\$1.50	\$40,050.00	\$0.60	\$16,020.00	\$2.98	\$79,566.00	\$1.25	\$33,375.00	\$3.10	\$82,770.00	\$1.75	\$46,725.00	\$4.44	\$118,548.00	\$1.00	\$26,700.00	\$1.00	\$26,700.00
3	Surface Preparation by Sand Blasting of Interior Wet Area (Bowl Portion) of Tank.	15,400	SF	\$2.60	\$40,040.00	\$4.55	\$70,070.00	\$3.15	\$48,510.00	\$5.90	\$90,860.00	\$5.70	\$87,780.00	\$5.00	\$77,000.00	\$5.00	\$77,000.00	\$5.05	\$77,770.00	\$6.00	\$92,400.00	\$6.00	\$92,400.00
4	Exterior Tank Surface Spray Painting/Coating and Roller/Brush Painting as Necessary to Meet Coating Application Thickness. Including Painting/Coating of Exterior Ground Yard Piping.	18,600	SF	\$4.00	\$74,400.00	\$3.50	\$65,100.00	\$6.50	\$120,900.00	\$3.72	\$69,192.00	\$5.00	\$93,000.00	\$3.00	\$55,800.00	\$5.00	\$93,000.00	\$2.96	\$55,056.00	\$6.00	\$111,600.00	\$5.00	\$93,000.00
5	Interior Tank Dry Area Surface Spray Painting/Coating and Roller/Brush Painting as Necessary to Meet Coating Application Thickness.	8,100	SF	\$3.00	\$24,300.00	\$2.47	\$20,007.00	\$3.00	\$24,300.00	\$1.34	\$10,854.00	\$4.50	\$36,450.00	\$1.40	\$11,340.00	\$3.50	\$28,350.00	\$2.96	\$23,976.00	\$4.00	\$32,400.00	\$4.00	\$32,400.00
6	Interior Tank Wet Area (Bowl Portion) Surface Spray Painting/Coating and Roller/Brush Painting as Necessary to Meet Coating Application Thickness.	15,400	SF	\$3.25	\$50,050.00	\$3.90	\$60,060.00	\$4.50	\$69,300.00	\$3.20	\$49,280.00	\$3.45	\$53,130.00	\$3.60	\$55,440.00	\$4.00	\$61,600.00	\$3.37	\$51,898.00	\$5.00	\$77,000.00	\$6.00	\$92,400.00
7	Drainging Tank, Disinfection of Interior Wet Area (Bowl Portion) of Tank, Dechlorination of Tank, and Final Fill of Tank.	1	JOB	\$1,225.00	\$1,225.00	\$2,800.00	\$2,800.00	\$600.00	\$600.00	\$500.00	\$500.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$3,000.00	\$3,000.00	\$1,500.00	\$1,500.00	\$2,000.00	\$2,000.00	\$3,000.00	\$3,000.00
8	Site Restoration and Cleanup	1	JOB	\$2,000.00	\$2,000.00	\$3,413.00	\$3,413.00	\$8,800.00	\$8,800.00	\$3,136.00	\$3,136.00	\$3,500.00	\$3,500.00	\$30,000.00	\$30,000.00	\$15,000.00	\$15,000.00	\$2,500.00	\$2,500.00	\$4,000.00	\$4,000.00	\$4,000.00	\$4,000.00
					\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	\$ -	\$0.00		\$0.00
	Cash Allowance Table				\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
1	Construction Contingencies	1	JOB	\$ 20,000.00	\$20,000.00	\$ 20,000.00	\$20,000.00	\$ 20,000.00	\$20,000.00	\$ 20,000.00	\$20,000.00	\$ 20,000.00	\$20,000.00	\$ 20,000.00	\$20,000.00	\$ 20,000.00	\$20,000.00	\$ 20,000.00	\$20,000.00	\$ 20,000.00	\$20,000.00	\$ 20,000.00	\$20,000.00
					\$0.00																		
Base Bid Total					\$229,400.00		\$289,500.00		\$326,430.00		\$333,388.00		\$339,235.00		\$350,350.00		\$359,675.00		\$363,186.00		\$367,100.00		\$371,900.00
Page 1																							

Bid Tabulation for (City of Tomball)



2901 Wilcrest Dr., Suite 550

Houston, TX 77042

806.993.6226

Bid Date November 16, 2023, 2:00 PM

PROJECT: City of Tomball - Pine St. Elevated Storage Tank Rehabilitation
OEI PROJECT NO.: 1030.23.05 / Tomball Project No. 2024-05

DATE: 11/22/2023
INITIALS: AV

Item No.	Description	Quantity	Unit	BRZ Coating Inc.		Stoic Industrial Coatings, LLC		CFG Industries		Tanksco, Inc.		Maguire Iron Inc.		M.K. Painting, Inc.		Blastco		D&M Tank, LLC		Classic Protective Coatings, Inc.		TMI Coatings, Inc.		
				Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	Unit Cost
Base Bid																								
1	General Terms and Conditions, Mobilization. (Not to Exceed 5% of total base bid), complete in-full.	1	JOB	\$11,000.00	\$11,000.00	\$15,000.00	\$15,000.00	\$17,600.00	\$17,600.00	\$17,000.00	\$17,000.00	\$5,000.00	\$5,000.00	\$10,000.00	\$10,000.00	\$22,857.00	\$22,857.00	\$22,350.00	\$22,350.00	\$21,524.00	\$21,524.00	\$30,000.00	\$30,000.00	
2	Surface Preparation by Power Washing of Exterior Tank and Interior Dry Area. Above Ground Yard Piping Surface Preparation.	26,700	SF	\$2.50	\$66,750.00	\$0.40	\$10,680.00	\$1.00	\$26,700.00	\$1.35	\$36,045.00	\$0.80	\$21,360.00	\$1.00	\$26,700.00	\$0.52	\$13,884.00	\$6.06	\$161,802.00	\$5.63	\$150,321.00	\$5.00	\$133,500.00	
3	Surface Preparation by Sand Blasting of Interior Wet Area (Bowl Portion) of Tank.	15,400	SF	\$6.00	\$92,400.00	\$6.50	\$100,100.00	\$7.00	\$107,800.00	\$4.60	\$70,840.00	\$3.00	\$46,200.00	\$5.00	\$77,000.00	\$4.74	\$72,996.00	\$6.95	\$107,030.00	\$8.00	\$123,200.00	\$12.00	\$184,800.00	
4	Exterior Tank Surface Spray Painting/Coating and Roller/Brush Painting as Necessary to Meet Coating Application Thickness. Including Painting/Coating of Exterior Ground Yard Piping.	18,600	SF	\$5.00	\$93,000.00	\$5.60	\$104,160.00	\$5.00	\$93,000.00	\$5.30	\$98,580.00	\$7.00	\$130,200.00	\$5.00	\$93,000.00	\$7.83	\$145,638.00	\$3.50	\$65,100.00	\$4.00	\$74,400.00	\$7.00	\$130,200.00	
5	Interior Tank Dry Area Surface Spray Painting/Coating and Roller/Brush Painting as Necessary to Meet Coating Application Thickness.	8,100	SF	\$3.00	\$24,300.00	\$6.60	\$53,460.00	\$5.00	\$40,500.00	\$5.15	\$41,715.00	\$5.00	\$40,500.00	\$10.00	\$81,000.00	\$5.38	\$43,578.00	\$5.35	\$43,335.00	\$7.00	\$56,700.00	\$4.00	\$32,400.00	
6	Interior Tank Wet Area (Bowl Portion) Surface Spray Painting/Coating and Roller/Brush Painting as Necessary to Meet Coating Application Thickness.	15,400	SF	\$4.00	\$61,600.00	\$4.50	\$69,300.00	\$5.00	\$77,000.00	\$5.50	\$84,700.00	\$8.20	\$126,280.00	\$10.00	\$154,000.00	\$9.93	\$152,922.00	\$4.63	\$71,302.00	\$6.00	\$92,400.00	\$7.00	\$107,800.00	
7	Drainging Tank, Disinfection of Interior Wet Area (Bowl Portion) of Tank, Dechlorination of Tank, and Final Fill of Tank.	1	JOB	\$1,000.00	\$1,000.00	\$2,000.00	\$2,000.00	\$2,500.00	\$2,500.00	\$7,000.00	\$7,000.00	\$5,460.00	\$5,460.00	\$2,000.00	\$2,000.00	\$2,270.00	\$2,270.00	\$2,500.00	\$2,500.00	\$1,400.00	\$1,400.00	\$5,000.00	\$5,000.00	
8	Site Restoration and Cleanup	1	JOB	\$7,000.00	\$7,000.00	\$3,000.00	\$3,000.00	\$4,500.00	\$4,500.00	\$14,000.00	\$14,000.00	\$10,000.00	\$10,000.00	\$5,000.00	\$5,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$1,000.00	\$1,000.00	\$5,000.00	\$5,000.00	
					\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	\$-	\$0.00		\$0.00	
	Cash Allowance Table				\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
1	Construction Contingencies	1	JOB	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	
Base Bid Total				\$377,050.00	\$377,700.00				\$389,600.00		\$389,880.00		\$405,000.00		\$468,700.00		\$477,145.00		\$496,419.00		\$540,945.00		\$648,700.00	
Page 2																								

Document 00520

AGREEMENT

Project: Pine St. EST Rehabilitation

Project Location: _____ (Key Map No. C003)

Project Bid No: 2024-05

E&P Project No: 2023-10004

The City: The City of Tomball, County of Harris, Texas (the "City")
and

Contractor: RCB Sandblasting & Painting Inc. DBA MC Sandblasting & Painting

(Address for Written Notice) P.O. Box 802, Cedar Springs, MI 49319

Fax Number: _____

City Engineer is: _____

(Address for Written Notice) _____

Fax Number: _____

THE CITY AND CONTRACTOR AGREE AS FOLLOWS:

ARTICLE 1

THE WORK OF THE CONTRACT

1.1 Contractor shall perform the Work in accordance with the Contract.

ARTICLE 2

CONTRACT TIME

2.1 Contractor shall achieve Date of Substantial Completion within 90 days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

2.2 The Parties recognize that time is of the essence for this Agreement and that the City will suffer financial loss if the Work is not completed within the Contract Time. Parties also recognize delays,

00520-1
06-16-2011

expense, and difficulties involved in proving in a legal or arbitration proceeding actual loss suffered by the City if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Parties agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay the City the amount stipulated in Document 00800 – Supplementary Conditions, for each day beyond Contract Time.

**ARTICLE 3
CONTRACT PRICE**

3.1 Subject to terms of the Contract, the City will pay Contractor in current funds for Contractor's performance of the Contract, Contract Price of \$ 229,400.00, which includes Alternates, if any, accepted below.

3.2 The City accepts Alternates as follows:

Alternate No. 1 _____
[Alternate No. 2 _____]
Alternate No. 3 _____

**ARTICLE 4
PAYMENTS**

4.1 The City will make progress payments to Contractor as provided below and in the General Conditions.

4.2 The Period covered by each progress payment is one calendar month ending on the [] 10th, [] 20th, or [X] last day of the month.

4.3 The Schedule of Values established as provided in paragraph 2.07.A of the General Conditions will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed. The City will make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as provided below in paragraphs 4.3.1 and 4.3.2.

4.3.1 Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or City may withhold, in accordance with paragraph 14.02 of the General Conditions:

- a. For contracts under \$400,000.00, 90% of Work completed (with the balance being retainage).
For contracts over \$400,000.00, 95% of Work completed (with the balance being retainage.)

00520-2
06-16-2011

b. For contracts under \$400,000.00, 90% (with the balance being retainage) and for contracts over \$400,000.00, 95% (with the balance being retainage) of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to the City as provided in paragraph 14.02 of the General Conditions).

4.3.2 Upon Substantial Completion, the City shall pay an amount sufficient to increase total payments to Contractor to 95% of the Work completed, less such amounts as Engineer shall determine in accordance with paragraph 14.02.B.5 of the General Conditions and less 100% of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the Certificate of Substantial Completion.

4.4 Final payment, constituting entire unpaid balance of Contract Price, will be made by the City to Contractor as provided in the General Conditions.

ARTICLE 5

CONTRACTOR REPRESENTATIONS

5.1 Contractor represents:

5.1.1 Contractor has examined and carefully studied Contract documents and other related data identified in Bid Documents.

5.1.2 Contractor has visited the site and become familiar with and is satisfied as to general, local, and site conditions that may affect cost, progress, and performance of the Work.

5.1.3 Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.

5.1.4 Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in Contract documents and (2) reports and drawings of a hazardous environmental condition, if any, at the site which has been identified in Contract documents.

5.1.5 Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including applying specific means, methods, techniques, sequences, and procedures of construction, if

00520-3
06-16-2011

any, expressly required by the Contract to be employed by Contractor, and safety precautions and programs incident thereto.

5.1.6 Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for performance of the Work at Contract Price, within Contract Time, and in accordance with the Contract.

5.1.7 Contractor is aware of general nature of work to be performed by the City and others at the site that relates to the Work as indicated in Contract documents.

5.1.8 Contractor has correlated information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract.

5.1.9 Contractor has given City Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract, and written resolution thereof by City Engineer is acceptable to Contractor.

5.1.10 Contract documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 6

MISCELLANEOUS PROVISIONS

6.1 The Contract may be terminated by either Party as provided in Conditions of the Contract.

6.2 The Work may be suspended by the City as provided in Conditions of the Contract.

6.3 Contractor further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An "undocumented worker" shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States.

6.4 In accordance with Chapter 2270, Texas Government Code, a government entity may not enter into a contract with a company for goods or services unless the company covenants and agrees that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. Furthermore, the contractor is prohibited from engaging in business with Iran, Sudan or Foreign Terrorist Organizations.

ARTICLE 7

00520-4
06-16-2011

ENUMERATION OF CONTRACT DOCUMENTS

- 7.1 The following documents are incorporated into this Agreement:
- 7.1.1 Document 00700 - General Conditions
 - 7.1.2 Document 00800 - Supplementary Conditions
 - 7.1.3 General Requirements.
 - 7.1.4 Divisions 02 through 03 of Specifications attached hereto or incorporated by reference in Document 00010 - Table of Contents.
 - 7.1.6 Addenda which apply to the Contract, are as follows:
 - Addendum No. 1, dated [Oct. 30, 2023]
 - Addendum No. 2, dated [Nov. 6, 2023]
 - Addendum No. 3, dated [Nov. 13, 2023]
 - Addendum No. 4, dated [Nov. 14, 2023]
 - 7.1.7 Other documents:

<u>Document No.</u>	<u>Title</u>
[X] 00410B	Bid Form - Part B
[X] 00500	Form of Business
[X] 00501	Resolution of Corporation (if a corporation)
[X] 00610	Performance Bond
[X] 00611	Statutory Payment Bond
[X] 00612	One-year Maintenance Bond
[X] 00620	Affidavit of Insurance (with the Certificate of Insurance attached)
[X] 00800	Exhibit A, Wage Rates
[] 00821	Wage Rate for Building Construction
[] 00830	Trench Safety Geotechnical Information

ARTICLE 8
SIGNATURES

- 8.1 This Agreement is executed in two originals and is effective on _____.

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06-16-2011

CONTRACTOR:

(If Joint Venture)

By: *Ryan Bekins*
Name: *RYAN BEKINS*
Title: *President*
Date: *11-28-23*
Tax Identification Number: *83-4035145*

By: _____
Name: _____
Title: _____
Date: _____
Tax Identification Number: _____

ATTEST/SEAL:

[SEAL]

Melanie M Whitten
Notary Public, Kent County, MI
Acting in *Kent* County MI
My Commission Expires Nov 1, 2024

Attest: *Melanie M Whitten*

Date: *11/28/2023*

CITY OF TOMBALL, TEXAS:

By: _____
City Manager

Date: _____

ATTEST/SEAL:

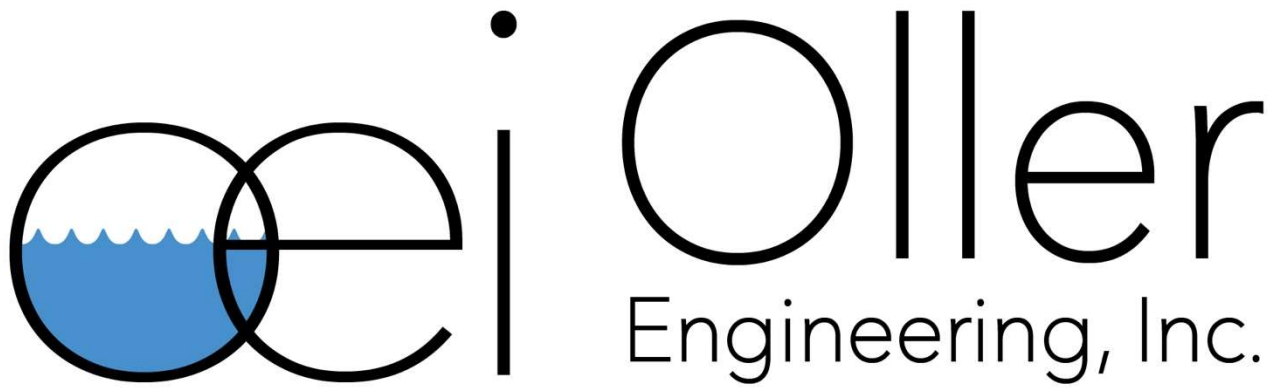
[SEAL]

Attest: _____
City Secretary

Date: _____

END OF DOCUMENT

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06-16-2011



City of Tomball

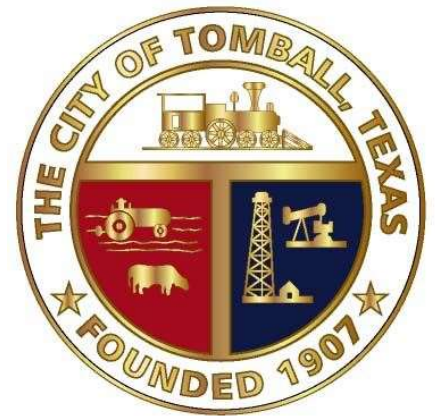
Pine St. EST Rehabilitation

Administrative Specifications

City of Tomball Job #2024-05

OEI Job #1030.23.05

October 2023



10/25/2023

beyond engineering

Document 00010

TABLE OF CONTENTS

NOTE: Documents listed "for filing" are to be provided by Bidder and are not included in this Project Manual unless indicated for example only. The Document numbers and titles hold places for actual documents to be submitted by Contractor during Bid, post-bid, or construction phase of the Project. Documents in the 200, 300 and 400 series of Division 00, except for Document 00410B - Bid Form, Part B, are not part of the Contract.

Doc.

No. Document Title

Doc. Date

INTRODUCTORY INFORMATION

00010	Table of Contents	02-25-2010
00015	List of Drawings	01-06-2009

BIDDING REQUIREMENTS

00100	Invitation to Bidders	12-10-2009
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INSTRUCTIONS TO BIDDERS

00200	Instructions to Bidders	11-18-2009
00210	Supplementary Instructions to Bidders	01-06-2009
00220	Request for Bid Information	01-06-2009

INFORMATION AVAILABLE TO BIDDERS - NOT USED

BID FORMS AND SUPPLEMENTS

00410	Bid Form, Parts A & B	01-06-2009
00430	Bidder's Bond (For filing; Example Form)	01-06-2009
00453	Bidder's Statement of Residency	01-06-2009
00455	Affidavit of Ownership or Control	01-06-2009

POST-BID PROCEDURES

00495	Post-bid Procedures	01-06-2009
00496	Control Form for Contract Documents	01-06-2009
00497	Request for Bonds and Proof of Insurance	01-06-2009
00498	Notice of Intent to Award	01-06-2009

Doc.

No. Document Title

Doc. Date

CONTRACTING REQUIREMENTS

AGREEMENT

00500 Form of Business	01-06-2009
00501 Resolution of Corporation	01-06-2009
00520 Agreement	01-06-2009

BONDS AND CERTIFICATES

00600 List of Proposed Subcontractors and Suppliers, Part A	01-06-2009
00601 Drug Policy Compliance Agreement	01-06-2009
00603 Checklist for Drug Policy Submittal	01-06-2009
00604 History of OSHA Actions and List of On-the-job Injuries	01-06-2009
00607 Certification Regarding Debarment, Suspension, and Other Responsibility Matters	01-06-2009
00610 Performance Bond	01-06-2009
00611 Statutory Payment Bond	01-06-2009
00612 One-year Maintenance Bond	02-25-2010
00620 Affidavit of Insurance (with attached Certificates of Insurance)	02-01-2008
00641 Contractor's Certification of Final Completion	01-06-2009
00642 Certification of Payment to Subcontractors and Suppliers	01-06-2009
00643 Estimate and Certificate for Payment, Unit Price Work	01-06-2009
00644 Drug Policy Compliance Declaration	01-06-2009
00645 Certificate of Substantial Completion	01-06-2009
00650 Certificate of Final Completion	01-06-2009
00691 Acceptance of Water & Wastewater Lines	01-06-2009

GENERAL CONDITIONS

00700 General Conditions	01-06-2009
--------------------------	------------

SUPPLEMENTARY CONDITIONS

00800 Supplementary Conditions	03-24-2009
00820 Wage Scale and Payroll Requirements for Engineering Construction	02-01-2016

Doc.

No. Document Title

Doc. Date

ADDENDA AND MODIFICATIONS

00910	Addendum	01-06-2009
00911	Notice of Addendum	01-06-2009
00931	Request for Information (Example only)	01-06-2009
00940	Work Change Directive	01-06-2009
00941	Change Order Form	01-06-2009

SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

01110	Summary of Work	01-06-2009
01145	Use of Premises	01-06-2009
01230	Alternates	01-06-2009
01255	Change Order Procedures	01-06-2009
01270	Measurement and Payment	01-06-2009
01292	Schedule of Values	01-06-2009
01312	Coordination and Meetings	01-06-2009
01321	Construction Photographs	01-06-2009
01325	Construction Schedule	01-06-2009
01326	Construction Schedule (Bar Chart)	01-06-2009
01330	Submittal Procedures	01-06-2009
01340	Shop Drawings, Product Data, and Samples	01-06-2009
01422	Reference Standards	01-06-2009
01450	Contractor's Quality Control	01-06-2009
01452	Inspection Services	01-06-2009
01454	Testing Laboratory Services	01-06-2009
01502	Mobilization	01-06-2009
01572	Pollution Source Controls on Construction Projects	01-06-2009
01576	Waste Material Disposal	01-06-2009
01610	Basic Product Requirements	01-06-2009
01630	Product Substitution Procedures	01-06-2009
01731	Cutting and Patching	01-06-2009
01732	Procedure for Water Valve Assistance (with Attachments)	01-06-2009
01733	Procedure for New Water Line Disinfection	01-06-2009
01740	Restoration of Site Improvements	01-06-2009
01770	Closeout Procedures	01-06-2009
01785	Project Record Documents	09-08-2009

Doc.

No. Document Title

Doc. Date

DIVISION 2 - SITE WORK

02501 Ductile Iron Pipe and Fittings	02-01-2008
02511 Water Lines	02-01-2008
02514 Disinfection of Water Lines	02-01-2008
02521 Gate Valves	02-01-2008

DIVISION 3 - CONCRETE - NOT USED

DIVISION 4 - MORTAR - NOT USED

EXTRA SPECIFICATIONS

09 97 14 Painting and Coating	10-19-2023
32 31 00 Fences and Gates	10-19-2023

END OF DOCUMENT

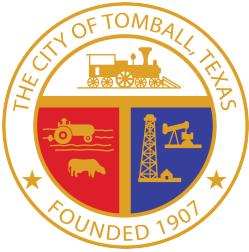
Document 00015

LIST OF DRAWINGS

<u>Sheet No.</u>	<u>Drawing Title</u>
C001	Cover Sheet
C002	City of Tomball General Notes
C003	Existing Site Plan
C100	Elevation Storage Tank Details

END OF DOCUMENT

00015-1
02-01-08



City of Tomball

Lori Klein Quinn
Mayor

David Esquivel, PE
City Manager

OFFICIAL NOTICE

The City of Tomball, Harris County, Texas is soliciting sealed bids for the **"Pine Street Elevated Storage Tank Rehabilitation"**. The bid documents may be obtained for **no charge** by downloading them at www.civcastusa.com (account setup required) or at the office of Oller Engineering, Inc. (2901 Wilcrest Drive, Suite 550, Houston, Texas 77042) with a **\$150.00** non-refundable charge for each complete set of documents in electronic format obtained. Make checks payable to Oller Engineering, Inc.

Sealed bids shall be submitted via CivCast E-bidding, www.civcastusa.com, for **"E&P CIP No. 2023-10004; Project Bid Number 2024-05 – "Pine Street EST Rehabilitation"**. Bids will be accepted until **2:00 p.m. CST on Thursday, November 16, 2023**.

An electronic pre-bid conference will be held on November 9, 2023, at 2:00 p.m., to familiarize the Bidders with the goals for this project. The information for the pre-bid conference will be posted on CivCast and sent out to all plan holders. The pre-bid conference is not mandatory.

Cashier's Check, Certified Check, or Bid Bond in an amount equal to ten percent (10%) of the total amount bid must accompany the BID. The Owner reserves the right to reject any or all bids or to accept any bid deemed advantageous to it and waive informalities in bidding. All bids received after the closing time designated will be returned unopened.

During the period between the Request for Proposal, submission date, and the contract award, respondents including their agents and/or representatives/owners, shall not directly or indirectly promote their proposal or bid to any member of the Tomball City Council or City staff except in the course of City-sponsored inquiries, briefings, interviews, and/or presentations requests. Violation of this provision may result in the rejection of the respondent's Proposal submittal.

The City of Tomball reserves the right to accept or to reject any bids, to waive technicalities and to make any investigation deemed necessary concerning the bidder's ability to provide the product(s) required, and to accept what in its judgment is the most advantageous bid. All bids received after the closing time designated will be returned unopened.

David Esquivel, PE
City Manager

CERTIFICATION

I certify that the above "Notice to Bidders" was posted on the bulletin board of City Hall, City of Tomball, Texas on the ____ day of October 2023.

Tracylynn Garcia
City Secretary

Section 00200

INSTRUCTIONS TO BIDDERS

1. DEFINITIONS

- A. Terms used in these Instructions to Bidders which are defined in the Standard General Conditions of the Construction Contract (General Conditions) have the meanings assigned to them in the General Conditions. Other terms used in the Bidding Documents and not defined elsewhere have the following meanings, which are applicable to both the singular and plural thereof:
1. Bidder: One who submits a bid directly to the Owner.
 2. Successful Bidder: The most qualified, responsible and responsive bidder to whom the Owner makes an award.
 3. Bidding Documents: The Notice to Bidders, Instructions to Bidders, Supplementary Conditions to General Conditions, Special Conditions (Underground Utilities), Special Conditions to the Agreement, Proposal and the Proposed Contract Documents (including Addenda issued prior to receipt of Bids).

2. PREPARATION OF BIDS

- A. Complete sets of bidding documents must be used in preparing bids. Neither the Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of bidding documents. Copies of bidding documents are made available only for the purpose of obtaining bids on the work and do not confer a license or grant for any other use.

3. QUALIFICATIONS OF BIDDERS

- A. Each bidder must submit with the bid a Financial and Experience Statement. The statement shall be filed with the proposal in a separate sealed envelope marked "Financial and Experience Statement".
- B. Financial statements from the three most qualified bidders will be retained by the Owner until award of the contract. **NO FINANCIAL STATEMENT WILL BE READ ALOUD AT THE BID OPENING.** Upon award of the contract, the statements of all unsuccessful bidders will be returned.

- C. Additional written evidence of qualifications, such as financial data, previous experience, present commitments, and other such data as may be called for by the OWNER.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- A. It is the responsibility of each Bidder before submitting a Bid to (a) examine the Contract Documents thoroughly, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance, or furnishing of the Work, (c) consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify ENGINEER of all conflicts, errors, or discrepancies in the Contract Documents discovered by the Bidder.
- B. Information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to OWNER and ENGINEER by owners of such Underground Facilities or others, and OWNER does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.
- C. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, underground facilities, and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions.
- D. Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies, and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work, and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.
- E. On request in advance, OWNER will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall clean up and restore the site to its former condition upon completion of such explorations.

- F. Failure to perform such investigations during the Bid period shall not relieve Bidder from responsibility for investigations, interpretations, and proper use of available information in preparation of Bidder's proposal.
- G. The lands upon which the Work is to be performed, rights-of-way, and easements for access thereto and other lands designated for use by CONTRACTOR in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by CONTRACTOR. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by OWNER unless otherwise provided in the Contract Documents.
- H. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and such means, methods, techniques, sequences, or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

6. INTERPRETATION OF DOCUMENTS AND ADDENDA

- A. All questions about the meaning or intent of the Contract Documents must be submitted to the Engineer in writing at least ten (10) days prior to the opening of bids. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be issued by Addenda at least 48 hours prior to Bid Opening.
- B. Any interpretation of the Contract Documents will be made only by Addendum duly issued, and a copy of such addendum will be made available to each prospective bidder recorded by ENGINEER as having received a set of Contract Documents. Each Bidder is responsible for obtaining Addenda. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- C. Addenda may also be issued to modify the Contract Documents as deemed advisable by OWNER and ENGINEER.

7. BID SECURITY

- A. Each Bid shall be accompanied by Bid security made payable to OWNER in an amount of five percent of the Bidder's maximum Bid price and in the form

of a bid bond, cashier's check, or certified check. Bid Bond shall have a "B+" rating from Best's Key Rating Guide and shall be duly authorized by the State of Texas to execute Bid Security.

- B. The Bid security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required contract security, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security with 15 calendar days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the earlier of the seventh day after the Effective Date of the Agreement or the forty-sixth day after the Bid opening, whereupon Bid security furnished by such Bidders will be returned. Bid security with Bids which are not competitive will be returned within 7 days after the Bid opening.

8. CONTRACT TIME

- A. The number of days within which, or the dates by which, the Work is to be substantially completed and completed and ready for final payment (the Contract Time) are set forth in the Agreement.

9. LIQUIDATED DAMAGES

- A. Provisions for liquidated damages, if any, are set forth in the Agreement.

10. SUBSTITUTE OR "OR EQUAL" ITEMS

- A. The Contract, if awarded, will be on the basis of materials and equipment described in the DRAWINGS or specified in the Specifications without consideration of possible substitute or "or equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ENGINEER, application for such acceptance will not be considered by ENGINEER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by ENGINEER is set forth in Paragraph 6.05 of the General Conditions and may be supplemented in the General Requirements (Division 1).

11. SUBCONTRACTORS, SUPPLIERS AND OTHERS

- A. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, and other person and organizations (including those who are to

furnish the principal items of material and equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within 7 days after the Bid opening, submit to OWNER a list of all such Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person, or organization, either may, before the Notice of Award is given, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid price.

- B. If apparent Successful Bidder declines to make any such substitution, OWNER may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the Bid security of any Bidder. Any Subcontractor, Supplier, other person, or organization listed and to whom OWNER or ENGINEER does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06.B of the General Conditions.
- C. In Contracts where the Contract Price is on the basis of Cost of Work Plus a Fee, the apparent Successful Bidder, prior to the Notice of Award, shall identify in writing to OWNER those portions of the Work that such Bidder proposes to subcontract and after the Notice of Award may only subcontract other portions of the Work with OWNER'S written consent.
- D. No CONTRACTOR shall be required to employ any Subcontractor, Supplier, other person, or organization against whom CONTRACTOR has a reasonable objection.

12. BID FORMS

- A. All Bids shall be completely filled out on the specified bid forms without modification or provisions unless otherwise required.
- B. The Bids shall be completed in duplicate. The original shall be filed with the OWNER and the Bidder shall keep the duplicate.
- C. The Bids must be clearly and legibly filled out in ink or typed. In case of ambiguity or lack of clearness in stating the prices tendered or the condition of the Bid, the OWNER reserves the right to consider the most favorable

construction thereof or to reject the Bid from further consideration.

- D. All Bids must be officially executed. Bids by Corporations must be executed in the corporate name by the president or vice president (or other corporate officer, accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or assistant secretary. The corporate address and state of incorporation must be shown below the signature. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature, and the official address of the partnership must be shown below the signature. All business entity names must be registered with the Secretary of State of Texas and appropriate office of registration.
- E. The Bid shall contain an acknowledgement of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

13. SUBMISSION OF BIDS

- A. Bids shall be submitted at the time and place indicated in the Notice to Bidders, and shall be enclosed in an opaque sealed envelope marked with the Project title, name and address of the Bidder and containing Bid security and other required documents. Bids will be securely kept unopened, until the specified time. The bids received after the specified time will not be considered. All incomplete Bids shall be considered non-responsive. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

14. MODIFICATION AND WITHDRAWAL OF BIDS

- A. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to opening of Bids.
- B. If, within 24 hours after Bids are opened, any Bidder files a duly signed, written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid and the Bid security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

15. OPENING OF BIDS

- A. Bids will be opened and read aloud publicly. An abstract of the amounts of

the base Bids and major alternates (if any) will be made available to Bidders within 7 calendar days after the date of Bid opening.

16. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- A. The apparent Successful Bid and the next two lowest Bids will remain subject to acceptance for 60 calendar days after the day of the Bid opening. All other Bids will be released, and the Bid security returned within 7 days. OWNER may, in its sole discretion, release any Bid and return the Bid security prior to that date.

17. AWARD OF CONTRACT

- A. Contract will be awarded on basis of low Base Bid. Selection of alternates or deductive Bid Items by the OWNER will not be used to displace the low Bidder.
- B. The Owner reserves the right to reject any and all bids, to waive any and all informalities not involving price, time or changes in the Work, to negotiate contract terms with the Successful Bidder, and to disregard all non-conforming, non-responsive, unbalanced or conditional Bids. Also, OWNER reserves the right to reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive, or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- C. In evaluating Bids, OWNER will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- D. OWNER may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. OWNER also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

- E. OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to OWNER'S satisfaction within the prescribed time.
- F. Alternate bid items are included in the Bid Form. The Successful Bidder will be determined based on either the low Base Bid (Part C of the Bid), or the low Base Bid Plus Alternate Bid (Part E of the Bid), at the discretion of the OWNER.
- G. If the Contract is to be awarded, OWNER will give the Successful Bidder a Notice of Award within 60 calendar days after the day of the Bid opening.

18. CONTRACT SECURITY

- A. Paragraph 5.1 of the General Conditions and the Supplementary Conditions set forth OWNER'S requirements as to performance and payment Bonds. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required performance and payment Bonds.

19. INSURANCE CERTIFICATES

- A. The CONTRACTOR shall provide and maintain a minimum coverage as defined in the Contract Documents (Article 5 of the General Conditions). The companies providing the coverage shall be acceptable to the OWNER (Certificate of Insurance Section 00620).

20. SIGNING OF AGREEMENT

- A. When OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within 15 calendar days thereafter, CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER with the required Bonds. Within 10 calendar days thereafter, OWNER shall deliver one fully signed counterpart to CONTRACTOR. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

21. PRE-BID CONFERENCE

- A. A pre-bid conference will be held at the time and place indicated in the Invitation to Bid (Section 00100). Representatives of OWNER and ENGINEER

will be present to discuss the Project. All prospective bidders are encouraged to attend and participate in the conference. ENGINEER will notify all prospective Bidders of record of any such Addenda as ENGINEER considers necessary in response to questions arising at the conference.

22. SALES TAX

- A. Owner is exempt from Texas sales and use taxes pursuant to Texas Tax Code §151.309 as a political subdivision of the State of Texas. OWNER shall provide CONTRACTOR with a completed Texas Sales and Use Tax Exemption Certification as evidence of the applicability of such exemption and, accordingly, CONTRACTOR shall not collect Texas sales and use taxes from OWNER with respect to this Contract. CONTRACTOR and all Subcontractors to CONTRACTOR shall issue a Texas Sales and Use Tax Exemption Certification with respect to, and shall not pay Texas sales and use taxes on, all purchases of the following items that are exempt from Texas sales and use taxes pursuant to Texas Tax Code §151.311: (i) tangible personal property that will be incorporated into OWNER'S realty; (ii) tangible personal property that is necessary and essential for the performance of this Contract and is consumed entirely on the job site; and (iii) taxable services for use in the performance of this Contract that are performed at the job site and are either integral to the performance of this Contract or expressly required to be provided by this Contract. In addition, CONTRACTOR and all Subcontractors to CONTRACTOR (i) shall not include any provision for Texas sales and use taxes with respect to such exempt items in any bid or contract amount, and (ii) shall pass on to OWNER cost savings due to the exempt status of such exempt items. CONTRACTOR'S contracts with all Subcontractors to CONTRACTOR shall include the foregoing provision regarding the exemption from Texas sales and use taxes.

**END OF
SECTION**

Document 00210

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

The following Paragraphs modify Document 00200 - Instructions to Bidders. Where a portion of the Instructions to Bidders is modified or deleted by these Supplementary Instructions, the unaltered portions of the Instructions to Bidders remains in effect.

4.0 - BID DOCUMENTS:

- A. The Bid Documents may be obtained for no charge by downloading them at www.civcastusa.com (account setup required).
- B. The following plan rooms, whose names, addresses, phone and fax numbers were last updated on September 1, 2004, have been authorized by the City to display Bid Documents for examination:

AMTEK Information Services, Inc., 4001 Sherwood Lane, Houston, TX 77092, 713-956-0100, Fax 713-956-5340, Email: planroom@amtekusa.com

Associated Builders & Contractors, Inc., (ABC), 3910 Kirby, Suite 131, Houston, TX 77098-4151, 713-523-6222, Fax 713-874-0747. Email: lori@abchouston.org

Associated General Contractors (AGC-BB) Building Branch, 3825 Dacoma, Houston, TX 77092-8717, 713-843-3700, Fax 713-843-3701. Email: karla.s@agchouston.org

Associated General Contractors, (AGC-HHUI), Highway, Heavy Utilities and Industrial Branch, 2400 Augusta St., Suite 180, Houston, TX 77057, 713-334-7100, Fax 713-334-7130. Email: houston@agctx.org

Construction Information Network, 1225 North Loop West, Suite 550, Houston, TX 77008, 713-868-2233 ext. 329, Fax 866-852-2713. Email: paul.tilford@cnsx.com

F. W. Dodge Corporation, 4101 Greenbriar, Suite 320, Houston, TX 77098, 713-529-4895, Fax 713-524-7639. Email: Terrie_Harris@mcgraw-hill.com

The Builders' Exchange of Texas, Inc., 3910 Kirby, Suite 131, Houston, TX 77098, 210-564-6900, Fax: 210-564-6921, Email: houston@bctx.com

5.0 - EXAMINATION OF DOCUMENTS, SITE, AND LOCAL CONDITIONS:

- A. Work will be performed in public right-of-way and in City of Tomball easements. The site may be examined at any time during daylight hours.

8.0-SUBSTITUTION OF PRODUCTS:

- A. Where Bid Documents specify a specific Product with provision for consideration of substitutions (or equal), requests for prebid approval of substitutions will be considered from Bidders only if received by Project Manager 10 days or more prior to Bid Date.
- B. Requests for substitutions must provide complete information in order to determine acceptability of the Products, in accordance with provisions of Document 00700 - General Conditions.
- C. The City will consider requests for substitutions and, if approved, will issue an Addendum. Bidder shall base its Bid only on substitutions approved in Addenda. Substitutions, not listed in an Addendum, are not allowed.
- D. Bidder shall include in its Bid, costs of substitutions approved by Addenda.

10.0 - BID SUBMISSION:

- A. Sealed bids shall be submitted via CivCast E-Bidding, www.civcast.com, for Pine St. EST Rehabilitation Project. Bids shall be submitted no later than 2:00 p.m., Local Time on Nov. 16, 2023.
- B. Submit one copy of the executed offer on the bid forms provided, properly signed, with required Security Deposit, and other Supplements to Bid Forms, in a sealed, opaque envelope. On the outside of the envelope, clearly identify the Certificate of Responsibility number, Bidders name, Project name, and the City's name. Bids submitted by mail shall be enclosed in a separate envelope addressed for mailing, and identifying the enclosure as a bid.

15.0 - PREBID MEETING:

- A. A pre-bid conference will be hosted electronically on Nov. 9 at 2:00 pm, to familiarize bidders with the goals for this project. The information for the pre-bid will be posted on CivCast and sent to all plan holders. **The pre-bid conference is not mandatory.**

END OF DOCUMENT

Document 00220

REQUEST FOR BID INFORMATION

PROJECT: Pine St. EST Rehabilitation

PROJECT No 2024-05

TO: Oller Engineering, Inc.
Attn: Adam Valenzuela

Phone No. 806.993.6226
Fax No. _____
Email Addr. adam.valenzuela@oei-eng.com

(Type or Print question legibly; use back if more space is needed)

This request relates to _____ and/or _____
Drawing / Detail No. Specification Section No.

Attachments to this request: _____

Signature

Date

(Type or Print Name)

(Type or Print Company Name)

END OF DOCUMENT

00220-1
02-01-08

Document 00410A

BID FORM - PART A

To: **The Honorable Mayor and City Council of the City of Tomball
City Hall**

Tomball, Texas

Project: Pine St. EST Rehabilitation

Project No.: 2024-05

Bidder: _____
(Print or type full name of proprietorship, partnership, corporation, or joint venture.)

1.0 OFFER

- A. Total Bid Price:** Having examined the Project location and all matters referred to in Bid Documents for the Project, we, the undersigned, offer to enter into a Contract to perform the Work for the Total Bid Price shown on the signature page of this Document
- B. Security Deposit:** Included with the Bid is a Security Deposit in the amount of 10 percent of the Total Bid Price subject to terms described in Document 00200 - Instructions to Bidders.
- C. Period for Bid Acceptance:** This offer is open to acceptance and is irrevocable for 90 days from Bid Date. That period may be extended by mutual written agreement of the City and Bidder.
- D. Addenda:** All Addenda have been received. Modifications to Bid Documents have been considered and all related costs are included in the Total Bid Price.
- E. Bid Supplements:** The following documents are attached:
- ☒ Security Deposit (*as defined in Document 00200 - Instructions to Bidders*)
 - ☒ Document 00453 - Bidder's Statement of Residency
 - ☒ Document 00455 - Affidavit of Ownership or Control
 - ☐ Page 00809-63, Request for Contractor Clearance
 - ☐ Others as listed: _____

2.0 CONTRACT TIME

- A.** If offer is accepted, Contractor shall achieve Date of Substantial Completion within 90 days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

Document 00410B

BID FORM - PART B

**1.0 TOTAL BID PRICE HAS BEEN CALCULATED BY BIDDER, USING THE
FOLLOWING COMPONENT PRICES AND PROCESS (PRINT OR TYPE
NUMERICAL AMOUNTS):**

A. STIPULATED PRICE:

\$N/A

(Total Bid Price; minus Base Unit Prices, Extra Unit Prices, Cash Allowances and All Alternates, if any)

B. BASE UNIT PRICE TABLE:

Item No.	Control No.	Item Description	Unit Measure	Unit Quantity	Unit Price	Total in figures
1		General Terms and Conditions, Mobilization. (Not to Exceed 5% of total base bid), complete in-full.	JOB	1		
2		Shroud, Surface Preparation by power washing of Exterior Tank and Above Ground Piping.	SF	19700		
3		Surface Preparation by Power Washing and/or Sand Blasting of Interior Portion of Tank.	SF	22400		
4		Exterior Surface Spray Painting/Coating and Roller/Brush Painting as Necessary to Meet Coating Application Thickness.	SF	19700		
5		Interior Surface Spray Painting/Coating and Roller/Brush Painting as Necessary to Meet Coating Application Thickness	SF	22400		
6		Draining Tank, Disinfection of Interior of Tank, Dichlorination of Tank, and Final Fill of Tank.	JOB	1		
<u>TOTAL BASE UNIT PRICES</u>						\$ _____

C. EXTRA UNIT PRICE TABLE:

Item No.	Control No.	Item Description	Unit Measure	Unit Quantity	Unit Price	Total in figures
7		Repair and/or Replace Steel Structural Members	LF	1		
<u>TOTAL EXTRA UNIT PRICES</u>						\$ _____

REST OF PAGE INTENTIONALLY LEFT BLANK

D. CONTENGANCY CASH ALLOWANCE TABLE:

Cash Allowance No.	Cash Allowance Short Title	Cash Allowance in figures
1	Contingency Cash Allowance All Bidders	\$25,000
<u>TOTAL CASH ALLOWANCES</u>		

E. ALTERNATES TABLE:

Alternate No.	Alternate Short Title	Total Price for Alternate in figures
	N/A	
<u>TOTAL ALTERNATES</u>		\$ _____

REST OF PAGE INTENTIONALLY LEFT BLANK

F. TOTAL BID PRICE:

(Add Totals for Items A., B., C., D., and E. above)

\$ _____

2.0 SIGNATURES: By signing this Document, I agree that I have received and reviewed all Addenda and considered all costs associated with the Addenda in calculating the Total Bid Price.

Bidder:

(Print or type full name of your proprietorship, partnership, corporation, or joint venture.*)

**** By:**

Signature

Date

Name:

(Print or type name)

Title

Address:

(Mailing)

(Street, if different)

Telephone and Fax Number:

(Print or type numbers)

- * If Bid is a joint venture, add additional Bid Form signature sheets for each member of the joint venture.
- ** Bidder certifies that the only person or parties interested in this offer as principals are those named above. Bidder has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding.

Footnotes for Basic Unit Price Table and Extra Unit Price Table:

- (1) Fixed Unit Price determined prior to Bid. Cannot be adjusted by the Bidder.
- (2) Minimum Bid Price determined prior to Bid. Can be increased by the Bidder by crossing out the Minimum and noting revised price on the line above.
- (3) Maximum Bid Price determined prior to Bid. Can be decreased by Bidder by crossing out the Maximum and noting revised price on the line above.
- (4) Fixed Range Unit Price determined prior to Bid. Unit Price can be adjusted by Bidder to any amount within the range defined by crossing out prices noted and noting revised price on the line above.

Note: This document constitutes a government record, as defined by § 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in § 37.10 of the Texas Penal Code.

END OF DOCUMENT

Document 00430

BIDDER'S BOND

THAT WE, _____, as Principal,
(Bidder)
("Bidder"), and the other subscriber hereto, _____, as Surety, do hereby
acknowledge ourselves to be held and firmly bound to the City of Tomball, a municipal corporation, in the
sum of _____ Dollars (\$_____) (an amount
equal to 10 percent of the Total Bid Price, including Cash Allowances and Alternates, if any, for the payment
of which sum, well and truly to be made to the City of Tomball and its successors, the Bidder and Surety do
bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Bidder has submitted on or about this day a proposal offering to perform the following:

(Project Name, Location and Number)
in accordance with the Drawings, Specifications, and terms and conditions related thereto to which
reference is hereby made.

NOW, THEREFORE, if the Bidder's offer as stated in the Document 00410 - Bid Form is accepted by the
City, and the Bidder executes and returns to the City Document 00520 - Agreement, required by the City,
on the forms prepared by the City, for the Work and also executes and returns the same number of the
Performance, Payment and Maintenance Bonds (such bonds to be executed by a Corporate Surety
authorized by the State Board of Insurance to conduct insurance business in the State of Texas, and having
an underwriting limitation in at least the amount of the bond) and other submittals as required by Document
00495 - Post-Bid Procedures, in connection with the Work, within the Contract Time, then this obligation
shall become null and void; otherwise it is to remain in full force and effect.

If Bidder is unable to or fails to perform the obligations undertaken herein, the undersigned Bidder and
Surety shall be liable to the City for the full amount of this obligation which is hereby acknowledged as the
amount of damages which will be suffered by the City on account of the failure of such Bidder to perform
such obligations, the actual amount of such damages being difficult to ascertain.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when
actually received or, if earlier, on the third day following deposit in a United States Postal Service post office
or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the
respective other Party at the address prescribed in the Contract documents, or at such other address as the
receiving Party may hereafter prescribe by written notice to the sending Party.

IN WITNESS THEREOF, the Bidder and Surety have signed and sealed this instrument on the
respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)
WITNESS: (if not a corporation)

By: _____
Name:
Title:

ATTEST/SURETY WITNESS: (SEAL)

By: _____
Name:
Title:
Date:

(Name of Bidder)

By: _____
Name:
Title:
Date:

(Full Name of Surety)

(Address of Surety for Notice)

(Telephone Number of Surety)

By: _____
Name:
Title:
Date:

END OF DOCUMENT

Document 00453

BIDDER'S STATEMENT OF RESIDENCY

The City may not award a contract for general construction, services, or purchases to a Nonresident Bidder unless Nonresident's Bid is lower than the lowest Bid submitted by a responsible Texas Resident Bidder by the same amount that a Texas Resident bidder would be required to underbid the Nonresident Bidder to obtain a comparable contract in the state in which Nonresident's principle place of business is located.

1. This certifies that the Bidder, _____, is a State of Texas Resident Bidder as defined in TEX. GOVT. CODE ANN. § 2252.001(4) (Vernon 1994).

Signature

Title

"Texas Resident Bidder" means a bidder whose principal place of business is in this State, and includes a Contractor whose ultimate parent company or majority owner has its principal place of business in this State. *When bidder cannot sign 1, above, proceed to 2.*

2. a. _____ is a resident of _____ and is a Nonresident Bidder as defined in TEX. GOVT. CODE ANN. § 2252.001(3) (Vernon 1994).

Signature

Title

"Nonresident Bidder" means a bidder whose principal place of business is not in this State, but excludes a contractor whose ultimate parent company or majority owner has its principal place of business in this State.

- b. The State of _____ Bidder's resident state _____ Does or Does Not have a state statute giving preference to resident bidders.

Signature

Title

If the answer to 2.b is that your state does have a statute giving preference to resident bidders, then you must provide a copy and proceed to 3.

3. A copy of the State of _____ statute is attached.

Signature

Title

Date

END OF DOCUMENT

Orig. Dept.: _____

File/I.D. No.: _____

INSTRUCTION: Entities using an assumed name should disclose such fact to avoid rejection of the affidavit. The following format is recommended: Corporate/Legal Name d.b.a. Assumed Name.

Document 00455

AFFIDAVIT OF OWNERSHIP OR CONTROL

BEFORE ME, the undersigned authority, on this day personally appeared

_____ (Full Name, hereafter "Affiant"),

_____ (state title/capacity with Contracting Entity) of

_____ (Contracting Entity's Corporate/Legal Name)

("Contracting Entity"), who being by me duly sworn on oath stated as follows:

1. Affiant is authorized to give this affidavit and has personal knowledge of the facts and matters herein stated.

2. Contracting Entity seeks to do business with the City in connection with

_____ (describe project or matter) which is expected to be in an amount that exceeds \$25,000.

3. The following information is submitted in connection with the proposal, submission or bid of Contracting Entity in connection with the above described project or matter.

4. Contracting Entity is organized as a business entity as noted below (check box as applicable):

FOR PROFIT ENTITY:

☐ SOLE PROPRIETORSHIP

☐ CORPORATION

☐ PARTNERSHIP

☐ LIMITED PARTNERSHIP

☐ JOINT VENTURE

☐ LIMITED LIABILITY COMPANY

☐ OTHER (Specify type in space below)

NON-PROFIT ENTITY:

☐ NON-PROFIT CORPORATION

☐ UNINCORPORATED ASSOCIATION

Orig. Dept.: _____

File/I.D. No.: _____

5. The information shown below is true and correct for the Contracting Entity and all owners of 5% or more of the Contracting Entity and, where the Contracting Entity is a non-profit entity, the required information has been shown for each officer. (NOTE: In all cases, use full names, local business and residence addresses and telephone numbers. Do not use post office boxes for any address. Inclusion of e-mail addresses is optional, but recommended. Attach additional sheets as needed.)

Contracting Entity

Name: _____

Business Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (_____)_____

Email Address (optional) _____

Residence Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (_____)_____

Email Address (optional) _____

5% Owner(s) (IF NONE, STATE "NONE.")

Name: _____

Business Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (_____)_____

Email Address (optional) _____

Residence Address (No./Street) _____

(City/State/Zip Code) _____

Telephone Number (_____)_____

Email Address (optional) _____

6. Optional Information

Contracting Entity and/or _____ (Name of Owner or Non-Profit Officer) is actively protesting, challenging or appealing the accuracy and/or amount of taxes levied against _____ (Contracting Entity, Owner or Non-Profit Officer) as follows:

Orig. Dept.: _____

File/I.D. No.: _____

Name of Debtor: _____

Tax Account Nos. _____

Case or File Nos. _____

Attorney/Agent Name _____

Attorney/Agent Phone No. (_____)_____

Tax Years _____

Status of Appeal (Describe) _____

Affiant certifies that he or she is duly authorized to submit the above information on behalf of the Contracting Entity, that Affiant is associated with the Contracting Entity in the capacity noted above and has personal knowledge of the accuracy of the information provided herein, and that the information provided herein is true and correct to the best of Affiant's knowledge and belief.

Affiant

SWORN TO AND SUBSCRIBED before me this ____ day of _____, 20____.

(Seal)

Notary Public

NOTE:

This affidavit constitutes a **government record** as defined by Section 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in Section 37.10 of the Texas Penal Code. Attach additional pages if needed to supply the required names and addresses.

END OF DOCUMENT

Document 00495

POST-BID PROCEDURES

1.0 DOCUMENT ADDRESSES

- A. Notice of Intent to Award.
- B. Monitoring Authority
- C. Failure of Bidder to comply with requirements.
- D. Notice to Proceed.

2.0 NOTICE OF INTENT TO AWARD

- A. The City will provide written Notice of Intent to Award to Low Bidder.

3.0 DEFINITIONS

- A. The "Monitoring Authority" for this Project is:
- B. The "Project Manager" for this Project is:

Rich Oller, P.E.
Oller Engineering, Inc.
2811 S. Loop 289, Ste. 17
Lubbock, TX 79423

(O): 806-993-6226
(E): rich.oller@oei-eng.com

4.0 REQUIREMENTS OF BIDDER

- A. Within 3 days of receipt of Notice of Intent to Award, Low Bidder shall execute and deliver to Project Manager and Monitoring Authority, for the City's approval, documents indicated by an "X" below:
 - [X] Document 00600 - List of Proposed Subcontractors and Suppliers
 - [X] Executed Subcontract(s), Letter(s) of Intent, or documentation of good faith efforts to meet the goals

- B. Within 10 days of receipt of Notice of Intent to Award, Low Bidder shall execute and deliver to Project Manager for the City's approval, documents indicated by an "X" below:

- [X] Document 00500 - Form of Business
- [X] Document 00501 - Resolution of Corporation
- [X] Document 00520 - Agreement
- [X] Document 00601 - Drug Policy Compliance Agreement
- [X] Document 00602 - Contractor's Drug-free Workplace Policy (**Contractor creates this document.**)
- [X] Document 00604 - History of OSHA Actions and List of On-the-job Injuries
- [X] Document 00607 - Certification Regarding Debarment, Suspension, and Other Responsibility Matters
- [X] Document 00610 - Performance Bond
- [X] Document 00611 - Statutory Payment Bond
- [X] Document 00612 - One-year Maintenance Bond
- [X] Document 00620 - Affidavit of Insurance (*with Certificate of Insurance attached*)
- [X] Document 00622 - Name and Qualifications of Proposed Superintendent (**Contractor creates this document.**)

- C. On Bidder's written request, Project Manager may grant an extension of time, not to exceed 5 days, to furnish documents specified in Paragraphs 4.0.A and 4.0.B. If Bidder is required to resubmit documents specified in Paragraph 4.0.A or 4.0.B, Bidder shall do so within time limits provided in the request for resubmission.

5.0 FAILURE OF BIDDER TO COMPLY WITH REQUIREMENTS

- A. Should Bidder, on receipt of Notice of Intent to Award, fail to comply with requirements of this Document 00495 within stated time, the City may declare award in default and require forfeiture of the Security Deposit.
- B. After the City's written notice of default to Low Bidder, the City may award the Contract to Bidder whose offer is the next lowest bid, and Security Deposit of Bidder in default shall be forfeited to the City in accordance with provisions of Document 00200 - Instructions to Bidders.

6.0 NOTICE TO PROCEED

- A. Upon the City's execution of the Agreement and delivery to Contractor, City Engineer will give Document 00551 - Notice to Proceed to Contractor, which establishes Date of Commencement of the Work.

END OF DOCUMENT

Document 00496

CONTROL FORM FOR CONTRACT DOCUMENTS

NOTE: This form is to remain with the Contract documents and SHOULD NOT BE REMOVED.

PROJECT NAME: Pine St. EST Rehabilitation

PROJECT No.: 2024-05

CONTRACTOR: _____

DEPARTMENT/DIVISION: _____

CONTACT PERSON(S): _____ **PHONE NUMBER(S):** _____

These documents are assembled according to the attached checklist. For verification of items within the Contract documents, refer to the checklist.

This Ordinance and/or Contract have been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

By: _____ Date: _____
Legal Assistant

I have sent the Ordinance to the Controller's Office.

By: _____ Date: _____
Award Coordinator

TO THE CITY SECRETARY: I have examined and approved the Contract documents. Two copies of the Contract documents are sent to you herewith for signatures.

By: _____ Date: _____
Director,

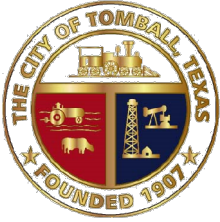
TO THE CITY CONTROLLER: Two copies of the Contract documents are sent to you herewith for countersignature. They were authorized by Ordinance Number _____ passed by City Council on _____. The Contract documents were executed by the Mayor or Mayor Pro Tem on _____.

By: _____ Date: _____
City Secretary

TO THE DIRECTOR: One copy of the Contract documents is sent to you for final distribution.

By: _____ Date: _____
City Controller

END OF DOCUMENT



CITY OF TOMBALL

Mayor

Director
Engineering & Planning
501 James Street
Tomball, Texas 77375

[Date]

[Contractor]
ATTN: [Contractor Contact]
[Contractor's Address]
[City, ST Zip]

RE: REQUEST FOR BONDS AND PROOF OF INSURANCE

Project No.

Dear [Contractor Contact]:

You are hereby notified that in accordance with Document 00495 - Post-bid Procedures, you have 14 days to deliver the following documents for the City's approval:

- ☒ Document 00610 - Performance Bond
- ☒ Document 00611 - Statutory Payment Bond
- ☒ Document 00612 - One-year Maintenance Bond
- ☐ Document 00613 - One-year Surface Correction Bond
- ☒ Document 00615 - Affidavit of Insurance (*with Certificate of Insurance attached*)

Deliver the documents to the Project Manager, City of Tomball, [Contracting Department], [PM's Address].

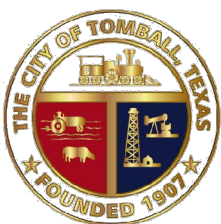
**FAILURE OF BIDDER TO MEET SUCH CONDITIONS ON OR BEFORE SUCH DATE MAY
RESULT IN APPLICATION OF PROVISIONS OF DOCUMENT 00495 - POST-BID
PROCEDURES, PARAGRAPH 5.0.**

Sincerely,

Director

[AD:typ]

c: [Contracting Department's Director]
File No. [File No.]



CITY OF TOMBALL

[Contracting Department]

Mayor

[Contracting Dept's Director]
Director
[Contracting Department]
[Dept's Address]
Tomball, Texas 77375

[Date]

[Contractor]
ATTN: [Contractor Contact]
[Contractor's Address]
[City, ST Zip]

RE: NOTICE OF INTENT TO AWARD
Pine St. EST Rehabilitation
Project No. 2024-05

Dear [Contractor Contact]:

Your Bid dated November 16, 2023 for the above Contract has been considered and you are the apparent Low Bidder. Subject to the approval of City Council and your satisfactory compliance with requirements listed in the attached Document 00495 - Post-Bid Procedures, the City intends to award a construction contract to you for:

[Project description of the Work plus alternates or phases of the Work, if any]

The Contract Price is [Original Contract Price].

Deliver to the City of Tomball, [Contracting Department], [Dept's Address], Tomball, Texas [Zip] two executed copies of the enclosed Agreement and each document listed in Document 00495 within the specified number of days. Also deliver listed documents to the Monitoring Authority specified in Document 00495 and in the number of days specified.

After complying with these conditions, and promptly after City Council has considered and approved this action, the City will return one fully executed Contract.

Should you, on receipt of this notice, fail to comply with the requirements of Document 00495, within the stated time, the City may declare the award in default and require forfeiture of the Security Deposit.

Direct questions regarding post-bid procedures or the contract award process to [City contact person] at [City contact person's phone number].

Sincerely,

[Contracting Division]
[Contracting Department]

c: [Distribution List]

Document 00498 – Notice of Intent to Award

Document 00500

FORM OF BUSINESS

Please mark the box describing your firm's form of business, fill in the requested information, and include the relevant attachments.

[] Corporation

Corporate Name: _____
State of Incorporation: _____
Mailing Address: _____
Type of Corporation: _____

Certificate of Assumed Name, if operating under a name different than that on the corporate charter (the Certificate must have been issued within the past 10 years to be valid)

*Certificate of Good Standing

*Certificate of Existence (if non-Texas corporation, Certificate of Authority)

[] Partnership/Joint Venture

Partnership/Joint Venture Name: _____
Mailing Address: _____
Type of Partnership/Joint Venture: _____

Copy of the Partnership or Joint Venture Agreement, **or**
Affidavit with the name of the partnership or joint venture, the names of the individual partners or participants in the joint venture, and a statement that the partnership or joint venture is in existence

Certificate of Assumed Name, (the Certificate must have been issued within the past 10 years to be valid)

If firm is a limited partnership, the Certificate of Limited Partnership

If any partner or joint venturer is a corporation, the above information relating to corporation must be included as to each sum partner or joint venturer.

[] Sole Proprietorship

Name: _____
Mailing Address: _____

Certificate of Assumed Name, if operating under a name different than that of the sole proprietor (the Certificate must have been issued within the past 10 years to be valid)

* Must be furnished upon request of the Director and must be less than 90 days old.

END OF DOCUMENT

Document 00501

RESOLUTION OF CORPORATION

I hereby certify that it was RESOLVED by a quorum of the directors of

(Name of Corporation / Contractor)

on the _____ day of _____, 20____, that _____,
(Corporate Representative)

be, and hereby is, authorized to act on behalf of the Corporation, as its
representative, in all business transactions conducted in the State of Texas, and

That the above resolution was unanimously ratified by the Board of Directors at
said meeting and that the resolution has not been rescinded or amended and is now
in full force and effect; and

In authentication of the adoption of this resolution, I subscribe my name on this
_____ day of _____, 20_____.

Secretary/Assistant Secretary

END OF DOCUMENT

Document 00520

AGREEMENT

Project: Pine St. EST Rehabilitation

Project Location: _____ (Key Map No. C003)

Project Bid No: 2024-05

E&P Project No: 2023-10004

The City: The City of Tomball, County of Harris, Texas (the "City")

and

Contractor: _____

(Address for Written Notice) _____

Fax Number: _____

City Engineer is: _____

(Address for Written Notice) _____

Fax Number: _____

THE CITY AND CONTRACTOR AGREE AS FOLLOWS:

ARTICLE 1

THE WORK OF THE CONTRACT

1.1 Contractor shall perform the Work in accordance with the Contract.

ARTICLE 2

CONTRACT TIME

2.1 Contractor shall achieve Date of Substantial Completion within 90 days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

2.2 The Parties recognize that time is of the essence for this Agreement and that the City will suffer financial loss if the Work is not completed within the Contract Time. Parties also recognize delays,

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expense, and difficulties involved in proving in a legal or arbitration proceeding actual loss suffered by the City if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Parties agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay the City the amount stipulated in Document 00800 - Supplementary Conditions, for each day beyond Contract Time.

ARTICLE 3
CONTRACT PRICE

3.1 Subject to terms of the Contract, the City will pay Contractor in current funds for Contractor's performance of the Contract, Contract Price of \$_____, which includes Alternates, if any, accepted below.

3.2 The City accepts Alternates as follows:

Alternate No. 1 _____
[Alternate No. 2 _____]
Alternate No. 3 _____

ARTICLE 4
PAYMENTS

4.1 The City will make progress payments to Contractor as provided below and in the General Conditions.

4.2 The Period covered by each progress payment is one calendar month ending on the [____] 10th, [____] 20th, or ☒ last day of the month.

4.3 The Schedule of Values established as provided in paragraph 2.07.A of the General Conditions will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed. The City will make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as provided below in paragraphs 4.3.1 and 4.3.2.

4.3.1 Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or City may withhold, in accordance with paragraph 14.02 of the General Conditions:

- a. For contracts under \$400,000.00, 90% of Work completed (with the balance being retainage).
For contracts over \$400,000.00, 95% of Work completed (with the balance being retainage.)

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b. For contracts under \$400,000.00, 90% (with the balance being retainage) and for contracts over \$400,000.00, 95% (with the balance being retainage) of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to the City as provided in paragraph 14.02 of the General Conditions).

4.3.2 Upon Substantial Completion, the City shall pay an amount sufficient to increase total payments to Contractor to 95% of the Work completed, less such amounts as Engineer shall determine in accordance with paragraph 14.02.B.5 of the General Conditions and less 100% of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the Certificate of Substantial Completion.

4.4 Final payment, constituting entire unpaid balance of Contract Price, will be made by the City to Contractor as provided in the General Conditions.

ARTICLE 5

CONTRACTOR REPRESENTATIONS

5.1 Contractor represents:

5.1.1 Contractor has examined and carefully studied Contract documents and other related data identified in Bid Documents.

5.1.2 Contractor has visited the site and become familiar with and is satisfied as to general, local, and site conditions that may affect cost, progress, and performance of the Work.

5.1.3 Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.

5.1.4 Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in Contract documents and (2) reports and drawings of a hazardous environmental condition, if any, at the site which has been identified in Contract documents.

5.1.5 Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including applying specific means, methods, techniques, sequences, and procedures of construction, if

any, expressly required by the Contract to be employed by Contractor, and safety precautions and programs incident thereto.

5.1.6 Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for performance of the Work at Contract Price, within Contract Time, and in accordance with the Contract.

5.1.7 Contractor is aware of general nature of work to be performed by the City and others at the site that relates to the Work as indicated in Contract documents.

5.1.8 Contractor has correlated information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract.

5.1.9 Contractor has given City Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract, and written resolution thereof by City Engineer is acceptable to Contractor.

5.1.10 Contract documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 6

MISCELLANEOUS PROVISIONS

6.1 The Contract may be terminated by either Party as provided in Conditions of the Contract.

6.2 The Work may be suspended by the City as provided in Conditions of the Contract.

6.3 Contractor further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An "undocumented worker" shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States.

6.4 In accordance with Chapter 2270, Texas Government Code, a government entity may not enter into a contract with a company for goods or services unless the company covenants and agrees that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. Furthermore, the contractor is prohibited from engaging in business with Iran, Sudan or Foreign Terrorist Organizations.

ARTICLE 7

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ENUMERATION OF CONTRACT DOCUMENTS

- 7.1 The following documents are incorporated into this Agreement:
- 7.1.1 Document 00700 - General Conditions
- 7.1.2 Document 00800 - Supplementary Conditions
- 7.1.3 General Requirements.
- 7.1.4 Divisions 02 through 03 of Specifications attached hereto or incorporated by reference in Document 00010 - Table of Contents.
- 7.1.6 Addenda which apply to the Contract, are as follows:
- Addendum No. 1, dated [_____]
- Addendum No. 2, dated [_____]
- Addendum No. 3, dated [_____]

- 7.1.7 Other documents:

<u>Document No.</u>	<u>Title</u>
[X] 00410B	Bid Form - Part B
[X] 00500	Form of Business
[X] 00501	Resolution of Corporation (if a corporation)
[X] 00610	Performance Bond
[X] 00611	Statutory Payment Bond
[X] 00612	One-year Maintenance Bond
[X] 00620	Affidavit of Insurance (with the Certificate of Insurance attached)
[X] 00800	Exhibit A, Wage Rates
[] 00821	Wage Rate for Building Construction
[] 00830	Trench Safety Geotechnical Information

ARTICLE 8

SIGNATURES

- 8.1 This Agreement is executed in two originals and is effective on _____.

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CONTRACTOR:

(If Joint Venture)

By: _____
Name: _____
Title: _____
Date: _____
Tax Identification Number: _____

By: _____
Name: _____
Title: _____
Date: _____
Tax Identification Number: _____

ATTEST/SEAL:

[SEAL]

Attest: _____

Date: _____

CITY OF TOMBALL, TEXAS:

By: _____
City Manager

Date: _____

ATTEST/SEAL:

[SEAL]

Attest: _____
City Secretary

Date: _____

END OF DOCUMENT

Document 00600

LIST OF PROPOSED SUBCONTRACTORS AND SUPPLIERS - PART A
SCHEDULE OF SUBCONTRACTORS AND SUPPLIERS

PROJECT NAME: _____ DATE OF REPORT: _____
PROJECT NO.: _____

SUBCONTRACTOR OR SUPPLIER	ADDRESS	SCOPE OF WORK ²

- NOTES:**
1. RETURN PART B FOR ALL PROJECTS WITHIN THE SPECIFIED NUMBER OF DAYS AFTER RECEIPT OF NOTICE OF INTENT TO AWARD.
 2. DESCRIBE THE WORK TO BE PERFORMED, SUCH AS PAVING, ELECTRICAL, ETC.

CONTRACTOR SHALL EXECUTE CONTRACTS WITH APPROVED SUBCONTRACTORS AND SUPPLIERS WITHIN 30 DAYS AFTER THE DATE OF THE NOTICE TO PROCEED.

SIGNATURE: _____ COMPANY NAME: _____

NAME: _____ TITLE: _____
(Type or Print)

END OF DOCUMENT

00600-1
02-01-08

Document 00601

DRUG POLICY COMPLIANCE AGREEMENT

I, _____, _____
Name Title

of _____
Contractor

have authority to bind Contractor with respect to its Bid, Proposal, or performance of any and all contracts it may enter into with the City of Tomball; and that by making this Agreement, I affirm that Contractor is aware of and by the time the Contract is awarded will be bound by and agree to designate appropriate safety impact positions for company employee positions, and to comply with the following requirements before the City issues a Notice to Proceed:

1. Develop and implement a written Drug Free Workplace Policy and related drug testing procedures for Contractor that meet the criteria and requirements established by the Mayor's Amended Policy on Drug Detection and Deterrence (Mayor's Drug Policy) and the Mayor's Drug Detection and Deterrence Procedures for Contractors (Executive Order No. _____).
2. Obtain a facility to collect urine samples consistent with Health and Human Services (HHS) guidelines and an HHS-certified drug-testing laboratory to perform drug tests.
3. Monitor and keep records of drug tests given and results; and upon request from the City of Tomball, provide confirmation of such testing and results.
4. Submit semi-annual Drug Policy Compliance Declarations.

I affirm on behalf of Contractor that full compliance with the Mayor's Drug Policy and Executive Order No. _____ is a material condition of the Contract with the City of Tomball,

I further acknowledge that falsification, failure to comply with or failure to timely submit declarations or documentation in compliance with the Mayor's Drug Policy or Executive Order No. _____ will be considered a breach of the Contract with the City and may result in non-award or termination of the Contract by the City.

Contractor Title

Signature Date

END OF DOCUMENT

Document 00603

CHECKLIST FOR DRUG POLICY SUBMITTAL

TO: **FROM:** **DIRECTOR**
[CONTRACTING DIVISION]
[CONTRACTING DEPARTMENT]
TOMBALL, TEXAS
DATE: _____

CONTRACTOR: _____

PROJECT NAME: Pine St. EST Rehabilitation

PROJECT No.: 2024-05

PROJECT MANAGER: Rich Oller **TELEPHONE:** 806-993-6226 **FAX:** 806-577-4722

DOCUMENTS CHECKED BELOW ARE BEING SUBMITTED: (Project Manager, check.)

- ☐ **DOC. 00601 - DRUG POLICY COMPLIANCE AGREEMENT (Standard Form)**
- ☐ **DOC. 00602 - CONTRACTOR'S DRUG-FREE WORKPLACE POLICY (Contractor creates this Document)**
- ☐ **DOC. 00605 - LIST OF SAFETY IMPACT POSITIONS (Contractor creates this List) "OR"**
- ☐ **DOC. 00606 - CONTRACTOR'S CERTIFICATION OF NO SAFETY IMPACT POSITIONS**

CCODT REVIEW: THE FOLLOWING CHECKED ITEM(S) ARE MISSING FROM SUBMISSION/POLICY AND NEED TO BE CORRECTED PRIOR TO AWARD:

- ☐ **NAME OF DRUG TESTING LAB**
REASON FOR TESTING:
 - ☐ **RANDOM TESTING - 25% ANNUALLY**
 - ☐ **REASONABLE SUSPICION**
 - ☐ **POST ACCIDENT**
- ☐ **SAFETY IMPACT POSITIONS INCOMPLETE**
- ☐ **EMPLOYEE ACKNOWLEDGMENT FORM**
- ☐ **DRUG TESTING PROCEDURES**
- ☐ **CONSEQUENCE OF POSITIVE TEST:** *PERMANENTLY REMOVED FROM ANY CONTRACT CITY WORKSITE.*
- ☐ **CONSEQUENCE OF REFUSAL TO CONSENT:** *PERMANENTLY REMOVED FROM ANY CONTRACT CITY WORKSITE.*
- ☐ **OTHER:** _____

REJECTED	_____

APPROVED	_____

COMMENTS: _____

DATE RECEIVED: _____ **RESUBMITTAL DATE:** _____

END OF DOCUMENT

HISTORY OF OSHA ACTIONS AND LIST OF ON-THE-JOB INJURIES

Prior to award of the Contract, Low Bidder will be required to file the following with the City:

1. A history of all OSHA actions, advisories, etc., Contractor has received on all jobs worked in any capacity, prime or subcontractor. The history shall be for the two-year period preceding the Bid Date of the Project.
2. A list of all on-the-job injuries, accidents, and fatalities suffered by any present or former employees of Contractor during the same two-year period.
3. If less than the two-year period, give the date Contractor started doing business.

This information must be submitted to the City within the time period stated in Document 00498 - Notice of Intent to Award. An officer of the company must certify in a notarized statement that the information submitted is true and correct.

END OF DOCUMENT

Document 00607

**CERTIFICATION REGARDING DEBARMENT,
SUSPENSION, AND OTHER RESPONSIBILITY MATTERS**

Contractor certifies to the best of its knowledge and belief that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal, State, or local department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction: violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph 2 of this certification; and
4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Section 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to five years, or both.

Company:

Typed Name & Title of Authorized Representative

Signature of Authorized Representative

Date

☐ I am unable to certify the above statements. My explanation is attached.

END OF DOCUMENT

00607-1
02-01-08

Document 00610

PERFORMANCE BOND

THAT WE, _____, as Principal, (the "Contractor"), and the other subscriber hereto, _____, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Tomball (the "City"), a municipal corporation, in the penal sum of \$_____ for the payment of which sum, well and truly to be made to the City, its successors and assigns, Contractor and Surety do bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a Contract in writing with the City for _____

_____ all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

NOW THEREFORE, if the said Contractor shall faithfully and strictly perform the Contract in all its terms, provisions, and stipulations in accordance with its true meaning and effect, and in accordance with the Contract documents referred to therein and shall comply strictly with each and every provision of the Contract and with this Bond, then this obligation shall become null and void and shall have no further force and effect; otherwise the same is to remain in full force and effect. Should the Contractor fail to faithfully and strictly perform the Contract in all its terms, including but not limited to the indemnifications thereunder, the Surety shall be liable for all damages, losses, expenses and liabilities that the City may suffer in consequence thereof, as more fully set forth herein.

It is further understood and agreed that the Surety does hereby relieve the City or its representatives from the exercise of any diligence whatever in securing compliance on the part of the Contractor with the terms of the Contract, and the Surety agrees that it shall be bound to take notice of and shall be held to have knowledge of all acts or omissions of the Contractor in all matters pertaining to the Contract. The Surety understands and agrees that the provision in the Contract that the City will retain certain amounts due the Contractor until the expiration of 30 days from the acceptance of the Work is intended for the City's benefit, and the City will have the right to pay or withhold such retained amounts or any other amount owing under the Contract without changing or affecting the liability of the Surety hereon in any degree.

It is further expressly agreed by Surety that the City or its representatives are at liberty at any time, without notice to the Surety, to make any change in the Contract documents and in the Work to be done thereunder, as provided in the Contract, and in the terms and conditions thereof, or to make any change in, addition to, or deduction from the Work to be done thereunder; and that such changes, if made, shall not in any way vitiate the obligation in this Bond and undertaking or release the Surety therefrom.

It is further expressly agreed and understood that the Contractor and Surety will fully indemnify and save harmless the City from any liability, loss, cost, expense, or damage arising out of Contractor's performance of the Contract.

If the City gives Surety notice of Contractor's default, Surety shall, within 45 days, take one of the following actions:

1. Arrange for Contractor, with consent of the City, to perform and complete the Contract; or
2. Take over and assume completion of the Contract itself, through its agents or through independent contractors, and become entitled to the payment of the balance of the Contract Price.

If the Surety fails to take either of the actions set out above, it shall be deemed to have waived its right to perform and complete the Contract and receive payment of the balance of the Contract Price and the City shall be entitled to enforce any remedies available at law, including but not limited to completing the Contract itself and recovering any cost in excess of the Original Contract Price from the Surety.

This Bond and all obligations created hereunder shall be performable in Harris County, Texas. This Bond is given in compliance with the provisions of Chapter 2253, Texas Government Code, as amended, which is incorporated herein by this reference.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other Party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)
WITNESS: (if not a corporation)

Name of Contractor

By: _____
Name:
Title:

By: _____
Name:
Title:
Date:

ATTEST/SURETY WITNESS:
(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _____
Name:
Title:
Date:

By: _____
Name:
Title: Attorney-in-Fact
Date:

END OF DOCUMENT

Document 00611

STATUTORY PAYMENT BOND

THAT WE, _____, as Principal,
hereinafter called Contractor and the other subscriber hereto, _____
_____,
as Surety, do hereby acknowledge ourselves to be held and firmly bound unto the City
of Tomball, a municipal corporation, in the sum of \$_____ for the payment of
which sum, well and truly to be made to the City of Tomball, and its successors, the said
Contractor and Surety do bind themselves, their heirs, executors, administrators,
successors, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a contract in writing
with the City of Tomball for _____
_____,
all of such work to be done as set out in full in said Contract documents therein referred
to and adopted by the City Council, all of which are made a part of this instrument as
fully and completely as if set out in full herein;

NOW, THEREFORE, if the said Contractor shall pay all claimants supplying labor
and materials to him or a Subcontractor in the prosecution of the Work provided for in
the Contract, then, this obligation shall be void; otherwise the same is to remain in full
force and effect;

PROVIDED HOWEVER, that this Bond is executed pursuant to the provisions of
Chapter 2253, Texas Government Code, as amended, and all liabilities on this Bond shall
be determined in accordance with the provisions of said Article to the same extent as if it
were copied at length herein.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed
this instrument on the respective dates written below their signatures and have attached
current Power of Attorney.

City of Tomball
Pine St. EST Rehabilitation
Project No. 2024-05

STATUTORY PAYMENT BOND

ATTEST, SEAL: (if a corporation)
WITNESS: (if not a corporation)

Name of Contractor

By: _____
Name:
Title:

By: _____
Name:
Title:
Date:

ATTEST/SURETY WITNESS:
(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _____
Name:
Title:
Date:

By: _____
Name:
Title: Attorney-in-Fact
Date:

END OF DOCUMENT

Document 00612

ONE-YEAR MAINTENANCE BOND

THAT WE, _____, as Principal,
hereinafter called Contractor, and the other subscriber hereto, _____,

as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Tomball, a municipal corporation, in the sum of \$ _____, for the payment of which sum well and truly to be made to the City of Tomball and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a Contract in writing with the City of Tomball for _____

_____ all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

NOW THEREFORE, if the said Contractor shall comply with the provisions of Paragraph 13.07 of the General Conditions, and correct work not in accordance with the Contract documents discovered within the established one-year period, then this obligation shall become null and void, and shall be of no further force and effect; otherwise, the same is to remain in full force and effect.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)

WITNESS: (if not a corporation)

Name of Contractor

By: _____
Name:
Title:

By: _____
Name:
Title:
Date:

ATTEST/SURETY WITNESS:

(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _____
Name:
Title:
Date:

By: _____
Name:
Title: Attorney-in-Fact
Date:

END OF DOCUMENT

Document 00620

AFFIDAVIT OF INSURANCE

BEFORE ME, the undersigned authority, on this day personally appeared

_____, who
Affiant

being by me duly sworn on his oath stated that he is _____ of
Title

Contractor's Company Name

the Contractor named and referred to within the Contract documents; that he is fully competent and authorized to give this affidavit and that the attached original insurance certificate truly and accurately reflects the insurance coverage that is now available and will be available during the term of the Contract.

Affiant's Signature

SWORN AND SUBSCRIBED before me on _____
Date

Notary Public in and for the State of TEXAS

Print or type Notary Public name

My Commission Expires: _____
Expiration Date

END OF DOCUMENT

Document 00641

CONTRACTOR'S CERTIFICATION OF FINAL COMPLETION

CERTIFICATE OF FINAL COMPLETION OF: Pine St. EST Rehabilitation

Project No.: 2024-05

Contract Dated: _____

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____ who, being by me duly sworn, on his oath says that he or she represents _____, the Contractor who has performed a contract with the City of Tomball for the construction of the Work described above, and is duly authorized to make this affidavit; that he or she has personally examined the Work described above as required by the Contract documents; that said Work and all items thereof have been completed and all known defects made good; that all surplus material, refuse, dirt and rubbish have been cleaned up and removed or disposed of as directed by the City Engineer; that all parts of Work are in a neat, tidy, finished condition and ready in all respects for acceptance by the City; that all gravel or shell roadway surfaces removed during the course of the Work have been replaced in accordance with the Specifications, that rates of pay for all labor employed on said Work have not been below the minimum set out in "Labor Classification and Minimum Wage Scale" in the Contract documents and that within the knowledge of affiant all just bills for labor and material and for the rental or use of any equipment or apparatus, used in, on, or in connection with the Work have been paid in full by the Contractor.

Affiant's Signature

SWORN AND SUBSCRIBED before me on _____

Date

Notary Public in and for the State of TEXAS

Print or type name

My Commission Expires: _____

Expiration Date

THIS IS TO CERTIFY that I have thoroughly inspected the Work performed by the above named Contractor on the above described Contract and find all things in accordance with the Contract documents governing this Work.

Inspector

[Project Manager or Construction Manager]

Approved:

[Title of Approval Authority], [Contracting Department]

END OF DOCUMENT

Document 00642

CERTIFICATION OF PAYMENT
TO SUBCONTRACTORS AND SUPPLIERS

The undersigned, _____, states that he is the _____,
of _____
Affiant Title

Contractor

and that he is duly authorized to execute this Certification of Payment to
Subcontractors and Suppliers; that Contractor has made payments to
Subcontractors and Suppliers for all labor, materials, equipment, and services
furnished to date for Work on Project No. _____

in the amounts for which Contractor has been paid; that the labor, materials,
equipment, and services covered by this Certificate of Payment have been
furnished in accordance with and all in compliance with the Contract

Documents; that no sums have been withheld by Contractor for Subcontractors
and Suppliers as a result of any allegations of deficiencies in the Work; and that
such payments were made in accordance with the Contract Documents and
with the laws of the State of Texas.

Affiant's Signature

SWORN AND SUBSCRIBED before me on _____.
Date

Notary Public in and for the State of TEXAS

Print or type name

00642-1
02-01-08

My Commission Expires: _____
Expiration Date

END OF DOCUMENT

Document 00643

ESTIMATE AND CERTIFICATE FOR PAYMENT, UNIT PRICE WORK

Estimate No. _____
Cut off Date: _____
Estimate Date: _____

Project Name: Pine St. EST Rehabilitation
Contractor: _____
Address: _____

Contract No.: _____
Project No.: 2024-05
Ordinance No.: _____

Contract Date: _____
Start Date: _____
Current Contract Completion Date: _____
Substantial Completion Date: _____
Percentage: By Time _____% In Place _____%

CONTRACT TIME IN CALENDER DAYS

Original Contract Time: _____ Days
Approved Extensions: _____ Days
Total Contract Time: _____ Days
Days Used to Date: _____ Days
Days Remaining to Date: _____ Days

Date Insurance Exp. _____ Drug Policy Due _____ Current MWBE % _____ Schedule Update Received _____

CONTRACT AMOUNT TO DATE:

1. Original Contract Price:		\$ _____
2. Approved Change Orders: <u>No./Description</u>	<u>Amount</u>	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
Total Change Orders to Date: _____ +/-	\$ _____	\$ _____
TOTAL CONTRACT AMOUNT:		\$ _____

A. EARNINGS TO DATE:

1. Work Completed to Date: _____ % Complete	\$ _____
2. Materials Stored on Site: _____	\$ _____
3. Materials Stored in Place: _____	\$ _____
4. Balance - Materials Accepted, Not in Work:	\$ _____

TOTAL EARNINGS TO DATE:

\$ _____

B. DEDUCTIONS:

1. Retainage: _____ % of \$ _____	\$ _____
2. Add: Retainage Deduction: _____	\$ _____
3. Total Retainage: _____	\$ _____
4. Liquidated Damages: _____ Days @ \$ _____	\$ _____
5. Quality Control Retest Cost: _____	\$ _____
6. Sunday/Holiday Overtime Cost: _____	\$ _____

TOTAL DEDUCTIONS:

\$ _____

C. AMOUNT DUE THIS PERIOD:

1. Total Earnings to Date:	\$ _____
2. Total Deductions:	\$ _____
3. Total Payments Due:	\$ _____
4. Less Previous Payments:	\$ _____
5. Restoration Adjustment:	\$ _____

TOTAL AMOUNT DUE THIS DATE:

\$ _____

Prepared By: _____ Date: _____ Checked By: _____ Date: _____

Submitted By: _____ Date: _____ Approved: _____ Date: _____

Approved: _____ Date: _____
Director,

END OF DOCUMENT

00643-1
02-01-08

Document 00644

DRUG POLICY COMPLIANCE DECLARATION

BEFORE ME, the undersigned authority, on this day personally appeared

_____ who being by me duly sworn on his oath stated

Affiant

that he is _____ of _____

Title

Contractor's Company Name

the Contractor named and referred to within the Contract documents; that he is fully competent and authorized to give this affidavit and that he has personal knowledge and full authority to make the following declarations:

This reporting period covers the preceding six months from _____ to _____, 20____.

_____ A written Drug Free Workplace Policy has been implemented and employees notified.

Initials The policy meets the criteria established by the Mayor's Amended Policy on Drug Detection and Deterrence (Mayor's Policy).

_____ Written drug testing procedures have been implemented in conformity with the Mayor's

Initials Drug Detection and Deterrence Procedures for Contractors, Executive Order No. . Employees have been notified of such procedures.

_____ Collection/testing has been conducted in compliance with federal Health and Human

Initials Services (HHS) guidelines.

_____ Appropriate safety impact positions have been designated for employee positions performing on the City of Tomball contract. The number of employees in safety impact positions during this reporting period is _____.

_____ From _____ to _____ the following testing has occurred:

Initials

Start date

End date

	<u>Random</u>	<u>Reasonable Suspicion</u>	<u>Post Accident</u>	<u>Total</u>	
Number Employees Tested	_____	_____	_____	_____	
Number Employees Positive	_____	_____	_____	_____	
Percent Employees Positive	_____	_____	_____	_____	_____

_____ Any employee who tested positive was immediately removed from the City
worksite
Initials consistent with the Mayor's Policy and Executive Order No. _____.

_____ I affirm that falsification or failure to submit this declaration timely in accordance
Initials with established guidelines will be considered a breach of contract.

I declare under penalty of perjury that the affirmations made herein and all
information contained in this declaration are within my personal knowledge and are true
and correct.

Affiant's Signature

SWORN AND SUBSCRIBED before me on

Date

Notary Public in and for the State of TEXAS

Print or type name

My Commission Expires: _____
Expiration Date

END OF DOCUMENT

Document 00645

CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT: Pine St. EST Rehabilitation Project

CONTRACT No.: _____

PROJECT No.: 2024-05.

TO: _____

Contractor and _____

Address for Written Notice _____

1.01 DATE OF SUBSTANTIAL COMPLETION

The Work performed under the Contract was inspected on _____ and found to be substantially complete. The Date of Substantial Completion of the Work is hereby established as _____.

1.02 PUNCH LIST

A list of items to be completed or corrected, prepared by Contractor and verified by Project Manager, (the "Punch List") is attached hereto. Failure to include any items on such list does not alter the responsibility of Contractor to complete the Work in accordance with the Contract. Contractor shall complete or correct the Work on the Punch List attached hereto within 30 days from the above Date of Substantial Completion.

1.03 OCCUPANCY BY THE CITY

_____ will assume full possession at _____ on _____.

1.04 CONSENT OF SURETY

Contractor shall obtain consent of Surety for approval of reduction in retainage.

1.05 WARRANTY PERIOD

Warranties required by the Contract will commence on the above Date of Substantial Completion.

1.06 TRANSITION OF RESPONSIBILITIES

The City and Contractor agree that security, maintenance, heating, ventilating, air conditioning, utilities, damage to the Work, and insurance, during the period prior to Final Completion, transfer to the City unless otherwise stated in the attached Transition of Responsibilities document.

1.07 CONTRACTOR'S ACKNOWLEDGEMENT

Signature of Contractor, or its agent, acknowledges attached Punch List, referenced in Paragraph 1.02, and Transition of Responsibilities, referenced in Paragraph 1.06.

Contractor

Signature

Date

Inspector

Signature

Date

Project Manager or Construction Manager	Signature	Date
<hr/>	<hr/>	<hr/>
[Intermediate Authority]	Signature	Date
<hr/>	<hr/>	<hr/>
City Engineer	Signature	Date
<hr/>	<hr/>	<hr/>

cc: [Design Consultant], [Owning Dept. Director], [Other Copy Addees], [File]

END OF DOCUMENT

Document 00650

CERTIFICATE OF FINAL COMPLETION

PROJECT: Pine St. EST Rehabilitation Project

CONTRACT No.: _____

PROJECT No.: 2024-05

TO: _____

Contractor and _____

Address for Written Notice _____

1.01 DATE OF FINAL COMPLETION

The Work performed under the Contract was inspected on _____, and found to be complete. The date of final completion of the Work is hereby established as _____.

1.02 PUNCH LIST

Contractor certified in Document 00641 - Contractor's Certification of Final Completion that all Punch List items were completed or corrected. Failure to identify incomplete work items or requirements of the Contract prior to issuance of this Certificate does not alter the responsibility of Contractor to comply with all provisions of the Contract.

1.03 ACCEPTANCE OF THE WORK

Based on inspection and to the best of our knowledge, information and belief, the Work has been completed in accordance with the terms and conditions of the Contract and we recommend acceptance of the Work by City Council or their delegated authority.

Inspector Signature Date

Project Manager or Construction Manager Signature Date

[Intermediate Authority] Signature Date

City Engineer Signature Date

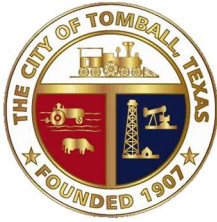
1.04 TRANSITION OF RESPONSIBILITIES

Except as provided in the Contract documents attached hereto, _____ accepts the Work as complete and accepts responsibility for security, maintenance, heating, ventilating, air conditioning, utilities, damage to the Work, and insurance, that has not been previously transferred from Contractor.

[Owning Department or User Group] Signature Date

END OF DOCUMENT

cc: [Design Consultant], [Owning Dept. Director], [Other Copy Addressees], [File]



CITY OF TOMBALL

Engineering & Planning
Department

Mayor

Director
Engineering & Planning
Department

Tomball, Texas

T. 281
F. 281

[Date]

[Contractor]
[Contractor's Address]
[City, ST Zip]

ATTN: [Contractor Contact]

RE: ACCEPTANCE OF
Pine St. EST REHABILITATION PROJECT

Dear _____,

Please be advised that the wastewater lines in **Elevated Storage Tank Rehabilitation Project** have been accepted by the City of Tomball as shown below:

1. [Start Point] [Direction] to [End Point], [X]' of [Y]" Pipe, \$[Dollar Value]
2. [Start Point] [Direction] to [End Point], [X]' of [Y]" Pipe, \$[Dollar Value]
3. [Start Point] [Direction] to [End Point], [X]' of [Y]" Pipe, \$[Dollar Value]

Date of Acceptance: [Date of Final Completion]

One year warranty period begins on **[Date of Substantial Completion]** and ends on **[Calculated End Date]** for the infrastructure listed above. [One year surface correction warranty period begins on that end date and extends the warranty for surface restoration of waterline work one additional year.]

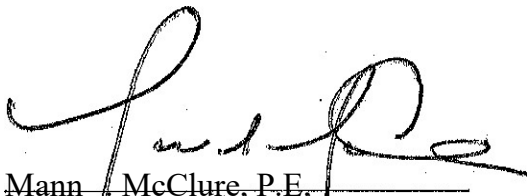
Sincerely,

City Engineer

JJS:xxx

c: [Additional Distribution]

The City of Tomball purchased rights (03/06/08) to utilize the Standard General Conditions of the Construction Contract prepared by Engineers Joint Contract Documents Committee (EJCDC) C-700, Copyright 2007 National Society of Professional Engineers, A copy of the EJCDC instruction and license agreement is attached for reference. A scanned copy of the EJCDC 00700 Standard General Conditions (2018) is also attached. Note that the City of Tomball has created required supplemental conditions included as Section 00800.



Mann McClure, P.E.,
Director of Engineering & Planning

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
- 11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 - 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 - 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 - 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 - 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 - 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 - 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 - 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 - 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 - 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 - 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 Hazardous Environmental Conditions at Site

A. Reports and Drawings: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. ~~*Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions. See SC 6.04 A~~
- B. *Property Insurance for Facilities of Owner Where Work Will Occur:* Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities:* Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;
 - 6. The issuance of a notice of acceptability by Engineer;
 - 7. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 Indemnification

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 Delegation of Professional Design Services

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

~~c. Construction Equipment Rental~~

- ~~1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.~~
 - ~~2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.~~
 - ~~3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.~~
- ~~d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.~~
- ~~e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.~~
- ~~f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.~~

~~g. The cost of utilities, fuel, and sanitary facilities at the Site.~~

~~h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.~~

~~i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.~~

C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
2. The cost of purchasing, renting, or furnishing small tools and hand tools.
3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
6. Expenses incurred in preparing and advancing Claims.
7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 Defective Work

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS
SECTION 00800

SUPPLEMENTARY CONDITIONS
(TO ACCOMPANY STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT,
EJCDC NO. C-700 [2007 EDITION] FOR CITY OF TOMBALL CONSTRUCTION PROJECTS)

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SECTION 00800

SUPPLEMENTARY CONDITIONS

PART I AMENDMENTS TO GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (General Conditions) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1 DEFINITIONS

SC-1.01

The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract (General Conditions) have the meanings assigned to them in the General Conditions.

Amend Paragraph 1.01.A.19, Engineer, of the General Conditions by adding the following to the end:

"For this project the following named persons, firms, or corporations have been utilized by ENGINEER to furnish services as a consultant with respect to the project (if blank, none have been utilized by the ENGINEER):

1. _____
2. _____
3. _____"

ARTICLE 2 PRELIMINARY MATTERS

SC-2.02

Amend the first sentence of Paragraph 2.02.A of the General Conditions to read as follows:

"Five sets of the Contract Documents shall be furnished to the CONTRACTOR, at no charge, for construction purposes."

And so amended, Paragraph 2.02 remains in effect.

SC-2.03

Amend the third sentence of Paragraph 2.03.A of the General Conditions to read as follows:

"In no event will the Contract Time commence to run later than 90 days after the day of Bid opening or 30 days after the Effective Date of the Agreement, whichever is earlier, without the written agreement of the Contractor and Owner."

ARTICLE 4 AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS;
HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

SC-4.02

In the preparation of Drawings and Specifications, ENGINEER or ENGINEER's Consultants have relied upon:

4.02.A.1 The following reports of exploration and tests of subsurface conditions at the site of the Work (if blank, no reports or tests were used by ENGINEER or ENGINEER's Consultants):

1. _____
2. _____

The technical data contained in such reports upon which the CONTRACTOR may rely is _____.

4.02.A.2 The following drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities) which are at or contiguous to the site of Work:

1. _____
2. _____
3. _____

All of the information in such drawings constitutes technical data on which CONTRACTOR may rely with the following exceptions: _____

Copies of these reports and drawings that are not included with the Bidding Documents may be examined at the office of the ENGINEER during regular business hours. These reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which CONTRACTOR is entitled to rely as provided in GC-4.02.B and as identified and established above are incorporated therein by reference. CONTRACTOR is not entitled to rely upon other information and data utilized by ENGINEER.

SC-4.06

Delete Paragraph 4.06.G of the General Conditions in its entirety.

ARTICLE 5 BONDS AND INSURANCE

SC-5.01

Delete Paragraphs 5.01.A and 5.01.B of the General Conditions in their entirety and insert the following in their place:

"A. The Successful Bidder must furnish with the executed Contract Documents a Performance Bond and a Payment Bond on the forms furnished with the Contract Documents, each in the amount of 100% of the total Contract Price in accordance with Texas Local Government Code § 252.044 and Texas Government Code Ch. 2253. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. The surety company must be authorized to do business in Texas, which authorization must be recorded in the files of the State Board of Insurance. The surety company must be authorized to issue Payment and Performance Bonds in the amount required for the particular Contract, which authorization must be recorded in the files of the State Board of Insurance. The surety company must have a rating of at least "B" in the current Best's Key Rating Guide, or if the surety company does not have such a rating due to the length of time it has existed, the surety company must be eligible to participate in the surety bond guarantee program of the Small Business Administration and must be an approved surety listed in the current U.S. Department of Treasury Circular 570, and must meet all of the related rules and regulations of the Treasury Department. The person executing the Payment and Performance Bonds must be a licensed Texas local recording agent, and such licensing must be recorded in the files of the State Board of Insurance. The person executing the Payment and Performance Bonds must be authorized by the surety company to execute Payment and Performance Bonds on behalf of the company in the amount required for the Contract, and such authorization must be recorded in the files of the State Board of Insurance. The Contract shall not be in effect until such Bonds have been provided by the CONTRACTOR and accepted by the OWNER."

SC-5.04

The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

Worker's Compensation

- | | |
|---|-------------------------|
| (1) State: <u>Statutory</u> | |
| (2) Applicable Federal (e.g., Longshoreman's): <u>Statutory</u> | |
| (3) Employer's Liability: | |
| \$500,000 | Each Accident |
| \$500,000 | Disease - Policy Limit |
| \$500,000 | Disease - Each Employee |

Commercial General Liability

- | | |
|---|-------------|
| (1) General Aggregate Limit (other than products-completed operations) coverage must include Explosion, Collapse, and Underground Coverages | \$1,000,000 |
| (2) Products-Completed Operations Aggregate Limit | \$1,000,000 |
| (3) Each Occurrence Limit | \$ 500,000 |

Commercial Automobile Liability

\$500,000	Any One Loss or Accident
-----------	--------------------------

Umbrella Liability

\$1,000,000	Excess Limit
-------------	--------------

Shortages in coverage in any of the areas listed above may be covered by additional umbrella coverage.

The Contractor shall not commence work on any Contract in the City until the Contractor has obtained all the insurance required under this paragraph and such insurance has been approved by the City.

Workers' Compensation Insurance Coverage - Continued

A. Definitions:

Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (DWC-81, DWC-82, DWC-83, or DWC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

Duration of the project - includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

Persons providing services on the project ("subcontractor" in 406.096) - includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnished persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

- B. The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.
- C. The contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.
- D. If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.
- E. The contractor shall obtain from each person providing services on the project, and provide to the governmental entity:
 - (1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

- (2) no later than seven days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
- F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.
- G. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.
- H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Division of Workers' Compensation, Texas Department of Insurance, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.
- I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:
 - (1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
 - (2) provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
 - (3) provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (4) obtain from each other person with whom it contracts, and provide to the contractor:
 - (a) a certificate of coverage, prior to the other person beginning work on the project; and
 - (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
 - (6) notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision

of coverage of any person providing services on the project; and

- (7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.

- J. By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.
- K. The contractor's failure to comply with any of these provisions is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten days after receipt of notice of breach from the governmental entity.

SC-5.06

Delete Paragraphs 5.06, 5.07, and 5.08 of the General Conditions in their entirety.

SC-5.09

Delete Paragraph 5.09 of the General Conditions in its entirety and insert the following in its place:

- "A. If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR in accordance with Article 5 on the basis of its not complying with the Contract Documents, OWNER shall notify CONTRACTOR in writing. OWNER and CONTRACTOR shall each provide to the other such information in respect of insurance provided by each as the other may reasonably request."

ARTICLE 6 CONTRACTOR'S RESPONSIBILITIES

SC-6.02

Add Paragraph 6.02.C to the General Conditions to read as follows:

- "C. CONTRACTOR further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An "undocumented worker" shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States."

SC-6.06

Delete Paragraph 6.06.G of the General Conditions in its entirety and insert the following in its place:

"G. All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate Agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER."

Add a new paragraph immediately after Paragraph 6.06.G of the General Conditions which is to read as follows:

"6.06.H OWNER or ENGINEER may furnish to any such Subcontractor, Supplier, or other person or organization, to the extent practicable, information about amounts paid to CONTRACTOR in accordance with CONTRACTOR's Applications for Payment on account of the particular Subcontractor's, Supplier's, other person's, or other organization's Work."

SC-6.10

Delete Paragraph 6.10 of the General Conditions in its entirety and insert the following in its place:

"A. The CONTRACTOR's attention is directed to Paragraph No. 3 of Ruling No. 9, Repairmen and Contractors (as amended) issued by the Comptroller of Public Accounts. Reference Article 20.01 (T), Limited Sales, Excise, and Use Tax and to subsequent applicable legislation. The OWNER requires that no sales tax be paid on any materials incorporated into the completed Work on this Project. All Bidders and their respective Subcontractors must comply with Paragraph No. 3 of Ruling No. 9 by obtaining the necessary permit or permits from the State Comptroller allowing the purchase of materials for incorporation into this Project without having to pay the Limited Sales, Excise, and Use Tax at the time of purchase. Total materials cost should not include materials which are used up or consumed in performing the Work, but which do not become a part of this proposed Work."

SC-6.16

Amend the third sentence of Paragraph 6.16 of the General Conditions to read as follows:

"If ENGINEER and OWNER determine that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued."

And so amended, Paragraph 6.16 remains in effect.

SC-6.22

Amend Article 6 of the General Conditions by inserting the following Paragraph 6.22:

"6.22 LOSSES FROM NATURAL CAUSES:

- A. All loss or damage to the CONTRACTOR arising out of the nature of the Work to be done, or from the action of the elements, or from any unforeseen circumstance in the prosecution of the same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the Work, shall be sustained and borne by the CONTRACTOR at his own cost and expense."

ARTICLE 7 OTHER WORK AT THE SITE

SC-7.02

Delete Paragraphs 7.02.A and 7.02.B of the General Conditions in their entirety and insert the following in its place:

- "A. If OWNER contracts with others for the performance of other Work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors shall be the OWNER's Representative. The extent of the authority and responsibility of the OWNER's Representative will be as specified in the Contract Documents."
- "B. Should CONTRACTOR cause damage to work or property of any separate contractor at the site, or should any claim arising out of CONTRACTOR'S performance of the Work at the site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, ENGINEER'S Consultants, the Construction Coordinator, or any other person, CONTRACTOR shall promptly attempt to settle with such other contractor by agreement, or otherwise resolve the dispute by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER, ENGINEER, ENGINEER's Consultants, and the Construction Coordinator harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals, and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER, ENGINEER, ENGINEER's Consultants or the Construction Coordinator to the extent based on a claim arising out of CONTRACTOR's performance of the Work. Should a separate contractor cause damage to the Work or property of CONTRACTOR or should the performance of Work by any separate contractor at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER, ENGINEER, ENGINEER's Consultants, or the Construction Coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER, ENGINEER, ENGINEER's Consultants, or the Construction Coordinator on account of any such damage or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be CONTRACTOR's exclusive remedy with respect to OWNER, ENGINEER, ENGINEER's Consultants, and Construction Coordinator for any delay, disruption, interference, or hindrance caused by any separate contractor. This paragraph does not prevent recovery from OWNER, ENGINEER, ENGINEER's Consultant, or Construction Coordinator for activities that are their respective responsibilities."

ARTICLE 8 OWNER'S RESPONSIBILITIES

SC-8.02

Amend Paragraph 8.02 of the General Conditions to read as follows:

"In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer whose status under the Contract Documents shall be that of the former ENGINEER."

And so amended, Paragraph 8.02 remains in effect.

SC-8.06

Delete Paragraph 8.06 of the General Conditions in its entirety.

ARTICLE 9 ENGINEER'S STATUS DURING CONSTRUCTION

SC-9.01

Amend the second sentence of Paragraph 9.01 of the General Conditions to read as follows:

"The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and will not be changed except by written direction of OWNER."

And so amended, Paragraph 9.01 remains in effect.

SC-9.04

Delete the third sentence of Paragraph 9.04, Authorized Variations in Work, of the General Conditions in its entirety, and so amended, Paragraph 9.04 remains in effect.

ARTICLE 10 CHANGES IN THE WORK; CLAIMS

SC-10.03

Amend the first sentence of Paragraph 10.03.A of the General Conditions to read as follows:

"OWNER and CONTRACTOR shall, when appropriate, execute Change Orders recommended by ENGINEER (or Written Amendments) covering:"

And so amended, Paragraph 10.03 remains in effect.

SC-10.05

Amend the first sentence of Paragraph 10.05.B., Claims – Notice, of the General Conditions shall be amended by changing "30 days" to read "fourteen (14) calendar days"

Amend Paragraph 10.05.E by deleting it in its entirety.

And so amended, Paragraph 10.05 remains in effect.

ARTICLE 13 TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

SC-13.04

Amend the first sentence of Paragraph 13.04.B of the General Conditions to read as follows:

"If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request and with OWNER's written approval, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment."

And so amended, Paragraph 13.04 remains in effect.

SC-13.07

Delete Paragraph 13.07.D of the General Conditions in its entirety and insert the following in its place:

"D. Notwithstanding any other provision of this section or the Contract Documents to the contrary, this provision shall not serve to limit any causes of action which the OWNER may have against the CONTRACTOR for Defective Work or for otherwise failing to fulfill CONTRACTOR's obligations under the Contract Documents; nor shall this provision serve to limit the time in which such causes of action shall be asserted."

SC-13.09

Amend the second sentence of Paragraph 13.09.B of the General Conditions to read as follows:

"In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere."

And so amended, Paragraph 13.09 remains in effect.

ARTICLE 14 PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02

Amend Paragraph 14.02.D.1.b of the General Conditions to read as follows:

"Claims or Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;"

Add Paragraph 14.02.D.1.e to the General Conditions to read as follows:

"OWNER concludes that one or more of the events enumerated in Paragraph 14.02.B.2.a through 14.02.B.2.c have not occurred."

And so amended, Paragraph 14.02 remains in effect.

SC-14.03

Amend Paragraph 14.03.A of the General Conditions to read as follows:

"CONTRACTOR warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens or Claims."

And so amended, Paragraph 14.03 remains in effect.

SC-14.04

Insert prior to the first sentence of Paragraph 14.04.A of the General Conditions the following:

"Substantial completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the OWNER can occupy or utilize the Work for its intended use."

And so amended, Paragraph 14.04 remains in effect.

SC-14.07

Amend Paragraph 14.07.A.2(d) of the General Conditions to read as follows:

"complete and legally effective releases or waivers (satisfactory to OWNER) of all Claim or Lien rights arising out of or Claims or Liens filed in connection with the Work."

Amend Paragraph 14.07.A.3 of the General Conditions to read as follows:

"In lieu of the releases or waivers of Liens and Claims specified in Paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien or Claim could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien or Claim."

Amend Paragraph 14.07.C.1 of the General Conditions to read as follows:

"If OWNER concurs with ENGINEER's recommendation, thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR."

And so amended, Paragraph 14.07 remains in effect.

SC-14.09

Amend Paragraph 14.09.A.1 of the General Conditions to read as follows:

"a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens or Claims of laborers and materialmen, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and"

And so amended, Paragraph 14.09 remains in effect.

ARTICLE 15 SUSPENSION OF WORK AND TERMINATION

SC-15.02

Amend Paragraph 15.02.A.1 of the General Conditions to read as follows:

"CONTRACTOR's failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);"

Amend the first sentence of Paragraph 15.02.B of the General Conditions to read as follows:

"If one or more of the events identified in Paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site and take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient."

And so amended, Paragraph 15.02 remains in effect.

ARTICLE 16 DISPUTE RESOLUTION

SC-16.01

Amend Paragraph 16.01 A. of the General Conditions by deleting the second and third sentences in their entirety.

Amend Paragraph 16.01 B. of the General Conditions by deleting it in its entirety.

ARTICLE 17 MISCELLANEOUS

Amend "ARTICLE 17 MISCELLANEOUS PROVISIONS of the General Conditions to add the following provisions:

- 17.07 WAGE RATES. The prevailing wage rates for this project are included as Exhibit A to the Supplementary Conditions and are hereby made a part of the Contract Documents by reference. Wages not less than these rates must be paid on this project, including fringe benefits. The CONTRACTOR shall post the Prevailing Wage Rate Determination in a prominent and easily accessible location at the project site and shall abide by all associated laws and regulations pertaining thereto.
- 17.08 LIQUIDATED DAMAGES. The Owner will suffer financial loss in an amount that is difficult to quantify if the Project is not Substantially Completed on the date set forth in the Contract Documents. The Owner may assess liquidated damages against the Contractor (and its surety) in an amount equal to .5% of the Contract per week for each project, as fixed, agreed and liquidated damages and not a penalty, for each calendar day of delay until the Work is Substantially Completed. In the event liquidated damages are caused by the Contractor and another entity, the Owner may reasonably apportion damages. The right to assess liquidated damages is in addition to, and not in limitation of, any right or remedy available to the Owner."
- 17.09 VENUE. This Agreement is governed by the laws of the State of Texas. The parties agree that venue for any litigation arising out of this Agreement shall lie exclusively in the State and Federal Courts in Harris County, Texas.
- 17.10 NO THIRD PARTY BENEFICIARIES The signing parties to this agreement do not intend to confer any rights upon any persons not a party to this Contract; accordingly this contract shall not be construed to create any third party beneficiaries."

(SPACE INTENTIONAL)

PART II OTHER PROVISIONS

The following additional items are attached to this section.

1. Exhibit A, Wage Rates
2. Exhibit B, Worker's Compensation Insurance Coverage
3. Exhibit C, A Listing of the Duties, Responsibilities, and Limitations of Authority of the Resident Project Representative
4. Exhibit D, Addenda (if any)
5. Exhibit E, Change Order (form)
6. Exhibit F, Application for Payment (form)
7. Exhibit G, Storm Water Pollution Prevention Plan
8. Exhibit H, Conflict of Interest Questionnaire

END OF SECTION 00800

EXHIBIT A

Wage Rates

Document 00820

WAGE SCALE AND PAYROLL REQUIREMENTS FOR ENGINEERING
CONSTRUCTION

Wage Scale Requirements

- 1.1 In accordance with Prevailing Wage Law on Public Works (Chapter 2258 of the Texas Government Code), the public body awarding Contract does hereby specify the following to be the general prevailing rates in the locality in which the Work is being performed.
- 1.2 This prevailing wage rate does not prohibit the payment of more than the rates stated.
- 1.3 In bidding, Contractor warrants and represents that it has carefully examined the classifications for each craft or type of worker needed to execute the Contract and determined that such classifications in Exhibit "A" include all necessary categories to perform the work under the Contract.
- 1.4 The wage scale for engineering construction is to be applied to all site work greater than five feet from an exterior wall of new building under construction or from an exterior wall of an existing building.
- 1.5 If Contractor believes that an additional classification for a particular craft or type of worker is necessary to perform work under the Contract, it must submit with its bid a request to the Contract Compliance Division of the Office Of Business Opportunity ("OBO") to use an additional labor classification not listed in Exhibit "A" and specify the proposed new classification. OBO shall determine whether a proposed classification is already covered in Exhibit "A", and, if it is, specify which classification is appropriate. OBO's decision is conclusive. If OBO decides that a new classification is necessary, it will determine the appropriate prevailing wage rate for any resurveyed, amended, new, or additional craft or type of worker not covered by Exhibit "A". Such determination must be decided in accordance with procedures established by OBO, and in compliance with Chapter 2258 of the Texas Government Code.
- 1.6 Contractor must not use any labor classification not covered by Exhibit "A" until such classification is established and approved for use by OBO.
- 1.7 A Contractor or Subcontractor who violates Chapter 2258 of the Texas Government Code must pay to the City, \$60 per each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates set forth in Exhibit "A".

- 1.8 The City may withhold money required to be withheld under Chapter 2258 of the Texas Government Code from the final payment to Contractor or earlier payments if City Council makes a determination that there is good cause to believe that Contractor has not complied with these provisions and Chapter 2258 of the Government Code, in which case the City may withhold the money at any time subsequent to the finding by City Council.
- 1.9 Contractor and Subcontractors must keep records specifying:
- (1) the name and classification of each worker employed under the Contract; and
 - (2) the actual per diem wages paid to each worker, and the applicable hourly rate.
- The records must be open at all reasonable hours for inspection by the officers and agents of the City.
- 1.10 The hourly cost of salary for non-exempt workers for labor in excess of 40 hours per worker per week, shall be calculated at 1.5 times the worker's base pay for the applicable craft and level.

Certified Payroll Requirements

- 2.1 Employees are paid weekly and payrolls are submitted weekly using the City of Tomball's electronic payroll submission module, unless the prime Contractor has been instructed to do otherwise by the Office of Business Opportunity. When no work is done after a Contractor has started work, the Contractor is required to submit a weekly compliance statement indicating no work was performed. The payrolls must reflect the exact work and classification of the workers, the exact amount that they were paid. Workers must be paid the contracted amount (prevailing wage rates). The Contractor will be penalized \$60.00 a day for each employee who is underpaid per Texas Government Code §2258.023 for all contracts.
- 2.2 Payrolls must be submitted electronically & indicate whether the worker worked inside or outside the building area when both wage rates are applicable to the contract.
- 2.3 Payrolls must be submitted each week until all work by the contractor is complete and the electronic payroll submission is marked as final in the system.
- 2.4 Payrolls must cover a seven day period from the start of the work week and must be consecutive seven day periods until all work is complete.
- 2.5 Payrolls must have employees' names, addresses, last four digits of the social security numbers, and job classifications. The job classifications must be the same as the classifications on the prevailing wage rate schedule.

- 2.6 A payroll deduction authorization form must be submitted for each employee for any deductions other than Federal and FICA taxes.
- 2.7 Employees must be paid overtime (time and a half) for all hours worked over 40 hours a week on both federally and City-funded contracts.
- 2.8 The Contractor has the responsibility to comply with all Internal Revenue Service rules and regulations. Contractors who submit certified payrolls with **Owner Operators (truckers)** must submit a signed tax liability statement from Owner Operator acknowledging their responsibility for Federal Income Tax and FICA reporting obligations.
- 2.9 If the Contractor wants to use the apprentice wage rates for an employee, the apprenticeship certificates must be submitted to the Office of Business Opportunity in advance of the employee working on the project and appearing on the payroll. You must comply with the listed number of journeymen to apprentices as listed.
- 2.10 A poster of the Prevailing Wage Rate Schedule should be clearly displayed on each job site from the time the project starts until the work is completed, or in case of annual service agreements, in the Contractor's office.
- 2.11 The Contractor shall submit the "Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "**B**") to the Monitoring Authority listed in Document 00495 prior to final execution of the contract.
- 2.12 During the course of the work, ALL Subcontractors shall submit the "Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "**C**") to the Monitoring Authority listed in Document 00495.
- 2.13 Upon completion of the Project, as part of the contract-awarding department's total clearance process, the Office of Business Opportunity's Contract Compliance Section must review whether the Wage Rate and Payroll Requirements were met and report the results to the department.

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**WAGE SCALE AND PAYROLL REQUIREMENTS
FOR ENGINEERING CONSTRUCTION**

EXHIBIT "A"

LABOR CLASSIFICATIONS AND PREVAILING WAGE RATES FOR
ENGINEERING CONSTRUCTION **2016 & 2023***

CLASSIFICATION	RATE	CLASSIFICATION	RATE
Asphalt Distributor Operator	\$14.06*	Milling Machine Operator - Fine Grade	\$13.53
Asphalt Paving Machine Operator	\$14.32*	Mixer Operator	\$10.33
Asphalt Raker	\$12.36*	Motor Grader Operator- Rough	\$14.23*
Asphalt. Shoveler	\$11.68	Motor Grader Operator	\$15.69*
Broom or Sweeper Operator	\$12.68*	Oiler	\$12.12
Bulldozer Operator	\$11.81	Painter-Structures	\$18.62*
Carpenter- Rough	\$12.49	Pavement Marking Machine Operator	\$11.18*
Concrete Finisher- Paving	\$13.07	Pile Driverman	\$14.95*
Concrete Finisher- Structures	\$12.98*	Pipe Layer	\$12.12*
Concrete Paving Curbing Machine Operator	\$11.71	Reinforcing Steel Setter - Paving	\$15.15
Concrete Paving Finishing Machine Operator	\$13.07*	Reinforcing Steel Setter - Structure	\$14.39
Concrete Paving Joint Sealer Operator	\$11.00	Roller Operator, Pneumatic - Self-propelled	\$16.00*
Concrete Paving. Saw Operator	\$13.99*	Roller Operator, Steel Wheel, Flat Wheel/Tamping	\$16.00*
Concrete Paving Spreader Operator	\$10.44	Roller Operator, Steel Wheel, Plant Mix Pavement	\$16.00*
Concrete Rubber . . .	\$9.00	Scraper Operator	\$13.47*
Crane Clamshell Backhoe Derrick, Dragline, Shovel Operator	\$12.71	Servicer	\$13.97*
Crusher and Screening Plant Operator	\$11.29	Sign Installer - PGM	\$8.54
Electrician * 3 Journeyman 2 Apprentice Allowed	\$27.11	Slip Form Machine Operator	\$11.07
Flagger	\$10.33*	Spreader Box Operator	\$13.58*
Form Builder/Setter- Structures	\$13.84*	Structural Steel Worker	\$14.39*
Form Liner- Paving and Curb	\$12.34*	Tractor Operator - Crawler Type	\$13.68*
Form Setter- Paving and Curb	\$12.34	Tractor Operator- Pneumatic	\$10.07
Foundation Drill Operator - Crawler Mounted	\$17.43*	Transit Mixer Truck Driver	\$11.00
Foundation Drill Operator - Truck Mounted	\$15.89*	Truck Driver, Lowboy-float	\$16.03*
Front End Loader Operator	\$13.55*	Truck Driver, Single-Axle - Heavy	\$11.48*
Laborer Common	\$11.02*	Truck Driver, Single-Axle - Light	\$11.48
Laborer- Utility	\$11.73*	Truck Driver, Tandem Axle Semi-Trailer	\$12.27*
Manhole Builder	\$9.00	Work Zone Barricade Servicer	\$11.67*
Mechanic	\$16.96*	Welders - Receive rate prescribed for craft performing operation to which welding is incidental	
* Apprentices- must be in an approved USDOL Program and cannot exceed ratios			

Engineering Prevailing Wages Classification Definitions

Asphalt Distributor Operator

Drives distributor truck, sets spray bars and operates valves and levers to control distribution of bituminous material for highway surfacing. May oil, grease or otherwise service and make adjustments to equipment as needed. Performs other related duties.

Asphalt Paving Machine Operator

Operates paving machine that spreads and levels asphaltic concrete on highway subgrade. Controls movement of machine, raises and lowers screed, regulates width of screed. May, oil, grease, service and make adjustments to equipment as needed. Performs other related duties.

Asphalt Raker

Distributes asphaltic materials evenly over road surface by raking and brushing material to correct thickness; directs Laborers when to add or take away material to fill low spots or to reduce high spots. Performs other related duties.

Asphalt Shoveler

A general term used on construction work covering many unskilled classifications requiring work of a physical nature. A laborer works with all crews doing everything from pick and shovel work to cleaning up lumber with hammer, shoveling and placing concrete, uses air tools, cleans concrete joints and fills joints with sealing compound from bucket or with hose and nozzle from a central source, applies coating of oil to inside face of forms, may help set and strip forms, unloads and transports reinforcing steel, cures newly poured concrete, helps lower pipe into ditch for pipelayers, builds fences, works with dirt crew keeping construction layout stakes out of the way of dirt moving equipment.

Broom or Sweeper Operator

Operates a self-propelled machine to sweep and clean roadway surfaces. May oil grease, service and make adjustments to equipment as needed. Performs other related duties.

Bulldozer Operator

Operates a crawler tractor with a bulldozer mounted in front of chassis to level, distribute and push earth or other material. May operate a ripper attachment to break up rock or other hard material. May use a push block on front of tractor to push load scrapers. May oil, grease, or otherwise service and make minor repairs to equipment as needed. Performs other related duties.

Carpenter, Rough

Works from plans to build, assemble, fit together, align, plum, and set in place forms for molding concrete structures. Forms may be wood, steel, aluminum, fiberglass or any other type of material. Checks form while concrete is placed. May install miscellaneous materials integral to concrete structures. May set precast concrete elements. Prepares for slipforming traffic rail and median barrier. May install permanent metal deck forms. May work with power tools Performs other related duties.

Concrete Finisher, Paving

Finishes the exposed surfaces of fresh concrete paving, median barrier and every element of concrete structures to the final grade and contour structures to the final grade and contour with the use of straight edges and steel trowels. Operates bridge deck finishing machine. Finishes concrete curbs and gutters. Finishes exposed surface of concrete after forms have been removed by patching imperfections with fresh concrete, rubbing surface with abrasive stone, and directing others in removing excess or defective concrete with power tools. Performs other related duties.

Concrete Finisher, Structures

A worker semi-skilled in concrete finishing who assists Concrete finisher by performing specific or general duties of lesser skill and keeping Concrete Finisher supplied with materials, tools, and supplies; cleaning working area an equipment; and holding materials and tools. Performs other related duties.

Concrete Paving Curbing Machine Operator

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

Concrete Paving Finishing Machine Operator

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

Concrete Paving Joint Sealer Operator

Cleans and seals joints requiring a hot or cold sealing compound in concrete paving, sidewalks, driveway and approach slabs. May oil, grease or make necessary repairs adjustments to equipment as needed. Performs other related duties.

Concrete Paving Saw Operator

Operates a water-cooled power saw with either or an abrasive blade to saw expansion and contraction joints in concrete paving. May also be used to saw asphaltic pavements. May oil grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Concrete Paving Spreader Operator

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

Concrete Rubber

Finishes the exposed surface of concrete masonry after the forms have been removed by patching holes and broken corners with fresh concrete, rubbing surface with abrasive stone to remove rough spots, and removing high spots and defective concrete with hand chisel and hammer or pneumatic chisel and powered abrasive stone. Performs other related duties.

Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel Operator

A worker who operates a lattice boom type crane can hoist and move materials, raise and lower heavy weights and perform other related operations. May be crawler type or rubber tired. May include placement of rock riprap, clamshell, dragline, pipe and pile driving operations. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Crusher and Screed Plant Operator

Operates a crusher or screening plant through which rock is run to break it into crushed stone for construction or to control flow of materials not needed. May include minor repairs and may service and make necessary adjustments to equipment as needed. Performs other related duties.

Electrician *3 Journeyman 2 Apprentice

Plans and directs the layout of metal electrical conduit, installs wiring systems, switch-panels, buss bars, works on overhead distribution systems and underground distribution systems. Performs other related duties.

Flagger

A worker who directs traffic in or around a construction site. May use signs or devices to direct traffic. May help assemble, position and clean devices or equipment used to direct traffic. Must be able to effectively communicate with the public. May require certain level of training by TXDOT specifications. Performs other related duties.

Form Builder/Setter, Structures

Fits together, aligns and sets to grade metal and wooden forms for placement of concrete. Forms may be wood, steel, aluminum, fiberglass or any other type of material. Checks forms while concrete is placed. May install miscellaneous materials integral to concrete structures. May set precast concrete elements. Prepares for slipforming traffic rail and median barrier. May install permanent metal deck forms. May work with power tools. Performs other related duties.

Form Liner, Paving & Curb

Fits together, panels align and sets to grade metal and wooden forms for placement of concrete. Works with survey crew to set stringline for panels or moles. Performs other related duties.

Form Setter, Paving & Curb

Fits together, align and set to grade metal and wooden forms for placement of concrete paving and curbs. Works with survey crew to set stringline for paving, curb and gutter curb. Performs other related duties.

Foundation Drill Operator, Crawler Mounted

Operates a hole-drilling machine that is crawler mounted. May include geotechnical operations such as soils nails, rock nails, tiebacks, anchors and jet grouting. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Foundation Drill Operator, Truck Mounted

Operates a hole drilling machine that is mounted on the rear of a rubber tired vehicle or truck. May include soils nails, rock nails, tiebacks, anchors and jet grouting. Drive truck from location to location or may have laborer who drives truck. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Front End Loader Operator

Operates a rubber tired, skid steer or crawler type tractor with an attached scoop type bucket on front end. Machine is used to load materials from stockpiles, excavation, charging batch plants, loading and unloading trucks. May be used with attachments in lieu of the bucket. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Laborer, Common

A general term used on construction work covering many unskilled classifications requiring work of a physical nature. A laborer works with all crews doing everything from pick and shovel work to cleaning up lumber with hammer, shoveling and placing concrete, uses air tools, cleans concrete joints and fills joints with sealing compound from bucket or with hose and nozzle from a central source, applies coating of oil to inside face of forms, may help set and strip forms, unloads and transports reinforcing steel, cures newly poured concrete, helps lower pipe into ditch for pipelayers, builds fences, works with dirt crew keeping construction layout stakes out of the way of dirt moving equipment.

Laborer, Utility

Performs a variety of manual duties, usually working in a utility capacity by working on multiple projects and tasks where demands require workmen with varied experience and ability to work without close direction. Unloads and transports reinforcing steel. May occasionally place and tie reinforcing steel. Directs common laborers in pouring concrete. Erects shoring and bracing. Assists in installation of pipe. Installs, operate and maintains dewatering systems. May assist equipment operators in positioning machines, verifying grades and signaling operators. Directs truck drivers and scraper operators to dumping positions to maintain grades as directed. Uses power tools and air tools. May work as lead man in a labor crew. His performance of a wide variety of construction jobs distinguishes him from a helper assigned to a specific craft. Installs and maintains erosion control. Is more or less a general utility construction worker. May be second step in learning a skill, and may later become a helper in a specific classification. Performs other related duties.

Manhole Builder

Constructs a means of permanent access to water and sewer lines for maintenance purposes. This work consists of laying brick or concrete slab at bottom of ditch up to an approximate grade line near the surface of the ground. Brick or block is normally laid to form a nearly circular manhole. Brick or block is laid in by eyesight and is normally to a plumb line. Chipped or culled brick can be used quite often is. No effort may be made to keep mortar off the face of the brick and joints are not pointed. May apply coating of concrete to interior and exterior surface. Performs other related duties.

Mechanic

Assembles, set up, adjusts and maintains and repairs all types of construction equipment and trucks. He may perform the duties of a welder in repair of equipment. Performs other related duties.

Milling Machine Operator, Fine Grade

Operates a power-driven milling machine that planes material of the to roadbed and discharges the material into a hauling unit or a windrow. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Mixer Operator

Performs a variety of manual duties, usually working in a utility capacity by working on multiple projects and tasks where demands require workmen with varied experience and ability to work without close direction. Unloads and transports reinforcing steel. May occasionally place and tie reinforcing steel. Directs common laborers in pouring concrete. Erects shoring and bracing. Assists in installation of pipe. Installs, operate and maintains dewatering systems. May assist equipment operators in positioning machines, verifying grades and signaling operators. Directs truck drivers and scraper operators to dumping positions to maintain grades as directed. Uses power tools and air tools. May work as lead man in a labor crew. His performance of a wide variety of construction jobs distinguishes him from a helper assigned to a specific craft. Installs and maintains erosion control. Is more or less a general utility construction worker. May be second step in learning a skill, and may later become a helper in a specific classification. Performs other related duties.

Motor Grader Operator, Rough

Operates a motor grader. Equipment is used to grade excavation and embankment and to lay asphalt, base and other materials. May blade haul roads and do other general motor grader work, but does not perform finish grade work to close specification tolerances. This operator may be a learner in the first phase of learning the skills of motor grader work. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Motor Grader Operator

Operates a motor grader. Equipment is used to grade excavation and embankment and to lay asphalt, base and other materials. May blade haul roads and do other general motor grader work, but does not perform finish grade work to close specification tolerances. This operator may be a learner in the first phase of learning the skills of motor grader work. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Oiler

A learner or semi-skilled worker who under the direction of the watch engineer. May oil and grease or otherwise service all engines and necessary equipment as needed. He may clean and paint engine room as needed. Performs other related duties.

Painter, Structures

Paints and stains structural steel and concrete surfaces of bridges, retaining walls, or other structures. Directs cleaning and abrasive blasting of surfaces prior to painting or staining. Performs other related duties.

Pavement Marking Machine Operator

Operates machine used in laying paint stripes or markers on all types of paving. Loads machine with appropriate materials and may walk or ride on machine. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Piledriverman

Sets in place, aligns, plumbs directs driving of timber, concrete, steel, pipe and any other type of piling. Sets, drives and pulls steel, concrete and other types of sheet piling. Rigs pile and leads and bracing. Signals operator. Splices piles before and after driving. Directs pile cutoff. May direct jetting or drilling equipment in connection with installing piles to grade. Performs other related duties.

Pipelayer

Installs concrete, clay, steel, ductile iron, plastic, corrugated pipe and any other type of pipe for storm drainage, water lines, gas lines and sanitary sewer lines. Lays underground communication and electrical ducts. May install and set electrical ground boxes, hand holes, manholes, inlets and other structures. Caulks joints, makes threaded and flanged connections. Installs valves and other accessories. Performs other related duties.

Reinforcing Steel Setter, Paving

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker (helper) or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

Reinforcing Steel Setter, Structure

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker (helper) or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

Roller Operator, Pneumatic, Self-Propelled

Operates a self-propelled machine with either steel wheels pneumatic tires, which is used to compact and smooth all bituminous materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Roller Operator, Steel Wheel, Flat Wheel/Tamping

Operates a self-propelled machine with either steel wheels or pneumatic tires which is used to compact earth fills, subgrade, flexible base and all other types of materials except bituminous. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Roller Operator, Steel Wheel, Plant Mix Pavement

Operates a self-propelled machine with either steel wheels pneumatic tires, which is used to compact and smooth all bituminous materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Scraper Operator

Operates a self-contained wheeled tractor scraper both self loading or assisted by crawler tractors or other scrapers. Used to excavate and transport earth or other materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Servicer

Drives a truck, which carries various fuels, oils, greases and filters. Must have knowledge of and is responsible for the correct oiling and greasing and changing of filters on equipment according to the manufacturers' specifications. Uses compressed air grease guns, wrenches and other tools. May make adjustments to clutches, brakes and other mechanical items. Keeps record of service preventive maintenance records. May have laborer assisting him. May require CDL if driving truck on public highways. Performs other related duties.

Sign Installer (PGM)

Sets forms, reinforcing steel, anchor bolts and pours concrete for Sign foundations. Fabricates and erects pipe and angle Frameworks by bolting, welding or other means prior to installation of signs that are normally prefabricated. Works from plans in location and drilling holes for proper location and alignment of signs. May direct hoisting of signs into place. Fastens signs to framework by bolting and other means. Locates and sets lighting brackets. May perform other work associated with signing projects. Supervises sign erector helper. Performs other related duties.

Slip Form Machine Operator

Cleans and seals joints requiring a hot or cold sealing compound in concrete paving, sidewalks, driveway and approach slabs. May oil, grease or make necessary repairs adjustments to equipment as needed. Performs other related duties.

Spreader Box operator

Operates spreader box by adjusting hopper and strike off blade so that the gravel, stone or other material may be spread to a specific depth on road surface during seal coat and surface treatment operations. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Structural Steel Worker

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker (helper) or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

Tractor operator, Crawler Type

Operates a crawler tractor with a bulldozer mounted in front of chassis to level, distribute and push earth or other material. May operate a ripper attachment to break up rock or other hard material. May use a push block on front of tractor to push load scrapers. May oil, grease, or otherwise service and make minor repairs to equipment as needed. Performs other related duties.

Tractor Operator, Pneumatic

Operates a gasoline or diesel powered agricultural tractor that tows compaction rollers, plow, disc, water tanks, scrapers and other similar operations. May use other miscellaneous attachments. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Traveling Mixer Operator

Drives a gasoline or diesel truck upon which is mounted a concrete mixer. Operates concrete mixer and dumps concrete on the grade, into forms or into concrete pumps or buckets. Cleans mixer drum. May require CDL license for on highway use. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

Truck driver, lowboy-Float

Drives a heavy-duty diesel powered truck to which is attached a trailer upon which heavy equipment is hauled. Driver is often required to operate heavy equipment to load or unload the lowboy. May require CDL license for on highway use. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

Truck driver, Single Axle, Heavy

Drive a light capacity truck for transporting loads of construction material. The truck is of single rear axle type, may have various kinds of beds attached, such as dump, flat bed, tank, etc. May require CDL license for driving on highway. May service and make necessary adjustments for proper operation equipment. Performs other related duties.

Truck driver, Single Axle-Light

Drive a light capacity truck for transporting loads of construction material. The truck is of single rear axle type, may have various kinds of beds attached, such as dump, flat bed, tank, etc. May require CDL license for driving on highway. May service and make necessary adjustments for proper operation equipment. Performs other related duties.

Truck Driver, Tandem Axle, Semi-Trailer

Drives a diesel-powered tractor pulling a semi trailer hauling materials. Hauls dirt, rock, aggregates or other material. May require CDL license for driving on highway. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

Work Zone Barricade Servicer

Fabricates, erects and maintains temporary traffic control devices, including arrow boards, signs, barricades, channelizing devices, barrels and all message boards. May operate a truck during traffic control operations.

WELDERS - Receives rate for craft being performed to which welding is incidental.

EXHIBIT "B"

CERTIFICATE FROM CONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO
SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

E-Mail Address: _____

Project WBS#: _____ Date _____

(I) (We) hereby certify that (I am) (we are) the **Prime Contractor** for _____

(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed _____, whose signature appears below, to supervise the payment of (my) (our) employees beginning _____, 20 ____; that he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and the City of

Tomball, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to the City of Tomball a new certificate appointing some other person for the purposes hereinabove stated.

_____ Phone: _____

(Identifying Signature of
Appointee)

Attest: _____

(Name of Firm or Corporation)

By: _____

(Signature)

By: _____

(Signature)

(Title)

(Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and the City of Tomball.

EXHIBIT "C"

CERTIFICATE FROM SUBCONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO
SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

E-Mail Address: _____

Project WBS#: _____ Date _____

(I) (We) hereby certify that (I am) (we are) the **Sub Contractor** for _____

(Specify work to be performed by subcontractor for this project)
in connection with construction of the above-mentioned Project, and that (I) (we) have
appointed _____, whose signature appears below, to supervise
the payment of (my) (our) employees beginning _____, 20_____;
that he/she is in a position to have full knowledge of the
facts set forth in the payroll documents and in the statement of compliance required by the
Copeland Act and the City of Tomball, which he/she is to execute with (my) (our) full
authority and approval until such time as (I) (we) submit to the City of **Tomball** a new
certificate appointing some other person for the purposes hereinabove stated.

(Identifying Signature of
Appointee) Phone: _____

Attest: _____
(Name of Firm or Corporation)

By: _____ By: _____
(Signature) (Signature)

(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and the City of Tomball.

END OF DOCUMENT

EXHIBIT B

Worker's Compensation Insurance Coverage

EXHIBIT B
MEMORDANDUM

4/28/2008

Date: April 28, 2008
To: City of Tomball Contract Insurance Requirements
From: Mark A. McClure, P.E. *mm*
Director of Engineering & Planning
City of Tomball
Re: Certificate of Insurance Explanations

Effective immediately, to facilitate the processing of Contracts, the Engineering & Planning Department is requesting the following information be submitted with each Certificate of Insurance. A sample insurance form is attached, matching the numbered listings below:

1. Certificate must not be more than 12 months old.
2. Name and address of producer writing coverage.
3. Name of insurance company providing coverage as listed in Best's Key Rating Guide or on company's Certificate of Authority on file with Texas Department of Insurance. Company must have rating of B+ or better; provided, however, that this requirement will be waived for workers compensation coverage if the coverage is placed with a company that participates in the State of Texas Workers' Compensation Assigned Risk Pool.
4. Name and address of insured, as shown on policy.
5. Must reference the insurer of the policy being described.
6. Must be a policy number, no binders.
7. Date policy became effective.
8. Expiration date must be at least 60 days from date of deliver of certificate.
9. Check limits of liability against contract.
10. Must check either; 1) Any Auto, or 2) All Owned, Hired, and Non-Owned Autos.
11. Statutory limits must be checked per our ordinance.
12. Must name the City as Additional Insured on Commercial General Liability and Automobile Liability. Must have a Waiver of Subrogation in favor of the City on Commercial General Liability, Automobile Liability, and Workers' Compensation/Employers' Liability.
13. Name and file number of project.
14. Address of the City of Tomball and the name of the project manager (as a suggestion either project applicable Department Director or Assistant City Manager).
15. Cancellation clause of the underlying policy must endorsed to provide that , "should any of the above described policies be canceled before the expiration date thereof, the issuing company will mail 30 days written notice to the certificate holder named."
16. Signature or facsimile signature of authorized representative of producer.

UNLESS OTHERWISE SPECIFIED:

Minimum Insurance Requirements: Small contracts (less than \$50,000.00)-Workers compensation insurance and Automobile Liability Insurance required by law.

Minimum Insurance Requirements: All other contracts-

1. Commercial General Liability: \$500,000 per occurrence for bodily injury, personal injury and property damage. \$1,000,000 Aggregate Policy will include coverage for a) Premises - Operations; b) Broad Form Contractual Liability; c) Products and Completed Operations; d) Use of Contractors and Subcontractors; e) Personal Injury; f) Broad Form Property Damage; g) Explosion Collapse and Underground (XCU) Coverage (when applicable), Fire Damage, Medical Expense. NOTE: The aggregate loss limit applies to each project.
2. Workers' Compensation and Employer's Liability: Workers' Compensation limits as required by the Labor Code of the State of Texas and Statutory Employer's Liability Limits.
3. Automobile Liability - \$500,000 per occurrence; 1,000,000 Aggregate if contract involves road construction projects.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1

PRODUCER	THIS CERTIFICATION IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
2	INSURERS AFFORDING COVERAGE	3
INSURED	INSURER A:	NAIC #
4	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR/ADD'L LTR INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	9
5	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO- JECT <input type="checkbox"/> LOC	6	7	8	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	\$ \$ \$ \$ \$ \$ \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	\$ \$ \$ \$ \$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT OTHER THAN EA ACC AUTO ONLY: AGG	\$ \$ \$
	EXCESS/UMBRELLA LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE RETENTION \$				EACH OCCURRENCE AGGREGATE	\$ \$ \$ \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				WC STATU- TORY LIMITS E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	11 \$ \$ \$
	OTHER PROFESSIONAL LIABILITY				PER CLAIM AGGREGATE	\$ \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

GENERAL LIABILITY AND AUTOMOBILE LIABILITY POLICIES ENDORSED TO INCLUDE CITY OF TOMBALL

PROJECT DESCRIPTION:

13

CERTIFICATE HOLDER

City of Tomball
501 James Street
Tomball, Texas 77377

14

CANCELLATION

15

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

16

EXHIBIT C**A Listing of the Duties, Responsibilities, and Limitations to Authority of the Resident Project Representative (RPR)****A. General**

RPR as Owner's agent at the site, will act as directed by and under the supervision of the Owner, and will confer with ENGINEER regarding RPR's actions. RPR's dealings in matters pertaining to the on-site Work shall in general be with ENGINEER and CONTRACTOR keeping OWNER advised as necessary. RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of CONTRACTOR. RPR shall generally communicate with OWNER with the knowledge of and under the direction of ENGINEER.

B. Duties and Responsibilities of RPR**1. Schedules:**

Review the progress schedule, schedule of Shop Drawing submittals, and other required schedules prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.

2. Conferences and Meetings:

Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.

3. Liaison:

- a. Serve as ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent, and assist in understanding of the Contract Documents, and assist ENGINEER in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's on-site operations.
- b. Assist in obtaining from OWNER additional details or information when required for proper execution of the Work.

4. Shop Drawings and Samples:

- a. Record date of receipt of Shop Drawings and samples.
- b. Receive samples, which are furnished at the site by CONTRACTOR, and notify ENGINEER of availability of samples for examination.
- c. Advise ENGINEER and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or sample if the submittal has not been approved by ENGINEER.

5. Review of Work, Rejection of Defective Work, Inspections, and Tests:

- a. Conduct on-site observations of the Work in progress to assist ENGINEER in determining if the Work is in general proceeding in accordance with the Contract Documents.
- b. Report to ENGINEER whenever RPR believes that any Work is unsatisfactory, faulty or defective, or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test, or approval required to be made; and advise ENGINEER of Work that RPR believes should be corrected or rejected, or should be uncovered for observation, or requires special testing, inspection, or approval.
- c. Verify that tests, equipment, and systems start-up and operating and maintenance training are conducted in the presence of appropriate personnel, and that CONTRACTOR maintains adequate records thereof; and observe, record, and report to ENGINEER appropriate details relative to the test procedures and start-ups.
- d. Accompany visiting inspectors, other than the OWNER's, representing public or other agencies having jurisdiction over the Project, record the result of these inspections, and report to ENGINEER.

6. Interpretation of Contract Documents:

Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to Contract clarifications and interpretations as issued by the ENGINEER.

7. Modifications:

Consider and evaluate CONTRACTOR's suggestions, for modifications in Drawings or Specifications and report with RPR's recommendations to ENGINEER. Transmit to CONTRACTOR decisions as issued by ENGINEER.

8. Records:

- a. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions of original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, ENGINEER's clarification and interpretations of the Contract Documents, progress reports, and other Project-related documents.
- b. Keep a diary or log book recording CONTRACTOR hours on the job site, weather conditions, data relative to questions of Work Directive Changes, Change Orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures, and send copies to ENGINEER.

- c. Record names, addresses, and telephone numbers of all contractors, subcontractors, and major Suppliers of materials and equipment.

9. Reports:

- a. Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the progress schedule and schedule of Shop Drawings and sample submittals.
- b. Consult with ENGINEER in advance of schedule of major tests, inspections, or start of important phases of the Work.
- c. Draft proposed Change Orders and Work Directive Changes, obtaining back-up material from CONTRACTOR, and recommend to ENGINEER Change Orders, Work Directive Changes, and Field Orders.
- d. Report immediately to OWNER and ENGINEER upon the occurrence of any accident.

10. Payment Requests:

Review Applications for Payment with CONTRACTOR for compliance with the established procedure for their submission and forward with recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of items, Work completed, and materials and equipment delivered at the site but not incorporated in the Work.

11. Certificates, Maintenance and Operation Manuals:

During the course of the Work, verify that certificates, maintenance and operation manuals, and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment for Work.

12. Completion:

- a. Before ENGINEER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring completion of correction.
- b. Conduct final inspection in the company of ENGINEER, OWNER, and CONTRACTOR, and prepare a final list of items to be completed or corrected.
- c. Observe that all items on final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance.

C. Limitations of Authority

Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment unless authorized by ENGINEER.
2. Shall not exceed limitations of authority as set forth in the Agreement or the Contract Documents.
3. Shall not undertake any of the responsibilities of CONTRACTOR, subcontractor, or CONTRACTOR's superintendent.
4. Shall not advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences, or procedures of construction unless such advice or directions are specifically required by the Contract Documents.
5. Shall not advise on, issue directions regarding, or assume control over safety precautions and programs in connection with the Work.
6. Shall not accept Shop Drawing or sample submittals from anyone other than CONTRACTOR.
7. Shall not authorize OWNER to occupy the Project in whole or in part.
8. Shall not participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by Owner.

EXHIBIT D

EXHIBIT D

Attach any and all Addendums

Document 00910

ADDENDUM NO. _____

Date of Addendum: _____

PROJECT NAME: Pine St. EST Rehabilitation

PROJECT NO: 2024-04

BID DATE: Nov. 16, 2023 (There is no change to the Bid Date.)

FROM: [City Engineer's Name], P.E., City Engineer
City of Tomball, [Contracting Department]
[Street Address of Contracting Department]
_____, Texas [Zip Code]
Attn: _____, P.E., Project Manager

TO: Prospective Bidders

This Addendum forms a part of the Bidding Documents and will be incorporated into the Contract documents, as applicable. Insofar as the original Project Manual and Drawings are inconsistent, this Addendum governs.

CHANGE IN BID DATE

The Bid Date for this Project has been changed from _____ to _____.
Date Date

The bid date for this project has been indefinitely postponed. Another Addendum will be issued to reset the Bid Date or to cancel bidding on this Project.

This Addendum uses the change page method: remove and replace or add pages, or Drawing sheets, as directed in the change instructions below. Change bars (|) are provided in the outside margins of pages from the Project Manual to indicate where changes have been made; no change bars are provided in added Sections. Reissued Drawing Sheets show the Addendum number below the title block and changes in the Drawing are noted by a revision mark and enclosed in a revision cloud.

CHANGES TO PREVIOUS ADDENDA

ADDENDUM NO. _____

CHANGES TO PROJECT MANUAL

BIDDING REQUIREMENTS

[2. Document 00020 - Notice to Bidders. Replace page 00020-

2.] CONTRACT FORMS

[3. Document 00610 - Replace revised Performance Bond, page 00610-1.]

CONDITIONS OF THE CONTRACT

[4. Document 00800 - Supplementary Conditions. Replace page 00800-4
and add page 00800-5.]

SPECIFICATIONS

[5. Section 02050 - Demolition. Add section including pages 02050-
1 through 02050-3.]

CHANGES TO DRAWINGS

[6. Delete Sheet S-9, Beam Schedule, and replace with Sheet S-9-A.]

CLARIFICATIONS

[7. Document 00210 - Supplementary Instructions to Bidders states that no substitutions will be considered during the bidding phase. Substitutions will be considered during the first 15 percent of the Contract Time or first 90 days of the Contract, whichever is less, as stated in Document 00700 - General Conditions.]

END OF ADDENDUM NO. ____

DATED: _____
[Director]

END OF DOCUMENT

Document 00911

NOTICE OF
ADDENDUM NO. _____

Date of Addendum: _____

PROJECT NAME: _____

PROJECT NO: 2024-05

BID DATE: Nov. 16, 2023 (There is no change to the Bid Date.)

FROM: [Director's Name], [Title]
City of Tomball, [Contracting Department]
[Street Address of Contracting Department]
Tomball, Texas [Zip Code]
Attn: _____, P.E., Project Manager

TO: Prospective Bidders

CHANGE IN BID DATE

The Bid Date for this Project has been changed from _____ to _____.
Date Date

The bid date for this project has been indefinitely postponed. Another Addendum will be issued to reset the Bid Date or to cancel bidding on this Project.

The referenced Addendum forms a part of the Bidding Documents and will be incorporated into the Contract documents, as applicable.

Written questions regarding this Addendum may be submitted to the Project Manager following the procedures specified in Document 00200 - Instructions to Bidders. Immediately notify the City Engineer through the named Project Manager upon finding discrepancies or omissions in the Bid Documents.

This Addendum includes:

ADDENDUM SYNOPSIS

- Changes to Previous Addendum
- Changes to Project Manual
 - Bidding Requirements
 - Contract Forms
 - Condition of the Contract
 - Specifications
- Changes to Drawings
- Clarifications

DATED: _____
[Director]

END OF DOCUMENT

Document 00931

REQUEST FOR INFORMATION

1. PROJECT No.: 2024-05
2. RFI No.: _____
3. PROJECT NAME: Pine St. EST Rehabilitation
4. CONTRACTOR: _____
5. CONTRACT No.: _____
6. SPECIFICATION Nos.: _____
7. DRAWING Nos.: _____
8. RESPONSE CODE: ☐ CRITICAL ☐ ROUTINE
9. DATE RESPONSE REQUIRED: _____
10. INFORMATION REQUIRED:

11. _____
CONTRACTOR (Signature) TITLE DATE

12. RESPONSE:

13. _____
PROJECT MANAGER (Signature) DATE

14. **If Contractor believes the response given in Item 12 requires an adjustment in Contract Price or Contract Time, Contractor shall submit a timely proposal so as not to delay Contractor's Work in accordance with General Conditions, Article 7 - Changes in the Work.**

END OF DOCUMENT

EXHIBIT E

Change Orders

Document 00940

WORK CHANGE DIRECTIVE / WCD No. _____

PROJECT: Pine St. EST Rehabilitation
CONTRACT No.: _____ PROJECT No.: 2024-05

TO: _____
Contractor and _____
Address for Written Notice _____

REFERENCE RFIs/RFPs: _____

You are hereby directed to make the following changes in the Work, as described below and specified or shown on attachments, if applicable.

1.01 DESCRIPTION OF CHANGES

A. Brief description of changes in the Work:

B. Justification for change(s):

1.02 PROPOSED ADJUSTMENTS

A. Contract Price (Check one):

- ☐ Lump sum [increase / decrease] of \$_____.
☐ Unit Price of \$_____ per _____.
☐ As provided in subparagraph _____ of General Conditions.
☐ As follows:

B. Contract Time: Contract Time is proposed to [be adjusted / remain unchanged].
Proposed adjustment, if any, is [an increase / a decrease] of ____ days.

- 1.03 NOTICE TO PROCEED BY THE CITY
Signature by City Engineer indicates notice to proceed to Contractor for the described work and outlines proposed method of adjustment in Contract Price and Contract Time.

Project Manager

Date

[Intermediate Authority, if needed]

Date

[Intermediate Authority, if needed]

Date

City Engineer

Date

- 1.04 ACCEPTANCE BY CONTRACTOR
Signature by Contractor indicates Contractor's agreement with the above proposed adjustments in Contract Price and Contract Time.

Contractor Signature and Title

Date

END OF DOCUMENT

cc: [Design Consultant], [Owning Dept. Director], [Other Copy Addressees], [File(s)]

EXECUTIVE SUMMARY

WCD No. _____ Contract No.: _____ Proj. No.: 2024-05

1.01	CONTRACT PRICE SUMMARY	DOLLAR AMOUNT	PERCENT
A.	Original Contract Price	\$	100.00%
B.	Previous Change Orders	\$0.00	#VALUE!
C.	This Work Change Directive	\$0.00	#VALUE!
D.	Revised Contract Price	\$0.00	#VALUE!
E.	Projected Contract Modifications*		
F.	Projected Contract Price		
D.	Revised Contract Time	180 Days	Friday, March 28, 2003
E.	Projected Contract Modifications*		
F.	Projected Contract Time		

1.03 TOTAL VALUE OF INCREASES OUTSIDE OF GENERAL SCOPE OF WORK
A. Including this Work Change Directive, the following table is provided to track conditions related to Paragraph 7.1.2.3 of Document 00700 - General Conditions.

WCD & C.O. Nos.	AMOUNT ADDED	PERCENT OF ORIGINAL CONTRACT PRICE
[1]	[\$0.00]	[0%]
TOTALS	\$0.00	0.0%

* Based on approved WCDs not yet included in Change Orders and Change Orders not yet issued.

END OF SUMMARY

EXECUTIVE SUMMARY:

1. Paragraph 1.01: Insert (A) Original Contract Price, (B) cost of previous Change Orders and (C) cost of this WCD in the price summary block. Other amounts and percentages in block are calculated by formula except projected amounts on last two lines. Fill in these lines, based on approved WCDs not yet included in Change Orders and Change Orders not yet issued.
2. Paragraph 1.02: Insert Date of Commencement of Work (from Notice to Proceed), (A) original Contract Time, (B) additional days added from previous Change Orders and (C) days required for this WCD in the time summary block. Other days and dates in block are calculated by formula except projected amounts on last two lines. Fill in these lines, based on approved WCDs not yet included in Change Orders and Change Orders not yet issued.
3. Paragraph 1.03 A: Project Manager will provide information from all previous Change Orders and WCDs for this table (i.e. number, amount and percentage of Original Contract Price) so that it can be determined if Council Action is necessary. *NOTE: The conditions of Paragraph 7.1.2.3 of Document 00700 - General Conditions may make Council Action necessary even if funding is already available and even if the 5% contingency threshold has not yet been reached.*

Document 00941

CHANGE ORDER / C.O. No. _____

PROJECT: Pine St. EST Rehabilitation Project

CONTRACT No.: _____ PROJECT No.: 2024-05

TO: _____

Contractor and _____

Address for Written Notice _____

REFERENCE RFIs/RFPs: _____

1.01 DESCRIPTION OF CHANGES

	CONTRACT CHANGE	
	AMOUNT	TIME
ITEM 1 SCOPE: <i>[Description of first change order item]</i>	\$0.00	0 Days
JUSTIFICATION: <i>[Justification for adding or deleting work described in "Item 1 Scope"]</i>		
ITEM 2 SCOPE:	\$0.00	0 Days
JUSTIFICATION:		
ITEM 3 SCOPE:	\$0.00	6 Days
JUSTIFICATION:		
TOTALS:	\$0.00	6 Days

1.02 ACCEPTANCE BY CONTRACTOR

Contractor agrees to perform change(s) included in this Change Order for the price and time indicated. The prices for changes include all costs associated with this Change Order.

Contractor Signature and Title

Date

1.03 ACCEPTANCE BY THE CITY

Project Manager Date

[City Management – Required for COs to Council] Date

[Intermediate Authority, if needed] Date

[Mayor – Required for COs to Council] Date

[Intermediate Authority, if needed] Date

Public Works Director Date

END OF DOCUMENT

cc: *[Design Consultant], [Owning Dept. Director], [Other Copy Address], [File(s)]*

EXECUTIVE SUMMARY

C.O. No. _____ Contract No.: _____ Proj. No.: 2024-05

1.01	CONTRACT PRICE SUMMARY	DOLLAR AMOUNT	PERCENT
A.	Original Contract Price	\$0.00	100.00%
B.	Previous Change Orders	\$0.00	#DIV/0!
C.	This Change Order	\$0.00	#DIV/0!
D.	Contract Price	\$0.00	#DIV/0!

Date of Commencement of the Work: #VALUE! DATE HERE

1.02	CONTRACT TIME SUMMARY	DURATION	COMPLETION DATE
A.	Original Contract Time	90 Days	#VALUE! #VALUE!
B.	Previous Change Orders	0 Days	#VALUE! #VALUE!
C.	This Change Order	0 Days	
D.	Contract Time	90 Days	#VALUE! #VALUE!

1.03 TOTAL VALUE OF INCREASES OUTSIDE OF GENERAL SCOPE OF WORK
A. Including this Change Order, the following table is provided to track conditions related to Paragraph 7.1.2.3 of Document 00700 - General Conditions.

CHANGE ORDER No.	AMOUNT ADDED	PERCENT OF ORIGINAL CONTRACT PRICE
[1]	[\$0.00]	[0%]

TOTALS	\$0.00	0.0%
--------	--------	------

END OF SUMMARY

INSTRUCTIONS

PURPOSE: Change Orders are used to affect Modifications to the Contract. Prior to final payment, previously approved Work Change Directives can be combined into a summary Change Order to reconcile project cost accounting. When signed and dated by Contractor and City Engineer, document becomes an approved Change Order.

APPLICATION: This form is applicable to agreed on Modifications to the Contract including, but not limited to the following:

- ☐ Additions or reductions (including deletions) of existing bid item quantities.
- ☐ Increases or decreases in construction Contract Time.
- ☐ Change in methods, material, etc., not covered by existing bid item quantities.
- ☐ New work not covered by existing bid item quantities.
- ☐ Price or schedule consideration for conditions not indicated by the Contract.

INSTRUCTIONS: Project Manager or Design Consultant prepares this form. The Executive Summary is for use by the City in analyzing the Change Order but is not a part of the Change Order. This form has two MS Excel tables imbedded in the MS Word document (Paragraphs 1.01 and 1.02 in the Executive Summary). Double click on any cell in these tables to make entries in spreadsheet mode. Click anywhere outside the spreadsheet to return to word processing mode. Other tables in the Change Order and Executive Summary are MS Word tables, not imbedded Excel spreadsheets. Red colored text and numerals represent input fields. Black text and numerals are in cells with formulas or fixed text. Do not make entries in these cells. Following instructions correspond to blanks requiring input and paragraph numbers on form. Paragraph 1.02 of the Change Order form is completed by Contractor. All other items are completed by the City or Design Consultant. Paragraph 1.03 of the Change Order form is completed by administrative and approving authorities. Contractor shall provide all backup material to justify the costs of items enumerated in Paragraph 1.01 of the Change Order form.

CHANGE ORDER FORM:

1. Insert Change Order number and Contract number for the Project at the top of each page, following page one, if the Change Order must be longer than one page.
2. Insert Project name exactly as stated in the Agreement.
3. Insert Project number and other identifying numbers (e.g. CIP, Proj. No., AIP, File No.) for the Project.
4. Insert name of Contractor performing the Work and Contractor's address for notices. Address should be as shown in the Agreement unless changed by proper notice.
5. Insert applicable references to related RFIs and RFPs.
6. Paragraph 1.01: Insert brief descriptions of the changes, including reference to applicable Work Change Directives. Give justification to support change, cost of making change, and adjustment in Contract Time warranted by change. If more than one item is included, number each item. Extend the table to additional pages if necessary. Formulas are imbedded for totals but check the math when extending the table length.
7. Paragraph 1.02: Project Manager signs and dates and has other administrative authorities or representatives sign and date where indicated. Project Manager will substitute actual titles of these persons where red bracketed instructions are shown. Mayor's and Contracting Department Director's signature (and date) are only needed when the Change Order must go to City Council for funding prior to approval. City Engineer for Contracting Department (should be the same person designated in the Agreement) will only sign and date Paragraph 1.03 when funds are approved and in place for payment of additional work. City Engineer's signature and date signify approval of Change Order and is the only authorized approval authority of the City according to Document 00700 – General Conditions.
8. Insert appropriate list of "copy to" persons and file. Delete brackets and instructions. Change color of remaining text to black.

Project No. 2024-05
EXECUTIVE SUMMARY:

1. Paragraph 1.01: Insert (A) Original Contract Price, (B) cost of previous Change Orders and (C) cost of this Change Order in the price summary block. Other amounts and percentages in block are calculated by formula. Cost of this Change Order is calculated at the bottom of the table in Paragraph 1.01 of the Change Order form, when all items have been filled in BUT it does not automatically change the amount in Paragraph 1.01 C.
2. Paragraph 1.02: Insert Date of Commencement of Work (from Notice to Proceed), (A) original Contract Time, (B) additional days added from previous Change Orders and (C) days required for this Change Order in the time summary block. Other days and dates in block are calculated by formula. Days for this Change Order are calculated at the bottom of the table in Paragraph 1.01 of the Change Order form, when all items have been filled in BUT it does not automatically change the amount in Paragraph 1.02 C.
3. Paragraph 1.03 A: Project Manager will provide information from all previous Change Orders for this table (i.e. number, amount and percentage of Original Contract Price) so that it can be determined if Council Action is necessary. *NOTE: The conditions of Paragraph 7.1.2.3 of Document 00700 - General Conditions may make Council Action necessary even if funding is already available and even if the 5% contingency threshold has not yet been reached.*

EXHIBIT F

Applications for Payment

Document 00643

ESTIMATE AND CERTIFICATE FOR PAYMENT, UNIT PRICE WORK

Estimate No. _____
Cut off Date: _____
Estimate Date: _____

Project Name: Pine St. EST Rehabilitation
Contractor: _____
Address: _____

Contract No.: _____
Project No.: 2024-05
Ordinance No.: _____

Contract Date: _____
Start Date: _____
Current Contract Completion Date: _____
Substantial Completion Date: _____
Percentage: By Time _____% In Place _____%

CONTRACT TIME IN CALENDER DAYS

Original Contract Time: _____ Days
Approved Extensions: _____ Days
Total Contract Time: _____ Days
Days Used to Date: _____ Days
Days Remaining to Date: _____ Days

Date Insurance Exp. _____ Drug Policy Due _____ Current MWBE % _____ Schedule Update Received _____

CONTRACT AMOUNT TO DATE:

1. Original Contract Price:		\$ _____
2. Approved Change Orders: <u>No./Description</u>	<u>Amount</u>	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
_____	\$ _____	
Total Change Orders to Date: _____ +/-	\$ _____	\$ _____
TOTAL CONTRACT AMOUNT:		\$ _____

A. EARNINGS TO DATE:

1. Work Completed to Date: _____ % Complete	\$ _____
2. Materials Stored on Site: _____	\$ _____
3. Materials Stored in Place: _____	\$ _____
4. Balance - Materials Accepted, Not in Work:	\$ _____

TOTAL EARNINGS TO DATE:

\$ _____

B. DEDUCTIONS:

1. Retainage: _____ % of \$ _____	\$ _____
2. Add: Retainage Deduction: _____	\$ _____
3. Total Retainage: _____	\$ _____
4. Liquidated Damages: _____ Days @ \$ _____	\$ _____
5. Quality Control Retest Cost: _____	\$ _____
6. Sunday/Holiday Overtime Cost: _____	\$ _____

TOTAL DEDUCTIONS:

\$ _____

C. AMOUNT DUE THIS PERIOD:

1. Total Earnings to Date:	\$ _____
2. Total Deductions:	\$ _____
3. Total Payments Due:	\$ _____
4. Less Previous Payments:	\$ _____
5. Restoration Adjustment:	\$ _____

TOTAL AMOUNT DUE THIS DATE:

\$ _____

Prepared By: _____ Date: _____ Checked By: _____ Date: _____

Submitted By: _____ Date: _____ Approved: _____ Date: _____

Approved: _____ Date: _____
Director,

END OF DOCUMENT

00643-1
02-01-08

EXHIBIT G

Storm Water Pollution Prevention Plan

Refer to Plans and Specifications

EXHIBIT "H"

Conflict of Interest Questionnaire

EXHIBIT "H"

Section 00800

Conflict of Interest Questionnaire



City of Tomball

***Gretchen Fagan
Mayor***

February 7, 2008

Attention: Vendors, Agents, Contractors, Prospective Bidders, Etc.

Re: House Bill 914 – Adding Chapter 176.2 to the Local Government Code

In the 2005 Regular Session, the Texas Legislature passed House Bill 914, which requires the disclosure and availability of information concerning certain local government entities, local government officials, and vendors or other persons, agencies, corporations, or entities contracting or seeking to contract with the City of Tomball for the sale or purchase of property, goods or services.

As a courtesy, enclosed is a copy of the Conflict of Interest Questionnaire (CIQ), a copy of HB 914, and a list of all City officials, as defined under Chapter 176 of the Local Government Code. Please complete this questionnaire and return to the City Secretary as soon as possible at the following address:

CIQ
Attention: City Secretary
City of Tomball
401 Market Street
Tomball, Texas 77375.

If you need additional information regarding the new requirements, please contact your attorney for additional instructions. You may also contact me at 281-290-1002 or dspeer@ci.tomball.tx.us.

Sincerely,

Doris Speer
City Secretary

Enclosure

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ**For vendor or other person doing business with local governmental entity**

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.**2** ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 name of local government officer with whom filer has employment or business relationship.

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

☐ Yes☐ No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

☐ Yes☐ No

D. Describe each employment or business relationship with the local government officer named in this section.

4

Signature of person doing business with the governmental entity

Date

Section 01110

SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Summary of the Work including work by City, City furnished products, Work sequence, future Work, Contractor use of Premises, and City occupancy.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

1. Furnish all necessary materials, machinery, equipment, superintendence and labor for the rehabilitation of a 750K gallon elevated storage tank of welded steel construction. The exterior of the tank shall be shrouded and all nearby electrical power lines protected from construction activity. The exterior of the tank shall be power washed as well as all exposed piping attached to the tank and cleaned of loose debris. All corner, rough edges, exposed rust shall be brushed with a wire brush to remove loose debris prior to spray, roller, brush painting. Interior shall be sandblasted or combination of power washed and sandblasted to remove all loose debris and prepared for spray, roller, brush painting. All corners, rough edges, exposed rust shall be brushes with a wire brush to remove loose debris prior to painting. Once approved thickness has been met and paint and coating has meet specification requirements as approved by a certified tester, the interior of tank shall be disinfected and tested per TCEQ requirements prior to filling and placing into usage. Work of the contract is for the rehabilitation of Pine St. EST.

1.3 CASH ALLOWANCES

1. Include the following specific Cash Allowances in the Contract Price under provision of General Conditions Paragraph 3.9:
 1. \$25,000 for contingencies.

1.4 CITY FURNISHED PRODUCTS

1. Items Furnished by City for Installation and Final Connection by Contractor:
2. Contractor's Responsibilities:
 1. Arrange and pay for product delivery to site.

2. Receive and unload products at site; jointly with City, inspect for completeness or damage.
3. Handle, store, install, and finish products.
4. Repair or replace damaged items.

1.5 WORK SEQUENCE

1. Construct Work in phases during the construction period, coordinate construction schedule and operations with City:
 1. Phase 1: [_____].
 2. Phase 2: [_____].
 3. Phase 3: [_____].
2. Coordination of the Work: Refer to Section 01312 - Coordination and Meetings, and Section 01230 - Alternates

1.6 CONTRACTOR USE OF PREMISES

1. Comply with procedures for access to the site and Contractor's use of rights-of-way as specified in Section 01145 - Use of Premises.
2. Construction Operations: Limited to City's rights-of-way provided by City.
3. Utility Outages and Shutdown: Provide notification to the City and private utility companies (when applicable) a minimum of 48 hours, excluding weekends and holidays, in advance of required utility shutdown. Coordinate all work as required.

1.7 STREET CUT ORDINANCE

1. Excavations on or under pavement in City's Right-of-Way must have a permit. Comply with City of Tomball, Texas Ordinance No. _____, an ordinance amending Chapter ____ of the Code of Ordinances, Tomball, Texas, relating to excavating on the Public Right-of-Way.
2. Comply with New Pavement Repair Details Drawing No. _____ sheets _____ and Street Cut Pavement Replacement, Drawing No. _____ sheets _____.

3. Quantities are included for the pavement replacement in accordance with the various specification sections that identify method of pavement.

1.8 WARRANTY

1. Comply with warranty requirements in accordance with Document 00700 - General Conditions.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01145

USE OF PREMISES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General use of site including properties inside and outside rights-of-way, work affecting road, ramps, streets and driveways and notification to adjacent occupants.

1.02 MEASUREMENT AND PAYMENT

- B. No payment will be made for this item. Include cost of work activities specified in this section in overhead cost of this project.

1.03 RIGHTS-OF-WAY

- A. Confine access, operations and storage areas to rights-of-way provided by City as stipulated in Document 00700 - General Conditions; trespassing on abutting lands or other lands in the area is not allowed.
- B. Make arrangements, at no cost to City, for temporary use of private properties. Contractor and Contractor's surety shall indemnify and hold harmless City against claims or demands arising from use of properties outside rights-of-way. Submit notarized copy of agreement between private property owner and Contractor prior to use of area.
- C. Obtain permits from City of Tomball Parks and Recreation Department for storage of materials on esplanades and other areas within rights-of-way under Parks and Recreation Department's jurisdiction. Submit copies of permits to City prior to use of area.

- D. Restrict total length of distributed materials along route of construction to 1,000 linearfeet unless approved in writing by City Engineer.

1.04 PROPERTIES OUTSIDE OF RIGHTS-OF-WAY

- A. Do not alter condition of properties adjacent to and along rights-of-way.
- B. Do not use ways, means, methods, techniques, sequences, and procedures that result in damage to properties or improvements.

- C. Restore damaged properties outside of rights-of-ways at no cost to City.

1.05 USE OF SITE

- A. Obtain approvals from governing authorities prior to impeding or closing public roads and streets. Do not close more than two consecutive intersections at one time.
- B. Notify City Engineer and City Traffic Management and Maintenance department at least 48 hours prior to closing street or street crossing. Obtain permits for street closures in advance.
- C. Maintain 10-foot-wide minimum access lane for emergency vehicles including access to fire hydrants.
- D. Avoid obstructing drainage ditches or inlets; when obstruction is unavoidable due to requirements of Work, provide grading and temporary drainage structures to maintain unimpeded flow.
- E. Locate and protect private lawn sprinkler systems which may exist within site. Test existing irrigation systems prior to construction. Repair or replace damaged systems to condition existing at start of Work, or better.
- F. Perform daily clean-up in affected construction areas in order to restore site to existing or better conditions. Areas should be free of debris, scrap material, dirt, mud, and other items identified by City Engineer. Do not leave buildings, roads, streets and other construction areas unclean.
- G. Restore damaged landscaping to condition existing at start of Work, or better.
- H. Beware of overhead power lines existing in area and in close proximity of project. When 10 feet of clearance between energized overhead power line and construction-related activity cannot be maintained, request Reliant Energy de-energize or move conflicting overhead power line. Contact Reliant Energy representatives at (713) 207-7777. Schedule, coordinate and pay costs associated with de-energizing or moving conflicting overhead power lines. There is no separate pay item for this effort. Include these costs in various items of bid that make such work necessary.

1.06 NOTIFICATION TO ADJACENT OCCUPANTS

- A. Notify individual occupants in areas to be affected by Work of proposed construction and time schedule. Notify not less than 72 hours or more than 2

weeks prior to work performed within 200 feet of homes or businesses. Follow form and content of sample door hanger provided by City Engineer.

- B. Include in notification names and telephone numbers of two company representatives for resident contact available on 24-hour call. Include precautions taken to protect private property and identify potential access, utility inconvenience and disruption.
- C. Submit proposed notification to City Engineer for approval. Consider ethnicity of neighborhood where English is not dominant language. Provide notice in understandable language.

1.07 PUBLIC, TEMPORARY, AND CONSTRUCTION ROADS AND RAMPS

- A. Construct and maintain temporary detours, ramps, and roads to provide for normal public traffic flow when use of public roads or streets is closed by necessities of Work.
- B. Provide mats or other means to prevent overloading or damage to existing roadways from tracked equipment, large tandem axle trucks or equipment that will damage existing roadway surface.
- C. Construct and maintain access roads and parking areas as specified in Section 01504- Temporary Facilities and Controls.

1.08 EXCAVATION IN STREETS AND DRIVEWAYS

- A. Avoid hindering or inconveniencing of public travel on streets or intersecting alleys for more than two blocks at one time, except by permission of City Engineer.
- B. Obtain City Traffic Management and Maintenance Department and City Engineer's approval when nature of Work requires closing entire street. Permits required for street closure are Contractor's responsibility. Avoid unnecessary inconvenience to abutting property owners.
- C. Remove surplus materials and debris and open each block for public use when work in that block is complete.
- D. Acceptance of any portion of Work is not based on return of street to public use.
- E. Avoid obstructing driveways or entrances to private property.

- F. Provide temporary crossing or complete excavation and backfill in one continuous operation to minimize duration of obstruction when excavation is required across drives or entrances.
- G. Provide barricades and signs in accordance with Section VI of the State of Texas Manual on Uniform Traffic Control Devices.

1.09 TRAFFIC CONTROL

- A. Comply with traffic regulation as specified in Section 01555 - Traffic Control and Regulation.

1.10 SURFACE RESTORATION

- A. Restore site to condition existing before construction.
- B. Repair paved area per requirements of Section 02951 - Pavement Repair and Resurfacing.
- C. Repair damaged turf areas, level with bank run sand conforming to Section 02317 - Excavation and Backfill for Utilities, or topsoil conforming to Section 02911 - Topsoil, and re-sod in accordance with Section 02922 - Sodding. Water and level newly sodded areas with adjoining turf using appropriate steel wheel rollers for sodding. Do not use spot sodding or sprigging.

1.11 LIMITS OF CONSTRUCTION

- A. Confine operations to lands within construction work limits shown on Drawings. Unless otherwise noted on Drawings adhere to the following:
 - 1. Where utility alignment is within esplanade, and construction limits are shown on Drawings to extend to edge of esplanade, keep equipment, materials, stockpiles, a minimum of 5 feet from back of curb.
 - 2. Where construction limits are shown on Drawings to extend to property line, keep equipment, materials, stockpiles, a minimum of 5 feet away from sidewalks.

1.12 EQUIPMENT AND MATERIAL SALVAGE

- A. Upon completion of Work, carefully remove salvageable equipment and material. Deliver them to City of Tomball as directed by City Engineer. Dispose

of equipment offsite at no additional cost to City when City Engineer deems equipment unfit for further use.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF
SECTION

Section 01230

ALTERNATES

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Submission procedures.
- B. Documentation of changes to Contract Price and Contract Time.

1.02 RELATED SECTIONS

- A. Document 00200 - Instructions to Bidders: Definition of Alternate Bids.
- B. Document 00410 - Bid Form: Quotation of each Alternate Bid.
- C. Document 00520 - Agreement Between City of Tomball and Contractor: Monetary value of each accepted Alternate.
- D. Document 00700 - General Conditions: Product Options and Substitutions.
- E. Section 01110 - Summary of Work: Description of each Alternate Bid.
- F. Section 01330 - Submittal Procedures: Construction schedule affected by Alternates.

1.03 REQUIREMENTS

- A. When allowed in Bid documents, alternate bids quoted on Bid Forms will be reviewed and accepted or rejected at City option.
- B. Volunteer Alternates, any Alternate not specified in Section 01110, will not be considered.
- C. Accepted Alternates will be identified in Owner-Contractor Agreement.

1.04 SELECTION AND AWARD OF ALTERNATIVES

- A. Bids will be evaluated on base bid price. After determination of lowest bidder, consideration will be given to Alternates and Bid Price adjustments.

PART 2 P R O D U C T S - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01255

CHANGE ORDER PROCEDURES

PART1 GENERAL

1.1 SECTION INCLUDES

1. Procedures for processing Change Orders, including:
 1. Assignment of responsible individual for approval and communication of changes in Work
 2. Documentation of change in Contract Price and Contract Time.
 3. Change procedures, using proposals and construction contract modifications, Work Change Directive, Stipulated Price Change Order, Unit Price Change Order, Time and Materials Change Order.
 4. Execution of Change Orders.
 5. Correlation of Contractor submittals.

1.2 REFERENCES

1. Rental Rate Blue Book for Construction Equipment (Data Quest Blue Book). Rental Rate is defined as full unadjusted base rental rate for appropriate item of construction equipment.

1.3 RESPONSIBLE INDIVIDUAL

1. Provide letter indicating name and address of individual authorized to execute change documents and responsible for informing others in Contractor's employ and Subcontractors of changes to Work. Information shall be provided at Preconstruction Conference.

1.4 DOCUMENTATION OF CHANGE IN CONTRACT PRICE AND CONTRACT TIME

1. Maintain detailed records of changes in Work. Provide full information required for identification and evaluation of proposed changes, and substantiate costs of changes in Work.

2. Document each proposal for change in cost or time with sufficient data to allow evaluation of proposal.
3. Proposals shall include the following minimum information:
 1. Quantities of items in original Document 00410 - Bid Form with additions, reductions, deletions, and substitutions.
 2. Quantities and cost of items in original schedule of values with additions, reductions, deletions and substitutions.
 3. Provide unit prices for items not included in Schedule of Unit Prices with supporting information when absent from Schedule of Unit Price Work.
 4. Justification for changes in Contract Time.
 5. Additional data upon request.
4. For changes in Work performed on a time-and-materials basis, provide the following additional information:
 1. Quantities and description of products and equipment.
 2. Taxes, insurance and bonds.
 3. Overhead and profit as noted in Document 00800 - Supplementary Conditions.
 4. Dates, times, and by whom work was performed.
 5. Time records and certified copies of applicable payrolls.
 6. Invoices, receipts for products, rented equipment, and subcontracts, similarly documented.
5. For changes in Work performed on a time-and-materials basis, payment for rental equipment will be as follows:
 1. Actual invoice cost for duration required to complete extra work without markup for overhead and profit. When extra work comprises only a portion of rental invoice where equipment would otherwise be on site, compute hourly equipment rate by dividing the actual monthly invoice by 176. (One day equals 8 hours and one week equals 40 hours.)

2. Do not exceed estimated operating costs given in Blue Book for items of equipment. Overhead and profit will be allowed on operating cost.
6. For changes in Work performed on a time-and-materials basis using Contractor-owned equipment, use Blue Book rates as follows:
 1. Contractor-owned equipment will be paid at Blue Book Rental Rate for duration of time required to complete extra work without markup for overhead and profit. Utilize lowest cost combination of hourly, daily, weekly or monthly rates. Use 150 percent of Rental Rate for double shifts (one extra shift per day) and 200 percent of Rental Rate for more than two shifts per day. Standby rates shall be 50 percent of appropriate Rental Rate shown in Blue Book. No other rate adjustments apply.
 2. Do not exceed estimated operating costs given in Blue Book. Overhead and profit will be allowed on operating cost. Operating costs will not be allowed for equipment on standby.

1.5 CHANGE PROCEDURES

1. Changes to Contract Price or Contract Time can only be made by issuance of Document 00941 - Change Order. Issuance of Document 00940- Work Change Directive will be formalized into a Change Order. Changes will be in accordance with requirements of Document 00700 - General Conditions.
2. City Engineer will advise of minor changes in Work not involving an adjustment to Contract Price or Contract Time as authorized by Document 00700 - General Conditions by issuing supplemental instructions.
3. Request clarification of Drawings, Specifications, Contract Documents or other information by using Document 00931- Request for Information. Response by City Engineer to Requests for Information does not authorize Contractor to perform tasks outside scope of Work. Changes must be authorized as described in this section.

1.6 PROPOSALS AND CONTRACT MODIFICATIONS

1. City Engineer may issue Document 00932- Request for Proposal, which includes detailed description of proposed change with supplementary or revised Drawings and Specifications. City Engineer may also request a proposal in response to Request for Information. Prepare and submit proposal within 7 days or as specified in request.

2. Submit request for Contractor changes to City Engineer describing proposed change and its full effect on Work, with a statement describing reason for change and effect on Contract Price and Contract Time including full documentation.
3. City may use Design Consultant to review change orders.

1.7 WORK CHANGE DIRECTIVE

1. City Engineer may issue a signed Work Change Directive instructing Contractor to proceed with a change in Work. Work Change Directive will subsequently be incorporated in Change Order.
2. Document will describe changes in Work and designate method of determining change in Contract Price or Contract Time.
3. Proceed promptly to execute changes in Work in accordance with Work Change Directive.

1.8 STIPULATED PRICE CHANGE ORDER

1. Stipulated Price Change Order will be based on accepted proposal.

1.9 UNIT PRICE CHANGE ORDER

1. Where Unit Prices for affected items of Work are included in Document 00410 - Bid Form, unit price Change Order will be based on unit prices, subject to Articles 7 and 9 of Document 00700 - General Conditions.
2. Where unit prices of Work are not pre-determined in Document 00410- Bid Form, Work Change Directive or accepted proposal will specify unit prices to be used.

1.10 TIME-AND-MATERIAL CHANGE ORDER

1. Provide itemized account and supporting data after completion of change, within time limits indicated for claims in Document 00700 - General Conditions.
2. City Engineer will determine change allowable in Contract Price and Contract Time as provided in Document 00700 - General Conditions.
3. Maintain detailed records of work done on time-and-material basis as specified in Paragraph 1.04, Documentation of Change in Contract Price and Contract Time.

4. Provide full information required for evaluation of changes and substantiate costs for changes in Work.

1.11 EXECUTION OF CHANGE DOCUMENTATION

1. City Engineer will issue Change Orders, Work Change Directives, or accepted proposal for signatures of parties as described in Document 00700 - General Conditions.

1.12 CORRELATION OF CONTRACTOR SUBMITTALS

1. For Stipulated Price Contracts, promptly revise Schedule of Values and Application for Payment forms to record authorized Change Orders as separate line item.
2. For Unit Price Contracts, next monthly estimate of Work after acceptance of a Change Order will be revised to include new items not previously included and appropriate unit rates.
3. Promptly revise progress schedules to reflect change in Contract Time, and to adjust time for other items of work affected by change, and resubmit for review.
4. Promptly enter changes to on-site and record copies of Drawings, Specifications or Contract Documents as required in Section 01785 - Project Record Documents.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01270

MEASUREMENT AND PAYMENT

PART 1 G E N E R A L

1.1 SECTION INCLUDES

1. Procedures for measurement and payment plus conditions for nonconformance assessment and nonpayment for rejected products.

1.2 AUTHORITY

1. Measurement methods delineated in Specification sections are intended to complement criteria of this section. In event of conflict, requirements of the Specification section shall govern.
2. City Engineer will take measurements and compute quantities accordingly.
3. Assist by providing necessary equipment, workers, and survey personnel.

1.3 UNIT QUANTITIES SPECIFIED

1. Quantity and measurement estimates stated in Agreement are for contract purposes only. Quantities and measurements supplied or placed in Work and verified by City Engineer shall determine payment as stated in Article 9 of Document 00700 - General Conditions.
2. When actual Work requires greater or lesser quantities than those quantities indicated in Document 00410 - Bid Form, provide required quantities at unit prices contracted, except as otherwise stated in Article 9 of Document 00700 - General Conditions.

1.4 MEASUREMENT OF QUANTITIES

1. Measurement by Weight: Reinforcing steel, rolled or formed steel or other metal shapes are measured by CRSI or AISC Manual of Steel Construction weights. Welded assemblies are measured by CRSI or AISC Manual of Steel Construction or scale weights.
2. Measurement by Volume:

1. Stockpiles: Measured by cubic dimension using mean length, width, and height or thickness.
2. Excavation and Embankment Materials: Measured by cubic dimension using average end area method.
3. Measurement by Area: Measured by square dimension using mean length and width or radius.
4. Linear Measurement: Measured by linear dimension, at item centerline or mean chord.
5. Stipulated Price Measurement: By unit designated in Agreement.
6. Other: Items measured by weight, volume, area, or linear means or combination, as appropriate, as completed item or unit of Work.
- G. Measurement by Each: Measured by each instance or item provided.
- H. Measurement by Lump Sum: Measure includes all associated work.

1.5 PAYMENT

1. Payment Includes: Full compensation for required supervision, labor, products, tools, equipment, plant, transportation, services, and incidentals; and erection, application or installation of an item of Work; and Contractor's overhead and profit.
2. Total compensation for required Unit Price Work shall be included in Unit Price bid in Document 00410 - Bid Form. Claims for payment as Unit Price Work, but not specifically covered in list of unit prices contained in Document 00410, will not be accepted.
3. Interim payments for stored materials will be made only for materials to be incorporated under items covered in unit prices, unless disallowed in Supplementary Conditions.
4. Progress payments will be based on City Engineer's observations and evaluations of quantities incorporated in Work multiplied by unit price.
5. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities determined by City Engineer multiplied by unit price for Work which is incorporated in or made necessary by the Work.

1.6 NONCONFORMANCE ASSESSMENT

1. Remove and replace Work, or portions of Work, not conforming to Contract Documents.
2. When not practical to remove and replace Work, City Engineer will direct one of the following remedies:
 1. Nonconforming Work will remain as is, but Unit Price will be adjusted lower at discretion of City Engineer.
 2. Nonconforming Work will be modified as authorized by City Engineer, and Unit Price will be adjusted lower at discretion of City Engineer, when modified Work is deemed less suitable than specified.
3. Specification sections may modify above remedies or may identify a specific formula or percentage price reduction.
4. Authority of City Engineer to assess nonconforming work and identify payment adjustment is final.

1.7 NONPAYMENT FOR REJECTED PRODUCTS

1. Payment will not be made for the following:
 1. Products wasted or disposed of in unacceptable manner.
 2. Products determined as nonconforming before or after placement.
 3. Products not completely unloaded from transporting vehicle.
 4. Products placed beyond lines and levels of required Work.
 5. Products remaining on hand after completion of Work, unless specified otherwise.
 6. Loading, hauling, and disposing of rejected products.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01292

SCHEDULE OF VALUES

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Preparation and submittal of Schedule of Values for stipulated price contracts or for major lump sum items on unit price contracts for progress payments.

1.02 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for this item. Include cost of preparing Schedule of Values in overhead cost for this project.

1.03 DEFINITION

- A. Schedule of Values is itemized list that establishes value of each part of Work for stipulated price contract and for major lump sum items in unit price contract. Schedule of Values is used as basis for preparing applications for payments. Quantities and unit prices may be included in schedule when designated by City Engineer.
- B. Major lump sum item is a lump sum item in Schedule of Unit Price Work which qualifies as Major Unit Price Work as defined in Document 00700 - General Conditions. Break down costs to list major products or operations for each line item which has an installed value of more than \$2000.

1.04 PREPARATION

- A. For stipulated price contracts, subdivide Schedule of Values into logical portions of Work, such as major work items or work in contiguous geographic areas. Use Section 01325 - Construction Schedule to guide subdivision of work items. Items in Schedule of Values will correlate directly with tasks enumerated in Construction Schedule. Organize each portion using Table of Contents of Project Manual as an outline for listing value of Work by Sections. A pro rata share of mobilization, bonds, and insurance may be listed as separate items for each portion of Work.
- B. For unit price contracts, items should include proportional share of Contractor's overhead and profit so that total of all items will equal Contract Price.

- C. For lump sum equipment items where submittal of operation/maintenance data and testing are required, include separate item for equipment operation and maintenance data submittal valued at 5 percent of lump sum amount for each equipment item and separate item for testing and adjusting valued at 5 percent of lump sum amount for each equipment item.
- D. Round off figures for each listed item to nearest \$100 except for value of one item, when necessary, to make total of items in Schedule of Values equal Contract Price for stipulated price contracts or lump sum amount in Schedule of Unit Price Work.
- E. Submit Schedule of Values in approved electronic spreadsheet file and print on 8-1/2-inch by 11-inch white bond paper.

1.05 SUBMITTAL

- A. Submit Schedule of Values in accordance with requirements of Section 01330 - Submittal Procedures. Submit at least 10 days prior to submitting first application for progress payment.
- B. Revise Schedule of Values and resubmit for items affected by contract modifications, Change Orders, and Work Change Directives. After changes are reviewed without exception by City Engineer, make submittal at least 10 days prior to submitting next application for progress payment.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01312

COORDINATION AND MEETINGS

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. General coordination including preconstruction conference, site mobilization conference, and progress meetings.

1.02 MEASUREMENT AND PAYMENT

- 1. No payment will be made for this item. Include cost of meetings and project coordination in overhead cost for this project.

1.03 RELATED DOCUMENTS

- A. Coordination is required throughout documents. Refer to Contract Documents, coordinate as necessary.

1.04 CITY ENGINEER AND REPRESENTATIVES

- A. City Engineer, named in Document 00520 - Agreement Between City of Tomball and Contractor, may act directly or through designated representatives as defined in Document 00700 - General Conditions.

1.05 CONTRACTOR COORDINATION

- A. Coordinate scheduling, submittals, and Work of various Specification sections to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Coordinate completion and clean up of Work for Substantial Completion and for portions of Work designated for City's partial occupancy.
- C. Coordinate access to site for correction of nonconforming Work to minimize disruption of City's activities where City is in partial occupancy.

1.06 PRECONSTRUCTION CONFERENCE

- A. City Engineer will schedule preconstruction conference.

B. Attendance Required: City Engineer's representatives, Design Consultant, Special Consultants as required by City Engineer, Contractor, and major Subcontractors.

C. Agenda:

1. Distribution of Contract Documents.
2. Designation of personnel representing parties in Contract, and Design Consultant.
3. Review of insurance.
4. Discussion of formats for Schedule of Values and Construction Schedule.
5. Procedures and processing of shop drawings, substitutions, pay estimates or applications for payment, Requests for Information, Request for Proposal, Change Orders, and Contract closeout, other submittals
6. Scheduling of Work and coordination with other contractors.
7. Review of Subcontractors.
8. Appropriate agenda items listed for Site Mobilization Conference, Paragraph 1.07C, when preconstruction conference and site mobilization conference are combined.
9. Procedures for testing.
10. Procedures for maintaining record documents.

1.07 SITE MOBILIZATION CONFERENCE

A. When required by Contract Documents, City Engineer will schedule conference at Project site prior to Contractor occupancy.

B. Attendance Required: City Engineer representatives, Design Consultant, Special Consultants, Contractor's Superintendent, and major Subcontractors.

C. Agenda:

1. Use of premises by City and Contractor.
2. Safety and first aid procedures.

3. Construction controls provided by City.
4. Temporary utilities.
5. Survey and layout.
6. Security and housekeeping procedures.
7. Field office requirements.

1.08 PROGRESS MEETINGS

- A. Hold project meetings at Project field office or other location as designated by City Engineer. Hold meetings at monthly intervals, or more frequently when directed by City Engineer.
- B. Attendance Required: Job superintendent, major Subcontractors and suppliers, City Engineer representatives, and Design Consultant as appropriate to agenda topics for each meeting.
- C. City Engineer or representative will make arrangements for meetings, and recording minutes.
- D. City Engineer or representative will prepare agenda and preside at meetings.
- E. Provide required information and be prepared to discuss each agenda item.
- F. Agenda:
 1. Review minutes of previous meetings.
 2. Review of Work progress schedule, pay estimates, cash flow curve, payroll and compliance submittals.
 3. Field observations, problems, and decisions.
 4. Identification of problems, which impede planned progress.
 5. Review of submittal schedule and status of submittals.
 6. Review of RFI and RFP status.
 7. Change Order status.

8. Review of off-site fabrication and delivery schedules.
9. Maintenance of progress schedule.
10. Corrective measures to regain projected schedule.
11. Planned progress during succeeding Work period.
12. Coordination of projected progress.
13. Maintenance of quality and Work standards.
14. Effect of proposed changes on progress schedule and coordination.
15. Other item relating to Work.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01321

CONSTRUCTION PHOTOGRAPHS

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Photographic requirements for construction photographs and submittals.

1.02 MEASUREMENT AND PAYMENT

- A. No payment will be made for this item. Include cost of construction photographs in overhead cost for this project.

1.03 SUBMITTALS

- A. Refer to Section 01330 for submittal requirements.
- B. Prints: Prepare 2 prints of each view and submit 1 print directly to City and Engineer within 7 days of taking photographs. Retain one print in field office at Project site and available for reference.
- C. Extra Prints: When requested by City and Engineer, submit extra prints of photographs, with distribution directly to designated parties who will pay costs for extra prints directly to photographer.
- D. Submit photographs taken prior to start of construction to show original site conditions.
- E. Submit photographs monthly, with Pay Estimate.
- F. Negatives: Include photographic negatives in protective envelopes, identified by Project name, Contractor, and date taken with each submittal

1.04 QUALITY ASSURANCE

- A. Responsible for timely execution of photographs, their vantage point, and quality.

PART 2 P R O D U C T S

2.01 PRECONSTRUCTION PHOTOGRAPHS

- A. Prior to commencement of any construction, take 35mm color photographs of entire route of project and streets proposed to detour traffic. Present one set of prints and negatives to City and Engineer for use in contract administration and inspection.
- B. Photographs: Two prints; color, matte finish; 3 by 5 -inch size, mounted on 8-1/2 by 11- inch soft card stock, with left edge binding margin for three-hole punch.
- C. Photographs shall show on readable non-reflective chalkboard :
 - 1. Job number
 - 2. Project Number
 - 3. Date and time photographs were taken (Automatic date/time in negative is acceptable)
 - 4. Baseline station, direction of view (i.e. N, S, NW, etc.) and house number or street address and street name on chalkboard.
- D. Indicate condition of the following:
 - 1. Esplanades and boulevards
 - 2. Yards (near side and far side of street)
 - 3. Housewalk and sidewalk
 - 4. Curb
 - 5. Area between walk and curb
 - 6. Particular features (for example, yard light, shrubs, fences, and trees)
 - 7. Date shall be on negative
 - 8. Provide notation of vantage point marked for location and direction of shot, onkey plan of site
- E. Take sufficient number of photographs to show structural condition of concrete and condition of trees, shrubs, and grass.
- F. Identify each photograph with applied label or rubber stamp on back with the following information:

1. Name of Project
 2. Name and address of photographer (if professional photographer is used)
 3. Name of Contractor
 4. Date photograph was taken
 5. Place photographs in plastic pockets and bound in three-ring notebook for easy access and viewing
- G. Include photographs of streets not previously included in detour.

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01325

CONSTRUCTION SCHEDULE

PART 1 GENERAL

1.01 GENERAL

- A. Provide Construction Schedules for Work included in Contract in accordance with requirements in this Section. Create Construction Schedule using Critical Path Method (CPM) computer software capable of mathematical analysis of Precedence Diagramming Method (PDM) plans. Provide printed activity listings and bar charts in formats described in this Section.
- B. Combine activity listings and bar charts with narrative report to form Construction Schedule submittal for City and Engineer.

1.02 MEASUREMENT AND PAYMENT

- A. No payment will be made for this item. Include the cost of construction scheduling in overhead cost for this project.

1.03 SCHEDULING STAFF

- A. Employ or retain services of individual experienced in critical path scheduling for duration of Contract. Individual shall cooperate with City and Engineer and update schedule monthly as required to indicate current status of Work.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. During preconstruction meeting, as described in Section 01312 - Coordination and Meetings, provide sample bar charts and activity listings produced from scheduling software proposed. Scheduling software is subject to review by City and Engineer and must meet requirements provided in this Section. Review of samples will be provided by City and Engineer within 7 days of submittal.
- C. Within 21 days of receipt of approval of Contractor's format, or 30 days of Notice to Proceed, whichever is later, submit proposed Construction Schedule for review. Base Construction Schedule submittal on following:

1. Level of detail and number of activities required in schedule are dependent on project type.
 - a. For wastewater projects, Categorize Work Type and Area Code in schedule.
 - 1) For wastewater rehabilitation projects, there are 6 work-type categories. An area code will be assigned for each Meter Service Area or Basin. Include at least one activity for each unique combination of work type and area code. Normal schedules of wastewater rehabilitation projects contain between 35 and 100 activities, depending on number of basins and work types involved in each basin.
 - 2) For wastewater relief projects (line work), area codes will be assigned geographically.
 - 3) For wastewater plant or facility work, other criteria may apply to assignment of area codes, such as a combination of geographical and craft categories.
2. For projects with multiple types of tasks within scope, indicate types of Work separately within schedule.
3. For projects with work at different physical locations or service areas, or different facilities within a site, indicate each location or facility separately within schedule. Show Work on each floor of multi-story building as separate tasks.
4. For projects with multiple crafts or significant subcontractor components, indicate elements separately within schedule. Unless permitted by City and Engineer, tasks shall consist of work covered by only one division of Project Manual.
5. Unless permitted by City and Engineer, each schedule task shall be same as Schedule of Values line item, and vice versa.
6. For projects with significant major equipment items or materials representing over 5 percent of Total Contract Price, indicate shop drawing submittal and review, purchase, delivery, and installation dates. Include activities for testing, adjustment, and delivering O & M manuals.
7. No task except acquisition of major equipment items shall represent more than one percent of Total Contract Price for facility projects and 3 percent of Total

Contract Price for other projects. Duration of tasks may not exceed 40 calendar days.

8. For projects where operating facilities are involved, identify each period of work, which will impact any process or operation in schedule and must be agreed to by City and Engineer and facility operator prior to starting work in area.
9. Construction Schedule submittals shall include:
 - a. Printed bar charts that meet criteria outlined in this Section and are produced by Contractor's approved scheduling software.
 - b. Activity listings that meet criteria outlined in this Section and are produced by Contractor's approved scheduling software.
 - c. Predecessor/successor listing sorted by Activity ID that meets criteria outlined in this Section and which is produced by Contractor's scheduling software.
 - d. A logic network diagram is required with first Construction Schedule submittal for facilities projects.
 - e. Prepare and submit graphic or tabular display of estimated monthly billings, i.e., a cash flow curve for Work with first schedule submittal. This information is not required in monthly updates, unless significant changes in work require re-submittal of schedule for review. Display shall allocate units indicated in bid schedule or Schedule of Values to Construction Schedule activities. (Weighted allocations are acceptable, where appropriate). Dollar value associated with each allocated unit will be spread across duration of activity on monthly basis. Total for each month and cumulative total will be indicated. These monthly forecasts are only for planning purposes of. Monthly payments for actual work completed will be made by City Engineer in accordance with Document 00700 - General Conditions.
 - f. Narrative Report that provides information outlined in this Section.
- D. No payment will be made until Construction Schedule and billing forecast are accepted by City Engineer.
- E. If Contractor desires to make changes in his method of operating and scheduling, after original schedule has been reviewed by City Engineer, notify City Engineer in

writing, stating reasons for changes. When City Engineer considers these changes to be significant, Contractor may be required to revise and resubmit for review all or affected portion of Contractor's Construction Schedule to show effect on Work.

- F. Upon written request from City Engineer, revise and submit for review all or any part of Construction Schedule submittal to reflect changed conditions in Work or deviations made from original plan and schedule.
- G. Updated Construction Schedule with Actual Start and Actual Finish Dates, Percent Complete, and Remaining Duration of each Activity shall be submitted monthly. Data date used in updating monthly Construction Schedule shall be same date as is used in monthly Payment Application. This monthly update of schedule shall be required before monthly Payment Application will be processed for payment.

1.05 SCHEDULING COMPUTER SOFTWARE REQUIREMENTS

- A. Create Contractor's Construction Schedule using CPM computer software that provides mathematical analysis of PDM plans. Use software capable of creating bar charts and activity listings which can be sorted by various fields, i.e., Sort by Activity ID; Sort by Early Start; Sort by Total Float; Sort by Area Code; sort by Specification Section number; and sort by Subcontractor. Use software capable of producing logic network diagram.
- B. Use PDM scheduling software capable of producing activity listings and bar charts with following information for each activity in schedule:
 - 1. Activity ID
 - 2. Activity Description
 - 3. Estimated (Original) Duration
 - 4. Remaining Duration
 - 5. Actual Duration
 - 6. Early Start Date
 - 7. Late Start Date
 - 8. Early Finish Date
 - 9. Late Finish Date
 - 10. Free Float
 - 11. Total Float
 - 12. Activity Codes (such as Area Code, Work Type, Specification Section, Subcontractor)
- C. Use PDM scheduling software capable of printing calendars using mathematical analysis of schedule, indicating standard work days of week and scheduled holidays.

- D. Use Scheduling software capable of printing activity listing that indicates Predecessors and Successors, Lag Factors and Lag Relationships used in creating logic of schedule.
- E. Use scheduling software to provide monthly time in Bar Chart Format and scale with 12-month scale not to exceed one page width. Bar charts may be printed or plotted on 8.5 by 11-inch, 8.5 by 14-inch or 11 by 17-inch sheet sizes. Over-size plots are not acceptable.

1.06 NARRATIVE SCHEDULE REPORT

- A. Narrative Schedule Report shall list Activities Started This Month; Activities Completed This Month; Activities Continued This Month; Activities Scheduled To Start or Complete Next Month; Problems Encountered This Month; Actions Taken to Solve These Problems.
- B. Narrative Schedule Report shall describe changes made to Construction Schedule Logic (i.e., changes in Predecessors and Lags); Activities Added to Schedule; Activities Deleted from Schedule; any other changes made to Schedule other than addition of Actual Start Dates and Actual Finish Dates and changes of Data Date and Remaining Durations for re-calculation of mathematical analysis.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01326

CONSTRUCTION SCHEDULE (BAR CHART)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Provide initial Construction Schedule as required by this section for Work. Do not start construction until schedule is reviewed by City and Engineer.

1.02 MEASUREMENT AND PAYMENT

- A. No payment will be made for this item. Include the cost of construction scheduling in overhead cost for this project.

1.03 FORM AND CONTENT OF INITIAL CONSTRUCTION SCHEDULE

A. Bar Chart:

1. Show major construction activities such as pipe laying (by traffic control phases or other approved key areas), tunnel construction, pavement removal, pavement replacement, pressure testing, chlorination, clean up and punch out as separate activities on schedule.
2. Show week duration for activities.
3. Show separate activities for each shop drawing and product data submittal critical to timely completion. Show submission dates and dates approved submittals will be needed from City and Engineer.
4. Provide separate horizontal bar for each activity. List start and finish date for each activity at left side of diagram.
5. Horizontal Time Scale: Identify first work day of each week.
6. Scale and Spacing: Notes must be legible. Allow space for notations and future revisions.
7. Order of Listings: Order bar chart listings by phases or other approved groups of activities that are contiguous. List activities in chronological order within each phase or group.

B. Narrative Description:

1. Submit Narrative Description of anticipated work sequence as indicated by sequence of activities presented in schedule.
2. Narrative shall be of sufficient detail to discuss any activity that affects public (such as phases of traffic control), interaction with specific City forces (such as valved operation, chlorination and testing) or other associated prime Contractors.

1.04 PROGRESS REVISIONS

- A. Submit Progress Revisions or necessary information to complete and process Payment Application. When required, resubmittal for rejected revision must be submitted and reviewed prior to following months processing of Payment Application. Following months Payment Application will not be processed until resubmittal is reviewed and required Progress Revisions received.
- B. Provide Narrative Report to describe:
 1. Major changes in scope.
 2. Revised projections in progress, completion, or changes in activity duration.
 3. Other identifiable changes.
 4. Problem areas, anticipated delays, and impact on schedule.
 5. Corrective action recommended and its effect.
 6. Effect of changes on schedules or other prime contractors.
 7. Material delivery lead times.
 8. Include additional data with Bar Chart described in Paragraph 1.03A of this section:
 9. Show original dates for each activity in approved initial progress schedule by narrow bar next to wider bar for current schedule.
 10. Show date each activity actually started or finished when event has occurred. Clearly identify actual dates in two right-most columns in left portion of 11 by 17-inch chart.
 11. Indicate percentage progress to date of submission for each activity.

1.05 SUBMITTALS

- A. Submit initial progress schedule within 15 days after award of contract. City and Engineer will review schedule and return copy within 21 days after receipt.
- B. Progress revisions cut-off date may be as early as twentieth of month to avoid delaying processing of Payment Application. Use cut-off day for first approved revision for all revisions.
- C. When required, resubmit within 7 days after return of review copy.
- D. Include in schedule connecting lines between bars to indicate sequence that activities will be accomplished. Impact will be known by corresponding changes to preceding or succeeding activities identified by connecting lines when activities start or finish is modified. Submit minimum of 6 copies of bar chart on 11 by 17-inch opaque reproductions. Five copies will be retained by City and Engineer and remaining copy will be returned.

PART 1 P R O D U C T S - Not Used

PART 2 E X E C U T I O N - Not Used

END OF SECTION

Section 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Submittal procedures for:
 1. Schedule of Values
 2. Construction Schedules and Cash Flow Curve (billing forecast).
 3. Shop Drawings, Product Data and Samples
 4. Operations and Maintenance Data
 5. Manufacturer's Certificates
 6. Construction Photographs
 7. Project Record Documents and monthly certification.
 8. Video Tapes
 9. Design Mixes

1.2 SUBMITTAL PROCEDURES

1. Scheduling and Handling:
 1. Submit shop drawings, data and samples for related components as required by City and Engineer.
 2. Schedule submittals well in advance of need for material or equipment for construction. Allow time to make delivery of material or equipment after submittal is approved.
 3. Develop submittal schedule that allows sufficient time for initial review, correction, resubmission and final review of all submittals. City and Engineer will review and return submittals to Contractor as expeditiously as possible but amount of time required for review will vary depending on complexity and

quantity of data submitted. In no case will submittal schedule be acceptable that allows less than 30 days for initial review by City and Engineer. This time for review is not justification for delays or additional compensation to Contractor.

4. City and Engineer's review of submittals covers only general conformity to Drawings, Specifications and dimensions that affect layout. Contractor is responsible for quantity determination. No quantities will be verified by City and Engineer. Contractor is responsible for errors, omissions or deviations from Contract requirements; review of submittals in no way relieves Contractor from the obligation to furnish required items according to Drawings and Specifications.
 5. Submit 5 copies of documents unless otherwise specified in following paragraphs or Specifications.
 6. Revise and resubmit submittals as required. Identify all changes made since previous submittal.
 7. Assume risk for material or equipment which is fabricated or delivered prior to approval. No material or equipment shall be incorporated into Work or included in periodic progress payments until approval has been obtained in specified manner.
2. Transmittal Form and Numbering:
1. Transmit each submittal to City and Engineer with Transmittal letter which includes:
 1. Date and submittal number
 2. Project title and number
 3. Names of Contractor, Subcontractor, Supplier and Manufacturer
 4. Identification of product or material being supplied
 5. Location of where product or material is being installed
 6. Specification section number
 2. Identification of deviations from contract documents must be clouded on submitted drawings, and itemized and detailed on separate 8-1/2 by 11-inch

sheet titled "DEVIATIONS FOR _____." When deviations do not exist, this sheet must state so.

3. Design deviations must be signed and sealed by Professional Engineer registered in State of Texas.
 4. Sequentially number each transmittal letter beginning with number 1. Resubmittals use original number with alphabetic suffix (i.e., 2A for first resubmittal of Submittal 2 or 15C for third resubmittal of Submittal 15). Each submittal shall only contain one type of work, material, or equipment. Mixed submittals will not be accepted.
3. Contractor's Stamp:
1. Apply Contractor's Stamp, certifying that items have been reviewed in detail and are correct in accordance with Contract, except as noted by any requested variance.
 2. As a minimum, Contractor's Stamp shall include:
 1. Contractor's name
 2. Job number
 3. Submittal number
 4. Certification statement Contractor has reviewed submittal and it is in compliance with Contract
 5. Signature line for Contractor
4. Submittal Response:
1. Submittal will be returned marked "ACKNOWLEDGE RECEIPT" when no response is required. Resubmittal is not required.
 2. Submittal will be returned marked "NO EXCEPTION" when sufficient information is supplied to determine item described is equal to that specified. Resubmittal is not required.
 3. Submittal will be returned marked "EXCEPTIONS AS NOTED" when sufficient information is supplied to determine that item will be acceptable when certain changes are made. Changes, or exceptions, will be clearly stated. When exceptions require other changes, additional changes must be submitted for approval. Resubmittal is not required, when exceptions do not require other changes.

4. When submittal does not contain sufficient information or when information provided does not meet contract requirements, submittal will be returned "REJECTED-RESUBMIT." Additional data or details as requested by City and Engineer for approval must be formulated and resubmitted as required.

1.3 SCHEDULE OF VALUES

1. Submit Schedule of Values in accordance with Section 01292 - Schedule of Values.

1.4 CONSTRUCTION SCHEDULES

1. Submit Construction Schedules and billing forecast in accordance with Section 01325 - Construction Schedule (CPM), or Section 01326 - Construction Schedule (Bar Chart).

1.5 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

1. Submit shop drawings in accordance with Section 01340 - Shop Drawings, Product Data, and Samples.

1.6 OPERATIONS AND MAINTENANCE DATA

1. Submit Operations and Maintenance data in accordance with Section 01782 - Operations and Maintenance Data.

1.7 MANUFACTURER'S CERTIFICATES

1. When specified in Specification sections, submit manufacturers' certificate of compliance for review by City and Engineer.
2. Place Contractor's Stamp, as described in Paragraph 1.03C, on front of certification.
3. Submit supporting reference data, affidavits, and certifications as appropriate.
4. Certificates may be recent or previous test results on material or product, but must be acceptable to City and Engineer.

1.8 CONSTRUCTION PHOTOGRAPHS

1. Submit Construction Photographs and video tapes in accordance with Section 01321 - Construction Photographs, Section 01322 - Construction Photographs for Facility Projects.

1.9 PROJECT RECORD DOCUMENTS

1. Submit Project Record Documents in accordance with Section 01785 - Project Record Documents.
2. With each payment request, submit written certification that Aas-built@ conditions are being documented on-site in accordance with Section 01785 - Project Record Documents, and that they have been reviewed by City.

1.10 VIDEO

1. Submit television videos as required in Section 02533 - Acceptance Testing for Sanitary Sewers.
2. Number transmittal forms for videos sequentially beginning with T01, T02, T03, etc.

1.11 DESIGN MIXES

1. When specified in Specifications, submit design mixes for review.
2. Place Contractor's Stamp, as described in Paragraph 1.03C, on front of each design mix.
3. Mark each design mix to identify proportions, gradations, and additives for each class and type of design mix submitted. Include applicable test results on samples for each mix. All tests and certifications shall have been performed within the last 12 months prior to date of submittal
4. Maintain copy of approved design mixes at mixing plant.

1.12 CHANGES TO CONTRACT

1. Change to contract may be initiated by completing Request for Information form. City and Engineer provides response to Contractor by completing form and returning it to Contractor. When Contractor signs form and checks block indicating that response will result in no increase in cost or time, inquiry is complete. When Contractor and City and Engineer agree that an increase in time

or cost is warranted, City and Engineer will forward Request for Proposal so that Change Order may be negotiated and approved.

1.13 NON-INCLUSIVE SUBMITTAL LIST

1. See entire Specification Section 01292, "Schedule of Values"
2. See entire Specification Section 01330, "Submittal Procedures"
3. See entire Specification Section 01326, "Construction Schedule (Bar Chart)"
4. Construction Photographs (ref. Section 01321)
5. Design of temporary utility relocations and permanent relocations initiated by Contractor
6. Potentially petroleum contaminated material, if applicable (ref. Section 02105 and 02110)
7. Tree and shrub protection and name and experience of qualified tree surgeon (ref. Section 01562)
8. Groundwater control for open cut excavation (ref. Section 01578)
9. Traffic control plan (ref. Section 01555)
10. Project record documents (ref. Section 01785)
11. Operation and maintenance information (ref. Section 01782)
12. Potential obstruction report (ref. Section 02317)
13. Hot-mix asphaltic base (ref. Section 02711)
14. Geotextile (ref. Section 02621)
15. Tunnel shafts (ref. Section 02445)
16. All items listed in Section 02425, "Tunnel Excavation and Primary Liner"
17. Auger pits (ref. Section 02447)
18. Tunneling grout (ref. Section 02431)

19. Asphaltic concrete paving (ref. Section 02741)
20. Concrete paving (ref. Section 02751)
21. Temporary and removable reflectorized pavement markings (ref. Section 02765)
22. Manholes (ref. Section 02081, 02082 and 02084)
23. Ductile iron pipe (ref. Section 02501)
24. Steel pipe (ref. Section 02502 and 02518)
25. Pretensioned and prestressed concrete cylinder pipe (ref. Section 02613 and 02507)
26. PVC pipe (ref. Section 02506)
27. Water main in tunnels or casings (ref. Section 02517)
28. Blocking pipe in tunnel (ref. Section 02517)
29. Polyurethane coatings on steel pipe, if applicable (ref. Section 02527)
30. Valves and appurtenances (ref. Sections 02521 - 02524)
31. Cathodic protection systems (ref. Section 13111)
32. Concrete for utility construction (ref. Section 03315)
33. Miscellaneous metals (ref. Section 05500)

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01340

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Methods, schedule, and process followed for shop drawings, product data and sample submittals.

1.2 REQUIREMENT

1. Submit shop drawings, product data and samples as required by General Conditions and as designated in Specifications using procedures specified in Section 01330 - Submittal Procedures and requirements of this Section.
2. Shop drawings, product data and samples are not considered Contract Documents.
3. Registered Professional Engineer licensed by State of Texas must sign and seal design deviations from contract documents.

1.3 SHOP DRAWING/SUBMITTAL SCHEDULE

1. Submit separate Shop Drawing/Submittal schedule at same time Construction Schedule is submitted. List products, materials and equipment for which Shop Drawings and other submittals are required in the order in which they appear in Specifications. Include product data and sample submittals in schedule. Application for payment will not be processed until schedule of shop drawing submittals is approved by City and Engineer.

1.4 SHOP DRAWINGS

1. Submit minimum of seven sets of Shop Drawings and product data in form and quality suitable for microfilming. Review and sign Shop Drawings indicating compliance with Contract.
2. Place Contractor's Stamp on each drawing as described in Section 01330 - Submittal Procedures.
3. Show the following accurately and distinctly:

1. Field and erection dimensions
 2. Arrangement and section views
 3. Relation to adjacent materials or structure, including complete information for making connections between work under this Contract and work under other contracts
 4. Types of materials and finishes
 5. Parts list and descriptions
 6. Assembly drawings of equipment components and accessories showing respective positions and relationships to complete equipment package
 7. Identify details by reference to drawing sheet and detail numbers, schedule or room numbers as shown on Contract Drawings where necessary for clarity.
4. Scale drawings to provide true representation of specific equipment or item furnished.
 5. Coordinate and submit components, necessary for City and Engineer to adequately review submittal, as complete package. Reproduction of design drawings for use of shop drawings is not allowed.
 6. For major changes to original documents, submit CAD drawings.

1.05 PRODUCT DATA

1. Submit product data for review as required in Specification sections.
2. Place Contractor's Stamp, on each data item submitted, as described in Section 01330 - Submittal Procedures.
3. Mark each copy to identify applicable products, models, options to be used in this Project. Supplement manufacturers' standard data to provide information unique to this Project, where required by Specifications.
4. Give manufacturers, trade name, model or catalog designation and applicable reference standard for products specified only by reference standard.
5. Pre-approved and Pre-qualified Products.

1. For "pre-approved", "pre-qualified" and "approved" products named in City standard products list, provide appropriate list designation as described in Section 01630 - Product Substitution Procedures within 30 days after Notice to Proceed.
2. For products proposed as alternates to "approved" products, provide information required to demonstrate proposed products meet level of quality and performance criteria of "approved" product.
6. Submit revised data and samples for resubmittal in manner required for initial submission.

1.06 SAMPLES

1. Submit samples for review as required by Specifications. Have samples reviewed and signed by Registered Professional.
2. Place Contractor's Stamp on each sample or firmly attached sheet of paper, as described in Section 01330 - Submittal Procedures.
3. Submit number of samples specified in Specifications; one will be retained by City and Engineer.
4. Reviewed samples that may be used in Work are identified in Specifications.
5. Provide mark up as identified in specifications.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01422

REFERENCE STANDARDS

PART 1 GENERAL

1.1 SECTION INCLUDES

- 1. Section includes general quality assurance related to Reference Standards and list of references.

1.2 QUALITY ASSURANCE

- 1. For Products or workmanship specified by association, trade, or Federal Standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.
- 2. Conform to reference standard by current date of issue as stated in Document 0700 - General Conditions.
- 3. Request clarification from City and Engineer before proceeding when specified reference standards conflict with Contract Documents.

1.3 SCHEDULE OF REFERENCES

AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W. Washington, D.C. 20001
ACI	American Concrete Institute P.O. Box 9094 Farmington Hills, MI 48333-9094
AGC	Associated General Contractors of America 333 John Carlyle Street Alexandria, VA 22314
AI	Asphalt Institute Research Park Drive P.O. Box 14052 Lexington, KY 40512

	AITC	American Institute of Timber Construction 7012 S. Revere Parkway, Suite 140 Englewood, CO 80112
	AISC	American Institute of Steel Construction One East Wacker Dr. Chicago, IL 60601
	ISI	American Iron and Steel Institute 1101 17 th Street NW, Suite 1300 Washington, D.C. 20036
	ASME	American Society of Mechanical Engineers Three Park Avenue New York, NY 10016
	ANSI	American National Standards Institute 1819 L Street NW Sixth Floor Washington, D.C. 20036
	APA	American Plywood Association Box 11700 Tacoma, WA 98411
	API	American Petroleum Institute 1220 L Street, N.W. Washington, D.C. 20005
Association	AREMA	American Railway Engineering and Maintenance-of-Way 8201 Corporate Drive, Suite 1125 Landover, Maryland 20785
	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, PA 19428
	AWPA	American Wood-Preservers' Association P.O. Box 5690 Granbury, TX 76049

AWS	American Welding Society 550 NW 42 nd Avenue Miami, FL 33126
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
COH	City of Houston P.O. Box 1562 Houston, TX 77251-1562
CLFMI	Chain Link Fence Manufacturers Institute 9891 Broken Land Parkway, Suite 300 Columbia, MD 21046
CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Road Schaumburg, IL 60173-4758
EJMA	Expansion Joint Manufacturers Association 25 North Broadway Tarrytown, NY 10591
FS	Federal Standardization Documents General Services Administration Specifications Unit (WFSIS) 7th and D Streets, S.W. Washington, D.C. 20406
ICEA	Insulated Cable Engineer Association P.O. Box 440 S. Yarmouth, MA 02664
IEEE	Institute of Electrical and Electronics Engineers 445 Hoes Lane P.O. Box 459 Piscataway, NJ 08855-459
ISA	International Society of Arboriculture P.O. Box 3129 Champaign, IL 61826-3129

MIL	Military Specifications General Services Administration Specifications Unit (WFSIS) 7th and D Streets, S.W. Washington, D.C. 20406
NACE	National Association of Corrosion Engineers 1440 South Creek Drive Houston, TX 77084-4906
NEMA	National Electrical Manufacturers' Association 1300 North 17 th Street, Suite 1847 Rosslyn, VA 22209
NFPA	National Fire Protection Association 1 Batterymarch Park P.O. Box 9101 Quincy, MA 02269-9101
OSHA	Occupational Safety Health Administration U.S. Department of Labor Office of Public Affairs-Room N3647 200 Constitution Avenue Washington, D.C. 20210
PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077-1083
PCI	Prestressed Concrete Institute 209 W. Jackson Blvd. Chicago, IL 60606
SDI	Steel Deck Institute P.O. Box 25 Fox River Grove, IL 60021
SSPC	Society for Protective Coatings (Steel Structures Painting Council) 40 24 th Street, Sixth Floor Pittsburgh, PA 15222

TAC	Texas Administrative Code Texas Natural Resources Conservation Commission P. O. Box 13087 Library MC-196 Austin, TX 78711-3087
TxDOT	Texas Department of Transportation 125 East 11 th Street Austin, TX 78701 2483
UL	Underwriters' Laboratories, Inc. 333 Pfingston Road Northbrook, IL 60062
UNI-BELL	UNI-BELL Pipe Association 2655 Villa Creek Drive, Suite 155 Dallas, TX 75234

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01450

CONTRACTOR'S QUALITY CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Quality assurance and control of installation and manufacturers' field services and reports.

1.02 MEASUREMENT AND PAYMENT

- A. No payment will be made for this item. Include cost of Contractor's quality control in overhead cost for this project.

1.03 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions and workmanship, to produce Work of specified quality at no additional cost to City.
- B. Comply fully with manufacturers' installation instructions, including each step in sequence.
- C. Request clarification from City and Engineer before proceeding when manufacturers' instructions conflict with Contract.
- D. Comply with specified standards as minimum requirements for Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce specified level of workmanship.

1.04 REFERENCES

- A. Obtain copies of standards and maintain at job site when required by individual Specification sections.

1.05 MANUFACTURERS' FIELD SERVICES AND REPORTS

- A. When specified in individual Specification sections or as required by City and Engineer, provide material or product suppliers' or manufacturers' technical

representative to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, operator training, test, adjust and balance of equipment as applicable and to initiate operation, as required. Conform to minimum time requirements for start-up operations and operator training when defined in Specification sections.

- B. At City and Engineer's request, submit qualifications of manufacturers' representative to City and Engineer 15 days in advance of required representatives' services. Representative is subject to approval by City and Engineer.
- C. A manufacturers' representative is to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to a manufacturer's written instructions. Submit report within 14 days of observation to City and Engineer for review.

PART 1 P R O D U C T S - Not Used

PART 2 E X E C U T I O N - Not Used

END OF SECTION

Section 01452

INSPECTION SERVICES

PART 1 G E N E R A L

1.1 SECTION INCLUDES

1. Inspection services and references

1.2 INSPECTION

1. City and Engineer will appoint Inspector as representative of City to perform inspections, tests and other services specified in individual specification Sections
2. Alternately, City and Engineer may appoint, employ and pay independent firm to provide additional inspection or construction management services as indicated in Section 01454 - Testing Laboratory Services.
3. Reports will be submitted by independent firm to City and Engineer, indicating observations and results of tests and indicating compliance or non-compliance with Contract.
4. Assist and cooperate with Inspector; furnish samples of materials, design mix, equipment, tools, and storage.
5. Notify City and Engineer 24 hours prior to expected time for operations requiring services.
6. Sign and acknowledge report for Inspector.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01454

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Testing laboratory services and responsibilities related to those services.

1.2 REFERENCES

1. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
2. ASTM D 3666 - Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Materials.
3. ASTM D 3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
4. ASTM E 329 - Standard Specification for Minimum Requirements for Agencies Engaged the Testing and/or Inspection of Materials Used in Construction.
5. ISO/IEC 17025 - General Requirements for the Competence of Calibration and Testing Laboratories.

1.3 SELECTION AND PAYMENT

1. The City will select, employ, and pay for services of independent testing laboratory to perform inspection and testing identified in Part 3 of individual Specification sections.
2. Employ and pay for services of independent testing laboratory or laboratories to perform inspection and testing identified in Part 2 of individual Specification sections.
3. Employment of testing laboratory by the City does not relieve the Contractor of obligation to perform the Work in accordance with requirements of Contract Documents.
4. City deducts minimum 2-hour charge for testing laboratory time from periodic progress payment when operations requiring testing or inspection are canceled without prior notification.

5. City deducts cost of retesting from periodic progress payment whenever failed work is removed, replaced and retested.
6. City and Engineer schedules and monitors testing. Provide 24 hours notice of testing to City and Engineer to avoid delay of the Work.

1.4 QUALIFICATION OF LABORATORY

1. Meet laboratory requirements of ASTM E 329 and applicable requirements of ASTM C 1077, ASTM D 3666 and ASTM D 3740.
2. Meet ISO/IEC 17025 conditions for accreditation by the American Association for Laboratory Accreditation (A2LA) in specific fields of testing required in individual Specification sections.
3. If laboratory subcontracts are part of testing services, such work will be placed with laboratory complying with requirements of this Section.

1.5 LABORATORY REPORTS

1. Testing laboratory provides and distributes copies of laboratory reports to distribution list provided by City and Engineer at preconstruction conference.
2. Keep one copy of each laboratory report distributed or faxed at site field office for duration of project.
3. Laboratory will fax material supplier, Contractor and City and Engineer no later than close of business on working day following test completion and review, reports which indicate failing test results.

1.6 LIMITS ON TESTING LABORATORY AUTHORITY

1. Laboratory may not release, revoke, alter, or enlarge requirements of Contract.
2. Laboratory may not approve or accept any portion of the Work.
3. Laboratory may not assume duties of Contractor.
4. Laboratory has no authority to stop the Work.

1.7 CONTRACTOR RESPONSIBILITIES

1. Provide safe access to the Work and to manufacturer=s facilities for City and Engineer and for testing laboratory personnel.

2. Provide testing laboratory with copy of construction schedule and copy of each update to construction schedule.
3. Notify City and Engineer and testing laboratory during normal working hours of day previous to expected time for operations requiring inspection and testing services. When Contractor fails to make timely prior notification, then do not proceed with operations requiring inspection and testing services.
4. Notify Design Consultant 24 hours in advance when Specification requires presence of Design Consultant for sampling or testing.
5. Request and monitor testing as required to provide timely results and avoid delay to the Work. Provide samples to laboratory in sufficient time to allow required test to be performed in accordance with specified test methods before intended use of material.
6. Cooperate with laboratory personnel in collecting samples on site. Provide incidental labor and facilities for safe access to the Work to be tested; to obtain and handle samples at site or at source of products to be tested; and to facilitate tests and inspections including storage and curing of test samples.
7. Arrange with laboratory through City and Engineer. Payment for additional testing will be made in accordance with Document 00700 - General Conditions:
 - a. Retesting required for failed tests
 - b. Retesting for nonconforming Work
 - c. Additional sampling and tests requested beyond specified requirements
 - d. Insufficient notification of cancellation of tests for Work scheduled but not performed

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

1.8 CONDUCTING TESTING

1. Conform laboratory sampling and testing specified in individual Specification sections to latest issues of ASTM standards, TxDOT methods, or other recognized test standards as approved by City and Engineer.

2. Requirements of this section also apply to those tests for approval of materials, for mix designs and for quality control of materials as performed by employed testing laboratories.

END OF SECTION

Section 01502
MOBILIZATION

PART 1 G E N E R A L

1.1 SECTION INCLUDES

1. Mobilization of construction equipment and facilities onto site.

1.2 UNIT PRICES

- A. Measurement for mobilization is on lump sum basis.
- B. Mobilization payments will be included in periodic progress payment upon written application subject to following provisions:
 1. Authorization for payment of 50 percent of Contract Price for mobilization will be made upon receipt and approval by City and Engineer of following items, as applicable:
 - a. Schedule of Values
 - b. Trench safety program
 - c. Construction Schedule
 - d. Preconstruction photographs
 - f. Dewatering plan, when required
 2. Authorization for payment of remaining 50 percent of Contract Price for mobilization will be made upon completion of Work amounting to 5 percent of Contract Price less mobilization unit price.
- C. Mobilization payments will be subject to retainage amounts stipulated in Document 0700 - General Conditions.
- D. A reduction of 10% of mobilization amount bid in Schedule for Unit Price Work will be applied to each Payment Application when Field Office is not properly maintained. Proper maintenance consists of operational plumbing and sanitary facilities, adequate potable water supply, operational telephone and facsimile machine and functionable temperature control.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01572

POLLUTION SOURCE CONTROLS ON CONSTRUCTION
PROJECTS

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Description of erosion, sediment control and other control-related practices utilized during construction activities.

1.02 UNIT PRICES

- A. Unless indicated in Unit Price Schedule as a pay item, no separate payment shall be made for Work performed under this Section. Include cost of Work performed under this Section in pay items of which this Work is a component.

1.03 REFERENCE STANDARDS

- A. ASTM D 4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- B. Storm Water Quality Management Guidance Manual prepared by City of Tomball, Harris County and Harris County Flood Control District.

1.04 SUBMITTALS

- A. Submit manufacturer's catalog sheets and other product data on dispensing equipment, pump, and aboveground fuel storage tanks, indicating capacity and dimensions of tank.
- B. Submit drawings to show location of tank protection area and driveway. Indicate nearest inlet or channelized flow area. Clearly dimension distances and measurements.
- C. Submit list of spill containment equipment, and quantities thereof, located at fueling area.
- D. Submit manufacturer's catalog sheets and other product data on geotextile fabric.

1.05 QUALITY ASSURANCE

- A. Person conducting visual examination for pollutant shall be fully knowledgeable about the NPDES Construction General Permit, detecting sources of storm water contaminants, inspection of aboveground storage tank and appurtenances for leakage, and the day-to-day operations that may cause unexpected pollutant releases.

PART 2 P R O D U C T S

2.01 ABOVEGROUND STORAGE TANK

- A. Tank Assembly: Must be listed with UL 1709 and UL 2085.
- B. Inner Steel Storage Tank: Follow UL 142, with minimum thickness of 1/8-inch welded construction.
- C. Tank Encasement: Either concrete or steel to provide minimum of 110 percent containment of inner tank capacity. Provide 5-gallon overspill containment pan for tank refueling.
- D. Dispenser Pump: For submersible pump, UL listed emergency shut-off valve to be installed at each dispenser. For suction pump, UL listed vacuum-activated shut-off valve, with shear section, is to be installed at each dispenser. Fuel may not be dispensed from tank by gravity flow or by pressurization of tank. Means must be provided to prevent release of fuel by siphon flow.
- E. Representative Manufacturers: Convault, Fireguard, Ecovault, SuperVault, or equal.

2.02 CONCRETE

- A. Provide concrete with minimum strength of 4,000 psi at 28 days.

2.03 AGGREGATES

- A. Coarse aggregate shall consist of crushed stone, gravel, crushed blast furnace slag, or combination of these materials. Aggregate shall be composed of clean, hard, durable materials, free from adherent coatings, salt, alkali, dirt, clay, loam, shale, soft or flaky materials, or organic and injurious matter.
- B. Coarse aggregates shall conform to following gradation requirements.

Sieve Size	Percent Retained
(Square Mesh)	(By Weight)
2-1/2"	0
2"	0 - 20
1-1/2"	15 - 50
3/4"	60 - 80
No. 4	95 - 100

2.04 GEOTEXTILE FABRIC

- A. Provide woven or non-woven geotextile filter fabric made of either polypropylene, polyethylene, ethylene, or polyamide material in continuous rolls of longest practical length.
- B. Geotextile fabric shall have a grab strength of 270 psi in any principal direction (ASTM D4632), Mullen burst strength exceeding 200 psi (ASTM D-3786) and equivalent opening size between 50 and 70.
- C. Filter fabric material shall contain ultraviolet inhibitors and stabilizers to provide minimum of 6 months of expected usable construction life at a temperature range of 0 degrees F to 120 degrees F.
- D. Representative Manufacturers: Mirafi, Inc., Synthetic Industries, or equal.

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. No clearing and grubbing or rough cutting permitted until erosion and sediment control systems are in place, other than site Work specifically directed by City Engineer to allow soil testing and surveying.
- B. Prohibit equipment and vehicles from maneuvering on areas outside of dedicated rights-of- way and easements for construction. Immediately repair damage caused by construction traffic to erosion and sediment control systems.
- C. Maintain existing erosion and sediment control systems located within project site until acceptance of Project or until directed by City Engineer to remove and discard existing system.

- D. Regularly inspects and repairs or replaces damaged components of erosion and sediment control systems as specified in this Section. Unless otherwise directed, maintain erosion and sediment control systems until project area stabilization is accepted by City. Remove erosion and sediment control systems promptly when directed by City Engineer. Discard removed materials off site.
- E. Remove and dispose sediment deposits at designated spoil site for Project. If a project spoil site is not designated on Drawings, dispose of sediment off site at location not in or adjacent to stream or flood plain. Assume responsibility for off-site disposal. Spread sediment evenly throughout site, compacted and stabilized. Prevent sediment from flushing into a stream or drainage way. If sediment has been contaminated, dispose of in accordance with existing federal, state, and local rules and regulations.
- F. Assume responsibility for collecting, storing, hauling, and disposing of spoil, silt, and waste materials as specified in this or other Specifications and in compliance with applicable federal, state, and local rules and regulations.
- G. Employ protective measures to avoid damage to existing trees to be retained on project site. Conduct construction operations under this Contract in conformance with erosion control practices described in Drawings and this Specification.
- H. Prepare spill response and containment procedures to be implemented in event of significant materials spill. Significant materials include but are not limited to: raw materials; fuels; materials such as solvent, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; chemical required to be reported pursuant to Section 313 of Title III of SARA; fertilizers; pesticides, and waste products such as slag, ashes and sludge that have potential to be released with storm water discharges. Spill containment procedures shall be kept on-site or in construction field office.
- I. Spill containment equipment appropriate to size of operation is to be located in close proximity of fueling area. Such equipment includes, but not limited to, suitable waste containers for significant materials, drip pans, booms, inlet covers, or absorbent.
- J. Properly label significant materials or waste containers used for construction activities and stored on-site overnight.
- K. Install, maintain, and inspect erosion, sediment control measures and practices as specified in Drawings and in this or other Specifications.

3.02 TOPSOIL PLACEMENT FOR EROSION AND SEDIMENT CONTROL SYSTEMS

- A. When topsoil is specified as a component of another Specification, conduct erosion control practices described in this Specification during topsoil placement operations.
 - 1. When placing topsoil, maintain erosion and sediment control systems consisting of swales, grade stabilization structures, berms, dikes, waterways, and sediment basins.
 - 2. Maintain grades, which have been previously established on areas to receive topsoil.
 - 3. After areas to receive topsoil have been brought to grade, and immediately prior to dumping and spreading topsoil, loosen sub grade by discing or by scarifying to a depth of at least 2 inches to permit bonding of topsoil to subsoil. Compact by passing bulldozer up and down slope, tracking over entire surface area of slope to create horizontal erosion control slots.
 - 4. No sod or seed shall be placed on soil, which has been treated with soil sterilants until sufficient time has elapsed to permit dissipation of toxic materials.

3.03 DUST CONTROL

- A. Implement dust control methods to control dust creation and movement on construction sites and roads and to prevent airborne sediment from reaching receiving streams or storm water conveyance systems, to reduce on-site and off-site damage, to prevent health hazards, and to improve traffic safety.
- B. Control blowing dust by using one or more of following methods:
 - 1. Mulches bound with chemical binders such as Carasol, Terratack, or equal.
 - 2. Temporary vegetative cover.
 - 3. Spray-on adhesives on mineral soils when not used by traffic.
 - 4. Tillage to roughen surface and bring clods to surface.
 - 5. Irrigation by water sprinkling.
 - 6. Barriers using solid board fences, snow fences, burlap fences, crate walls, bales of hay, or similar materials.

- C. Implement dust control methods immediately whenever dust can be observed blowing on project site.

3.04 KEEPING STREETS CLEAN

- A. Keep streets clean of construction debris and mud carried by construction vehicles and equipment. If necessary, install stabilized construction exits at construction, staging, storage, and disposal areas. Vehicle/equipment wash area (stabilized with coarse aggregate) may be installed adjacent to stabilized construction exit, as needed. Release wash water into a drainage swale or inlet protected by erosion and sediment control measures. Construction exit and wash areas are specified in Section 01575 - Stabilized Construction Exit.
- B. In addition to stabilized construction exits, shovel or sweep pavement to extent necessary to keep street clean. Water hosing or sweeping of debris and mud off of street into adjacent areas is not allowed.

3.05 EQUIPMENT MAINTENANCE AND REPAIR

- A. Confine maintenance and repair of construction machinery and equipment to areas specifically designated for that purpose. Locate areas so that oils, gasoline, grease, solvents, and other potential pollutants cannot be washed directly into receiving streams or storm water conveyance systems. Provide these areas with adequate waste disposal receptacles for liquid as well as solid waste. Clean and inspect maintenance areas daily.
- B. On construction site where designated equipment maintenance areas are not feasible, take precautions during each individual repair or maintenance operation to prevent potential pollutants from washing into streams or conveyance systems. Provide temporary waste disposal receptacles.

3.06 WASTE COLLECTION AND DISPOSAL

- A. Formulate and implement a plan for collection and disposal of waste materials on construction site. In plan, designate locations for trash and waste receptacles and establish a collection schedule. Specify and carry out methods for ultimate disposal of waste in accordance with applicable local, state, and federal health and safety regulations. Make special provisions for collection and disposal of liquid wastes and toxic or hazardous materials.
- B. Keep receptacles and waste collection areas neat and orderly to extent possible. Waste shall not be allowed to overflow its container or accumulate from day-to-day. Locate trash collection points where they shall least likely be affected by

concentrated storm water runoff.

3.07 WASHING AREAS

- A. Avoid washing concrete delivery trucks or dump trucks and other construction equipment at locations where runoff shall flow directly into a watercourse or storm water conveyance system. Designate special areas for washing vehicles. Locate these areas where wash water shall spread out and evaporate or infiltrate directly into ground, or where runoff can be collected in temporary holding or seepage basin. Beneath wash areas construct a gravel or rock base to minimize mud production.

3.08 STORAGE OF CONSTRUCTION MATERIALS AND CHEMICALS

- A. Isolate sites where chemicals, cements, solvents, paints, or other potential water pollutants are stored in areas where they shall not cause runoff pollution.
- B. Store toxic chemicals, materials, pesticides, paints, and acids in accordance with manufacturers= guidelines. Protect groundwater resources from leaching by placing a plastic mat, packed clay, tar paper, or other impervious materials on areas where toxic liquids are to be opened and stored.

3.09 DEMOLITION AREAS

- A. Demolition activities which create large amounts of dust with significant concentrations of heavy metals or other toxic pollutants shall use dust control techniques to limit transport of airborne pollutants. However, retain water or slurry used to control dust contaminated with heavy metals or toxic pollutants on site, and prevent runoff directly into watercourses or storm water conveyance systems. Carry out methods of ultimate disposal of these materials in accordance with applicable local, state, and federal health and safety regulations.

3.10 SANITARY FACILITIES

- A. Provide construction sites with adequate portable toilets for workers in accordance with Section 01504 - Temporary Facilities and Controls, and applicable health regulations.

3.11 PESTICIDES

- A. Use and store pesticides during construction in accordance with manufacturer's guidelines and with local, state, and federal regulations. Avoid overuse of pesticides, which could produce contaminated runoff. Take great care to prevent accidental spillage. Never wash pesticide containers in or near flowing streams or storm water conveyance systems.

3.12 CONSTRUCTION METHODS

- A. Provide fuel tank protection area and driveway as shown on Drawings.
- B. Do not locate fueling area in or near channelized flow area or close to storm sewer conveyance system. Provide sufficient space to allow installation of other erosion and sediment controls to protect those areas.
- C. Clear and grub fueling area to remove unsuitable materials. Place geotextile fabric as permeable separator to prevent mixing of coarse aggregate with underlying soil. Overlap fabric minimum of 6 inches. Place coarse aggregate on top of geotextile fabric to minimum depth of 8 inches.
- D. Grade protection area and driveway to provide sufficient drainage away from stabilized areas. Use sandbags, gravel, boards, or similar methods to prevent sediment from entering public right-of-way, receiving stream or storm water conveyance system. Provide driveway to fuel tank area with minimum width of 15 feet for one-way traffic and 30 feet for two-way traffic.
- E. Place aboveground storage tank on top of cast-in-place or pre-cast foundation. Base size and thickness of foundation on size and weight of tank to be used, with minimum thickness of 6 inches. Enclose concrete foundation by 5-inch by 5-inch concrete curb and extend minimum of 1 foot beyond tank and dispenser assemblies, so that leak and drip can be contained within concrete foundation.
- F. Slope concrete foundation minimum of 1 percent toward 6-inch wide by 12-inch long by 4-inch deep sump pit. Install minimum of 2-inch pipe inside sump pit with valve on outside of curb to allow draining of concrete foundation.
- G. Install portable concrete Jersey Barrier around concrete foundation. Provide minimum clearance of 2 feet from edge of foundation. In lieu of Jersey barrier,

install 4-inch diameter steel pipe bollards around foundation. Bury bollards minimum of 3 feet deep, 3 feet above ground, and 4 feet on center, encased in 12-inch wide concrete foundation.

3.13 MAINTENANCE

- A. Inspections shall be conducted by designated health and safety officer qualified to conduct health and safety inspections.
- B. Inspect stabilized areas after every storm event and at least once a week. Provide periodic top dressing with additional coarse aggregate to maintain required depth. Repair and clean out damaged control measures used to trap sediment.
- C. Inspect fuel tank foundation's bermed area after every storm event and at least once a week. Visually examine storm water contained in tank's bermed foundation area for oil sheen or other obvious indicators of storm water pollution. Properly dispose of storm water when pollutant is present. Record visual examination of storm water discharge in Report noting date and time of examination, name of examiner, observations of water quality, and volume of storm water discharged from bermed area. Keep Report with other storm water pollution control inspection reports on site, in readily accessible location.

3.14 TEMPORARY FUELING AREA CLOSURE

- A. Dispose of temporary vehicle and equipment fueling area by removal of sediment and erosion controls properly off site. City Engineer will inspect topsoils in fueling area and immediate vicinity for evidence of fuel leaks. If City Engineer determines that sufficient pollutants have been released, remove soil and properly dispose off site. Other remediation methods may be required.

END OF SECTION

Section 01576

WASTE MATERIAL DISPOSAL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Disposal of waste material and salvageable material.

1.2 UNIT PRICES

- A. No separate payment will be made for waste material disposal under this Section. Include payment in unit price for related sections.

1.3 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit copy of approved "Development Permit", as defined in Chapter 38 of Flood Plain Ordinance (City Ordinance Number 2007-07), prior to disposal of excess material in areas designated as being in "100-year Flood Hazard Area" within City. Contact City of Tomball/Montgomery County Flood Plain Manager, Craig T. Meyers, Community Development Director, at (281-290-1412) for flood plain information.
- C. Obtain and submit disposal permits for proposed disposal sites if required by local ordinances.
- D. Submit copy of written permission from property owner, with description of property, prior to disposal of excess material adjacent to Project. Submit written and signed release from property owner upon completion of disposal work.

1.4 SALVAGEABLE MATERIAL

- A. Excavated Material: When indicated on Drawings, load, haul, and deposit excavated material at location or locations shown on Drawings outside limits of Project.
- B. Base, Surface, and Bedding Material: Load shell, gravel, bituminous, or other base and surfacing material designated for salvage into City trucks.
- C. Pipe Culvert: Load culverts designated for salvage into City trucks.

- D. Other Salvageable Materials: Conform to requirements of individual Specification Sections.
- E. Coordinate with City and Engineer loading of salvageable material on City trucks.

1.5 EXCESS MATERIAL

- A. Remove and legally dispose of vegetation, rubble, broken concrete, debris, asphaltic concrete pavement, excess soil, and other materials not designated for salvage from job site.
- B. Excess soil may be deposited on private property adjacent to Project when written permission is obtained from property owner. See Paragraph 1.03 D above.
- C. Verify flood plain status of any proposed disposal site. Do not dispose of excavated materials in area designated as within 100-year Flood Hazard Area unless a Development Permit has been obtained. Remove excess material placed in "100-year Flood Hazard Area" within City, without "Development Permit", at no additional cost to City.
- D. Remove waste materials from site daily, in order to maintain site in neat and orderly condition.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01610

BASIC PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Requirements for transportation, delivery, handling and storage of materials and equipment.

1.02 PRODUCTS

1. Products: Means material, equipment, or systems forming Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of Work. Products may also include existing materials or components designated for reuse.
2. Do not reuse materials and equipment, designated to be removed, except as specified by Contract.
3. Provide equipment and components from fewest number of manufacturers as practical, in order to simplify spare parts inventory and allow for maximum interchangeability of components. For multiple components of same size, type or application, use same make and model of component throughout Project.

1.03 TRANSPORTATION

1. Make arrangements for transportation, delivery and handling of equipment and materials required for timely completion of Work.
2. Transport and handle products in accordance with instructions.
3. Consign and address shipping documents to proper party giving name of Project, street number and city. Shipments shall be delivered to Contractor.

1.04 DELIVERY

1. Arrange deliveries of products to accommodate short-term site completion schedules and in ample time to facilitate inspection prior to installation. Avoid deliveries that cause lengthy storage or overburden of limited storage space.

2. Coordinate deliveries to avoid conflict with Work and conditions at site and to accommodate following:
 - a. Work of other contractors or City
 - b. Limitations of storage space.
 - c. Availability of equipment and personnel for handling products.
 - d. City's use of premises.
3. Have products delivered to site in manufacturer's original, unopened, labeled containers.
4. Immediately upon delivery, inspect shipment to assure:
 - a. Product complies with requirements of Contract.
 - b. Quantities are correct.
 - c. Containers and packages are intact; labels are legible.
 - d. Products are properly protected and undamaged.

1.05 PRODUCT HANDLING

1. Coordinate off-loading of materials and equipment delivered to job site. If necessary to move stored materials and equipment during construction, relocate materials and equipment at no additional cost to City.
2. Provide equipment and personnel necessary to handle products, including those provided by City, by methods to prevent damage to products or packaging.
3. Provide additional protection during handling as necessary to prevent breaking, scraping, marring, or otherwise damaging products or surrounding areas.
4. Handle products by methods to prevent over bending or over stressing.
5. Lift heavy components only at designated lifting points.
6. Handle materials and equipment in accordance with manufacturer's recommendations.

7. Do not drop, roll, or skid products off delivery vehicles. Hand carry or use suitable materials handling equipment.

1.06 STORAGE OF MATERIAL

1. Store and protect materials in accordance with manufacturer's recommendations and requirements of these Specifications.
2. Make necessary provisions for safe storage of materials and equipment. Place loose soil materials, and materials to be incorporated into Work to prevent damage to any part of Work or existing facilities and to maintain free access at all times to all parts of Work and to utility service company installations in vicinity of Work. Keep materials and equipment neatly and compactly stored in locations that will cause minimum inconvenience to other contractors, public travel, adjoining owners, tenants, and occupants. Arrange storage to provide easy access for inspection.
3. Restrict storage to areas available on construction site for storage of material and equipment as shown on Drawings or approved by City Engineer.
4. Provide off-site storage and protection when on-site storage is not adequate. Provide addresses of and access to off-site storage locations for inspection by City Engineer.
5. Do not use lawns, grass plots, or other private property for storage purposes without written permission of owner or other person in possession or control of premises.
6. Protect stored materials and equipment against loss or damage.
7. Store in manufacturer's unopened containers.
8. Neatly, safely, and compactly stack materials delivered and stored along line of Work to avoid inconvenience and damage to property owners and general public, and maintain at least 3 feet from fire hydrant. Keep public, private driveways and street crossings open.
9. Repair or replace damaged lawns, sidewalks, streets or other improvements to satisfaction of City Engineer. Total length which materials may be distributed along route of construction at one time is 1000 linear feet, unless otherwise approved in writing by City Engineer.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01630

PRODUCT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Options for making product or process selections.
2. Procedures for proposing equivalent construction products or processes, including preapproved, prequalified, and approved products or processes.

1.2 DEFINITIONS

1. Product means materials, equipment, or systems incorporated into Project. Product does not include machinery and equipment used for production, fabrication, conveying, and erection of Work. Products may also include existing materials or components designated for reuse.
2. Process proprietary system or method for installing system components resulting in integral, functioning part of Work. For this Section, the word Products includes Processes.

1.3 SELECTION OPTIONS

1. Preapproved Products are construction products of certain manufacturers or suppliers designated in Specifications as "preapproved." List of preapproved products is maintained by City. Preapproved products for this Project are designated as preapproved in Specifications. Products of other manufacturers or suppliers not acceptable for this Project and not considered under submittal process for approving alternate products.
2. Prequalified Products are construction products of certain manufacturers or suppliers designated in Specifications as "prequalified." Prequalified Products for this Project are designated as prequalified in Specifications. Products of other manufacturers or suppliers shall not be acceptable for this Project and shall not be considered under submittal process for approving alternate products.

3. Approved Products are construction products or processes of certain manufacturers or suppliers designated in Specifications followed by words "or approved equal." Approval of alternate products or processes not listed in Specifications may be obtained through provisions for product options and substitutions in Document 00700 - General Conditions, and by following submittal procedures specified in 01330- Submittal Procedures. Procedure for approval of alternate products is not applicable to preapproved or prequalified products.
4. Product Compatibility to maximum extent possible, is to provide products that are of same type or function from single manufacturer, make, or source. Where more than one choice is available, select product that is compatible with other products already selected, specified, or in use by City.

1.4 CONTRACTOR'S RESPONSIBILITY

1. Responsibility related to product options and substitutions is defined in Document 00700- General Conditions.
2. Furnish information City Engineer deems necessary to judge equivalency of alternate product.
3. Pay for laboratory testing, as well as other review or examination costs, needed to establish equivalency between products in order to obtain information upon which City Engineer can base decision.
4. If City Engineer determines alternate product is not equal to that named in Specifications, furnish one of specified products.

1.5 CITY ENGINEER'S REVIEW

1. Use alternate products or processes only when approved in writing by City Engineer. City Engineer's determination regarding acceptance of proposed alternate product is final.
2. Alternate products shall be accepted if product is judged by City Engineer to be equivalent to specified product or to offer substantial benefit to City.
3. City retains right to accept any product or process deemed advantageous to City, and similarly, to reject any product or process deemed not beneficial to City.

1.6 SUBSTITUTION PROCEDURE

1. Collect and assemble technical information applicable to proposed product to aid in determining equivalency as related to approved product specified.
2. Submit written request for construction product to be considered as alternate product.
3. Submit product information after effective date of Contract and within time period allowed for substitution submittals given in Document 00700 - General Conditions. After submittal period has expired, requests for alternate products shall be considered only when specified product becomes unavailable because of conditions beyond Contractor's control.
4. Submit 5 copies of each request for alternate product approval. Include following information:
 1. Complete data substantiating compliance of proposed substitution with Contract.
 2. For products:
 1. Product identification, including manufacturer's name and address
 2. Manufacturer's literature with product description, performance and test data and reference standards
 3. Samples, as applicable
 4. Name and address of similar projects on which product was used and date of installation. Include name of Owner, Architect/Engineer, and installing contractor
 3. For construction methods:
 1. Detailed description of proposed method
 2. Drawings illustrating methods
 4. Itemized comparison of proposed substitution with product or method specified

5. Data relating to changes in construction schedule
 6. Relation to separate contracts, if any
 7. Accurate cost data on proposed substitution in comparison with product or method specified
 8. Other information requested by City Engineer
5. Approved alternate products shall be subject to same review process as specified product for shop drawings, product data, and samples.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01731

CUTTING AND PATCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cutting, patching and fitting of Work or Work under construction. Coordinating installation or connection of Work with existing facilities, or uncovering Work for access, inspection or testing and related submittals. Demolition is specified elsewhere.

1.02 UNIT PRICES

- A. No separate payment will be made for cutting and patching under this Section. Include payment in unit price for related sections.

1.03 CUTTING AND PATCHING

- A. Perform activities to avoid interference with facility operations and Work of others in accordance with Document 00700 - General Conditions of Contract.
- B. Execute cutting and patching, including excavation, backfill and fitting to:
 - 1. Remove and replace defective Work or Work not conforming to Drawings and Specifications
 - 2. Take samples of installed Work as required for testing
 - 3. Remove construction required to provide for specified alteration or addition to existing Work
 - 4. Uncover Work to provide for inspection or reinspection of covered Work by City Engineer or regulatory agencies having jurisdiction
 - 5. Connect Work not accomplished in proper sequence to completed Work
 - 6. Remove or relocate existing utilities and pipes that obstruct Work

7. Make connections or alterations to existing or new facilities
 8. When necessary, provide openings, channels, chases and flues and cut, patch, and finish
 9. Provide protection for other portions of Project
- C. Restore existing Work to state equal to or better than that prior to cutting and patching and to standards of these Specifications.
- D. Support, anchor, attach, match, trim and seal materials to Work of others. Unless otherwise specified, furnish and install sleeves, inserts, hangers, required for execution of Work.
- E. Provide shoring, bracing and support as required to maintain structural integrity and protect adjacent Work from damage during cutting and patching. Before cutting beams or other structural members, anchors, lintels or other supports, request written instructions from City Engineer. Follow instructions, as applicable.
- F. Fully integrate new materials with existing similar materials by bonding, lapping, mechanically tying, anchoring or other effective means that shall prevent cracks and shall not show evidence of patching. Conceal effects of demolition and patching and provide new construction that blends with existing adjacent or abutting surfaces without obvious breaks, joints or changes of surface appearance unless specifically shown otherwise.

1.03 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
1. Submit written notice to City Engineer requesting consent to proceed prior to cutting, which may affect structural integrity or design function, City operations, or Work of another contractor.
- B. Include the following in submittal:
1. Identification of Project
 2. Description of affected Work
 3. Necessity for cutting

4. Effect on other Work and on structural integrity
 5. Include description of proposed Work:
 - a. Scope of cutting and patching
 - b. Contractor, subcontractor or trade to execute Work
 - c. Proposed products
 - d. Extent of refinishing
 - e. Schedule of operations
 6. Alternatives to cutting and patching
- D. When conditions of Work or schedule indicate change of materials or methods, submit written recommendation to City Engineer including:
1. Conditions indicating change
 2. Recommendations for alternative materials or methods
 3. Submittals as required for substitutions
- E. Submit written notice to City Engineer designating time Work shall be uncovered for observation. Do not begin cutting or patching operations until authorized by City Engineer.

1.04 CONNECTIONS TO EXISTING FACILITIES

- A. Perform construction necessary to complete connections and tie-ins to existing facilities. Keep all existing facilities in continuous operation unless otherwise specifically permitted in these Specifications or approved by City Engineer.
- B. Coordinate interruption of service requiring connection into existing facilities with City Engineer. Bypassing of wastewater or sludge to waterways is not permitted. Provide temporary pumping facilities to handle wastewater if necessary. Use temporary bulkheads to minimize disruption. Provide temporary power supply and piping to facilitate construction where necessary.
- C. Submit detailed schedule of proposed connections, including shut-downs and tie-ins. Include proposed time and date as well as anticipated duration of Work.

Submit detailed schedule coordinated with construction schedule.

1. Provide specific time and date information to City Engineer 48 hours in advance of proposed Work.

D. Procedures and Operations:

1. Operate existing pumps, valves and gates required for sequencing procedures under supervision of City Engineer. Do not operate valve, gate or other item of equipment without City Engineer's knowledge.
2. Insofar as possible, equipment shall be tested and in operating condition before final tie-ins are made to connect equipment to existing facility.
3. Carefully coordinate Work and schedules. Provide written notice to City Engineer at least 48 hours before shutdowns or bypasses are required.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF
SECTION

Section 01732

PROCEDURE FOR WATER VALVE ASSISTANCE

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Operation of existing valves is by City of Tomball employees. Operation of new valves by the Contractor's employees is included in the project.

1.02 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for this item. Include the cost of valve operation and valve assistance in Unit Price bid for valves and water mains.

1.03 PROCEDURE

- A. Perform activities listed in Exhibit A attached to this section.

1.04 SUBMITTALS

- A. Submit request for work order planning meeting as noted in 01330 - Submittal Procedures.

1. Include information listed in Step 1 of Exhibit A, attached to this Section.

1.05 CANCELLATION

- A. The Contractor, Construction, and Public Utilities Division may cancel the agreed scheduled valve assistance appointment at no extra cost to either party. The Contractor shall notify the City Inspector 24 hours in advance. The City Inspector shall notify Central Operation Service (COS) immediately of the cancellation. Cancellation may be caused by bad weather, unforeseen delays by either party, preparation work taking longer than anticipated, etc.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

EXHIBIT A

PROCEDURE FOR VALVE ASSISTANCE

- NOTE:**
- 1. DO NOT OPERATE EXISTING WATER VALVES.**
 - 1. OPERATE ALL NEW WATER VALVES INSTALLED UNTIL ACCEPTED BY THE CITY.**
 - 2. UTILITY MAINTENANCE DIVISION TO WITNESS THE TESTING OF ALL NEW WATER VALVES PRIOR TO SCHEDULING SUBSTANTIAL COMPLETION INSPECTION.**

Telephone: (713) 837-0500 (24 Hrs.)

The following procedure will be used by Utility Maintenance Division personnel when completing a service request from individual City Inspectors for operation of existing water valves.

ROUTINE VALVE ASSISTANCE REQUEST (NON-EMERGENCY JOBS):

- Step 1. a.** The City Inspector shall schedule a work order planning meeting by calling the Central Operation Service (COS) at **(713) 837-0500** a minimum of 3 days in advance (excluding weekends, holidays, inclement weather days, and the day of the call) and providing the following information:

Location of Work (Street Intersection)	Project #
Project Description	Contractor (Company Name)
Job Superintendent's Name	Superintendent's Office #/Mobile #/Pager
# Contractor's Emergency Information	Name and Phone#/Mobile #/Pager #
City Inspector/Senior Inspector	Name, Phone#/Mobile #/Pager #
Date & Time assistance is requested	

- b.** The COS will create a work order for each wet connection, cut and plug, etc. which will be designated as a A Code 40" (Private Contractor).
- c.** The COS will give the City Inspector the work order number. This work order number must be used as a reference in all communications regarding this request for Valve Assistance.
- d.** The valve personnel must have the work order number on his/her route sheet. When the valve personnel arrive at the job site for the **WORK ORDER PLANNING MEETING** (between the City Inspector, Contractor, and the Utility Maintenance valve personnel), he/she should verify the street intersection and work order number with the City Inspector before beginning the **WORK ORDER PLANNING MEETING.**

- e. During the **WORK ORDER PLANNING MEETING** between the City Inspector, Contractor, and the Utility Maintenance valve personnel, the work to be performed will be outlined and **the actual date the work is to be performed will be mutually determined by the City Inspector and the Utility Maintenance Division valve personnel, based upon relevant factors such as preparatory work needed, customer requirements, etc.**
- f. The valve personnel will perform the work specifically outlined in the work order requested. Also, the Utility Maintenance Branch valve personnel will only operate the existing water valves. The City Inspector must contact COS and request a new work order for additional work.
- g. The valve personnel will contact the dispatcher and advise when the job is complete. Valve personnel will list all appropriate information on his/her Crew Activity Report.

Step 2. Should valve personnel not be able to keep an appointment to provide valve assistance, Utility Maintenance Branch will provide notification to the appropriate City Inspector by phone at least 24 hours prior, with that fact and rescheduling information, if available.

Step 3. The City Inspector will notify COS if the valve personnel have not arrived at the site within 30 minutes of the scheduled appointment. **If the Contractor is not ready when the valve operator arrives to provide valve assistance, the Contractor shall pay a penalty of \$50.00 per hour to the City.**

Step 4. The Contractor will not be due delay claims or downtime if Utility Maintenance Branch has notified the City Inspector that they will not be able to provide the valve assistance as scheduled.

Step 5. Test new valves installed in the presence of the City Inspector before the substantial completion inspection is scheduled. Place new valves in the open position at or before substantial completion.

Step 6. Construction Division will notify in writing to the Utility Maintenance Division 2 months before the warranty expires to report any problems they have with the new water lines. Construction Division will notify Contractor about the problems.

EMERGENCY REQUEST FOR VALVE ASSISTANCE PROCEDURE:

Step 1. The City Inspector will request emergency Valve Assistance due to a broken main/service, etc. by calling COS at **(713) 837-0500** provide the following information:

Location of Work (Street Intersection)	Project #
Project Description	Superintendent's Office #/Mobile #/Pager
# Contractor (Company Name)	Name and Phone#/Mobile #/Pager #
Job Superintendent's Name	Name, Phone#/Mobile #/Pager
# Contractor's Emergency Information	
City Inspector/Senior Inspector	
Date & Time assistance is requested	

Step 2. COS will create an emergency work order number and describe the work to be performed.

Step 3. COS will give the City Inspector the emergency work order number. Reference work order number in all communications regarding request for Valve Assistance.

Step 4. COS will contact the designated valve personnel and assign the emergency work order. The dispatcher will follow the standard COS procedures if this situation occurs after normal working hours.

Step 5. The valve personnel must have the emergency work order number on his/her route sheet. When the valve personnel arrive at the job site for the emergency work, he/she should verify the street intersection and the emergency work order number with the City Inspector prior to beginning the work requested for operating the existing water valves. The valve personnel will coordinate the verification of the street intersection and the work order number with City Inspector prior to performing the work.

Section 01733

PROCEDURE FOR NEW WATER LINE DISINFECTION

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Disinfection of new water lines is performed by Public Utility Division personnel.

1.02 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for this item. Include the cost of disinfection and pressure testing of new water lines in Unit Price bid for water main construction.

1.03 PROCEDURE

- A. Perform activities listed in Exhibit A attached to this section.

1.04 SUBMITTALS

- A. A Request for Disinfection and Placement in Service: Submit as noted in 01330 - Submittal Procedures.

1.05 CANCELLATION

- A. The Contractor, Construction, and Public Utilities Division may cancel the agreed scheduled disinfection appointment at no extra cost to either party. The Contractor shall notify the City Inspector 24 hours in advance. The City Inspector shall notify COS immediately of the cancellation. Cancellation may be caused by bad weather, unforeseen delays by either party, preparation work taking longer than anticipated, etc.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

EXHIBIT A

REQUEST FOR NEW WATER LINE DISINFECTION

Water Production Telephone: (_____)

ONLY FAX REQUESTS FOR NEW WATER LINE DISINFECTION WILL BE ACCEPTED. FAX NO. (
_____.

The following procedure will be used by the Water Production Branch, Systems Development Section when receiving requests from City Inspector for New Water Line Disinfection.

- a. Forms must be completed correctly and faxed a minimum of 3 days prior to the actual date work is to be performed (excluding weekends, holidays, inclement weather days, and the day fax is received).
- b. **All requests for disinfection will be addressed to _____.**

PHASE I - CHLORINATION OF NEW WATER LINES:

Step 1. The City Inspector will complete the 4 forms: Request for Disinfection and Placement in Service of Water Mains, Disinfection of Water Mains Exhibit, and Chlorination of Water Mains Checklist.

Step 2. The City Inspector will mark the water lines that have been disinfected on the construction drawings for his records.

Step 3. The City Inspector shall check for proper installation of blow-off and chlorination injection risers.

Step 4. The City Inspector shall notify _____ at (_____)_____, **Pager No. (____)** _____, **Mobile Telephone No. (____)** _____, if the chlorination crew has not arrived at the site within 30 minutes of the scheduled appointment. **If the Contractor is not ready when the chlorination crew arrives to disinfect the new water main, Contractor shall reimburse the City for mobilization in the amount of \$ _____.00 for each request.**

Step 5. Contractor and Construction Division shall assist the chlorination crews to flush the dirt and debris out of the pipes **before** applying the chlorine.

Step 6. The chlorination crews shall inject chlorine solution into the pipe, confirming no less than a 25 ppm.

Step 7. The chlorine shall be left in the pipe for at least 24 hours.

Exhibit A
Revised 12/01/98

PHASE II - FINAL FLUSHING/BACTERIOLOGICAL SAMPLING:

- Step 8.** The chlorination crews shall flush chlorine out thoroughly until clear water is obtained from existing system. Crews shall collect samples from prescribed sample points, preferably every 1000 feet length of pipes, all dead ends, and blow-off, if any.
- Step 9.** The chlorination crews shall obtain sample results from the laboratory.
- Step 10.** If samples are good **(negative)**, Water Production Branch shall send back the request form to the City Inspector with second part completed **(fax to Construction Division Inspector/Senior Inspector)**. The original form shall be sent by interoffice mail.
- Step 11.** Water Production Branch shall advise the City Inspector when it is permissible to perform hydrostatic test.
- Step 12.** The Water Production Branch will receive the pressure test results performed by the Contractor from the City Inspector. **If the water line was opened, the City will re-chlorinate the water line at the Contractor's cost and obtain samples until found good.** The Water Production Branch will obtain the third part of the request form from the City Inspector.
- Step 13.** **If the samples are found to be POSITIVE more than twice**, re-chlorinate the water line.
- Step 14.** Send correspondence to Construction Division with any necessary charges.
- Step 15.** After the residual results are acceptable, the new water line is now ready to be **PLACED IN SERVICE**. Water Production Branch shall complete the fourth part of the Request for Disinfection and Placement in Service of Water Mains form and fax to the City Inspector. The original form will be sent by interoffice mail.

WATER MAINS PIPE-LAYING PRE/POST INSPECTION CHECKLIST (for water mains 30 inches in diameter and larger):

GFS/File No: _____ Exhibit: Location: _____

Inspector: _____ Contractor: _____
(Print name)**All questions must be answered A Yes prior to requesting disinfection of water mains.**

- | | <u>Yes</u> | <u>No</u> |
|---|-------------------|------------------|
| 1. Installed and maintained trench safety and confined space safety systems according to provisions of OSHA 29CFR . | Q | Q |
| 2. Confirmed that separation of gravity sanitary sewers, manholes, and force mains complies with minimum clearance specified. | Q | Q |
| 3. Pipe trenches were free of water, which might impair pipe laying and cause contamination. | Q | Q |
| 4. Covered or backfilled laid pipe and securely placed stoppers or bulkheads in all openings and in end of line when pipe-laying operations are interrupted and during nonworking hours. | Q | Q |
| 5. Placed pipe along project site before installation where storm water or other water will not enter or pass through pipe. | Q | Q |
| 6. Thoroughly cleaned and dried interior of pipe and fittings of foreign matter before installation. Kept interior clean until Work had been accepted. Kept joint contact surfaces clean until joining was completed. | Q | Q |
| 7. Left no debris, tools, clothing, or other materials in pipe. | Q | Q |
| 8. Inspected each pipe and fitting for defects before installation. Rejected defective or damaged pipe and fittings and removed from site. | Q | Q |
| 9. Cleaned pipe interior, removed all debris, and inspected thoroughly after all pipe-laying operations. | Q | Q |

Inspector: _____
(Signature)

Date: _____ / _____ / _____

DISINFECTION OF WATER MAINS CHECKLIST:

File No: _____ Exhibit: Location: _____

Inspector: _____ Contractor: _____
(Print name)**All questions must be answered A Yes prior to requesting disinfection of water mains.**

	<u>Yes</u>	<u>No</u>
1. Construction is completed and the water mains have been laid as shown on the drawings. Water mains shown in Exhibit _____ are free of dirt and debris.	Q	Q
2. A chlorine riser has been installed at the beginning of the new main. It is located in a manner that it can be reached conveniently from a chlorination trailer. The corporation cock is turned on.	Q	Q
3. A water supply riser is installed on a <i>live</i> line within 20 feet of the chlorine riser. The corporation cock is turned on.	Q	Q
4. Blow-offs with minimum diameter of 2 inches or greater are installed at each end, and at every 1,000 feet of the new mains. The blow-offs are large enough for the size of pipe used and length of main laid. They are safely accessible. Handwheel valve is installed 3 feet above grade on each one of them. The corporation cocks are turned on.	Q	Q
5. Adequate drainage is provided for blow-offs and fire hydrants so that private property or other construction sites will not be flooded.	Q	Q
6. An operator can reach all valves with a valve key. Stacks, if used, are straight and clean. There is no dirt or debris covering the operating nuts. There are no large holes full of water or anything else to prevent an operator from reaching the valve.	Q	Q
7. Wet connection valve is installed and existing water supply is adequate for proper disinfection.	Q	Q

Inspector: _____
(Signature)

Date: ____ / ____ / ____

***HYDROSTATIC PRESSURE TEST FOR:**
Q Small-diameter (less than or equal to 20 inches), minimum test pressure 125 psi
Q Large-diameter (greater than 20 inches), minimum test pressure 150 psi

File No:_____Exhibit:_____Location:_____
Inspector:_____Contractor: _____

(Print name)

SECTION TO BE TESTED				
ON (street name)	FROM (street name)	TO (street name)	TOTAL FOOTAGE (feet)	PIPE DIAMETER (inches)

Section 01740

RESTORATION OF SITE IMPROVEMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Restoration of site affected by Utility Work or Roadway Reconstruction and Widening. Section does not apply to roadway extension projects.

1.02 UNIT PRICES

- A. Measurement for restoration of project site for utilities disturbed by proposed construction is by linear foot. Site Restoration for utilities will be measured like particular utility as described in appropriate specification. No separate measurement will be made for branch pipe, valves and other associated work for utilities. Multiple utilities within same right-of-way will be paid on linear foot basis for only one utility.
- B. Measurement for restoration of project site disturbed along roadway reconstruction or widening project is by linear foot. Site restoration for roadway reconstruction or widening projects will be measured along the centerline of right-of-way. No separate payment will be made when more than one phase occurs within same right-of-way.
- C. Payment will be made at unit price for Site Restoration, regardless of size or type of pipe, method of construction, paved or unpaved areas or thickness and width of pavement. Payment for site restoration will be made when restoration is complete within right-of-way, including service connections. No partial payment will be made.
- D. Service Reconnections. Service reconnections are not considered restoration of site improvements and are not paid under this Section. Service reconnections are paid under Section 02426 - Sanitary Sewer Service Reconnections.

1.03 REFERENCES

- A. ANSI Z60.1. American Standard for Nursery Stock.

1.04 DEFINITIONS

- A. Site Restoration is replacement or reconstruction of site improvements to rights-of-way, easements, public property, and private property that are affected or altered by construction operations, with improvements restored to condition which is equal to, or better than, that which existed prior to construction operations.
- B. Site Improvement includes but is not limited to pavement, curb and gutter, esplanades, sidewalks, driveways, fences, lawns, irrigation systems and landscaping.
- C. Line Segment. Length of sewer from center line to centerline of manholes, in line junction structure and bends as designated on Drawings, and to end of stubs or termination of pipe.
- D. Minimum Trench Width. Allowable trench width for corresponding pipe outside diameter as defined in Section 02317 - Excavation and Backfill for Utilities.

1.05 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit qualifications of nursery or landscaping firm to be used.

1.06 QUALITY ASSURANCE

- A. Have trees, landscape shrubs and plantings performed by qualified personnel.

1.07 SCHEDULING

- A. After paving or utility work is completed online segment and segment is submitted on monthly estimate for payment, complete site restoration for that segment before next monthly estimate for payment is submitted, unless extended in writing by City Engineer.
- B. For utility work requiring testing or post-installation TV inspection, completion of segment is not considered to include testing or TV inspection. Schedule for completion of site restoration is not determined by completion of testing or TV inspection.

1.08 WARRANTY

- A. Provide two-week warranty on plants and grasses that die due to shock or damage

only.

- B. Replace plants that fail during warranty period according to specifications governing original plants.
- C. Provide written notification to homeowner stating that homeowner is responsible for watering replaced plants and grasses.
- D. Damage caused by natural hazards including hail, high winds or storm is not covered by warranty.
- E. Existing plant material required to be moved on site are covered under warranty.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Pavement, Sidewalks and Driveways. Use materials as specified in Section 02951 - Pavement Repair and Resurfacing.
- B. Seeding and Sodding. Provide sod as specified in Section 02922 - Sodding. For areas to be seeded, conform to Section 02921 - Hydromulch Seeding.
- C. Trees, Shrubs and Plantings.
 - 1. Provide trees, shrubs and plants of quantity, size, genus, species and variety of those being replaced and conforming to recommendations and requirements of ANSI Z60.1.
 - 2. Use balled-and-burlapped nursery stock for tree replacement.
 - 3. Within availability of standard nursery stock, replace each removed tree with one of an equivalent species and size, but with not less than 2-1/2 inch diameter trunk, as measured 1-1/2 feet above natural ground.

PART 3 EXECUTION

3.01 COORDINATION

- A. For water main and sanitary sewer construction, complete site restoration within 45 days from date construction is successfully tested, unless extended in writing by City Engineer.

- B. For water main and sanitary sewer construction, site restoration associated with wet connections, cut and plugs, salvaging of fire hydrants and sewer reconnections which needs to occur after line is tested, can be restored after 45 days provided site is restored immediately after accomplishing such work. No payment will be made for such wet connections, cut and plugs, salvaging of fire hydrants and sewer reconnection work until site restoration is complete.
- C. Utility installation or roadway reconstruction and widening cannot exceed site restoration by more than 8,000 linear feet. Site restoration must proceed continuously and be sequentially completed in order of work progress. When utility work and reconstruction or widening work occurs within same limits of right-of-way, utility installation cannot exceed pavement improvements by more than 3,000 linear feet. No intermediate areas can be skipped or left to be completed at a future date, unless otherwise approved by City Engineer.
- D. Do not proceed with additional work if requirements in paragraphs 3.01A, B and C are not satisfied.
- E. Limit utility installation to maximum of two project site locations for projects involving multiple subdivisions or locations.
- F. When roadway reconstruction and widening is being completed in phases, complete restoration of site in previous phase before continuing to next phase, unless otherwise approved by City Engineer.

3.02 EXAMINATION

- A. Construction Site Photographs. Document conditions on and adjacent to construction site with construction photographs as specified Section 01321 - Construction Photographs.
- B. Make photographs of all areas where construction operations will be conducted including driveways and sidewalks within or adjacent to Work area.

3.03 PREPARATION

- A. Removing Pavements and Structures.
 - 1. Remove minimum pavement, curb and gutter, and other structures as required to perform Work. Perform removals in accordance with Section 02221 - Removing Existing Pavements and Structures.

2. Remove concrete and asphaltic concrete material using sawed joints in accordance with Section 02752 - Concrete Pavement Joints.
3. Remove curb and gutter a distance of 2 feet outside excavation, unless otherwise approved by City Engineer.

- B. Remove or relocate existing fencing, if required, for construction operations. Maintain integrity of private property owner=s fencing if needed for protection of children, pets or property. Notify property owner 72 hours in advance before removing fencing and coordinate security needs.

3.04 INSTALLATION

- A. Pavement, Sidewalk, and Driveway Restoration.

1. Replace pavement, curb and gutter, sidewalks, and driveways removed or damaged as result of construction operations. Reconstruct in accordance with Section 02951 - Pavement Repair and Resurfacing.
2. Where replacement sidewalks terminate at street curb radius, construct wheel chair ramp according to City of Tomball Standard Detail Drawing Wheel Chair Ramp Details.

- B. Seeding and Sodding.

1. Clean up construction debris and level area with bank sand so that resulting surface of new grass matches level of existing grass and maintains pre-construction drainage patterns. Level minor ruts or depressions caused by construction operations where grass is still viable by filling with bank sand.
2. Restore previously existing turfed areas with sod and fertilize in accordance with Section 02922 - Sodding. Sod to match existing turf.
3. Restore unpaved areas not requiring sodding with hydromulch methods conforming to Section 02921 - Hydromulch Seeding.

- C. Trees, Shrubbery and Plants.

1. Take extra care in removing and replanting trees, shrubbery and plants. Remove trees, shrubbery and plants, leaving soil around roots. Place trees, shrubbery and plants outside of excavation area.
2. Replace in kind any trees, shrubbery, and plants removed or damaged by

construction operations.

3. Have nursery or landscape firm make tree replacements using balled-and-burlapped nursery stock.

D. Fence Removal and Replacement.

1. Replace fencing removed or damaged to equal or better than what existed prior to construction, including concrete footings and mow strips. Provide new wood posts, top and bottom railing and panels. Metal fencing material not damaged by Work may be reused.
2. Remove and dispose of damaged or substandard material.

3.05 CLEANING

- A. Remove debris and trash to maintain clean and orderly site as described in General Conditions and Section 01576 - Waste Material Disposal.

3.06 MAINTENANCE

- A. Maintain shrubs, plantings, sodded areas and seeded areas through warranty period.
- B. Replace shrubs, plantings and seeded or sodded areas that fail to become established through warranty period.
- C. Maintain newly planted trees, shrubs and plantings as follows:
 1. Water as often as necessary to keep ground and backfill moist until plantings have become established.
 2. Repair or replace bracing as necessary.
 3. Prune as necessary.
 4. Treat plants in accordance with approved methods of horticultural practices where insects or disease affect plants after planting.
- D. Refer to Section 01562 - Tree and Plant Protection, Section 02921 - Hydromulch Seeding and Section 02922 - Sodding for additional maintenance requirements.

END OF
SECTION

Section 01770

CLOSEOUT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Substantial Completion Procedures.
- B. Closeout procedures for final submittals, operation and maintenance data, warranties, spare parts and maintenance materials.
- C. Texas Department of Licensing and Regulation (TDLR) inspection for ADA compliance.

1.2 SUBSTANTIAL COMPLETION

- A. Comply with Document 00700 - General Conditions regarding substantial completion when Contractor considers the Work, or portion thereof designated by City and Engineer, to be substantially complete.
- B. Insure the following items have been completed when included in the Work, prior to presenting a list of items to be inspected by Project Manager for issuance of a Certificate of Substantial Completion:
 - 1. Cutting, plugging, and abandoning of water, wastewater, and storm sewer lines, as required by specifications for each item;
 - 2. Construction of, and repairs to, pavement, driveways, sidewalks, and curbs and gutters;
 - 3. Sodding and hydromulch seeding, unless waived by City and Engineer in writing;
 - 4. General clean up including pavement markings, transfer of services, successful testing and landscape;
 - 5. Installation of all bid items included in Document 00405 and
 - 6. Any additional requirements in Section 01110 - Summary of Work.

- C. Assist Project Manager with inspection of Contractor's list of items and complete or correct the items, including items added by project Manager, within a time period of 30 days or as mutually agreed.
- D. Should Project Manager's inspection show failure of Contractor to comply with substantial completion requirements, including those items in Paragraph 1.02 B. of this specification, Contractor shall complete or correct the items, before requesting another inspection by Project Manager.

1.3 CLOSEOUT PROCEDURES

- A. Comply with Document 00700 - General Conditions regarding Final Completion and Final Payment when Work is complete and ready for City and Engineer's final inspection.
- B. Provide Project Record Documents in accordance with Section 01785 - Project Record Documents.
- C. Complete or correct items on punch list, with no new items added. Address new items during warranty period.
- D. City will occupy portions of Work as specified in other Sections.

1.4 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. For facilities, clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Clean equipment and fixtures to sanitary condition.
- D. Clean or replace filters of operating equipment.
- E. Clean debris from roofs, gutters, down spouts, and drainage systems.
- F. Clean site; sweep paved areas, rake landscaped surfaces clean.
- G. Remove waste and surplus materials, rubbish, and temporary construction facilities from site following final test of utilities and completion of Work.

1.5 ADJUSTING

- A. Adjust operating equipment to ensure smooth and unhindered operation. Value of this testing and adjusting is 5 percent of Lump Sum Price in Schedule of Values for item being tested.

1.6 OPERATION AND MAINTENANCE DATA

- A. Submit operations and maintenance data as noted in Section 01330 - Submittal Procedures.
- B. Five percent of lump sum amount of each piece of equipment as indicated in Schedule of Unit Price Work or Schedule of Values shall be paid after required O&M data submissions are received and approved by City and Engineer.

1.7 WARRANTIES

- A. Provide one original and two copies of each warranty from subcontractors, suppliers, and manufacturers.
- B. Provide Table of Contents and assemble warranties in 3-ring/D binder with durable plastic cover.
- C. Submit warranties prior to final progress payment.
- D. Warranties shall commence in accordance with requirements in Document 00700 - General Conditions.

1.8 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual Specification sections.
- B. Deliver to location within City limits as directed by City and Engineer; obtain receipt prior to final Payment Application.

1.9 TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR) INSPECTION

- A. Contact TDLR's Houston Regional Office, 5425 Polk Street, Houston, Texas, 77023, telephone 713-924-6303, fax 713-921-3106, to schedule an inspection for ADA compliance prior to final completion.
- B. Provide results of TDLR's inspection to City prior to final inspection.

1.10 FINAL PHOTOS

- A. Provide per Specification Section 01322 - Construction Photographs for Facility Projects.

1.11 PROJECT RECORD DOCUMENTS

- A. Provide per Specification Section 01785 - Project Record Documents.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01785

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Maintenance and Submittal of Record Documents and Samples.

1.2 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Maintain one record copy of documents at site in accordance with Document 00700 - General Conditions.
- B. Store Record Documents and samples in field office when field office is required by Contract, or in secure location. Provide files, racks, and secure storage for Record Documents and samples.
- C. Label each document "PROJECT RECORD" in neat, large, printed letters.
- D. Maintain Record Documents in clean dry and legible condition. Do not use Record Documents for construction purposes.
- E. Keep Record Documents and Samples available for inspection by City and Engineer.
- F. Bring Record Documents to progress review meetings for viewing by City and Engineer.

1.3 RECORDING

- A. Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- B. Contract Drawings and Shop Drawings: Legibly mark each item to record actual construction, or "as built" conditions, including:
 - 1. Measured depths of elements of foundation in relation to finish first floor datum
 - 2. Measured horizontal locations and elevations of underground utilities and appurtenances, referenced to permanent surface improvements

3. Elevations of underground utilities referenced to City of Tomball bench mark utilized for Project
 4. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction
 5. Field changes of dimension and detail
 6. Changes made by modifications
 7. Details not on original Contract Drawings
 8. References to related shop drawings and modifications
- C. Record information with red felt-tip marking pen on set of blue line opaque drawings.
- D. For large diameter water mains, legibly mark specifications and addenda to record:
1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
 2. Changes made by change order or field order.
 3. Other matters not originally specified.
- E. Legibly annotate shop drawings to record changes made after review.

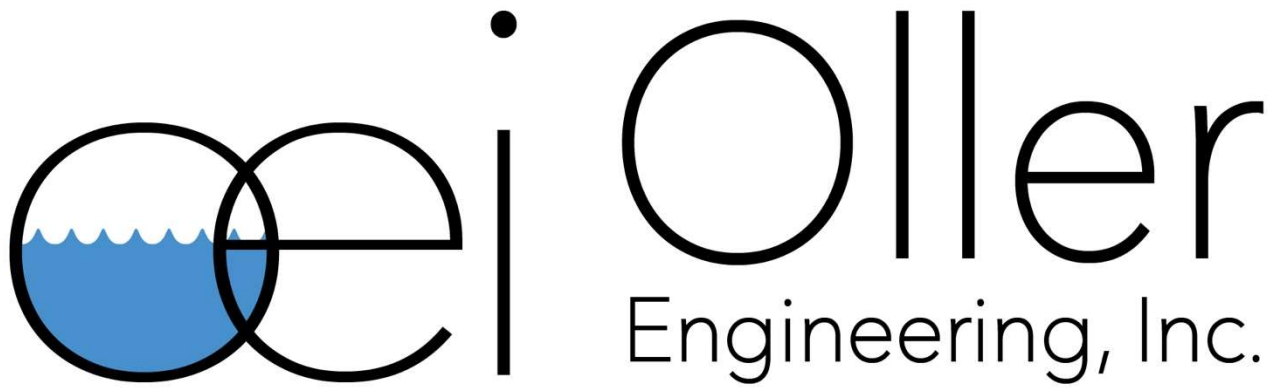
1.4 SUBMITTALS

- A. At Contract closeout, deliver Project Record Documents to City and Engineer.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION



City of Tomball

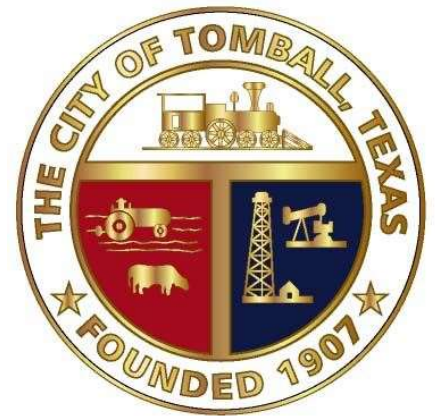
Pine St. EST Rehabilitation

Material and Equipment Specifications

City of Tomball Job #2024-05

OEI Job #1030.23.05

October 2023



beyond engineering

Section 02501

DUCTILE IRON PIPE AND FITTINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Ductile iron pipe and fittings for water lines, wastewater force mains, gravity sanitary sewers, and storm sewers.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

- 1. No separate payment will be made for ductile iron pipe and fittings under this Section, with the exception of extra fittings in place. Include cost in unit prices for work as specified in the following Sections, as applicable:
 - a. Section 02511 - Water lines
- 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Extra Ductile Iron Compact Fittings in Place shall be for additional fittings required to complete job. This is not to exclude extension of pipe across driveway or intersection for purpose of terminating line in more advantageous position. This determination shall be at discretion of City and Engineer. This bid item includes additional fittings as may be necessary to complete job in conformance with intent of Drawings.

- C. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ANSI A 21.4 (AWWA C 104) - Standard for Cement-Mortar Lining for Ductile-Iron Pipe and Fittings, for Water.
- B. ANSI A 21.10 (AWWA C 110) - Standard for Ductile-Iron and Gray-Iron Fittings, 3-in. through 48-in.

- C. ANSI A 21.11 (AWWA C 111) - Standard for Rubber Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
- D. ANSI A 21.15 (AWWA C 115) - Standard for Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges.
- E. ANSI A21.16 (AWWA C 116) - Protective Fusion Bonded Epoxy Coating for the Interior and Exterior Surfaces of Ductile Iron and Grey iron Fittings for Water Supply Service.
- F. ANSI A 21.50 (AWWA C 150) - Standard for Thickness Design of Ductile-Iron Pipe.
- G. ANSI A 21.51 (AWWA C 151) - Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water and Other Liquids.
- H. ANSI A 21.53 (AWWA C 153) - Standard for Ductile Iron Compact Fittings, 3 inches through 24 inches and 54 inches through 64 inches for Water Service.
- I. ASME B 16.1 - Cast Iron Pipe Flanges and Flanged Fittings.
- J. ASTM D 1248 - Standard Specification Polyethylene Plastics Molding and Extrusion Materials for Wire and Cable.
- K. ASTM F 477 - Elastomeric Seals (gaskets) for Joining Plastic Pipe.
- L. ASTM G 62 - Standard Test Methods for Holiday Detection in Pipeline Coatings.
- M. AWWA C 102 - American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems.
- N. AWWA C 300 - Standard for Prestressed Concrete Pressure Pipe, Steel-Cylinder Type, for Water and other Liquids.
- O. AWWA C 600 - Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances.
- P. SSPC-SP 6 - Steel Structures Painting Council, Commercial Blast Cleaning.
- Q. American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering.
- R. American Association of State Highway Transportation Officials (AASHTO).

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. For pipes 24 inches and greater submit shop drawings signed and sealed by Professional Engineer registered in State of Texas showing the following:
 - 1. Manufacturer's pipe design calculations.
 - 2. Provide lay schedule of pictorial nature indicating alignment and grade, laying dimensions, fitting, flange, and special details, with plan and profile view of each pipe segment sketched, detailing pipe invert elevations, horizontal bends, restrained joints, and other critical features. Indicate station numbers for pipe and fittings corresponding to Drawings. **Do not start production of pipe and fittings prior to review and approval by City and Engineer.**
 - 3. Calculations and limits of thrust restraint.
 - 4. Class and length of joint.
- C. Submit manufacturer's certifications that ductile iron pipe and fittings meet provisions of this Section and have been hydrostatically tested at factory and meet requirements of ANSI A 21.51.
- D. Submit certifications that pipe joints have been tested and meet requirements of ANSI A 21.11.
- E. Submit affidavit of compliance in accordance with ANSI A21.16 for fittings with fusion bonded epoxy coatings or linings.

PART 2 PRODUCTS

2.01 DUCTILE IRON PIPE - NOT USED

2.02 JOINTS

- A. Joint Types: ANSI A 21.11 push-on; ANSI A 21.11 mechanical joint; or ANSI A 21.16 flanged end. Provide push-on joints unless otherwise indicated on the Drawings or required by these specifications. For bolted joints, conform to

requirements of AWWA C111; provide minimum 304 stainless steel for restraint joints.

- B. Where restrained joints for buried service are required by Drawings, provide one of the following, **or approved equal**:
 - 1. Super-Lock by Clow Corporation.
 - 2. Flex-Ring or Lok-Ring by American Cast Iron Pipe Company.
 - 3. TR-Flex or Field Lok by U.S. Pipe and Foundry Company.
 - 4. One Bolt by One Bolt, Inc. (4 to 12 inches)
 - 5. Sur-Grip by JCM Industries. (4 to 12 inches)
- C. Threaded or grooved-type joints which reduce pipe wall thickness below minimum required are not acceptable.
- D. Provide for restrained joints designed to meet test pressures required under Section 02515 - Hydrostatic Testing of Pipelines, as applicable. Provide restrained joints for test pressure or maximum surge pressure as specified, whichever is greater for water lines. **Do not use passive resistance of soil in determining minimum restraint lengths.**
- E. Bond rubber gasketed joints to provide electrical continuity along entire pipeline, except where insulating flanges are required by Drawings.
- F. Make curves and bends by deflecting joints. Do not exceed maximum deflection recommended by pipe manufacturer for pipe joints or restraint joints. **Submit details of other methods of providing curves and bends for consideration by City and Engineer.** When other methods are deemed satisfactory, **install at no additional cost to City.**

2.03 GASKETS:

- A. Furnish, when no contaminant is identified, plain rubber (SBR) gasket material in accordance with ANSI A21.11 or ASTM F 477 (One Bolt only); for flanged joints 1/8-inch-thick gasket in accordance with ANSI A 21.15.

2.04 FITTINGS

- A. Use fittings of same size as pipe. Reducers are not permitted to facilitate an off-size fitting. Reducing bushings are also prohibited. Make reductions in piping

size by reducing fittings. Line and coat fittings as specified for pipe they connect to.

- B. Push-on Fittings: ANSI A 21.10; ductile iron ANSI A 21.11 joints, gaskets, and lubricants; pressure rated at 250 psig.
- C. Flanged Fittings: ANSI 21.10; ductile iron ANSI A 21.11 joints, gaskets, and lubricants; pressure rated at 250 psig.
- D. Mechanical Joint Fittings: ANSI A 21.11; pressure rated at 250 psi.
- E. Ductile Iron Compact Fittings for Water lines: ANSI A 21.53; 4-inch through 12-inch diameter fusion bonded epoxy-lined or cement mortar lining.

2.05 COATINGS AND LININGS

- A. Water line Interiors: ANSI A21.4, cement lined with seal coat; ANSI A 21.16 fusion bonded epoxy coating for interior.
- B. Exterior:
 - 1. Water Lines
 - a. Tunnel, Casing or Auger Holes: Conform to requirements of ASTM D 16, ASTM D 1737, SSPC-PA 2, SSPC-PA 3, SSPC-PS Guide 17.00, SSPC-SP 1, SSPC-SP 10.
 - b. Direct Bury: Conform to requirements of ASTM D 16, ASTM D 1737, SSPC-PA 2, SSPC-PA 3, SSPC-PS Guide 17.00, SSPC-SP 1, SSPC-SP 10.
 - C. Polyethylene Wrap: For buried water lines not cathodically protected and sanitary sewers, including point repairs, provide polyethylene wrap unless otherwise specified or shown. Conform to requirements of Section 02528 - Polyethylene Wrap.
 - D. For flanged joints in buried service, provide petrolatum wrapping system, Denso, or equal, for the complete joint and alloy steel fasteners. Alternatively, provide bolts made of Type 304 stainless steel.

2.06 MANUFACTURERS

- A. Use pre-approved manufacturers listed in City of Tomball approved products.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Conform to installation requirements of Sections 02511 - Water Lines, except as modified in this Section.
- B. Install in accordance with AWWA C 600 and manufacturer's recommendations.
- C. Install all ductile iron pipe in polyethylene wrap, unless cathodic protection is provided. **Do not use polyethylene wrap with a cathodic protection system.**
- D. Holiday Testing.
 - 1. Polyurethane: Conform to AWWA C 210, Section 5.3.3.1. Follow coating manufacturer's recommendation. Conduct inspection any time after coating has reached initial cure.
 - 2. Fusion Bonded Epoxy: Conform to requirements for new fittings in ANSI A 21.16.

3.02 FIELD REPAIR OF COATINGS

- A. Polyurethane
 - 1. Repair Procedure - Holidays:
 - a. Remove traces of oil, grease, dust, dirt, and other deleterious materials.
 - b. Roughen area to be patched by sanding with rough grade sandpaper (40 grit).
 - c. Apply one coat of repair material described above. Work repair material into scratched surface by brushing.
 - 2. Repair Procedure - Field Cuts or Large Damage:
 - a. Remove burrs from field cut ends or handling damage and smooth out edge of polyurethane coating.
 - b. Remove traces of oil, grease, dust, dirt, and other deleterious materials.

- c. Roughen area to be patched with rough grade sandpaper (40 grit). Feather edges and include overlap of 1 inch to 2 inches of roughened polyurethane in area to be patched.
 - d. Apply thick coat of repair material described above. Work repair material into scratched surface by brushing. Feather edges of repair material into prepared surface. Cover at least 1 inch of roughened area surrounding damage, or adjacent to field cut.
- 3. Repair Procedure - Thermite Brazed Connection Bonds:
 - a. Remove polyurethane coating with power wire brush from area on metal surface, which is to receive thermite, brazed connection.
 - b. Grind metal surface to shiny metal with power grinder and coarse grit grinding wheel.
 - c. Apply thermite-brazed connection using equipment, charge and procedure recommended by manufacturer of thermite equipment.
 - d. After welded surface has cooled to temperature below 130 degrees F, apply protective coating repair material to weld, exposed pipe surface and damaged areas of polyurethane coating.
 - e. **Do not cover or backfill freshly repaired areas of coating at thermite-brazed connection until repair material has completely cured. Allow material to cure in conformance with manufacturer's recommendations.**
- B. Fusion Bonded Epoxy: Conform to requirements for new fittings in ANSI A 21.16.

END OF SECTION

Section 02511

WATER LINES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Installation of water lines.
- B. Specifications identify requirements for both small diameter water lines and large diameter water lines. When specifications for large diameter water lines differ from those for small diameter water lines, large diameter specifications will govern for large diameter pipe.

1.2 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. Payment for water lines installed by bore or open-cut, augered with or without casing, aerial crossing, pipe offset section or within limits of Potentially Petroleum Contaminated Area (PPCA) is on linear foot basis for each size of pipe installed. Separate pay items are used for each type of installation.
 - 1. Mains: Measure along axis of pipe and include fittings and valves.
 - 2. Branch Pipe: Measure from axis of water line to end of branch.
 - 2. Payment for interconnection is on lump sum basis for each interconnection identified on Drawings. Payment will include tapping sleeve and valves piping, connections, and other related work necessary for construction as shown on Drawings or specified herein.
 - 3. Payment for removal of existing internal elliptical or dished head plug is on unit price basis for each internal elliptical or dished head plug removed. Payment will include deletion of plug, drainage or dewatering of water lines, repair of damaged linings, rechlorination and items incidental to operation.
 - 4. Payment for plug and clamp is on a unit price basis for each size of pipe.

5. Payment for drainline connection with service manhole is on unit price basis for each drainline shown on drawings. Payment includes valve, access manhole and connection.
 6. When directed by City and Engineer to install extra fittings as required to avoid unforeseen obstacles, payment will be based on the following:
 1. Each extra fitting requested by City and Engineer and delivered to jobsite will be paid according to unit price for "Extra Fittings in Place."
 2. Payment will include and be full compensation for items necessary for installation and operation of water line.
 7. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.3 REFERENCES

- A. ANSI A 21.11/AWWA C111 - Standard for Rubber-Gasket Joints for Ductile - Iron Pressure Pipe and Fittings.
- B. ANSI/NSF Standard 61 - Drinking Water System -Health Components.
- C. ASTM A 36 - Standard Specification for Carbon Structural Steel
- D. ASTM A 536 - Standard Specification for Ductile Iron Castings
- E. ASTM A 126 - Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
- F. ASTM B 21 - Standard Specification for Naval Brass Rod, Bar, and Shapes.
- G. ASTM B 98 - Standard Specification for Copper-Silicon Alloy Rod, Bar, and Shapes.
- H. ASTM B 301 - Standard Specification for Free-Cutting Copper Rod and Bar.
- I. ASTM B 584 - Standard Specification for Copper Alloy Sand Casting for

General Application.

- J. ASTM E 165 - Standard Test Method for Liquid Penetrant Examination.
- K. ASTM E 709 - Standard Guide for Magnetic Particle Examination.
- L. ASTM F 1674 - Standard Test Method for Joint Restraint Products for Use with PVC Pipe.
- M. AWWA C 206 - Standard for Field Welding of Steel Water Pipe.
- N. AWWA C 207 - Standard for Steel Pipe Flanges for Waterworks Service - Sizes 4 Inches through 144 Inches.

1.4 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Conform to submittal requirements of applicable Section for type of pipe used.

PART 2 PRODUCTS

1.5 PIPE MATERIALS

- A. Install pipe materials which conform to following:
 - 1. Section 02501 - Ductile Iron Pipe and Fittings.
 - 2. Section 02506 - Polyvinyl Chloride Pipe.
- B. Conform to American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 61 and have certified by an organization accredited by ANSI.
- C. Type of pipe materials used are Contractor's option unless specifically identified on Drawings.
- D. Provide minimum of 3/8 inch inside joint recess between ends of pipe in straight pipe sections.

1.6 WELDED JOINT PROTECTION FITTING

- A. Cylindrical Corrosion Barrier manufactured by CCB Int'l Inc., **or approved equal.**
- B. O-rings: Conform to National Sanitary Foundation requirements.

1.7 RESTRAINED JOINTS

- A. Ductile-Iron Pipe: See Section 02501 - Ductile Iron Pipe and Fittings.
- B. PVC Pipe: See Section 02506 - Polyvinyl Chloride Pipe.
- C. Prestressed Concrete Cylinder Pipe, Bar-Wrapped Pipe and Steel Pipe: Welded joints (see Paragraph 3.06D).
- D. Restrained Joints where required on DIP and PVC pipe:
 - 1. Restraint devices: Manufacture of high strength ductile iron, ASTM A 536 up to 24 inches, and ASTM A 36 for sizes greater than 30 inches. Working pressure rating twice that of design test pressure.
 - 2. Bolts and connecting hardware: High strength low alloy material in accordance with ANSI A21.11/AWWA C111.

1.8 COUPLINGS AND APPURTENANCES FOR LARGE DIAMETER WATERLINE

- A. Flexible (Dresser-type) Couplings.
 - 1. Install where shown on Drawings or where allowed by City and Engineer for Contractor's convenience. Use galvanized flexible couplings when installed on galvanized pipe, which is cement lined, or when underground. Provide gaskets manufactured from Neoprene or Buna-N.
 - 2. For steel pipe; sleeve-type flexible couplings, Dresser Style 38, Rockwell Type 411, or approved equal. Thickness of middle ring equal to or greater than thickness of pipe wall.
 - 3. Flanged adapter couplings for steel pipe; Dresser Style 128, Rockwell Type 913, or approved equal.
 - 4. Use Type 316 stainless steel bolts, nuts and washers where flexible

couplings are installed underground. Coat entire coupling with 20-mil of T.C. Mastic as manufactured by Tape Coat Company, Inc., Bitumastic 50 as manufacturer by The Carboline Company, or approved equal.

- B. Victaulic Joints. Make joint with Victaulic Style 77 coupling fitted with Grade H molded synthetic rubber gasket.
- C. Flap Valves: Provide on discharge of manhole drainline as shown on Drawings.
 - 1. Body and Flap: ASTM A 126-B cast iron.
 - 2. Seats: ASTM B 21-CA482 or ASTM B 301-CA145 bronze.
 - 3. Resilient Seat: Buna-N.
 - 4. Hinge Arms: ASTM B 584-CA865 high tensile bronze.
 - 5. Hinge pins: ASTM B 98-CA655 silicon bronze.
 - 6. Provide Rodney Hunt Series FV-AC, or approved equal.

PART 3 EXECUTION

1.9 PREPARATION

- A. Conform to applicable installation specifications for types of pipe used.
- B. Employ workmen who are skilled and experienced in laying pipe of type and joint configuration being furnished. Provide watertight pipe and pipe joints. Lay pipe with bell ends facing in direction of laying.
- C. Lay pipe to lines and grades shown on Drawings. Use adequate surveying methods and equipment; employ personnel competent in use of this equipment. Horizontal and vertical deviations from alignment as indicated on Drawings shall not exceed 0.10 feet. Measure and record "as-built" horizontal alignment and vertical grade at maximum of every 50 feet on record drawings.
- D. Confirm that nine feet minimum separation from gravity sanitary sewers and manholes or separation of four feet minimum from force mains as specified in this Section in all directions unless special design is provided on Drawings:
 - 1. Water line crossing above gravity sanitary sewer or force main with

no leaks: Minimum 2-foot vertical clearance.

- E. Where above clearances cannot be attained, and special design has not been provided on Drawings, obtain direction from City and Engineer before proceeding with construction.
- F. Inform City and Engineer if unmetered sprinkler or fire line connections exist which are not shown on Drawings. **Make transfer only after approval by City and Engineer.**
- G. Keep pipe trenches free of water, which might impair pipe-laying operations. Prevent pipe bells from coming in contact with sub grade. Grade pipe trenches to provide uniform support along bottom of pipe. Excavate for bell holes for proper sealing of pipe joints after bottom has been graded and in advance of placing pipe. Lay not more than nominal city block length of not more than 300 feet of pipe in trench ahead of backfilling operations. Cover or backfill laid pipe if pipe laying operations are interrupted and during non- working hours. Place backfill carefully and simultaneously on each side of pipe to avoid lateral displacement of pipe and damage to joints. If adjustment of pipe is required after it has been laid, remove and re-lay as new pipe.
- H. City of Tomball Utility Operations Division will handle, at no cost to Contractor, operations involving opening and closing valves for wet connections and for chlorination. Contractor is responsible for handling necessary installations and removal of chlorination and testing taps and risers.
- I. If asbestos-cement (A.C.) pipe is encountered, follow safety practices outlined in Asbestos-Cement Pipe Producers Association publication, "Recommended Work Practices for A/C Pipe". Strictly adhere to "recommended practices" contained in this publication and make them "mandatory practices" for this Project.
- J. For pipe diameters 36 inches and greater, clearly mark each section of pipe and fitting with unique designation on inside of pipe. Locate unique identifying mark minimum of five feet away from either end of each section of pipe. Provide one unique identifying mark in middle of each fitting. Place markings at consistent locations. Use permanent black paint and minimum letter height of 4 inches to mark designations.
- K. Laying Large diameter Water Line
 - 1. Lay not more than 50 feet of pipe in trench ahead of backfilling operations.

2. Dig trench proper width as shown. When Contractor's operations cause trench width below top of pipe to become 4 feet wider than specified, install higher class of pipe or improved bedding, as determined by City and Engineer. No additional payment will be made for higher class of pipe or improved bedding.
 3. Prevent damage to coating when placing backfill. Use backfill material free of large rocks or stones, or other material, which could damage coatings.
 4. Before assembling couplings, lightly coat pipe ends and outside of gaskets with cup grease or liquid vegetable soap to facilitate installation. Groove pipe to manufacturer's specifications.
 5. When installing water line below existing water line provide an approved repair clamp sized for existing water line on site.
 6. Prior to proceeding with critical tie-ins submit sequence of work based on findings from "critical location" effort.
- L. Contractor is responsible for assuring chosen manufacturer fulfills requirements for extra fittings and, therefore, is responsible for costs due to downtime if requirements are not met.
- M. **Do not remove plugs or clamps during months of peak water demands; June, July and August, unless otherwise approved by City and Engineer.**

1.10 HANDLING, CLEANING AND INSPECTION

A. Handling:

1. Place pipe along project site where storm water or other water will not enter or pass through pipe.
2. Load, transport, unload, and otherwise handle pipe and fittings to prevent damage of any kind. Handle and transport pipe with equipment designed, constructed and arranged to prevent damage to pipe, lining and coating. **Do not permit bare chains, hooks, metal bars, or narrow skids or cradles to come in contact with coatings. Where required, provide pipefittings with sufficient interior strutting or cross**

bracing to prevent deflection under their own weight.

3. Hoist pipe from trench side into trench by means of sling of smooth steel cable, canvas, leather, nylon or similar material.
 4. For large diameter water lines, handle pipe only by means of sling of canvas, leather, nylon, or similar material. Sling shall be minimum 36 inches in width. Do not tear or wrinkle tape layers.
 5. Use precautions to prevent injury to pipe, protective linings and coatings.
 1. Package stacked pipe on timbers. Place protective pads under banding straps at time of packaging.
 2. Pad fork trucks with carpet or other suitable material. Use nylon straps around pipe for lift when relocating pipe with crane or backhoe.
 3. Do not lift pipe using hooks at each end of pipe.
 4. Do not place debris, tools, clothing, or other materials on pipe.
 6. Repair damage to pipe or protective lining and coating before final acceptance.
 7. For cement mortar line and coated steel pipe and PCCP, permit no visible cracks longer than 6 inches, measured within 15 degrees of line parallel to pipe longitudinal axis of finished pipe, except:
 1. In surface laitance of centrifugally cast concrete.
 2. In sections of pipe with steel reinforcing collars or wrappers.
 3. Within 12 inches of pipe ends.
 8. Reject pipe with visible cracks (not meeting exceptions) and remove from project site.
- B. Cleaning: Thoroughly clean and dry interior of pipe and fittings of foreign matter before installation and keep interior clean until Work has been accepted. Keep joint contact surfaces clean until jointing is completed. **Do**

not place debris, tools, clothing, or other materials in pipe. After pipe laying and joining operations are completed, clean inside of pipe and remove debris.

- C. Inspection: Before installation, inspect each pipe and fitting for defects. **Reject defective, damaged or unsound pipe and fittings and remove them from site.**

1.11 EARTHWORK

- A. Conform to applicable provisions of Section 02317 - Excavation and Backfilling for Utilities.
- B. Bedding: Use bedding materials in conformance with Section 02320 - Utility Backfill Materials.
- C. Backfill: Use bank run sand or earth or native soil as specified in Section 02320 - Utility Backfill Materials. Backfill excavated areas in same day excavated. When not possible, cover excavated areas using steel plates on paved areas and other protective measures elsewhere.
- D. Place material in uniform layers of prescribed maximum loose thickness and wet or dry material to approximately optimum moisture content. Compact to prescribed density. Field density tests may be made at frequency determined by City and Engineer. **Water tamping is not allowed.**
- E. Pipe Embedment: Including 6-inch pipe bedding and backfill to 12 inches above top of pipe.

1.12 PIPE CUTTING

- A. Cut pipe 12 inches and smaller with standard wheel pipe cutters. Cut pipe larger than 12 inches in manner approved by City and Engineer. Make cuts smooth and at right angles to axis of pipe. Bevel plain end with heavy file or grinder to remove sharp edges.

1.13 PIPING INSTALLATION

- A. Do not lay pipe unless sub grade is free of water. Make adjustments of pipe to line and grade by scraping away sub grade or filling in with granular material. Wedging or blocking up bell will not be acceptable.

- B. Do not install pipe at greater depth than its design allows.
- C. Protection of Pipeline: Securely place stoppers or bulkheads in openings and in end of line when construction is stopped temporarily and at end of each day's work.
- D. Perform critical location to determine actual horizontal and vertical location of existing pipe and other utilities that may affect tie-in connection. **For large diameter water lines, submit to City and Engineer horizontal and vertical dimensions signed and sealed by Registered Professional Land Surveyor, prior to submitting portion of proposed water line lay schedule for tie-in.** Refer to Section 02317 - Excavation and Backfill for Utilities for additional requirements at critical locations.
- E. Perform following additional procedures when working on plant sites.
 - 1. Seventy-two hours prior to each plant shut down or connection, schedule coordination meeting with City and Engineer and Water Production personnel. At this meeting, present proposed sequencing of Work and verification of readiness to complete Work as required and within time permitted. **Do not proceed with Work until City and Engineer agrees key personnel, equipment and materials are on hand to complete Work.**
 - 2. Prior to fully excavating around existing piping, excavate as minimal as possible to confirm type and condition of existing joints. Verify size, type, and condition of pipe prior to ordering materials or fully mobilizing for Work.
 - 3. **Do not proceed with connections to existing piping and identified critical stages of work unless approved by City and Engineer and City's Water Production Division operator is present to observe.**
 - 4. **Coordinate with City's Water Production Division operators to obtain reduction in operating pressures prior to performing connections to existing piping.**
 - 5. Make connections to existing piping only when two valves are closed off between connection and source of water pressure. **Do not make connection relying solely on one valve, unless otherwise approved by City and Engineer.**

6. Perform critical stages of Work identified on Drawings at night or during low water demand months as specified in Section 01110 - Summary of Work.
 7. Excavation equipment used on plant sites to have smooth bucket, no teeth or side cutters.
 8. Before each "dig" with mechanical excavator, probe ground to determine potential obstructions. Repeat procedure until existing pipe is located or excavation reaches desired elevation. Perform excavations within one foot to existing piping by hand methods.
 9. Provide adequate notice to pipe manufacturer's representative when connecting or modifying existing prestressed or pretension concrete cylinder pipe.
 10. Provide field surveyed (horizontal and vertical elevations) "as-builts" of new construction and existing underground utilities encountered. Submit in accordance with Section 01330 - Submittal Procedures.
 11. No night work or plant shut down will be scheduled to begin two working days before or after designated City Holidays.
- F. For tie-ins to existing water lines, provide necessary material on hand to facilitate connection prior to shutting down existing water line.

1.14 JOINTS AND JOINTING

- A. Rubber Gasketed Bell-and-Spigot Joints for Concrete Cylinder Pipe, Bar Wrapped Pipe PVC, Steel, and DIP:
1. After rubber gasket is placed in spigot groove of pipe, equalize rubber gasket cross section by inserting tool or bar recommended by manufacturer under rubber gasket and moving it around periphery of pipe spigot.
 2. Lubricate gaskets with nontoxic water-soluble lubricant before pipe units are joined.
 3. Fit pipe units together in manner to avoid twisting or otherwise displacing or damaging rubber gasket.
 4. After pipe sections are joined, check gaskets to ensure that no displacement of gasket has occurred. If displacement has occurred,

remove pipe section and remake joint as for new pipe. Remove old gasket, inspect for damage, and replace, if necessary, before remaking joint.

5. Where preventing movement of 16-inch diameter or greater pipe is necessary due to thrust, use restrained joints.
 1. Include buoyancy conditions for soil unit weight when computing thrust restraint calculations.
 - 2. Do not include passive resistance of soil in thrust restraint calculations.**
6. Provide means to prevent full engagement of spigot into bell as shown on Drawings. Means may consist of wedges or other types of stops as approved by City and Engineer.
- B. Flanged Joints where required on Concrete Cylinder Pipe, Bar Wrapped Pipe, Ductile Iron Pipe, or Steel Pipe: **NOT USED**
- C. Welded Joints (Concrete Cylinder Pipe, Bar Wrapped Pipe, Steel Pipe): **NOT USED**
- D. Harnessed Joints (Concrete Cylinder Pipe, Bar Wrapped Pipe): **NOT USED**
- E. Restrained Joints
 1. Installation.
 - a. Install restrained joints mechanism in accordance with manufacturer=s recommendations.
 - b. Examine and clean mechanism; remove dirt, debris, and other foreign material.
 - c. Apply gasket and joint NSF 61 FDA food grade approved lubricant.
 - d. Verify gasket is evenly seated.
 - e. Do not over stab pipe into mechanism.
 2. For existing water lines and water lines less than 16 inches in diameter, restrain pipe joints with concrete thrust blocks or provide restrained joints.

3. Prevent any lateral movement of thrust restraints throughout pressure testing and operation. Place 2500 psi concrete conforming to Section 03315 - Concrete for Utility Construction, for blocking at each change in direction of existing water lines, to brace pipe against undisturbed trench walls. Finish placement of concrete blocking, made from Type I cement, 4 days prior to hydrostatic testing of pipeline. Test may be made 2 days after completion of blocking if Type II cement is used.
 4. Thrust restraint lengths shown on Drawings are minimum anticipated lengths. These lengths are based on deflections indicated and on use of prestressed concrete cylinder pipe. Adjustments in deflections or use of other pipe material may result in reduction or increase of thrust lengths. Perform calculations by pipe manufacturer to verify proposed thrust restraint lengths. Submit calculations for all pipe materials sealed by a registered Professional Engineer in State of Texas for review by City and Engineer. **Make adjustments in thrust restraint lengths at no additional cost to City.**
 5. Passive resistance of soil will not be permitted in calculation of thrust restraint.
 6. Use minimum 16-foot length of pipe in and out of joints made up of beveled pipe where restraint joint lengths are not identified on Drawings. Otherwise, provide restraint joints for a minimum length of 16 feet on each side of beveled joints.
- F. Joint Grout (Concrete Cylinder Pipe, Bar Wrapped Pipe, Steel Pipe): **NOT USED**
- G. Joint Testing: In addition to testing individual joints with feeler gauge approximately 1/2 inch wide and 0.015-inch thick, use other joint testing procedure approved or recommended by pipe manufacturer which will help ensure watertight installation prior to backfilling. **These tests shall be made at no additional cost to City.**
- H. Make curves and bends by deflecting joints or other method as recommended by manufacturer and approved by City and Engineer. Submit details of other methods of providing curves and bends, which exceed manufacturer's recommended deflection prior to installation.
1. Deflection of pipe joints shall not exceed maximum deflection recommended by pipe manufacturer, unless otherwise indicated on Drawings.

2. If deflection exceeds that specified but is less than 5 percent, repair entire deflected pipe section such that maximum deflection allowed is not exceeded.
 3. If deflection is equal to or exceeds 5 percent from that specified, remove entire portion of deflected pipe section and install new pipe.
 4. Replace, repair, or reapply coatings and linings as required.
 5. Assessment of deflection may be measured by City and Engineer at location along pipe. Arithmetical averages of deflection or similar average measurement methods will not be deemed as meeting intent of standard.
 6. When rubber gasketed pipe is laid on curve, join pipe in straight alignment and then deflect to curved alignment.
- I. Closures Sections and Approved Field Modifications to Steel, Concrete Cylinder Pipe, Bar Wrapped Pipe and Fittings:
1. Apply welded-wire fabric reinforcement to interior and exterior of exposed interior and exterior surfaces greater than 6 inches in diameter. Welded-wire fabric: minimum W1; maximum spacing 2 inches by 4 inches; 3/8 inch from surface of steel plate or middle third of lining or coating thickness for mortar thickness less than 3/4 inch.
 2. Fill exposed interior and exterior surfaces with non-shrink grout.
 3. For pipe diameters 36 inches and greater, perform field welds on interior and exterior of pipe.
 4. For large diameter water lines, provide minimum overlap of 4 inches of butt strap over adjacent piece on butt-strap closures.
- 1.15 CATHODIC PROTECTION APPURTENANCES
- A. Where identified on Drawings, modify pipe for cathodic protection as detailed on Drawings and specified. Unless otherwise noted, provide insulation kits at connections to existing water system or at locations to isolate one type of cathodic system from another type, between water line, access manhole piping and other major openings in water line, or as shown on Drawings.

- B. Bond joints for pipe installed in tunnel or open cut, except where insulating flanges are provided. Weld strap or clip between bell and spigot of each joint or as shown on Drawings. No additional bonding required where joints are welded for thrust restraint. **Repair coatings as specified by appropriate AWWA standard, as recommended by manufacturer, and as approved by City and Engineer.**
- C. Bonding Strap or Clip: Free of foreign material that may increase contact resistance between wire and strap or clip.

1.16 SECURING, SUPPORTING AND ANCHORING

- A. Support piping as shown on Drawings and as specified in this Section, to maintain line and grade and prevent transfer of stress to adjacent structures.
- B. Where shown on Drawings, anchor pipe fittings and bends installed on water line by welding consecutive joints of pipe together to distance each side of fitting. Restrained length, as shown on Drawings, assumes that installation of pipe and subsequent hydrostatic testing begin upstream and proceed downstream, with respect to normal flow of water in pipe. If installation and testing differ from this assumption, submit for approval, revised method of restraining pipe joints upstream and downstream of device used to test against (block valve, blind flange, or dished head plug).
- C. Use adequate temporary blocking of fittings when making connections to distribution system and during hydrostatic tests. Use sufficient anchorage and blocking to resist stresses and forces encountered while tapping existing water line.

1.17 POLYETHYLENE WRAP FOR DUCTILE IRON PIPE

- A. Double wrap pipe and appurtenances (except fire hydrants and fusion bond or polyurethane coated fittings) with 8-mil polyethylene film.
- B. Conform to requirements of Section 02528 - Polyethylene Wrap.

1.18 CLEANUP AND RESTORATION

- A. Provide cleanup and restoration crews to work closely behind pipe laying crews, and where necessary, during chlorination, testing, service transfers, abandonment of old water lines, backfill and surface restoration.

- B. Upon completion of section not exceeding 4000 feet per crew, chlorinate and pressure test. Begin transfer of services no later than 7 calendar days after successful completion of chlorination and pressure testing.
- C. After transfer of services, but no later than 21 calendar days after successful completion of chlorination and pressure testing, begin abandonment of old water lines, including resodding and placement of sidewalks and pavements.
- D. Do not begin construction of additional sections if above conditions are not met.
- E. For large diameter water lines, do not install more than 2000 feet of water line, without previous 2000 feet being cleaned up and site fully restored. Schedule paving crews so repaving work will not lag behind pipe laying work by more than 1000 feet. Failure to comply with this requirement will result in "Notice of Nonconformance".
- F. Complete site restoration within 30 days from date water line is successfully disinfected and hydrostatically tested, **unless extended in writing by City and Engineer.**
- G. For projects involving multiple subdivisions or locations, limit water line installation to maximum of two project site locations.

1.19 CLEANING PIPING SYSTEMS

- A. Remove construction debris or foreign material and thoroughly broom clean and flush piping systems. Provide temporary connections, equipment and labor for cleaning. **City must inspect water line for cleanliness prior to filling.**

1.20 DISINFECTION OF WATER LINES

- A. Conform to requirements of Section 02514 - Disinfection of Water Lines.

1.21 FIELD HYDROSTATIC TESTS

- A. Conform to requirements of Section 02515 - Hydrostatic Testing of Pipelines.

END OF SECTION

Section 02514

DISINFECTION OF WATER LINES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Disinfection of potable water lines.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. No separate payment will be made for disinfection of water lines under this Section. Include cost in unit price of water lines being disinfected.
2. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Adjusting Payment for Retesting.

1. Subsequent disinfection operations which may be necessary due to nonconforming or incomplete construction will be charged to Contractor. Charges will be deducted from retainage amounts when construction estimates are processed for final payment.
2. Total charge will consist of base charge of \$135.00 plus footage charge based on number of feet of specified diameter pipe in construction project. Footage charge is as follows:

Size of Pipe	Charge per Linear Foot
2-inch to 4-inch	\$0.03
6-inch	\$0.04
8-inch	\$0.05
10-inch to 12-inch	\$0.07
16-inch to 20-inch	\$0.09
24-inch to 30-inch	\$0.13
32-inch to 48-inch	\$0.16
54-inch	\$0.20
60-inch	\$0.22
66-inch	\$0.31
72-inch to 84-inch	\$0.40
90-inch to 96-inch	\$0.58
108-inch	\$0.75
120-inch or larger	\$1.00

- C. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. AWWA C 651 - Standard for Disinfecting Water Mains.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 CONDUCTING DISINFECTION

- A. Promptly disinfect water lines constructed before tests are conducted on water lines and before water lines are connected to City water distribution system.
- B. Water for disinfection and flushing will be furnished by City without charge.
- C. Unless otherwise provided in Contract Documents, City will conduct disinfection operations assisted by Contractor.
- D. Coordinate chlorination operations through City and Engineer.

3.02 PREPARATION

- A. Provide temporary blind flanges, cast-iron sleeves, plugs, necessary service taps, copper service leads, risers and jumpers of sizes, location and materials, and other items needed to facilitate disinfection of new water lines prior to connection to City water distribution system. Normally, each valved section of water line requires two each 3/4-inch taps. A 2-inch minimum blow-off is required for water lines up to and including 6-inch diameter.
- B. Use fire hydrants as blow-offs to flush newly constructed water lines 8-inch diameters and above. Where fire hydrants are not available on water lines, install temporary blow-off valves and remove promptly upon successful completion of disinfection and testing.
- C. Slowly fill each section of pipe with water in manner approved by City and Engineer. Average water velocity when filling pipeline should be less than one foot per second and shall not, under any circumstance, exceed 2 feet per second. Before beginning disinfection operations, expel air from pipeline.

- D. Backfill excavations immediately after installation of risers or blow-offs.
- E. Install blow-off valves at end of water line to facilitate flushing of dead-end water lines. Install permanent blow-off valves according to Drawings.

3.03 DISINFECTION BY CITY PERSONNEL

- A. Correct problems that may prevent disinfection operations prior to advising City and Engineer to perform disinfection work. When disinfection work cannot be performed due to covered up valves, missing valve stacks, inoperative fire hydrants or other nonconforming construction, charges will be levied against Contractor for each trip made by City personnel.
- B. Notify and coordinate with City and Engineer minimum of 72 hours before disinfection work is to be performed. Assist City personnel during disinfection operations.

3.04 DISINFECTION BY CONTRACTOR

- A. The following procedure will be used when disinfection by Contractor is required by Contract Documents:
 - 1. Use not less than 100 parts of chlorine per million parts of water.
 - 2. Introduce chlorinating material to water lines in accordance with AWWA C 651.
 - 3. After contact period of not less than 24 hours, flush system with clean water until residual chlorine is no greater than 1.0 parts per million parts of water.
 - 4. Open and close valves in lines being sterilized several times during contact period.
 - 5. If chemical compound is used for sterilizing agent, place in pipes as directed by City and Engineer.

3.03 BACTERIOLOGICAL TESTING

- A. After disinfection and flushing of water lines, bacteriological tests will be performed by City or testing laboratory in accordance with Section 01454 - Testing Laboratory Services. When test results indicate need for additional disinfection of water lines based upon Texas Department of Health requirements, assist City with additional disinfection operations.

3.06 COMPLETION

- A. Upon completion of disinfection and testing, remove risers except those approved for use in subsequent hydrostatic testing, and backfill excavation promptly.

END OF SECTION

Section 02521

GATE VALVES

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Gate valves.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. No separate payment will be made for gate valves 20 inches in diameter and smaller under this Section. Include payment in unit price for water lines.
2. Payment for gate valves 24 inches to 36 inches in diameter is on a unit price basis. Unit price includes cost of required box for gate valves.
3. Payment for 2-inch blow-off valve with box is on a unit price basis for each installation.
4. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ASTM A 307 - Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile.
- B. ASTM B 62 - Standard Specification for Composition Bronze or Ounce Metal Casting.
- C. ASTM D 429 - Standard Test Methods for Rubber Property-Adhesion to Rigid Substrates.

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- D. ASTM B 763 - Standard Specification for Copper Alloy Sand Casting for Valve Application.
- E. AWWA C 500 - Standard for Metal-Seated Gate Valves for Water Supply Service.
- F. AWWA C 509 - Standard for Resilient-Seated Gate Valves for Water Supply Service.
- G. AWWA C 515- Standard for Reduced Wall, Resilient- Seated Gate Valves for Water Supply Service.
- H. AWWA C 550 - Standard for Protective Epoxy Interior Coatings for Valves and Hydrants.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit manufacturer's product data for proposed valves for approval.
- 4. Provide detailed drawings of gearing mechanism for 20-inch and larger gate valves.

1.05 QUALITY CONTROL

- A. Submit manufacturer's affidavit that gate valves are manufactured in the United States and conform to stated requirements of AWWA C 500, AWWA C 509, AWWA C 515, and this Section, and that they have been satisfactorily tested in the United States in accordance with AWWA C 500, AWWA C 509, and AWWA C 515.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Gate Valves: AWWA C 500, AWWA C 509, AWWA C 515 and additional requirements of this Section. Direct bury valves and those in subsurface vaults open clockwise; aboveground and plant valves open counterclockwise.
- B. If type of valve is not indicated on Drawings, use gate valves as line valves for sizes 20-inches and smaller. When type of valve is indicated, no substitute is allowed.
- C. Gate Valves 1-1/2 Inches in Diameter and Smaller: 125 psig; bronze; rising-

stem; single- wedge; disc type; screwed ends; such as Crane No. 428, or approved equal.

- D. Coatings for Gate Valves 2 Inches and Larger: AWWA C 550; Indurall 3300 or approved equal, non-toxic, imparts no taste to water, functions as physical, chemical, and electrical barrier between base metal and surroundings, minimum 8-mil-thick, fusion-bonded epoxy. Prior to assembly of valve, apply protective coating to interior and exterior surfaces of body.
- E. Gate Valves 2 Inches in Diameter: Iron body, double gate, non-rising stem, 150-pound test, 2-inch square nut operating clockwise to open.
- F. Gate Valves 4 Inches to 12 Inches in Diameter: Non-directional, standard-wall resilient seated (AWWA C 509), parallel seat double disc (AWWA C 500), or reduced-wall resilient seated gate valves (AWWA C 515), 200 psig pressure rating, bronze mounting, push-on bell ends with rubber joint rings, and nut-operated unless otherwise specified. Provide standard-wall resilient seated valves manufactured by American Darling AFC-500, US Pipe Metroseal 200, or approved equal. Provide reduced-wall resilient seated valves manufactured by American Flow Control Series 2500 or approved equal. Provide double disc valves manufactured by American Darling 52, Clow F-6102, or approved equal. Comply with following requirements unless otherwise specified in Drawings:
 - 1. Design: Fully encapsulated rubber wedge or rubber seat ring mechanically attached with minimum 304 stainless-steel fasteners or screws; threaded connection isolated from water by compressed rubber around opening.
 - 2. Body: Cast or ductile iron, flange bonnet and stuffing box together with ASTM A 307 Grade B bolts. Manufacturer's initials, pressure rating, and year manufactured shall be cast in body.
 - 3. Bronze: Valve components in waterway to contain no more than 15 percent zinc and not more than 2 percent aluminum.
 - 4. Stems: ASTM B 763 bronze, alloy number 995 minimum yield strength of 40,000 psi; minimum elongation in 2-inches of 12 percent, non-rising.
 - 5. O-rings: For AWWA C 500, Section 3.12.2. For AWWA C 509, Sections 2.2.6 and 4.8.2. For AWWA C 515, Section 4.2.2.5.
 - 6. Stem Seals Consist of three O-rings, two above and one below thrust collar

with anti- friction washer located above thrust collar for operating torque.

7. Stem Nut: Independent or integrally cast of ASTM B 62 bronze.
 8. Resilient Wedge: Molded, synthetic rubber, vulcanized and bonded to cast or ductile iron wedge or attached with 304 stainless steel screws tested to meet or exceed ASTM D 429 Method B; seat against epoxy-coated surface in valve body.
 9. Bolts: AWWA C 500 Section 3.4, AWWA C 509 Section 4.4 or AWWA C 515 Section 4.4.4; stainless steel; cadmium plated, or zinc coated.
- G. Gate Valves 14 to 24 inches in Diameter: AWWA C 500; parallel seat double disc, or AWWA C 515; reduced-wall, resilient seated gate valves; push-on bell ends with rubber rings and nut- operated unless otherwise specified. Provide reduced-wall resilient seated valves with 250 psig pressure rating and manufactured by American Flow Control Series 2500, **or approved equal**. Provide double disc valves with 150 psig pressure rating and manufactured by American Darling 52, Clow F-6102, **or approved equal**. Comply with following requirements unless otherwise specified on Drawings:
1. Body: Cast iron or ductile iron; flange together bonnet and stuffing box with ASTM A 307 Grade B bolts. Cast following into valve body manufacturers initials, pressure rating, and year manufactured. When horizontally mounted, equip valves greater in diameter than 12 inches with rollers, tracks, and scrapers.
 2. O-rings: For AWWA C 500, Section 3.12.2. For AWWA C 515, Section 4.2.2.5.
 3. Stems: ASTM B 763 bronze, alloy number 995 minimum yield strength of 40,000 psi; minimum elongation in 2-inches of 12 percent, non-rising.
 4. Stem Nut: Machined from ASTM B 62 bronze rod with integral forged thrust collar machined to size; non-rising.
 5. Stem Seals: Consist of three O-rings, two above and one below thrust collar with anti- friction washer located above thrust collar for operating torque.
 6. Bolts: AWWA C 500 Section 3.4 or AWWA C 515 Section 4.4.4; stainless steel; cadmium plated, or zinc coated.
 7. Discs: Cast iron with bronze disc rings securely peened into machined dovetailed grooves.

8. Wedging Device: Solid bronze or cast-iron, bronze-mounted wedges. Thin plates or shapes integrally cast into cast-iron surfaces are acceptable. Other moving surfaces integral to wedging action shall be bronze monel or nickel alloy-to-iron.
 9. Bronze Mounting: Built as integral unit mounted over, or supported on, cast-iron base and of sufficient dimensions to be structurally sound and adequate for imposed forces.
 10. Gear Cases: Cast iron; furnished on 18-inch and larger valves and of extended type with steel side plates, lubricated, gear case enclosed with oil seal or O-rings at shaft openings.
 11. Stuffing Boxes: Located on top of bonnet and outside gear case.
- H. Gate Valves 20 Inches and Larger: Provide AWWA C 515; reduced-wall, resilient seated gate valves. Furnish with spur or bevel gearing.
1. Mount valves horizontally if proper ground clearance cannot be achieved by normal vertical installation. For horizontally mounted gate valves, provide bevel operation gear mounted vertically for above ground operation.
 2. Provide resilient wedge type valves rated for 250 p.s.i.g.
 3. Use valve body, bonnet, wedge, and operator nut constructed of ductile iron. Fully encapsulate exterior of ductile iron wedge with rubber.
 4. Ensure wedge is symmetrical and seals equally well with flow in either direction.
 5. Provide ductile iron operator nut with four flats at stem connection to apply even input torque to the stem.
 6. Provide high strength bronze stem and nut.
 7. Provide pressure O-rings as gaskets.
 8. Provide stem sealed by three O-rings. Top two O-rings are to be replaceable with valve fully open at full rated working pressure.
 9. Provide thrust washers to the thrust collar for easy valve operation.

- I. Valves 4 Inches through 12 Inches for Installation in Vertical Pipe Lines: Double disc, square bottom.
- J. Valves 14 Inches and Larger for Installation in Horizontal Pipe Lines: Equipped with bronze shoes and slides.
- K. Gate Valves Installed at Greater than 4-foot Depth: Provide non-rising, extension stem having coupling sufficient to attach securely to operating nut of valve. Upper end of extension stem shall terminate in square wrench nut no deeper than 4 feet from finished grade. Support extension stem with an arm attached to wall of manhole or structure that loosely holds extension stem and allows rotation in the axial direction only.
- L. Gate Valves in Factory Mutual (Fire Service) Type Meter Installations: Conform to provisions of this specification; outside screw and yoke valves; carry label of Underwriters' Laboratories, Inc.; flanged, Class 125; clockwise to close.
- M. Gate Valves for Tapping Steel Pipe: Provide double disc gate valve. Resilient wedge gate valve not permitted unless otherwise approved by City and Engineer.
- N. Provide flanged joints when valve is connected to steel or PCCP.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Earthwork. Conform to applicable provisions of Section 02317 - Excavation and Backfilling for Utilities.
- B. Operation. Do not use valves for throttling without prior approval of manufacturer.

3.02 SETTING VALVES AND VALVE BOXES

- A. Remove foreign matter from within valves prior to installation. Inspect valves in open and closed positions to verify that parts are in satisfactory working condition.
- B. Install valves and valve boxes where shown on Drawings. Set valves plumb and as detailed. Center valve boxes on valves. Carefully tamp earth around each valve box for minimum radius of 4 feet, or to undisturbed trench face when less than 4 feet. Install valves completely closed when placed in water line.

- C. For pipe section of each riser, use only 6- inch, ductile iron Class 51, or DR18 PVC pipe cut to proper length. Riser must be installed to allow complete access for operation of valve. Assemble and brace box in vertical position as indicated on Drawings.

3.03 DISINFECTION AND TESTING

- A. Assist City and City Inspector with disinfection of valves and appurtenances as required by Section 02514 - Disinfection of Water Lines and test as required by Section 02515 - Hydrostatic Testing of Pipelines.
- B. Double-Disc Gate Valves: **NOT USED**
- C. Solid-Wedge Gate Valves: Apply hydrostatic pressure equal to twice rated working pressure of valve with both ends bulkhead and gate open. Valve shall show no leakage through metal, flanged joints, or stem seals. Test at rated working pressure, applied through bulkheads alternately to each side of closed gate with opposite side open for inspection. Valve shall show no leakage through metal, flanged joints, or stem-seals. **Do not exceed leakage rate of 1 oz/hr/inch of nominal valve size.**
- D. Repair or replace valves which exceed leakage rate.

3.04 PAINTING OF VALVES

- A. Paint valves in vaults, stations, and above ground using ACRO Paint No. 2215, or approved equal.

END OF SECTION

PART 1 GENERAL

1.1 Scope

- A. The work of this section includes the coating of all interior and exterior surfaces, and installation of safety climb device.

1.2 Related works specified elsewhere (if applicable)

- A. Coating and painting of all interior and exterior surfaces is specified herein.

1.3 Reference Specifications and Standards

- A. Without limiting the general aspects of other requirements of these specifications, all surface preparation, coating and painting of interior and exterior surfaces and inspection shall conform to the applicable requirements of the Steel Structures Painting Council, NACE International, ASTM (American Society for Testing and Materials), AWWA and the manufacturer's printed instructions.
- B. The Engineer's decision shall be final as the interpretation and/or conflict between any of the referenced specifications and standards contained herein.

1.4 Contractor Quality Control Requirements and Documentation

- A. The Contractor shall have five years practical experience and successful history in the application of specified product to surfaces of steel water tanks. Upon request, he shall substantiate this requirement by furnishing a list of references and job completions.
- B. The Contractor shall submit with his bid a written statement by the coatings manufacturer stating that the Contractor is familiar with the materials specified and has workers capable of performing the work specified herein.
- C. The personnel performing the work shall be knowledgeable and have the required experience and skill to adequately perform the work for this project, in accordance with SSPC-PA1, "Shop, Field and Maintenance Painting".

1.5 Quality Assurance

- A. General: Quality assurance procedures and practices shall be utilized to monitor all phases of surface preparation, application and inspection throughout the duration of the project. Procedures or practices not specifically defined herein may be utilized provided they meet recognized and accepted professional standards and are approved by the Engineer.
- B. Surface Preparation: Surface preparation will be based upon comparison with: "Pictorial Surface Preparation Standards for Painting Steel Surfaces: SSPC-VIS 1", ASTM Designation D2200095, "Standard Methods of Evaluating Degree of Rusting on Painted Surfaces", ASTM D 4417, Method A and/or Method C or NACE Standard RP0287, and ASTM Designation D610 "Visual Standard for Surfaces of New Steel Air blast Cleaned with Sand Abrasive". In all cases, the written standard shall take precedence over the visual standard. In addition, NACE Standard RP0178, along with the Visual Comparator, shall be used to verify the surface preparation of welds.
- C. Application: No coating or paint shall be applied when:
 - (1) the surrounding air temperature or the temperature of the surface to be coated or painted is below the minimum surface temperature for the products specified herein.
 - (2) rain, snow, fog or mist is present
 - (3) the temperature is less than 50° F
 - (4) the air temperature is expected to drop below the minimum temperature for the products specified within six hours after application of coating. Dewpoint shall be measured by use of an instrument such as a Sling Psychrometer in conjunction with U.S. Department of Commerce Weather Bureau Psychometric Tables.

If any of the above conditions are prevalent, coating or painting shall be delayed or postponed until conditions are favorable. The day's coating or painting shall be completed in time to permit the film sufficient drying time prior to damage by atmosphere conditions. The Contractor is required to take necessary precautions to control paint drifting. The Owner will not be

responsible for any damage caused by drifting paint.

- D. Inspection Devices: The contractor shall furnish, until final acceptance of coating and painting is accepted, inspection devices in good working condition for measurement of dry film thickness of coating and paint. The Contractor shall also furnish U.S. Department of Commerce, National Bureau of Standards certified thickness calibration plates and/or plastic shims, depending upon the thickness gauge used, to test the accuracy of dry film thickness gauges and certified instrumentation to test the accuracy of holiday detectors. Dry film gauges and holiday detectors shall be made available for the Engineer's use at all times until final acceptance of application. Holiday detection devices shall be operated in the presence of the Engineer.
- E. Inspection: Inspection for this project shall consist of "hold point" inspections. The Engineer or his representative shall inspect the surface prior to application of coating materials, and between subsequent coats of material. Final inspection shall take place after all coatings are applied. Contractor will insure that sufficient rigging is in place so that the Engineer or his representative shall be able to conduct the required inspections.
- F. Warranty Inspection: Warranty inspection shall be conducted during the eleventh month following acceptance of all coating and painting work. All defective work shall be repaired in accordance with this specification and to the satisfaction of the Engineer and/or Owner.

1.6 Safety and Health Requirements

- A. General: In accordance with requirements set forth by regulatory agencies applicable to the construction industry and manufacturer's printed instructions and appropriate technical bulletins and manuals, the Contractor shall provide and require use of personal protective lifesaving equipment for persons working on or about the project site.
- B. Head and Face Protection & Respiratory Devices: Equipment shall include protective helmets which shall be worn by all persons while in the vicinity of the work. In addition, workers engaged in or near the work during sandblasting shall wear eye and face

protection devices and air purifying half-mask or mouthpiece respirators with appropriate filters. Barrier creams shall be used on any exposed areas of the skin.

- C. Ventilation: Where ventilation is used to control hazardous exposure, all equipment shall be explosion-proof. Ventilation shall reduce the concentration of air contaminants to a degree a hazard does not exist. Air circulation and exhausting of solvent vapors shall be continued until coatings have fully cured.
- D. Sound Levels: Whenever the occupational noise exposure exceeds maximum allowable sound levels, the Contractor shall provide and require the use of approved ear protection devices.
- E. Illumination: Adequate illumination shall be provided while work is in progress, including explosion-proof lights and electrical equipment. Whenever required by the Engineer, the Contractor shall provide additional illumination and necessary supports to cover all areas to be inspected. The level of illumination for inspection purposes shall be determined by the inspector.
- F. Temporary Ladders and Scaffolding: All temporary ladders and scaffolding harnesses and safety devices shall conform to applicable safety requirements. They shall be erected where requested by the Engineer to facilitate inspection and be moved by the Contractor to locations requested by the Engineer.

1.07 Product Delivery, Storage & Handling

- A. All materials shall be brought to the jobsite in original sealed containers. They shall not be used until the Engineer has inspected the contents and obtained data from information on containers or label. Materials exceeding storage life recommended by the manufacturer shall be rejected.
- B. All coatings and paints shall be stored in enclosed structures to protect them from weather and excessive heat or cold. Flammable coatings and paints must be stored to conform with City, County, State and Federal safety codes for flammable coating or paint materials. At all times coatings and paints shall be protected from freezing.

PART 2 PRODUCTS/MATERIALS

2.1 Acceptable Manufacturers

- A. Materials specified are those that have been evaluated for the specific service. Products of the TNEMEC Company, Inc. are listed to establish a standard of quality. Equivalent materials of other manufacturer's may be submitted on written approval of the Engineer. As part of the proof of equality, the Engineer will require at the cost of the Contractor, certified test reports from a nationally known, reputable and independent testing laboratory conducting comparative tests as directed by the Engineer between the product specified and the requested substitution.
- B. Requests for substitution shall include manufacturer's literature for each product giving name, product number, generic type, descriptive information, solids by volume, recommended dry film thickness and certified lab test reports showing results to equal the performance criteria of the products specified herein. In addition, a list of five projects shall be submitted in which each product has been used and rendered satisfactory service.
- C. All requests for product substitution shall be made at least 10 days prior to the bid date. No consideration shall be given to substitute products beyond this 10-day advance.
- D. Any material savings shall be passed to the owner in the form of a contract dollar reduction.
- E. Manufacturer's color charts shall be submitted to the Engineer at least 14 days prior to coating and/or paint application. General Contractor and Painting Contractor shall coordinate work so as to allow sufficient time (normally seven to ten days) for paint to be delivered to the job site. The colors to be used for the tank, logo background and logo lettering shall be selected by the Engineer.

2.2 General Requirements

- A. All materials shall be lead-free as defined by the Consumer Product Safety Act, Part 1303.

- B. All zinc dust pigment contained in any zinc-rich material shall meet the requirements of ASTM D 520 Type II as regards zinc content and purity.

2.3 Material Preparation

- A. Mix and thin materials according to manufacturer's latest printed instructions.
- B. Do not use materials beyond manufacturer's recommended shelf life.
- C. Do not use mixed materials beyond manufacturer's recommended pot life.

2.4 Tank Interior Coating Systems

A. Zinc/Epoxy System:

1. Surface Preparation Prior to Sandblasting: Weld flux and spatter shall be removed by power tool cleaning. Sharp projections shall be ground to a smooth contour. All welds shall be ground smooth as per NACE Standard RP178, Designation.
2. Surface Preparation: SSPC-SP10/NACE 2 Near-White Metal Blast Cleaning. A minimum angular profile of 2.0 to 2.5 mils as per ASTM D 4417, Method C or NACE Standard RP0287 is required.
3. Coating System

Prime Coat: TNEMEC Series 91-H2O Hydro-Zinc applied at 2.5 to 3.5 dry mils. Thin only with approved thinner, Tenemec 41-2 or 41-3 Thinner.

Stripe Coat: TNEMEC Series L140 Pota-Pox Plus - 15BL Tank White sprayed at 4.0 - 6.0 dry mils. Thin only with approved thinner, Tenemec 41-4 thinner.

Intermediate

Coat: TNEMEC Series L140 Pota-Pox Plus - 15BL Tank White applied at 4.0 to 6.0 mils. Thin only

with approved thinner 49.

Finish Coat: TNE MEC Series L140 Pota-Pox Plus - 15BL
Tank White applied at 4.0 to 6.0 mils. Thin only
with approved thinner 49.

Total dry film thickness shall be a minimum of 14.5 mils.

2.5 Tank Exterior Coating Systems

A. Zinc/Epoxy System:

1. Surface Preparation Prior to Abrasive Blast Cleaning: Weld flux and spatter shall be removed by power tool cleaning. Sharp projections shall be ground to a smooth contour. All welds shall be ground to a smooth contour as per NACE Standard SP0178, Designation D.
2. Surface Preparation: SSPC-SP10/NACE 2 Near-White Metal Blast Cleaning. A minimum angular profile of 2.0 to 2.5 mils as per ASTM D 4417, Method C or NACE Standard RP0287 is required.
3. Coating System:

Prime Coat: Tnemec Series 91-H2O Hydro-Zinc applied at 2.5 to 3.5 dry mils. Thin only with approved thinner, Tnemec 41-2 or 41-3 Thinner.

Stripe Coat: Tnemec Series N69-1255 Beige at 4.0 to 6.0 dry mils. Thin only with approved thinner, Tnemec 41-4 Thinner.

Intermediate

Coat: Tnemec Series 1095-00WH White Endura-Shield applied at 2.0 to 3.0 dry mils. Thin only with approved thinner, Tnemec 41-104 Thinner.

Finish Coat: Tnemec Series 700-15BL Tank White Hydroflon applied at 2.0 to 3.0 dry mils. Thin only with approved thinner, Tnemec

41-634 Thinner.

Total dry film thickness shall be a minimum of 10.5 mils.

Area to receive exterior coating shall be the exterior of the tank and pedestal along with the inside of the pedestal, access ladder and base.

For cold weather applications, Series 44-710 Urethane Accelerator may be added to Series 91-H₂O. For cold weather applications, use Series N69F instead of Series N69.

PART 3 EXECUTION

3.1 General

- A. All surface preparation, coating and painting shall conform to applicable standards of the Steel Structures Painting Council, NACE International and the manufacturer's printed instructions. Materials applied to the surface prior to the approval of the Engineer shall be removed and re-applied to the satisfaction of the Engineer at the expense of the contractor.
- B. All work shall be performed by skilled craftsmen qualified to perform the required work in a manner comparable with the best standards of practice. Continuity of personnel shall be coordinated with the Engineer.
- C. The Contractor shall provide a supervisor at the work site during cleaning and application operations. The supervisor shall have the authority to sign all change orders, coordinate work and make decisions pertaining to the fulfillment of the contract.
- D. Dust, dirt, oil, grease or any foreign matter that will affect the adhesion or durability of the coating or paint must be removed by washing with clean rags dipped in an approved cleaning solvent and wiped dry with clean rags.

- E. Coating and painting systems include surface preparation, prime coating and finish coatings. Unless otherwise approved in writing by the Engineer, prime coating shall be field applied. Where prime coatings are shop applied, the Contractor shall instruct suppliers to provide the prime coat compatible with the specified finish coat. Any off-site work which does not conform to this specification, is subjected to damage during transportation, construction or installation shall be thoroughly cleaned and touched-up in the field as directed by the Engineer. The Contractor shall use repair procedures which insure the complete protection of all adjacent primer. The specified repair method and equipment may include wire brushing, hand or power tool cleaning, or dry air blast cleaning. In order to prevent injury to surrounding painted surfaces, blast cleaning may require use of lower air pressure, smaller nozzle and/or abrasive blast particles, or shorter blast nozzle distances from surface shielding and masking. If damage is too extensive or uneconomical to touch-up, the entire item shall be blasted and then coated or painted as directed by the Engineer.
- F. The Contractor's coating and painting equipment shall be designed for application of materials specified and shall be maintained in first class working condition. Compressors shall have suitable traps and filters to remove water and oils from the air. Contractor's equipment shall be subject to approval of the Engineer.
- G. Application of the first coat shall follow immediately after surface preparation and cleaning, if applicable, before rust bloom occurs or the same day, whichever is less. Any cleaned areas not receiving first coat within this period shall be re-cleaned prior to application of first coat.
- H. Prior to assembly, all surfaces made inaccessible after assembly shall be prepared as specified herein and shall receive the coating or paint system specified.

3.2 Surface Preparation

- A. The latest revision of the following surface preparation specifications of the Steel Structures Painting Council (SSPC) shall form a part of this specification. The summaries listed below are for

informational purposes; consult the actual SSPC specification for full detail.

1. Solvent Cleaning (SSPC-SP1): Removal of oil, grease, soil and other contaminants by use of solvents, emulsions, cleaning compounds, steam cleaning or similar materials and methods which involve a solvent or cleaning action.
 2. Hand Tool Cleaning (SSPC-SP2): Removal of loose rust, loose mil scale and other detrimental foreign matter to a degree specified by hand chipping, scraping, sanding and wirebrushing.
 3. Power Tool Cleaning (SSPC-SP3): Removal of loose rust, loose mil scale and other detrimental foreign matter by power wirebrushing, power impact tools or power sanders.
 4. White Metal Blast Cleaning (SSPC-SP5/NACE No. 1): Air blast cleaning to a gray-white uniform metallic color until each element of surface area is free of all visible residues.
 5. Commercial Blast Cleaning (SSPC-SP6 NACE No. 3): Air blast cleaning until at least two-thirds of each element of surface area is free of all visible residues.
 6. Brush-Off Blast Cleaning (SSPC-SP7 NACE No. 4): Air blast cleaning to remove loose rust, loose mil scale and other detrimental foreign matter to a degree specified.
 7. Near-White Metal Blast Cleaning (SSPC-SP10 NACE No. 2): Air blast cleaning until at least 95% of each element of surface area is free of all visible residues.
 8. Power Tool Cleaning to Bare Metal (SSPC-SP11): Differs from SSPC-SP3 in that it requires more thorough cleaning and a surface profile not less than 1 mil.
- B. Slag, weld metal accumulation and spatters not removed by the Fabricator, Erector or Installer shall be removed by chipping and/or grinding. All sharp edges shall be peened, ground or otherwise blunted as required by the Engineer. All grinding and finishing of welds, edges, etc. shall be performed prior to solvent

cleaning and abrasive blasting. Welds shall be prepared as per NACE Standard RP0178 for all interior and exterior surfaces:

1. Butt Welds: Shall be ground smooth and free of all defects, designation "D".
 2. Lap Welds: Shall be ground smooth and blended, designation "C", excepting that visual imperfections and ripples are allowable.
 3. Fillet Welded Tee Joint: Shall be ground smooth and blended, designation "D".
- C. Field blast cleaning for all surfaces shall be by dry method unless otherwise directed. Blast nozzles shall be venturi-type nozzles with a minimum pressure at the nozzle of 90 psi.
- D. Particle size of abrasives used in blast cleaning shall be that which will produce a 1.5 - 2.5 mil (37.5 microns - 65.0 microns) surface profile or in accordance with recommendation of the manufacturer of the specified coating or paint system to be applied.
- E. Abrasive used in blast cleaning operations shall be new, washed, graded and free of contaminants that would interfere with adhesion of coating or paint and shall not be reused unless specifically approved in writing by the Engineer.
- F. During blast cleaning operations, caution shall be exercised to insure that existing coatings or paint are not exposed to abrasion from blast cleaning.
- G. The Contractor shall keep the area of his work and the surrounding environment in a clean condition. He shall not permit blasting materials to accumulate as to constitute a nuisance or hazard to the accomplishment of the work, the operation of the existing facilities or to the surrounding environment.
- H. Blast cleaned surfaces shall be cleaned prior to application of specified coatings or paint. All surfaces shall be free of dust, dirt and other residue resulting from the abrasive blasting operation.

No coatings or paint shall be applied over damp or moist surfaces.

- I. All welds shall be neutralized with a suitable chemical compatible with the specified coating or paint.
- J. Specific Surface Preparation: Surface preparation for the specific system shall be noted in Section 2.4.

3.3 NON-VISIBLE CONTAMINANTS

- A. Surface shall be checked in three locations for the presence of chlorides, free iron and sulfates. New tanks shall be tested prior to abrasive blasting, tanks being rehabilitated shall be tested prior to blasting. If blisters are present in existing tank, testing shall also be performed after abrasive blasting. These tests are an Iron Test (Fe^{2+}), Chloride Test and Sulfate Test. Testing shall be carried out as per SSPC Technology Guide 15 "Field Methods for Retrieval and Analysis of Soluble Salts on Steel and Other Nonporous Substrates". The maximum limits for these contaminants shall be:
 - 1. The maximum level of chlorides is 30 milligrams per square meter or 3 micrograms per square centimeter.
 - 2. The maximum level of sulfates is 100 milligrams per square meter or 10 micrograms per square centimeter.
 - 3. The maximum level of ferrous ions (Fe^{2+}) is 50 milligrams per square meter or 5 micrograms per square centimeter.
 - 4. Contamination levels above these limits will require washing and retesting in accordance with Item 2 (below) until the surface is under the allowable limits.
- B. If testing shows amounts present in the test solution to be greater than the limits listed herein, the Contractor shall clean the surface of the entire tank interior with a 5,000 psi water blast with fine entrained abrasive until the levels in the test solutions are below the maximum acceptable level. Alternate cleaning methods may be allowed with prior approval of the Engineer. Surface shall be reblasted as specified in 2.04 at no additional cost to the Owner.

- C. Contractor shall provide a written statement from paint manufacturer stating that the maximum acceptable levels are not less than those listed herein. Results of the testing shall be provided to the Owner before any coatings are applied.
- D. The following test kits are approved for use on this project:
 - a. Chlor*Rid Chor*Test Kit
 - b. KTA SCAT Test Kit
 - c. Test kits from other vendors shall be submitted to the Engineer for prior approval before use.
- E. When exterior coats are to be applied on subsequent days, or when the shroud is dropped between coats, the previously-applied coat of paint shall be thoroughly pressure-washed to remove any fallout and/or salt that may have settled on the surface.
- F. Within 50 miles of the coast, all exterior surfaces scheduled to be coated shall be rinsed immediately prior to the installation of coating with clean, potable water.
- G. Interior and exterior of tank shall be pressure washed prior to sand blasting.

3.4 APPLICATION, GENERAL

- A. Coating and paint application shall conform to the requirements of the Society for Protective Coatings Paint Application Specification SSPC-PA1, latest revision, for "Shop, Field and Maintenance Painting".
- B. Thinning shall be permitted only as recommended by the manufacturer and approved by the Engineer, and utilizing the thinners stated in Sections 2.04, 2.05 and 2.06.
- C. Each application of coating or paint shall be applied evenly, free of brush marks, sags, runs, with no evidence of poor workmanship. Care shall be exercised to avoid lapping on glass or hardware. Coatings and paints shall be sharply cut to lines. Finished surfaces shall be free from defects or blemishes.

- D. Contractor shall provide dehumidification for interior coating.
- E. Protective coverings or drop cloths shall be used to protect floors, fixtures and equipment. Care shall be exercised to prevent coatings or paints from being spattered onto surfaces which are not to be coated or painted. Report to the Engineer surfaces from which materials cannot be satisfactorily removed.
- G. When two coats of coating or paint are specified, where possible, the first coat shall contain sufficient approved color additive to act as an indicator of coverage or the two coats must be of contrasting color.
- G. Film thickness per coat as specified in Sections 2.04, 2.05 and 2.06 are the minimum required. If roller application is deemed necessary, the Contractor shall apply additional coats as to achieve the specified thickness.
- H. All material shall be as specified.

3.5 Application-General

- A. Coating and paint application shall conform to the requirements of the Steel Structure Painting Council Paint Application Specification SSPC-PA1, latest revision, for "Shop, Field and Maintenance Painting".
- B. Thinning shall be permitted only as recommended by the manufacturer and approved by the Engineer, and utilizing the thinners stated in Section 2.4.
- C. Each application of coating or paint shall be applied evenly, free of brush marks, sags, runs, with no evidence of poor workmanship. Care shall be exercised to avoid lapping on glass or hardware. Coatings and paints shall be sharply cut to lines. Finished surfaces shall be free from defects or blemishes.
- D. Protective coverings or drop cloths shall be used to protect floors, fixtures, and equipment. Care shall be exercised to prevent coatings or paints from being spattered onto surfaces which are not to be coated or painted. Report to the Engineer surfaces from

which materials cannot be satisfactorily removed.

- E. When two coats of coating or paint are specified, where possible, the first coat shall contain sufficient approved color additive to act as an indicator of coverage or the two coats must be of contrasting color.
- F. Film thickness per coat as specified in Section 2.4 are the minimum required. If roller application is deemed necessary, the Contractor shall apply additional coats as to achieve the specified thickness.
- G. All material shall be as specified.
- H. Tank exterior shall be washed daily prior to coating for the removal of airborne contaminants.

3.6 Coating Systems Application

- A. After completion of surface preparation as specified for the specific system, materials shall be applied as noted in Section 2.4.

3.7 Clean up

- A. Upon completion of the work, all staging, scaffolding and containers shall be removed from the site or destroyed in a manner approved by the Engineer. Coating or paint spots or oil stains upon adjacent surfaces shall be removed and the job site cleaned. All damage to surfaces resulting from the work of this section shall be cleaned, repaired and refinished to the satisfaction of the Engineer at no cost to the Owner.

3.8 Guarantee

The Contract shall guarantee the paint and painting for a period of one (1) year from the date of acceptance of the project by the Owner. This guarantee shall be filed with the Owner before final payment will be made to the Contractor. If any materials and/or workmanship prove to be defective within one year, they shall be replaced or repaired by the Contractor within thirty (30) days of written notice of

the defect.

4.0 Containment System

- A. All surfaces to be abrasive blast cleaned shall be shrouded. The shrouding shall remain in place until the painting operation is complete. During the daily blasting and coating process, the containment shall remain raised to its highest point to prevent any emission releases. The shroud shall enclose or surround the area being blasted to minimize the atmospheric entrainment of fine particulates and direct that material to a confined area for disposal. The shroud shall have overlapping seams to prevent leakage of particulates, shall extend a minimum of 15 feet (15') above the area being blasted, and shall have a shade factor of 95 percent (95%) and a control factor of 95 percent (95%) of particles 100 grit or greater.
- B. Containment plans must be designed by a licensed professional structural engineer and sealed. Plan must be submitted and approved by the Engineer before starting work.

5.0 Cathodic Protection

6.0 Contractor's Warranty

A. First-Anniversary Inspection

The first anniversary inspection shall be performed 30 days prior to the anniversary date as stated on the Acceptance Letter by the Engineer. The inspection may be performed by dive inspection, remote underwater cameras or a physical inspection as determined by the Owner. The City shall be responsible for preparing the tank and coordinating with their tank inspection Team to perform the inspection. The life of the coating system maybe extended as determined by the annual tank inspection based on the conditions identified in the inspection process.

END OF SECTION

PART 1 GENERAL

1.1 General

The work covered by this section of the specification includes all fencing at the project site. The Contractor shall furnish all materials, labor, superintendence, tools, equipment and incidentals necessary to accomplish this construction in accordance with the drawings and these specifications. All materials covered by these specifications shall be of domestic origin.

Shop drawings shall be submitted showing complete details of the proposed installation.

1.2 Measurement and Payment

Chain-link fence will be measured and paid for by the linear foot. Measurement will be along the top of the fence from center to center of end posts, including the length occupied by gates openings.

PART 2 PRODUCTS/MATERIALS

2.1 Wire Fabric

The base metal of the fabric shall be a good commercial quality of steel wire. The wire shall be woven throughout in the form of uniform square mesh. The fabric shall be knuckled at the bottom and twisted and barbed at the top. The fabric shall be 72 inches high except where otherwise shown on the drawings. The wire shall be No. 9 gauge with 2-inch mesh. The entire fabric shall be zinc coated in accordance with zinc-coated Steel Chain-Link Fence Fabric, ASTM designation A 392.

2.2 Posts, Top Rails, Gates, Braces and Fittings

Posts, top rails, gates and braces may be rolled, formed or tubular in section and shall be in accordance with ASTM Designation F 669. Fittings and appurtenances shall be in accordance with Fence Fittings, ASTM Designation F 626. End, corner and pull posts shall be 2.875" O.D. pipe

5.79 lbs. per ft., or 2.5" square, 5.70 lbs. per foot, or formed steel 3.5" by 3.5", 5.10 lbs per foot. Intermediate line posts for 6 ft. fabric shall be 2.375" O.D. pipe, 3.65 lbs. per foot, or H-section weighing at least 4.10 lbs. per foot or forged steel heavy "C" section 1.625" by 1.25", weight not less than 1.35 lbs. per foot. Weight of the zinc-coating shall be not less than 1.8 oz. per square foot. All rails, braces and fittings not galvanized shall be painted with an approved anti-corrosive paint.

2.3 Barbed Wire

Barbed wire shall be two strand twisted 12-1/2 AWS gauge galvanized steel wire with three point barbs of No. 14 AWS gauge galvanized steel wire and conforming to Zinc-Coated (Galvanized) Steel Barbed Wire, ASTM Designation A 121, Class 1.

2.4 Gates

All new gates shall be of the single leaf cantilever type or single swing type. General construction of all gates shall be as indicated on the drawings, or of similar construction as approved by the Engineer. Every gate shall be provided with a locking device suitable for pad locking. Latches for gates shall be of the fork type. Gates shall have barbed wire top when installed in fencing with barbed wire top.

2.5 Barbed Wire Fencing

Barbed wire fencing shall have red welded metal pasture gates installed as shown on the plans. Gates shall be swung from a 3-inch schedule 40 steel post set 3 feet deep and concreted in. Both the swing post and receiving post shall be set for the appropriate opening as shown on the plans.

Tee Posts shall be set on 10 foot intervals around the wells as shown on the plans. All barbed wire fencing shall be five strand barbed wire with steel corner posts with cross bracing in each corner, see Typical Detail for Corner Posts on plans. All runs shall be tight but care shall be taken to NOT over tighten the wire causing excess stress on the corner posts.

2.6 Concrete

Concrete around posts shall be adequate to maintain the posts truly plumb under the stresses imposed and shall have a 28-day compressive strength of not less than 2,500 psi.

PART 3 EXECUTION/CONSTRUCTION METHODS

3.1 General

The fence shall be constructed as specified herein, and all work shall be performed in a workman like manner satisfactory to the Engineer. The finished fence shall be plumb, taut, true to line and ground contour, and complete in every detail.

3.2 Clearing Fence Line

The site of the fence shall be sufficiently cleared of obstructions, and surface irregularities shall be graded so that the fence will conform to the general contour of the ground. The fence line shall be cleared to a minimum width of 2 feet on each side of the centerline of the fence. This clearing shall consist of the removal of all stumps, brush, rocks, trees, or other obstructions which will interfere with proper construction of the fence. Stumps within the cleared area of the fence line shall be grubbed or excavated. The bottom of the fence shall be placed a uniform distance of 2-inches above the ground.

The work shall include the handling and disposal of all material cleared, excavated, or removed, regardless of the type, character, composition, or condition of such material encountered.

3.3 Installing Posts

All posts shall be spaced not more that 10 feet apart. Terminal (end, corner, pull, and brace) and gate posts shall be set 36 inches in concrete bases. The top of the concrete bases shall be slightly above grade, trowel finished, and sloped to drain away from the posts. Holes of full depth and size for the concrete bases for posts shall be dug to the size and depth as

specified. All post settings shall be done carefully so that all posts shall be vertical and in true alignment and rigidly secured in position. Diameter of the holes shall be not less than 9-inches nor 3 times the diameter of the post.

On terminal (end, corner, pull, and brace) and gate posts, the post tops and brace rail clamps around the posts shall be placed before setting the posts in concrete bases. In setting the gate posts, great care must be taken to make sure that gate posts are set the exact distance apart as required by the gates furnished. A line drawn across from the top of one gate post to the other must be level, regardless of the grade at the ground line. If the ground is not level, the upgrade gate post shall be set first to better align proper height for the downgrade gate post. The concrete bases for end, corner, pull, brace, and gate posts shall be placed first and allowed to cure for 14 days. The concrete bases for line posts shall be allowed to cure for 7 days. Stretcher bar bands and truss bands as specified shall be spread and slipped on end, corner, pull, brace, and gate posts as the next operation. Posts tops are then inserted on all posts. No extra compensation shall be made for rock excavation. Rock excavation shall not be grounds for extension of time.

3.4 Installing Top Rails

To start the installation, a length of top rail shall be run through the first couple of post tops; a rail clamp shall be assembled on the end, corner, or gate post, as the case may be. The end of the rail already placed shall be butted into the clamp and fastened. The top rail shall be installed along the run of the fence and the various sections joined with sleeve couplings. At not more than every 100 feet an expansion coupling shall be placed to take care of expansion and contraction of the rail. The rail shall be clamped in the end, corner, or gate post at the end of the run of the installation of top rail.

3.5 Installing Braces

All horizontal braces shall be attached together with truss rods at all terminal (end, corner, and pull) and gate posts to the brace posts.

3.6 Corner Posts

Corner posts shall be placed at each horizontal angle point. Corner posts shall have braces and truss rods as specified.

3.7 Installing Fabric

The fabric shall be unrolled on the outside of the fence line with the bottom edge of the fabric against the posts. The various rolls shall be spliced by bringing the ends close together and weaving in a picket in such a way that it will engage both off the roll ends and catch with each twist each separate mesh of the end pickets of both rolls of fabric. The fabric shall be raised and tied loosely to the top rail with a temporary tie wire at intervals of about 20 feet. The fabric shall be installed by a method approved by the Engineer. One method used is given below.

- A. At end, corner, or gate posts, the stretcher bar shall be slipped through the end picket of the fabric and the stretcher bar bands at the same time. Then the bolts in the stretcher bar bands shall be tightened. Additional rolls of fabric shall be spliced and placed as the erection progresses along the fence.
- B. In long sections, the fence shall be stretched at intervals of about 100 feet. After the stretching is complete, the fabric shall be tied to the top rails with No. 9-gauge galvanized wire clips securely clinched at the back of the rail. The fastenings shall be spaced not more than 24 inches on centers for the top rail.
- C. The fabric shall be attached to the line posts with No. 9-gauge galvanized wire clips securely clinched to the back of the line posts. The fastenings shall be spaced not more than 14 inches on centers for line posts. The topmost clip shall be placed on the line posts as near the top of the fabric as possible and the lowest clip as near the bottom of the fabric as possible.
- D. At terminal (end, corner, and pull) and gate posts the fabric shall be fastened with stretcher bars and bands. The fastenings shall be spaced not more than 14 inches on centers for terminal (end, corner, and pull) and

gate posts. The topmost band shall be placed on these posts as near the top of the fabric as possible and the lowest band as near the bottom of the fabric as possible.

3.8 Installing Gates

All gates shall be hung on gate fittings as shown on the drawings. Gates shall be erected to slide or swing in the direction indicated and shall be provided with gate stops. All hardware shall be thoroughly secured, properly adjusted, and left in perfect working order. Supports and diagonal braces in gates shall be adjusted so that the gates will hang level.

END OF SECTION

City Council Meeting Agenda Item Data Sheet

Meeting Date: December 18, 2023

Topic:

Consideration, discussion, and possible action regarding January 2, 2023, Regular City Council

Background:

Origination:

Recommendation:n/a

n/a

Party(ies) responsible for placing this item on agenda: David Esquivel, City Manager

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: # _____

If no, funds will be transferred from account # _____ To account # _____

Signed	_____	Approved by	_____
	Staff Member		City Manager
	Date		Date

City Council Meeting

Agenda Item

Data Sheet

Meeting Date: _____

Topic:

Approve Request from Tomball Rotary Club for City Support and In-Kind Services for the Tomball Rotary Club Fish Fry at Juergens Park, on Friday, April 12, 2024 from 4:00-8:00 p.m

Background:

This annual event brings Tomball Rotary members and potential new members together.

Origination: Initial Rotary Club members will arrive at 8:00 a.m. to begin cooking and setup. The Event will officially start at 4:00 p.m. and finish at 8:00 p.m. where breakdown will immediately commence and should be completed by 10:00 p.m.

Recommendation:

To help with the efficiency of the event, we request the City of Tomball for the following in-kind services (as needed): Police, Fire, Public Works, and Coordination.

Party(ies) responsible for placing this item on agenda: Chrislord Templonuevo

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: # _____

If no, funds will be transferred from account # _____ To account # _____

Signed _____ Approved by _____
Staff Member Date City Manager Date

**CERTIFICATE OF FORMATION OF
TOMBALL ROTARY FOUNDATION
A NONPROFIT CORPORATION**

FILED
In the Office of the
Secretary of State of Texas

JAN 13 2011

Corporations Section

This certificate of formation is submitted for filing pursuant to the applicable provisions of the Texas Business Organizations Code.

Article I - Entity Name and Type

The name and type of filing entity being formed are: TOMBALL ROTARY FOUNDATION, a Texas nonprofit corporation (hereinafter "Corporation").

Article II - Purpose

The Corporation is organized for charitable, religious, scientific, literary, or educational purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code of 1986 (the "Code"), and the Texas Tax Code, Section 11.18. In particular the Corporation shall conduct fund raising activities and use proceeds to fund scholarships for Tomball area applicants and make contributions to worthy charitable and humanitarian efforts.

Article III - Restrictions and Limitations

Notwithstanding the foregoing or anything to the contrary herein, the Corporation may not:

- A. Engage in any activity or take any action prohibited by the applicable provisions of the Texas Business Organizations Code.
- B. Pay any dividend or distribute any part of the income of the Corporation to its members, if any, directors, if any, or officers. However, the Corporation may pay compensation in a reasonable amount to its members, directors, or officers for services rendered, may confer benefits upon its members in conformity with its purposes, provided such compensation and benefits are reasonable.
- C. Make loans to the Corporation's directors.
- D. Engage in any activities, except to an insubstantial degree, that are not in furtherance of the purpose or purposes of the Corporation.
- E. Conduct or carry on any activities not permitted to be conducted or carried on by an organization exempt from taxation under Section 501(c)(3) of the Internal Revenue Code and its regulations, or by an organization, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code and regulations.

F. " Serve any private interest except if clearly incidental to the public benefit provided by the Corporation.

G. Allow any of the Corporation's net earning to inure to the benefit of the members, if any of the Corporation, or any private individual.

H. Engage in more than an insubstantial degree in the carrying on of propaganda, or otherwise attempting, to influence legislation, and the Corporation shall not directly or indirectly participate in, or intervene in (including the publication or distribution of statements) any political campaign on behalf of any candidate for public office, except as allowed by Internal Revenue Code and its regulations.

I. Make distributions at such time and in such manner as to subject it to tax under Section 4942 of the Code.

J. Engage in any act of self-dealing which would be subject to tax under Section 4941 of the Code.

K. Retain any excess business holdings which would subject it to tax under Section 4943 of the Code.

L. Make any investments which would subject it to tax under Section 4944 of the Code.

M. Make any taxable expenditures which would subject it to tax under Section 4945 of the Code.

Article IV - Registered Office and Registered Agent

The initial registered agent is an individual resident of the state whose name is Susan L. Bulgawicz. The business address of the initial registered agent and the initial registered office is: 450 Gears, Suite 800, Houston, Texas 77067.

Article V - Organizer

The name and address of the organizer is:

<u>Name</u>	<u>Address</u>
Susan L. Bulgawicz	450 Gears, Suite 800, Houston, Texas 77067

Article VI - Governing Authority

Management of the affairs of the Corporation is to be vested in its board of directors. The number of initial directors shall be five (5). The number of directors shall be set by the bylaws of the Corporation as may be amended from time to time, provided that the number of directors may never be less than three. The names and addresses of the persons who are to serve as directors until the first annual meeting or until their successors are elected and qualified are:

<u>Name</u>	<u>Address</u>
1. Camille Hamilton	6046 FM 1920, Suite 222, Spring, Texas 77379
2. Deborah Petty	14235 FM 2920, Tomball, Texas 77377
3. Frank Willingham	30555 Tomball Parkway, Tomball, Texas 77375
4. Susan Bulgawicz	450 Gears, Suite 800, Houston, Texas 77067

Article VII - Organizational Structure

The Corporation will not have members.

Article VIII - Indemnification

To the full extent permitted by the applicable provisions of Title 1, Chapter 8 of the Texas Business Organizations Code and other applicable law, the Corporation shall advance or reimburse expenses to and indemnify any present and former directors, officers, employees, and agents of the Corporation and persons serving or formerly serving at the request of the Corporation as directors, officers, partners, venturers, proprietors, trustees, employees, agents or similar functionaries of another foreign or domestic corporation, employee benefit plan, other enterprise or entity against judgments, penalties (including excise and similar taxes), fines, settlements and reasonable expenses actually incurred by the person in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative, arbitative or investigative, any appeal in such action, suit or proceeding and any inquiry or investigation that could lead to such an action suit or proceeding, because the person is or was acting in one of the capacities set forth above.

Article IX - Distribution of Assets Upon Winding Up

After all liabilities and obligations of the Corporation in the process of winding up are paid, satisfied and discharged, the property of the Corporation shall be applied and distributed in accordance with section 22.304, Texas Business Organizations Code.

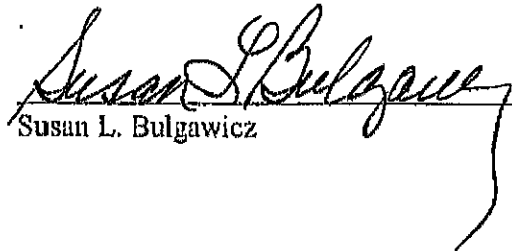
Article X - Effective Date of Filing

This certificate of formation becomes effective when the document is filed by the secretary of state.

Article XI - Execution

The undersigned affirms that the person designated as registered agent has consented to the appointment. The undersigned signs this document subject to the penalties imposed by law for the submission of a materially false or fraudulent instrument and certifies under penalty of perjury that the undersigned is authorized to execute the filing instrument.

Date: January 1, 2011

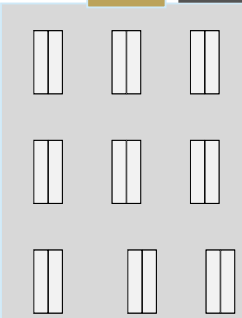

Susan L. Bulgawicz

PLAYGROUND &
PICKLE BALL



VOLLEYBALL COURT

MUSIC
TENT



PAVILLION

BBQ
AREA

DRINK
TENT

DUMPSTERS

FOOD PREP TENT



COOK TRAILER

BARRIER



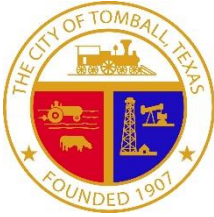
REFER
TRUCK



PLAY GROUND

RESTROOMS

PARKING LOT



SPECIAL EVENT GUIDELINES & APPLICATION

THE CITY OF TOMBALL, TEXAS

Effective Date: 1/1/2023

INTRODUCTION: Any organized activity or event and open to the general public that involves the use of, or having an impact upon, public property, facilities, public parks, sidewalks, or street areas in the city of Tomball require prior approval and must meet certain requirements for consideration.

PROCEDURES: Several procedures and guidelines must be followed before any non-city staged event may take place. Those include, but are not limited to, the following:

1. A completed Special Event application must be submitted to the Tomball Department of Marketing & Tourism at least 180 days prior to any proposed festival or event. Tomball City Council approval is required if the event meets one of the following criteria: sale of alcohol, street closures or contains a request for in-kind donations from the city of Tomball.
2. A written proposal must accompany the application. The proposal should include the overall event concept, a detailed site map, a list of planned activities, hours of operation, proposed vendors, food and beverage, entertainment, and any other relevant aspects of the event.
3. If a charity is involved, or is the beneficiary of funds raised, information about the charity needs to be included as a part of the application process, as well as proof of non-profit status. If requesting in-kind services, preference will be given to organizations providing donations to agencies within the city limits of Tomball.
4. A fee equal to the actual cost of city services to host the event will be required of for-profit event planners to be paid no less than ten business days before the event. Non-profit organizations may request city services as an in-kind donation.
5. A meeting will be scheduled with the Tomball Events Team (representatives of Tomball Police, Fire, Public Works, Marketing and Northwest Community Health EMS) to discuss the merits and feasibility of the proposed event. The applicant is required to be at this meeting to answer questions regarding the application. Failure to attend will result in the event being cancelled by the city of Tomball.
6. If approved by the Tomball Events Team, the proposed event will be presented to the city council for final approval. The applicant is required to be at this meeting to answer questions regarding the application if necessary.
7. Ten days prior to the event, proof of general liability insurance (\$1,000,000 minimum) must be provided by the event organizer naming the city of Tomball as additional insured.
8. Event coordinators must provide their own volunteers or staff; oversee food and beverage permits, vendors, site clean-up and other aspects of staging a festival/special event.
9. Failure to comply with the guidelines listed above will preclude applicant from staging future events.

For additional information, or to submit an event application, please contact:

Chrislord Templonuevo – Director of Marketing & Tourism

401 Market Street

Tomball, Texas 77375

281-290-1035 | Email – ctemplonuevo@tomballtx.gov



SPECIAL EVENT APPLICATION

CITY OF TOMBALL, TEXAS | 401 Market Street | Tomball, TX 77375 | 281-351-5484

An application to stage an event within the city of Tomball shall be filed with the Marketing & Tourism Team at least 180 days prior to the event. This application is not to be construed as authorizing or agreeing to any event until formally approved by the Tomball City Council.

Date: 11/30/2023

Is this event Co-City sponsored? Yes ☐ No ☒

Request for permission to use a public venue for the following type of event (please check one):

Festival ☐ Community Event ☒ Arts & Crafts Event ☐ Music Event ☐ Other (specify) _____

1. Event title: Rotary Fish Fry

2. Sponsoring entity: Tomball Rotary

3. Is this organization based in Tomball: Yes ☒ No ☐

4. Is this organization *non-profit* ☒ or *for-profit* ☐ *Attach 501 (c) (3) tax exemption if applicable

5. Contact: Craig Bogner Phone: 832-715-6291

6. Contact address: 31226 Antiona Lane Tomball Texas 77375

7. Contact email: Craig@tomballgermanfest.org

8. Event date: 4/12/2024

9. Event times: Start 8am Finish 10Pm Set-up 8am Breakdown 10pm

10. Is this event for charity? Yes ☐ No ☐

11. If yes, what charity? Rotary Tax ID _____

12. If yes, what percentage of net proceeds will be donated to the charity? _____

13. On-site contact: Craig Bogner Mobile #: 832-715-6291

14. Estimated number of attendees: 1500

15. Detailed site map in attached: Yes ☒ No ☐

16. Is this event open to the public: Yes ☒ No ☐

17. Admission fee: \$ _____ Free ☒

18. Time at which event staff will begin to arrive: 8am

19. The applicant will defend and hold harmless the city of Tomball from all claims, demands, actions or causes of action, of whatsoever nature or character, arising out of or by reason of the conduct of the activity authorized by such application including attorney fees and expenses. Initial cb

20. The applicant will provide proof of general liability insurance for the event naming the City of Tomball as additional insured. Initial cb

21. Name of insurance carrier: _____

Signature: 832-715-6291

FOR OFFICIAL USE - Fee required: Yes _____ No _____

Amount Due: \$ _____

City Council Agenda Item Data Sheet

Meeting Date: December 18, 2023

Topic:

Consideration to Approve **Zoning Case Z23-19**: Request by William G. Hightower to amend Chapter 50 (Zoning) of the Tomball Code of Ordinances, by rezoning approximately 0.24 acres of land legally described as being Lot 1, Block 1 of Elim from Single Family Residential – 6 (SF-6) to Old Town & Mixed Use (OT & MU). The property is located within the 300 block (north side) of Mechanic Street, within the City of Tomball, Harris County, Texas.

Conduct Public Hearing on **Zoning Case Z23-19**

Adopt, on First Reading, Ordinance No. 2023-54, an Ordinance of the City of Tomball, Texas, amending Chapter 50 (Zoning) of the Tomball Code of Ordinances by rezoning approximately 0.24 acres of land legally described as being Lot 1, Block 1 of Elim from Single Family Residential – 6 (SF-6) to Old Town & Mixed Use (OT & MU). The property is located within the 300 block (north side) of Mechanic Street, within the City of Tomball, Harris County, Texas; providing for severability; providing for a penalty of an amount not to exceed \$2,000 for each day of violation of any provision hereof, making findings of fact; and providing for other related matters.

Background:

Origination: William G. Hightower

Recommendation:

Approval

Party(ies) responsible for placing this item on agenda: Community Development Department

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____

If yes, specify Account Number: # _____

If no, funds will be transferred from account: # _____ To Account: # _____

Signed: _____ **Approved by:** _____
Staff Member Date City Manager Date

ORDINANCE NO. 2023-54

AN ORDINANCE OF THE CITY OF TOMBALL, TEXAS, AMENDING CHAPTER 50 (ZONING) OF THE TOMBALL CODE OF ORDINANCES BY CHANGING THE ZONING DISTRICT CLASSIFICATION OF APPROXIMATELY 0.24 ACRES OF LAND LEGALLY DESCRIBED AS BEING LOT 1, BLOCK 1 OF ELIM FROM SINGLE FAMILY RESIDENTIAL – 6 (SF-6) TO OLD TOWN & MIXED USE (OT & MU). THE PROPERTY IS LOCATED WITHIN THE 300 BLOCK (NORTH SIDE) OF MECHANIC STREET, WITHIN THE CITY OF TOMBALL, HARRIS COUNTY, TEXAS; PROVIDING FOR A PENALTY OF AN AMOUNT NOT TO EXCEED \$2,000 FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF, MAKING FINDINGS OF FACT; AND PROVIDING FOR OTHER RELATED MATTERS.

Whereas, William G. Hightower has requested changing the zoning district classification of approximately 0.24 acres of land being Lot 1, Block 1 of Elim from Single Family Residential - 6 (SF-6) to Old Town & Mixed Use (OT & MU). The property is located within the 300 block (north side) of Mechanic Street, within the City of Tomball, Harris County, Texas; and

Whereas, at least fifteen (15) days after publication in the official newspaper of the City of the time and place of a public hearing and at least ten (10) days after written notice of that hearing was mailed to the owners of land within three hundred feet of the Property in the manner required by law, the Planning & Zoning Commission held a public hearing on the requested rezoning; and

Whereas, the public hearing was held before the Planning & Zoning Commission at least forty (40) calendar days after the City's receipt of the requested rezoning; and

Whereas, the City Council deems it appropriate to grant the requested rezoning.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS, THAT:

Section 1. The facts and matters set forth in the preamble of this Ordinance are hereby found to be true and correct.

Section 2. The rezoning classification of the Property is hereby changed and is subject to the regulations, restrictions, and conditions hereafter set forth.

Section 3. The Official Zoning Map of the City of Tomball, Texas shall be revised and amended to show the designation of the Property as hereby stated, with the appropriate reference thereon to the number and effective date of this Ordinance and a brief description of the nature of the change.

Section 4. This Ordinance shall in no manner amend, change, supplement or revise any provision of any ordinance of the City of Tomball, save and except the change in zoning classification for the Property as described above.

Section 5. In the event any section, paragraph, subdivision, clause, phrase, provision, sentence, this Ordinance or the application of the same to any person or circumstance shall for any r

adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision hereof other any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of Tomball, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, or whether there be one or more parts.

Section 6. Any person who shall violate any provision of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction, shall be fined in an amount not to exceed \$2,000. Each day of violation shall constitute a separate offense.

FIRST READING:

READ, PASSED AND APPROVED AS SET OUT BELOW AT THE MEETING OF THE CITY COUNCIL OF THE CITY OF TOMBALL HELD ON THE _____ DAY OF _____ 2023.

COUNCILMAN FORD	_____
COUNCILMAN STOLL	_____
COUNCILMAN DUNAGIN	_____
COUNCILMAN TOWNSEND	_____
COUNCILMAN PARR	_____

SECOND READING:

READ, PASSED AND APPROVED AS SET OUT BELOW AT THE MEETING OF THE CITY COUNCIL OF THE CITY OF TOMBALL HELD ON THE _____ DAY OF _____ 2024.

COUNCILMAN FORD	_____
COUNCILMAN STOLL	_____
COUNCILMAN DUNAGIN	_____
COUNCILMAN TOWNSEND	_____
COUNCILMAN PARR	_____

LORI KLEIN QUINN, Mayor

ATTEST:

TRACYLYNN GARCIA, City Secretary

Exhibit "A"



Location: 300 Block (north side) of Mechanic Street. Being Lot 1, Block 1 of Elim

**NOTICE OF PUBLIC HEARING
CITY OF TOMBALL
PLANNING & ZONING COMMISSION (P&Z)
DECEMBER 11, 2023
&
CITY COUNCIL
DECEMBER 18, 2023**



Notice is Hereby Given that a Public Hearing will be held by the P&Z of the City of Tomball on **Monday, December 11, 2023 at 6:00 P.M.** and by the City Council of the City of Tomball on **Monday, December 18, 2023 at 6:00 P.M.** at City Hall, 401 Market Street, Tomball Texas. On such dates, the P&Z and City Council will consider the following:

Zoning Case Z23-19: Request by William G. Hightower to amend Chapter 50 (*Zoning*) of the Tomball Code of Ordinances, by rezoning approximately 0.24 acres of land legally described as being Lot 1, Block 1 of Elim from Single Family Residential – 6 (SF-6) to Old Town & Mixed Use (OT & MU). The property is located within the 300 block (north side) of Mechanic Street, within the City of Tomball, Harris County, Texas.

Ordinance Amendment OAM23-03: Request by the City of Tomball to amend Chapter 50 – Article III (*District Regulations*) adding Section 50-75.1 – Neighborhood Retail District (NR) zoning classification and subsequent district standards. Modifying Section 50-82 (*Use regulations (charts)*). Modifying Section 50-112 (*Off Street Parking and Loading Requirements*) adding parking regulations within the Neighborhood Retail District. Modifying Section 50-113 (*Landscape Requirements*) specifying parking lot screening requirements. Modifying Section 50-115 (*Screening, Buffering and Fencing Requirements*) replacing subsection (b)(1) (*Screening of Non-Residential, Multifamily, and manufactured (mobile) home parks*) with new land use buffering standards.

At the public hearings, parties of interest and citizens will have the opportunity to be heard. All citizens of the City of Tomball, and any other interested parties, are invited to attend. Applications are available for public inspection Monday through Friday, except holidays, at the Administrative Services Building, located at 501 James Street, Tomball, TX 77375. Further information may be obtained by contacting the City Planner, Jared Smith, at (281) 290-1491 or at jasmith@tomballtx.gov.

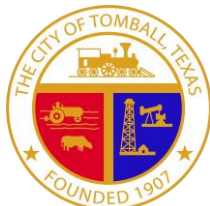
CERTIFICATION

I hereby certify that the above notice of meeting was posted on the bulletin board of City Hall; City of Tomball, Texas, a place readily accessible to the general public at all times, on the 8th day of December 2023 by 5:00 p.m., and remained posted for at least 72 continuous hours preceding the scheduled time of said meeting.

Jared Smith

Jared Smith
City Planner

This facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpretive services must be made 48 hours prior to this meeting. Please feel free to contact the City Secretary's office at (281) 290-1002 or FAX (281) 351-6256 for further information. AGENDAS MAY ALSO BE VIEWED ONLINE AT www.tomballtx.gov.



City of Tomball
Community Development Department

NOTICE OF PUBLIC HEARING

RE: Zone Change Case Number Z23-19

11/29/23

The Planning & Zoning Commission will hold a public hearing on **December 11, 2023 at 6:00 PM**, in City Council Chambers at City Hall, 401 Market Street, Tomball, Texas to recommend approval or denial to City Council on a request by William G. Hightower to amend Chapter 50 (*Zoning*) of the Tomball Code of Ordinances, by rezoning approximately 0.24 acres of land legally described as being Lot 1, Block 1 of Elim from Single Family Residential – 6 (SF-6) to Old Town & Mixed Use (OT & MU). The property is located within the 300 block (north side) of Mechanic Street, within the City of Tomball, Harris County, Texas.

This hearing is open to any interested person. Opinions, objections and/or comments relative to this matter may be expressed in writing or in person at the hearing. At the bottom of this letter is a form that you may cut off, fill out, and mail. Comments are also accepted by email as listed below. All responses must be signed.

The attached map shows the area of this request. Only that area which is bounded by the cross-hatched line on the map is being considered for **rezoning**. The solid boundary line around the subject area is only a notification area. All owners of property within 300-feet of the subject property are required to be notified. Whether approved or denied by the Planning & Zoning Commission, this case will be heard by City Council for First Reading with public hearing on **December 18, 2023 at 6:00 PM** in City Council Chambers at City Hall, 401 Market Street, Tomball, Texas.

If you have any questions, please contact Jared Smith, City Planner at telephone 281-290-1491 or by email address jasmith@tomballtx.gov

For the PLANNING & ZONING COMMISSION
Please call (281) 290-1491 if you have any questions about this notice.

CASE #: Z23-19

You may indicate your position on the above request by detaching this sheet at the dotted line and returning it to the address below. You may attach additional sheets if needed. You may also email your position to the email address listed below. All correspondence must include your name and address.

Mailing To: Community Development Department
501 James St., Tomball TX 77375

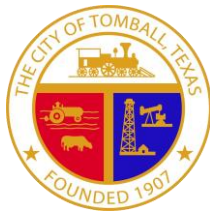
Name:
Parcel I.D.:
Address:

Email: jasmith@tomballtx.gov

I am in favor ☐
Additional Comments:

I am opposed ☐

Signature: _____



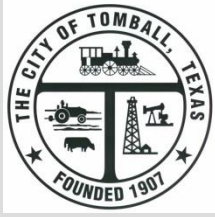
City of Tomball
Community Development Department

Z23-19



Notification Area





Rezoning Staff Report

Planning & Zoning Commission Public Hearing Date: December 11, 2023
City Council Public Hearing Date: December 18, 2023

Rezoning Case: Z23-19
Property Owner(s): William G. Hightower
Applicant(s): William G. Hightower
Legal Description: Lot 1, Block 1 of Elim
Location: 300 block (north side) of Mechanic St. (Exhibit “A”)
Area: 0.24 acres
Comp Plan Designation: Old Town (Exhibit “B”)
Present Zoning: Single-Family Residential -6 (Exhibit “C”)
Request: Rezone from the Single-Family Residential – 6 (SF-6) to the Old Town & Mixed Use (OT&MU) district

Adjacent Zoning & Land Uses:

North: Old Town & Mixed Use (OT&MU)/ Vacant
South: Single-Family Residential – 6 (SF-6)/ Single Family residence(s)
West: Single-Family Residential – 6 (SF-6) / Single-family residence
East: Single-Family Residential – 6 (SF-6) / Vacant

BACKGROUND

The subject property has been within the City Limits of Tomball since at least 1907. There is an accessory storage building which appears to have been placed on the subject property in 2020. Aside from this accessory building, the lot is currently vacant. According to the information provided by the applicants this request to rezone the subject property to Old Town & Mixed Use is to allow the use of the property for a small commercial business.

ANALYSIS

Description: The subject property comprises about 0.24 acres, located in the 300 block (north side) of Mechanic Street. This parcel of land is within the Single Family Residential – 6 (SF-6) zoning district and has been within this zoning designation since the City of Tomball adopted zoning in 2008. Immediately north of the subject property is vacant land within Old Town & Mixed Use (OT&MU). Properties to the east, west, and south are within the Single Family Residential – 6 (SF-6) zoning districts. The properties west and south of the subject property are occupied by single family residences, while the property to the east is vacant.

Comprehensive Plan Recommendation: The property is designated as “Old Town” by the Comprehensive Plans Future Land Use Map. This Old Town category is intended to be “highly walkable and promote a distinct sense of place”.

According to the Comprehensive Plan, “land uses should consist of a mix of residential, office, retail, entertainment, restaurants, and public facilities. Secondary uses include bed and breakfast lodging, live-work buildings, places of assembly or even venues and home professions”.

The Comprehensive Plan recommends the zoning district of – OT & MU (Old Town and Mixed Use) for the Old Town land use category.

According to Section 50-79 (*Old Town and Mixed-Use District*), the nature of the Old Town & Mixed-Use District “is a mixture of retail, commercial and other non-residential uses, along with single-family homes and multiple-family uses. The city’s comprehensive plan endorses the continuation of the mixture of uses in these areas”. Additionally, Old Town & Mixed-Use zoning “is intended to provide a zoning mechanism for a variety of uses in the original town site and those areas that have a diverse mixture of uses”.

Staff Review Comments:

The request to rezone to Old Town & Mixed-Use (OT & MU) is in accordance with the Future Land Use Map which identifies the subject property as being within the “Old Town” Future Land Use Category. Rezoning the property as requested would achieve the goals and objectives outlined in the Comprehensive Plan. This is particularly true regarding growth and capacity by encouraging infill and redevelopment, while utilizing existing infrastructure within Old Town Tomball. Additionally, this zone change request will promote the goal of encouraging development with a mixture of uses in a walkable environment. According to the Comprehensive Plan “locating community facilities, services, and limited commercial services within and near existing neighborhoods has the potential to create mutually beneficial synergies and higher quality of life”. This request also serves to achieve the community livability goal of encouraging the expansion of Old Town so that it continues to grow as the city grows.

The existing land uses within the immediate vicinity are comprised of a mixture of commercial and residential land uses. The request to rezone the subject property to Old Town & Mixed Use will continue to support the comprehensive plan’s objective of encouraging developments with this mixture of land uses within Old Town Tomball. The commercial uses which may be promoted by the rezoning of this property will not appear out of character with the surrounding area as there are existing commercial uses within the immediate vicinity to include properties along S. Chestnut Street, approximately 200-feet east of the subject property within Old Town & Mixed Use (OT&MU) zoning and the existing Live Oak Business Park, approximately 100-feet west of the subject property within Light Industrial (LI) zoning.

PUBLIC COMMENT

A Notice of Public Hearing was published in the paper and property owners within 300 feet of the project site were mailed notification of this proposal on November 29, 2023. Any public comment forms will be provided in the Planning & Zoning Commission and City Council packets or during the public hearing.

RECOMMENDATION

Based on the findings outlined in the analysis section of this staff report, City staff recommends approval of Zoning Case Z23-19.

EXHIBITS

- A. Aerial Location Map
- B. Future Land Use Plan
- C. Zoning Map
- D. Site Photo(s)
- E. Rezoning Application

Exhibit "A"
Aerial Location Map



Location

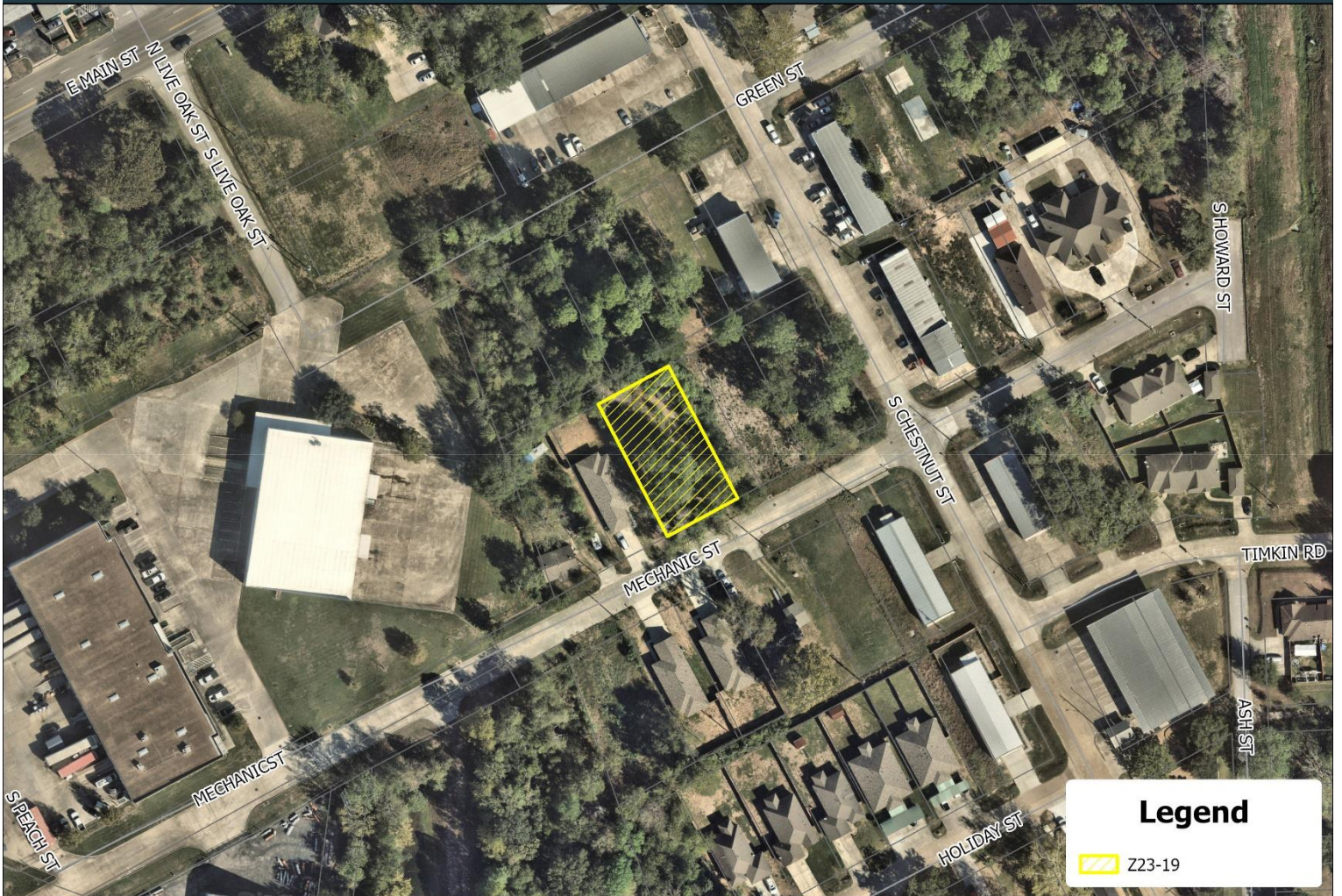


Exhibit "B"
Future Land Use Plan



Future Land Use

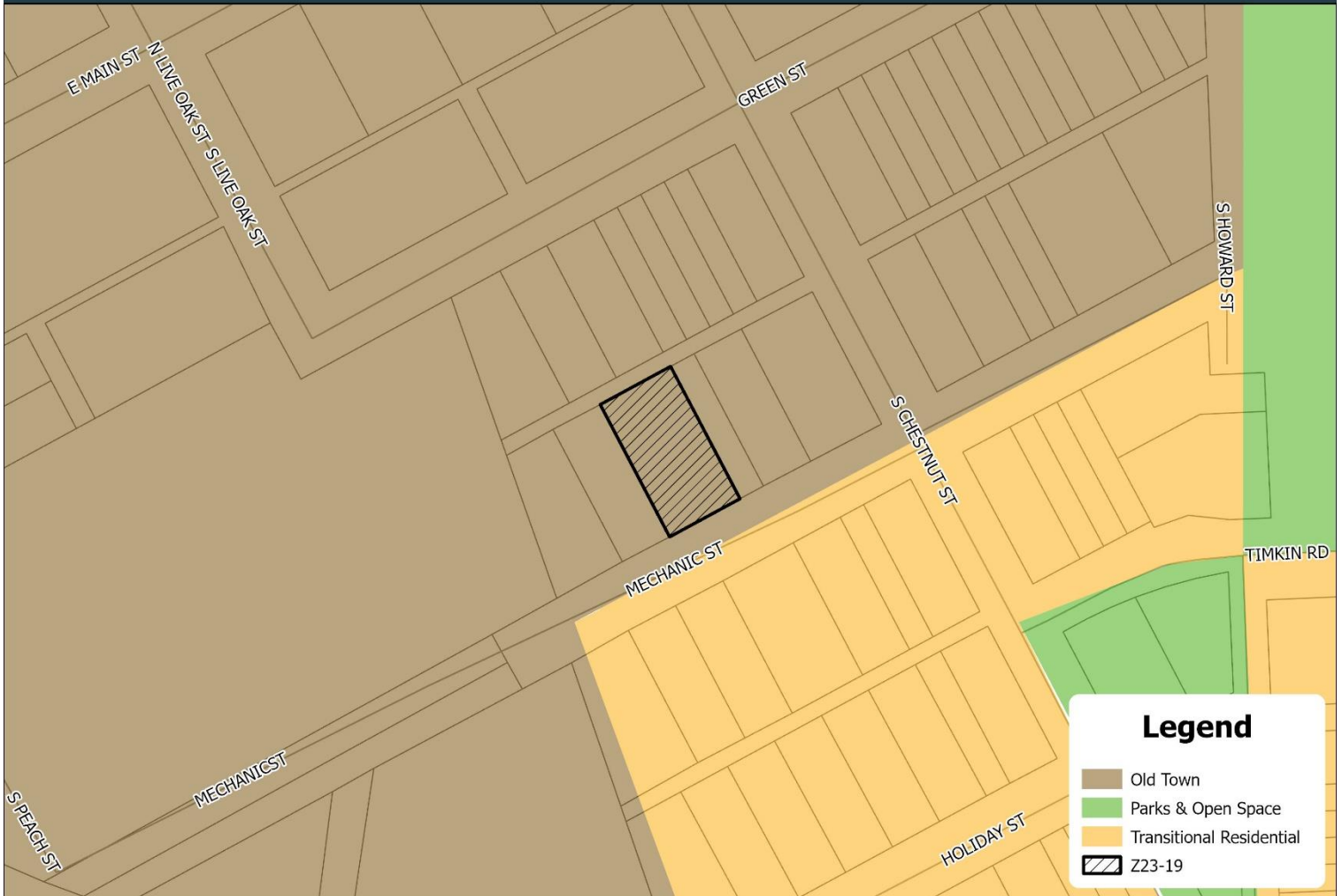
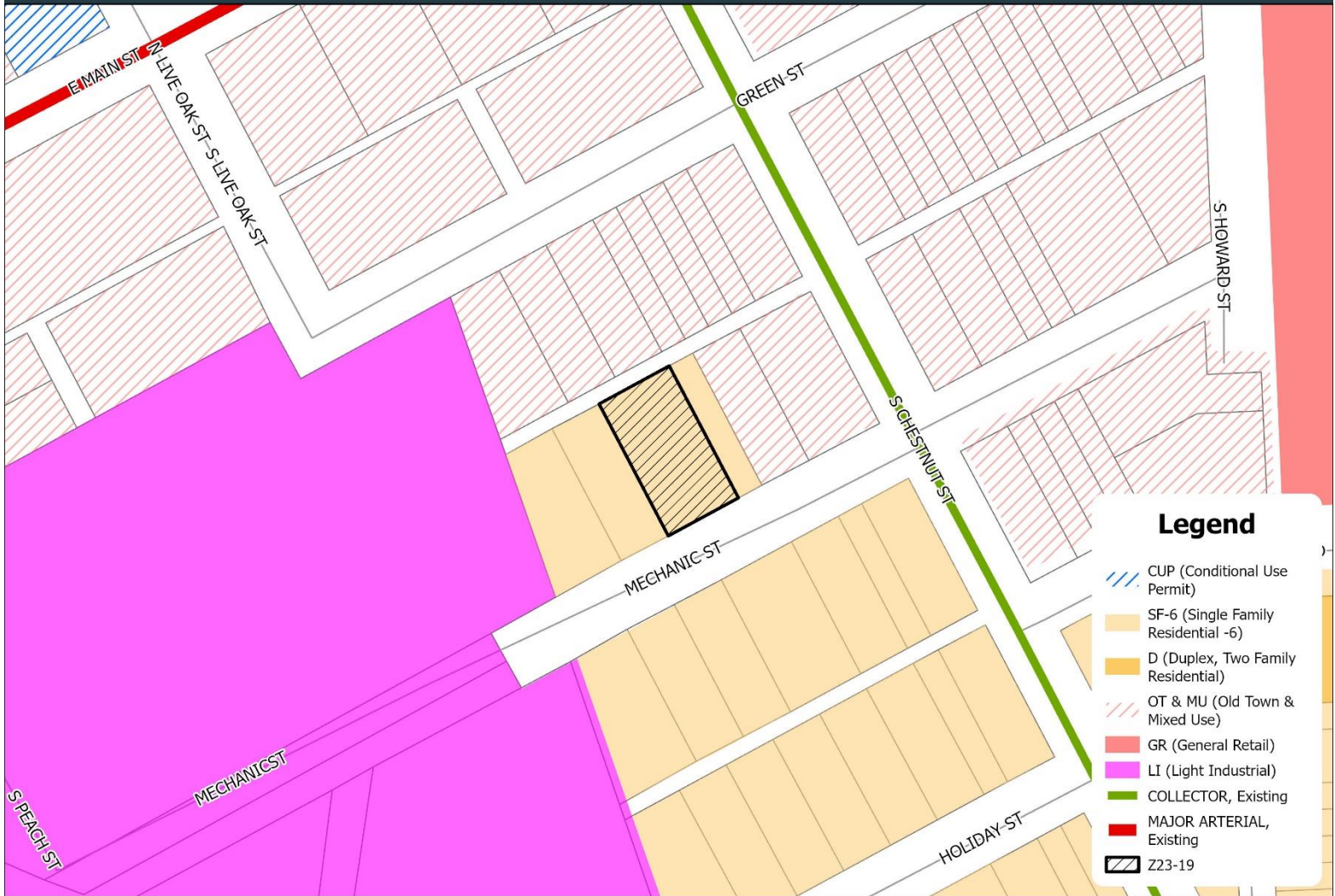


Exhibit "C"
Zoning Map



Zoning



**Exhibit “D”
Site Photo(s)**

Subject Site



Neighbor (West)



Neighbor (East)



Neighbor (North)



Neighbor (South)



Exhibit "E"
Rezoning Application

Revised: 10/1/2022



APPLICATION FOR RE-ZONING

Community Development Department
Planning Division

APPLICATION REQUIREMENTS: Applications will be *conditionally* accepted on the presumption that the information, materials and signatures are complete and accurate. If the application is incomplete or inaccurate, your project may be delayed until corrections or additions are received.

There is a \$1,000.00 application fee that must be paid at time of submission or the application will not be processed.

DIGITAL PLAN SUBMITTALS:

PLEASE SUBMIT YOUR APPLICATIONS AND PLANS DIGITALLY IN A SINGLE PDF BY FOLLOWING
THE WEBSITE BELOW:

WEBSITE: tomballtx.gov/securesend
USERNAME: **tombalcedd**
PASSWORD: **Tomball1**

Applicant

Name: William G. Hightower Title: OWNER
Mailing Address: 6015 THEALL RD. City: HOUSTON State: TEXAS
Zip: 77066 Contact: BILL HIGHTOWER
Phone: (832) 423-0513 Email: bill@hightowerelectricltd.com

Owner

Name: SAME AS ABOVE Title: _____
Mailing Address: _____ City: _____ State: _____
Zip: _____ Contact: _____
Phone: (____) _____ Email: _____

Engineer/Surveyor (if applicable)

Name: N/A Title: _____
Mailing Address: _____ City: _____ State: _____
Zip: _____ Contact: _____
Phone: (____) _____ Fax: (____) _____ Email: _____

Description of Proposed Project: Small Commercial Building

Physical Location of Property: 315 MECHANIC RD. @ CHESTNUT
[General Location -- approximate distance to nearest existing street corner]

Legal Description of Property: Lot 1 Block 1 FLIM
[Survey/Abstract No. and Tracts; or platted Subdivision Name with Lots/Block]

Current Zoning District: Single Family 6 District

City of Tomball, Texas 501 James Street, Tomball, Texas 77375 Phone: 281-290-1405 www.tomballtx.gov

Current Use of Property: VACANT

Proposed Zoning District: OLD TOWN MIXED USE

Proposed Use of Property: SMALL COMMERCIAL BUSINESS

HCAD Identification Number: 0352730700020 Acreage: .25

Please note: A courtesy notification sign will be placed on the subject property during the public hearing process and will be removed when the case has been processed.

This is to certify that the information on this form is COMPLETE, TRUE, and CORRECT and the under signed is authorized to make this application. I understand that submitting this application does not constitute approval, and incomplete applications will result in delays and possible denial.

X [Signature] 10/16/2023
Signature of Applicant Date

X [Signature] 10/16/2023
Signature of Owner Date

*William G. Hightower
6115 Theall Road
Houston, Texas 77066*

October 16, 2023

City of Tomball
Planning & Zoning Commission
501 James Street
Tomball, TX 77375

Reference: 315 Mechanic Street

I would like to request a zoning change for 315 Mechanic Street from SF-6 - Single Family 6 District to OT & MU – Old Town & Mixed-Use District. I am requesting this change to allow for construction of a small commercial building for future use.

Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read 'W. G. Hightower', with a stylized flourish at the end.

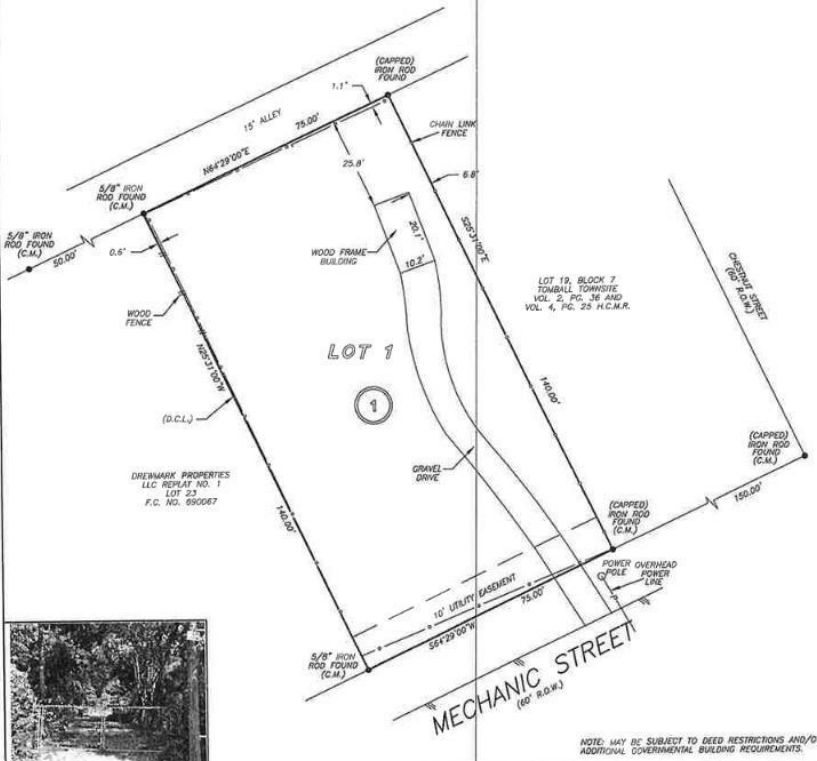
William G. Hightower

GF NO. 23004868 OLD REPUBLIC TITLE
ADDRESS: 315 MECHANIC ROAD
TOMBALL, TEXAS 77375
BORROWER: WILLIAM G. HIGHTOWER

HCA# 0352730700030

LOT 1, BLOCK 1 ELIM

A SUBDIVISION IN HARRIS COUNTY, TEXAS
ACCORDING TO THE MAP OR PLAT THEREOF RECORDED
IN FILM CODE NO. 702609 OF THE MAP RECORDS
OF HARRIS COUNTY, TEXAS



NOTE: MAY BE SUBJECT TO DEED RESTRICTIONS AND/OR
ADDITIONAL GOVERNMENTAL BUILDING REQUIREMENTS.

THIS PROPERTY DOES NOT LIE WITHIN THE
100 YEAR FLOOD PLAIN AS PER FIRM
PANEL NO. 48010-0225-1
MAP REVISION: 05/18/07
ZONE: X
BASED ONLY ON VISUAL EXAMINATION OF MAPS.
INCURACIES OF FEMA MAPS PREVENT EXACT
DETERMINATION WITHOUT DETAILED FIELD STUDY

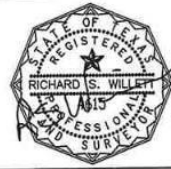
A SUBSURFACE INVESTIGATION
WAS BEYOND THE SCOPE OF THIS SURVEY

D.C.L. = DIRECTIONAL CONTROL LINE
RECORD BEARING: FILM CODE NO. 702609, H.C.M.R.

DRAWN BY: VT/MM

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE
ON THE GROUND, THAT THIS PLAT CORRECTLY
REPRESENTS THE FACTS FOUND AT THE
TIME OF SURVEY AND THAT THERE ARE NO
ENCROACHMENTS APPARENT ON THE GROUND.
EXCEPT AS SHOWN HEREON, THIS SURVEY IS
CERTIFIED FOR THIS TRANSACTION ONLY AND
ABSTRACTING PROVIDED IN THE ABOVE
REFERENCES TITLE COMMITMENT WAS RELIED
UPON IN PREPARATION OF THIS SURVEY.

RICHARD S. WILLET
PROFESSIONAL LAND SURVEYOR
NO. 4615
JOB NO. 23-06674
AUGUST 24, 2023



PRECISION
surveyors

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950 THRAEDDELE STREET SUITE 150 HOUSTON, TEXAS 77079 1777 NE LOOP 410 SUITE 600 SAN ANTONIO, TEXAS 78217
FORM NO. 10063700

City Council Meeting

Agenda Item

Data Sheet

Meeting Date: December 18, 2023

Topic:

Approve a Professional Services Agreement with Freese & Nichols, Inc. for the design of the expansion for the South Wastewater Treatment Plant, Project Number 2023-10003, for a not-to-exceed amount of \$4,933,000, authorize the expenditure of funds therefor, and authorize the City Manager to execute the agreement. This amount is included in the fiscal year 2023-2024 budget as a Capital Improvement Project.

Background:

The City currently owns and operates two wastewater treatment plants, the North Wastewater Treatment Plant (NWWTP) and the South Wastewater Treatment Plant (SWWTP). Currently, the SWWTP is permitted for an annual average daily flow of 1.5 million gallons per day (MGD) and 2-hour peak flow of 6.0 MGD. Due to the current and projected growth, the SWWTP needs to be expanded and permitted for an increased capacity of 3.0 MGD.

In FY 2022-2023, City Council approved a professional services agreement with Freese & Nichols to complete the preliminary design of the treatment plant expansion. Staff worked with Freese over the fiscal year to determine the best options and equipment to be utilized for the expansion. Based on the work completed during the preliminary phase, staff also worked with Freese to develop the scope of work for the final design phase, including bid preparation and working with the construction-manager-at-risk (CMAR) that has been chosen through our procurement process. Design will begin immediately upon approval and estimated to be complete in approximately a year.

The proposed Professional Services Agreement with Freese & Nichols, Inc. (FNI) is for a not-to-exceed amount of \$4,933,000.

Funds for completing the proposed project were allocated in the Fiscal Year 2023-2024 budget, as part of the Certificate of Obligation issuance that was approved at the December 4, 2023 City Council meeting.

Project Element	Total Contract	Remaining Contract Amount
Preliminary Engineering - FNI	\$506,085	\$0.00
Proposed Design Engineering - FNI	\$4,933,000	N/A
Proposed CMAR (Design Phase)	\$595,699	N/A
Pre-Procurement Packages (Pending)	Pending	N/A
Construction Management (Pending)	Pending	N/A
CMAR	Pending	N/A
Project Budget \$17,542,276	Total Contracts \$6,034,784	

Origination: Project Management

Recommendation:

Staff recommends approving the Professional Services Agreement with Freese & Nichols, Inc. for the design of the South Wastewater Treatment Plant expansion for a not-to-exceed amount of \$4,933,000.

Party(ies) responsible for placing this item on agenda: Meagan Mageo, Project Manager

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: X No: If yes, specify Account Number: #400-614-6409

If no, funds will be transferred from account: # To Account: #

Signed: Meagan Mageo **Approved by:**
 Staff Member Date City Manager Date

**PROFESSIONAL SERVICES AGREEMENT
FOR
ENGINEERING SERVICES
RELATED TO
ENGINEERING & PLANNING PROJECT NO. 2023-10003
CITY OF TOMBALL
SOUTH WASTEWATER TREATMENT PLANT EXPANSION**

**THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §**

THIS AGREEMENT is made, entered into, and executed by and between the CITY OF TOMBALL, TEXAS (the "City"), a municipal corporation of the State of Texas, and Freese & Nichols, Inc. ("Engineer").

WITNESSETH:

WHEREAS, the City desires to design and construct an expansion to the South Wastewater Treatment Plant (the "Project"); and

WHEREAS, the services of a professional engineering firm are necessary to project planning and design, and

WHEREAS, the Engineer represents that it is fully capable and qualified to provide professional services to the City related to professional engineering;

NOW, THEREFORE, the City and Engineer, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

**SECTION I.
SCOPE OF AGREEMENT**

Engineer agrees to perform certain professional services as outlined and defined in the Proposal attached hereto as Exhibit A, and made a part hereof for all purposes, hereinafter sometimes referred to as "Scope of Work," and for having rendered such services, the City agrees to pay Engineer compensation as stated in the Section VII.

**SECTION II.
CHARACTER AND EXTENT OF SERVICES**

Engineer shall do all things necessary to render the engineering services and perform the Scope of Work in a manner consistent with the professional skill and care ordinarily provided by competent engineering practicing in the same or similar locality and under the same or similar circumstances and professional license. It is expressly understood and agreed that Engineer is an Independent Contractor in the performance of the services

agreed to herein. It is further understood and agreed that Engineer shall not have the authority to obligate or bind the City, or make representations or commitments on behalf of the City or its officers or employees without the express prior approval of the City. The City shall be under no obligation to pay for services rendered not identified in Exhibit "A" without prior written authorization from the City.

SECTION III. OWNERSHIP OF WORK PRODUCT

Engineer agrees that the City shall have the right to use all exhibits, maps, reports, analyses and other documents prepared or compiled by Engineer pursuant to this Agreement. The City shall be the absolute and unqualified owner of all studies, exhibits, maps, reports, analyses, determinations, recommendations, computer files, and other documents prepared or acquired pursuant to this Agreement with the same force and effect as if the City had prepared or acquired the same. It is further understood and agreed that ownership and usage rights associated with the above referenced documents and analyses, hereinafter referred to as instruments, are contingent upon Engineer's completion of the services which will result in the production of such instruments and Engineer's receipt of payment, in full, for said services. Additionally, City understands and agrees that the rights described and provided hereunder shall not preclude or prevent Engineer from continuing to use those processes, analyses and data.

SECTION IV. TIME FOR PERFORMANCE

The time for performance is an estimated 18-month duration beginning from the execution date of this Agreement. Upon written request of the Engineer, the City may grant time extensions to the extent of any delays caused by the City or other agencies with which the work must be coordinated and over which Engineer has no control.

SECTION V. COMPLIANCE AND STANDARDS

Engineer agrees to perform the work hereunder in accordance with generally accepted standards applicable thereto and shall use that degree of care and skill commensurate with the applicable profession to comply with all applicable state, federal, and local laws, ordinances, rules, and regulations relating to the work to be performed hereunder and Engineer's performance.

SECTION VI. INDEMNIFICATION

To the fullest extent permitted by Texas Local Government Code Section 271.904, Engineer shall and does hereby agree to indemnify, hold harmless and defend the City, its officers, agents, and employees against liability for damage caused by or resulting from an act

of negligence, intentional tort, intellectual property infringement, or failure to pay a subcontractor or supplier committed by the Engineer, the Engineer's agent, consultant under contract, or another entity over which the Engineer exercises control.

SECTION VII. ENGINEER'S COMPENSATION

For and in consideration of the services rendered by Consultant pursuant to this Agreement, the City shall pay Engineer only for the actual work performed under the Scope of Work, on the basis set forth in Exhibit "A," up to an amount not to exceed \$4,933,000, including reimbursable expenses as identified in Exhibit "A".

SECTION VIII. INSURANCE

Engineer shall procure and maintain insurance for protection from workers' compensation claims, claims for damages because of bodily injury, including personal injury, sickness, disease, or death, claims or damages because of injury to or destruction of property, including loss of use resulting therefrom, and claims of errors and omissions.

SECTION IX. TERMINATION

The City may terminate this Agreement at any time by giving seven (7) days prior written notice to Engineer. Upon receipt of such notice, Engineer shall discontinue all services in connection with the performance of this Agreement and shall proceed to promptly cancel all existing orders and contracts insofar as such orders or contracts are chargeable to the Agreement. As soon as practicable after receipt of notice of termination, Engineer shall submit a statement, showing in detail the services performed under this Agreement to the date of termination. The City shall then pay Engineer that proportion of the prescribed charges which the services actually performed under this Agreement bear to the total services called for under this Agreement, less such payments on account of the charges as have been previously made. Copies of all completed or partially completed maps, studies, reports, documents and other work product prepared under this Agreement shall be delivered to the City when and if this Agreement is terminated.

SECTION X. ADDRESSES, NOTICES AND COMMUNICATIONS

All notices and communications under this Agreement shall be mailed by certified mail, return receipt requested, to Consultant at the following address:

Freese & Nichols, Inc.
Attn: Richard Weatherly
11200 Broadway Street, Suite 2320
Pearland, Texas 77584

All notices and communications under this Agreement shall be mailed by certified mail, return receipt requested, to the City at the following address:

City of Tomball
Attn: Project Manager
501 James Street
Tomball, Texas 77375

SECTION XI. LIMIT OF APPROPRIATION

Prior to the execution of this Agreement, Engineer has been advised by the City and Engineer clearly understands and agrees, such understanding and agreement being of the absolute essence to this Agreement, that the City shall have available only those sums as expressly provided for under this Agreement to discharge any and all liabilities which may be incurred by the City and that the total compensation that Engineer may become entitled to hereunder and the total sum that the City shall become liable to pay to Engineer hereunder shall not under any conditions, circumstances, or interpretations hereof exceed the amounts as provided for in this Agreement.

SECTION XII. SUCCESSORS AND ASSIGNS

The City and Engineer bind themselves and their successors, executors, administrators, and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of such other party, in respect to all covenants of this Agreement. Neither the City nor Engineer shall assign, sublet, or transfer its interest in this Agreement without the written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public body which may be a party hereto.

SECTION XIII. DISCLOSURE OF INFORMATION

Engineer shall under no circumstances release any material or information developed in the performance of its services hereunder without the express written permission of the City.

SECTION XIV. MODIFICATIONS

This instrument, including Exhibits A and B, contains the entire Agreement between the parties relating to the rights herein granted and the obligations herein assumed. Any oral or written representations or modifications concerning this instrument shall be of no force and effect excepting a subsequent modification in writing signed by both parties hereto.

SECTION XV. ADDITIONAL SERVICES OF ENGINEER

If authorized in writing by the City, Engineer shall furnish, or obtain from others, Additional Services that may be required because of significant changes in the scope, extent or character of the portions of the Project designed or specified by the Engineer, as defined in Exhibit "A". These Additional Services, plus reimbursable expenses, will be paid for by the Owner on the basis set forth in Exhibit "A," up to the amount authorized in writing by the City.

SECTION XVI. CONFLICTS OF INTEREST

Pursuant to the requirements of the Chapter 176 of the Texas Local Government Code, Consultant shall fully complete and file with the City Secretary a Conflict of Interest Questionnaire.

SECTION XVII. PAYMENT TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES

Invoices for Basic and Additional Services and reimbursable expenses will be prepared in accordance with Engineer's standard invoicing practices and will be submitted to the City by Engineer at least monthly. Invoices are due and payable thirty (30) days after receipt by the City.

XVIII. MISCELLANEOUS PROVISIONS

A. This Agreement is subject to the provisions of the Texas Prompt Payment Act, Chapter 2250 of the Texas Government Code. The approval or payment of any invoice shall not be considered to be evidence or performance by Engineer or of the receipt of or acceptance by the City of the work covered by such invoice.

B. Venue for any legal actions arising out of this Agreement shall lie exclusively in the federal and state courts of Harris County, Texas.

C. This Agreement is for sole benefit of the City and Engineer, and no provision of this Agreement shall be interpreted to grant or convey to any other person any benefits or rights.

D. Engineer further covenants and agrees that it does not and will not knowingly employ an undocumented worker. An "undocumented worker" shall mean an individual who, at the time of employment, is not (a) lawfully admitted for permanent residence to the United States, or (b) authorized by law to be employed in that manner in the United States.

E. In accordance with Chapter 2270, Texas Government Code, a government entity may not enter into a contract with a company for goods or services unless the Engineer covenants and agrees that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. Furthermore, the Engineer is prohibited from engaging in business with Iran, Sudan or Foreign Terrorist Organizations.

F. In accordance with Chapter 2274 of the Texas Government Code, Engineer covenants that it: (1) does not have a practice, policy, guidance or directive that discriminates against a firearm entity or firearm trade association, and (2) will not discriminate during the term of this contract against a firearm entity or firearm trade associations.

IN WITNESS WHEREOF, the City of Tomball, Texas, has lawfully caused this Agreement to be executed by its Mayor; and Engineer, acting by its duly authorized officer/representative does now sign, execute and deliver this instrument.

EXECUTED on this ____ day of _____, _____.

Company Name: Freese & Nichols, Inc

Richard Weatherly

Name: Richard Weatherly, PE

Title: Vice President/Project Manager

CITY OF TOMBALL, TEXAS

David Esquivel, City Manager

ATTEST:

Tracylynn Garcia, City Secretary

SCOPE OF SERVICES AND RESPONSIBILITIES OF CITY

Tomball South WWTP Expansion

Final Design and Bid Phase Services

PROJECT UNDERSTANDING

The City of Tomball (City) is planning to expand its South Wastewater Treatment Plant (WWTP) from an Annual Average Daily Flow (AADF) of 1.5 MGD to 3.0 MGD; and a Peak 2-hour Flow (P2HF) of 6.0 MGD to 12.0 MGD to accommodate the City's projected growth. The City previously retained Freese and Nichols, Inc., (FNI) to conduct a preliminary design of the WWTP expansion and to prepare the TPDES permit major amendment. The scope of this project is to provide design and bid phase services for the expansion, which includes the project features identified in Table 1 below.

Table 1: Project Features

Project Feature	Description
Demolition	The following existing structures and equipment will be demolished: Influent lift station #2 and oxidation ditch.
Coarse Screening	Repurpose the existing lift station #1 to a new coarse screen structure (24 MGD total peak flow capacity) with two coarse screens, manual bypass channel, and dumpster building.
New Influent Lift Station	New lift station with dual wet well configuration and six submersible pumps (12 MGD firm peak flow capacity) expandable to an ultimate firm capacity of 18 MGD.
Headworks Facility	Expand the existing headworks facility with one additional fine screen (6 MGD), manual bypass screen, replacement of existing mechanical-vortex grit removal unit (12 MGD) including two grit pumps, grit dewatering unit, and new dumpster building.
New Splitter Box	One new splitter box to split flows from the headworks to the three new aeration basins.
New Aeration Basins and Blowers	Three new conventional activated sludge aeration basins designed for BOD and ammonia removal. New aeration basins sized to treat 3 MGD at design influent loadings. Basins will include selector zones. New blower building with four blowers (3 duty + 1 standby) for the new aeration basins.
New Secondary Clarifiers	Two new secondary clarifiers (6 MGD total peak flow capacity each).
New RAS Pump Stations	Two new return activated sludge (RAS) pump stations for pumping RAS from the new and existing clarifiers to the aeration basins. Each pump station will have 3 pumps (2 duty + 1 standby).
New WAS Pump Station	One new waste activated sludge (WAS) pump station for pumping WAS from the common RAS header to the rotary drum thickeners. The pump station will have 3 pumps (2 duty + 1 standby).
New Scum Pump Station	Two scum pumps in one new scum pit for the two new secondary clarifiers.

Project Feature	Description
New Tertiary Filters	Two new inside-out type tertiary disk filters for a total capacity of 12 MGD.
New UV System	Inclined type Ultraviolet (UV) Disinfection system for disinfection of filtered effluent. Three inclined UV modules in a single channel for a total capacity of 12 MGD.
Parshall Flume	New Effluent Channel with Parshall Flume measurement.
New Mechanical Sludge Thickeners	Replace existing mechanical sludge thickening system with two new rotary drum thickeners, flocculation tanks, and polymer feed system.
New Aerobic Digesters Blowers	Replace existing aerobic digester blowers with two (1 duty + 1 standby) new blowers with a new blower pad and canopy.
New Digested Sludge Pumps	Three new digested sludge pumps to serve the new centrifuge. One new sludge grinder placed before the sludge pumps.
New Sludge Dewatering System	Replace existing centrifuge with a new centrifuge with a drain diversion box.
New Odor Control System	Two new odor control units. One unit for the influent coarse screen and lift station, and one unit for the headworks dumpster building.
Vacuum Truck Receiving Station	New Vacuum truck receiving station with dewatering dumpster and ramp.
Plant Drain	Expand gravity plant drain system.
NPW System	Expand existing non-potable water system by adding two new vertical turbine pumps and one additional self-backwashing strainer.
Administration Building Improvements	Expansion of existing administration building to include a new break room. Design was already completed as part of the previous critical needs improvements phase I project. Scope includes update to the design.
Chemical Feed System	New chemical storage tank and feed pumps to feed Magnesium hydroxide for copper removal.
Site Civil	Site grading for the new units and new site concrete paved roads
Electrical	Three new electrical buildings: Distribution Electrical Building, MCC-G and MCC-E buildings.
SCADA	New SCADA system for overall plant.
Back-Up Power Generation	Additional natural gas generators.

A. **Project Assumptions:** The scope of work, level of effort, budget and schedule is based on the following assumptions.

- The project will be self-funded by the City without state or federal funding assistance.
- The project will be delivered using the Construction Manager at Risk (CMAR) collaborative delivery method.
- The CMAR will be responsible for potholing utilities at tie-in points and critical crossings, based on requests and directions provided by the FNI Team as part of their Subsurface Utility Engineering (SUE). It is further assumed that the CMAR will be responsible for obtaining permits and utility locates (Texas One-call) necessary ahead of any potholing activities.
- FNI's standard Front-End Contract Documents (Div. 00) modified for the CMAR process will be

used.

- The City agrees to include provisions in the General Conditions that require the CMAR to include FNI: (1) as an additional insured and in any waiver of subrogation rights with respect to such liability insurance purchased and maintained by Contractor for the Project (except workers' compensation and professional liability policies); and (2) as an indemnified party in the Contractor's indemnification provisions where the City is named as an indemnified party.
- In performing these services, it is understood that FNI does not guarantee the CMAR's performance, nor is FNI responsible for the supervision of the CMAR's operation and employees. FNI shall not be responsible for the means, methods, techniques, sequences, or procedures of construction selected by the CMAR, or any safety precautions and programs relating in any way to the condition of the premises, the work of the Contractor or any Subcontractor. FNI shall not be responsible for the acts or omissions of any person (except its own employees or agents) at the Project site or otherwise performing any of the work of the Project.
- The design will accommodate effluent criteria based on the draft permit limits received from TCEQ (10/15/3 mg/L for BOD/TSS/NH3-N) in August 2023, which does not include Total Nitrogen or Total Phosphorus limits. The design will not provide enhanced nutrient removal as part of this expansion project but will provide accommodations for future enhanced nutrient removal including space for future selector zone basins.
- The application for the TPDES permit amendment for the expansion of the South WWTP was submitted in February 2023. The final design phase is anticipated to start in January 2024. Based on TCEQ's average review times of major permit amendments (12-18 months), the City may receive the final TPDES permit near the beginning or the middle of final design phase. If the final limits in the permit vary from the draft limits provided by the TCEQ, redesign for new or different permit limits than initially notified by TCEQ will be an additional service.

B. **CMAR Coordination:** This scope anticipates and includes coordination with the selected CMAR for design and construction phase efforts. The scope of work assumes preparation and issuance of up to two (2) Guaranteed Maximum Price (GMP) proposal packages for this project. A general assumption of the scope of the proposed GMP packages is described below. The actual GMP package breakout will be determined in the early stages of the design with input from the CMAR and City.

- GMP Package #1: Procurement of long lead-time equipment and electrical gear.
- GMP Package #2: Balance of plant construction.

C. **Final Design Services:** FNI will provide the following final design phase services for the project features described in Table 1, based on design recommendations in the Preliminary Design and Permitting project.

- Process Mechanical Design
- Structural Design
- Electrical Design
- Instrumentation and Controls Design
- WWTP SCADA System Design
- Architectural Design
- HVAC and Plumbing Design
- Drainage and Paving Improvements

In final design, deliverables will be provided for City review at the 30%, 60%, and 90% deliverable phases. The project will be executed using 3D design software (Revit) for new structures, AutoCAD 2D for modifications to existing structures, and AutoCAD Civil 3D for site civil drawings. The primary deliverables at 30% will be the initial 3D models of major unit processes, basic plan and section views for structure

quantity take-offs, site plan, yard piping plan, electrical one-line diagrams, and Process and Instrumentation Diagrams (P&IDs). For subsequent deliverables, a status set of drawings and specifications will be produced for review by City and the CMAR. A workshop will be conducted to collect and document all comments for inclusion in the subsequent design milestone deliverable. The CMAR will develop, update, and maintain the cost model throughout the project with input from the design team. FNI will work with the CMAR to review the cost model and to confirm the assumptions built into the cost model are in line with the proposed design.

- D. **Bid Phase Services:** Support the City and CMAR in their bidding and procurement of equipment, materials, contracting and subcontracting services; including consolidation of plans and specifications into a single conformed set of documents for use during construction of the project. The FNI Team will assist the CMAR and City by providing Issued For Bid (IFB) documents, participating in pre-bid meetings, responding to bidder questions, and providing support to the CMAR and City during the award of bids received that will become part of a guaranteed maximum price (GMP) proposal.
- E. **Special Services – Influent Lift Station Physical Model Hydraulic Testing:** The preliminary design layout for the new influent lift station proposed for the plant expansion is based on a rectangular dual wet-well configuration with 3 pumps in each wet well. Per Initial conversations with the CMAR, changing the configuration of the lift station wet well from rectangular to circular configuration will allow quicker and easier construction of the lift station through caisson method which will provide significant cost savings. Hydraulic Institute guidelines require a physical model study for circular lift station with four or more pumps to identify potential unacceptable flow patterns in the proposed design and to derive acceptable intake sump and piping design. As a special service, FNI will provide subconsultant services for physical model development and testing per Hydraulic Institute standards for the proposed influent lift station in a circular dual wet well configuration.

ARTICLE I

BASIC SERVICES: FNI shall render the following professional services in connection with the development of the Project:

- A. **PROJECT MANAGEMENT AND ADMINISTRATIVE DUTIES:** Upon execution of this AGREEMENT and upon receiving a Notice to Proceed from the City, FNI will provide the project management services for each phase as follows:
1. **Project Controls:** FNI shall manage scope, time, cost, quality, staff resources, communications, risk and procurements as necessary. Project controls shall include the management of the following “living-documents”. Some of these project controls, as indicated below, will be the responsibility of others and the FNI Team will provide a supporting role.
 - a. **Comment Log** – FNI will be primarily responsible for maintaining the Comment Log for each design milestone with input from CMAR and the City.
 - b. **Decision Log** – FNI will be primarily responsible for the Decision Log with input from CMAR and the City.
 - c. **Action Item Log** – FNI will be primarily responsible for the Action Item Log during design with input from CMAR and the City. During construction, the CMAR will be primarily responsible for the Action Item Log with input from FNI and the City.
 - d. **Risk Register** – FNI will be primarily responsible for the Risk Register during design with input from CMAR and the City. During construction, the CMAR will be primarily responsible for the Risk Register with input from FNI and the City.
 - e. **Cost Model** – the CMAR will be primarily responsible for the Cost Model and maintenance of a design change trend log. FNI Team will participate in the development, monitoring, and update of the cost model as the design progresses. The scope of work assumes updates of the cost model at 30%, 60%, 90%, and 100% submittal stages and up to two (2) intermittent updates at the request of the City.
 - f. **Overall Project Schedule** – the CMAR will be primarily responsible for the Project Schedule Model. FNI Team will participate in the development, monitoring, and update of the schedule model as the design progresses. FNI will coordinate with the CMAR to include the design schedule in the overall project schedule and will provide monthly updates including necessary revisions to bring the Project back on schedule if needed.
 2. **Communication:** Consult with the City throughout the project to see that the scope of services and the City’s requirements for the project are being met.
 3. **Invoicing:** FNI will prepare and submit monthly invoices to the City.
 4. **Monthly Status Reports:** FNI will prepare and submit monthly status reports to the City with FNI’s monthly invoice. Monthly status reports will include a one to two-page summary of the progress to date on the Project, work completed during the prior month, work anticipated to be completed during the upcoming month, and discussion of any scope, schedule, or budget issues that may need to be resolved.
 5. **Quality Assurance / Quality Control (QA/QC):** FNI will develop and implement a QA/QC plan for the work.

B. **FINAL DESIGN PHASE:** FNI shall provide professional services in this phase as follows:

1. **Meetings and Site Visits:** Prepare agendas and minutes for meetings described below.
 - a. **Project Kickoff Meeting:** Conduct a Final Design Phase Kick-off Meeting with City and CMAR: (1) to review the scope of services, (2) review project schedule, (3) discuss and understand any other requirements or expectations the City may have for the project.
 - b. **Monthly Progress Meetings:** Conduct monthly progress and design review meetings, up to a maximum of twelve (12) meetings during the design phase with City's project team and CMAR. Provide meeting minutes for City and CMAR review. Meetings will be held in-person and at City's office. Meetings may extend up to full-day workshops including time for "over-the-shoulder" review of BIM models in a workshop setting. Specific meeting topics listed below are included in the total of twelve meetings.
 - i. Conduct one (1) 3D model review workshop at the 30% design level to review the preliminary 3D models, answer questions and receive comments from the City's project team.
 - ii. Conduct one (1) day-long design review workshop at the 60% and 90% design milestones to review the construction documents, answer questions and receive comments from the City's project team. To expedite the design phase, the scope and schedule assumes that all City comments will be received at the design review workshop. Constructability review comments will be received from the CMAR at the 60% review workshop, and biddability review comments will be received from the CMAR at the 90% review workshop.
 - iii. Conduct up to two (2) SCADA workshops with City's project team to discuss requirements for the HMI system, review preliminary versions of the HMI graphics, and receive input from City's project team and plant operators.
 - iv. Conduct up to three (3) workshops for Maintenance of Plant Operations (MOPO), and Construction Sequencing to establish the sequence of construction and any special operating procedures required during construction to enable the required details to be incorporated into the construction documents.
 - c. **Monthly Leadership Calls:** Conduct up to twelve (12) monthly virtual meetings. These meetings are expected to be limited to project leadership (City, CMAR, and FNI), concise, less than one hour, informal and without the need for agendas or meeting minutes.
 - d. **Weekly Internal Coordination Calls:** Conduct up to fifty-four (54) weekly virtual meetings with each engineering discipline to coordinate the design development. Include CMAR on internal coordination calls, as needed.
 - e. **Site Visits:** Conduct up to three (3) site visits by the engineering team to the WWTP, for coordination on design aspects for completion of the project.
2. **Drainage Analysis:** A site drainage analysis for the development of the site will be prepared and submitted to City of Tomball and Harris County Flood Control District (HCFCD). The goal of the drainage analysis is to demonstrate no adverse impact to offsite stormwater runoff from the

proposed expansion of the WWTP based on City of Tomball and HCFCF drainage criteria. The following tasks are part of the site drainage analysis.

- a. Conduct one (1) site visit: Conduct a site visit to identify existing drainage patterns and possible outfall locations, which will be coordinated with the City. The discharge point will either be an existing roadside ditch, storm sewer system, or an existing drainage channel.
- b. Data Collection: Collect available topography, aerial photos, as-built plans for drainage infrastructure, and coordinate with the City and HCFCF to obtain past drainage studies for the site.
- c. Drainage Assessment: Perform a drainage assessment associated with the site development to quantify existing and proposed peak discharges for the site. Peak discharges will be developed for the 2, 10, 100, and 500-year storm events and will be determined from Atlas 14 Site Runoff Curves provided in the Harris County Flood Control's (HCFCF) Policy Criteria & Procedure Manual (PCPM), updated 10/23/18. The required detention volume will be computed using Method 1 from the HCFCF PCPM.

The WWTP expansion is partially located within the effective Willow Creek 500-year floodplain. If any fill is placed within the effective 500-year floodplain, floodplain fill mitigation will be required in addition to the detention associated with additional imperviousness.

There is currently a remapping effort being completed by HCFCF for the Willow Creek Watershed, which may impact the requirements by HCFCF for the drainage of this project. If any additional tasks are required beyond what is detailed in this scope, they will be considered an additional service. Identification of sizing of drainage improvements (included but not limited to channels, storm sewers, roadside ditches, or streets) downstream of the site are not included as part of this scope of work.

- d. Memorandum: A brief technical memorandum will be prepared and submitted to the City for review and comments. The memorandum will contain sufficient text, supporting data and exhibits, assumptions, and methodology to clearly illustrate the methods and results of the drainage study. Up to two (2) rounds of comments from the City will be addressed to obtain a drainage approval letter.
- e. Agency coordination: FNI Team will coordinate with the City and HCFCF to obtain drainage criteria required for the drainage analysis. FNI will conduct up to a total of three (3) meetings with City staff to discuss the drainage analysis.

3. **Desktop environmental assessment of the project site:**

- a. FNI environmental scientists will conduct a site visit to make observations at the project area in order to describe existing conditions and assess project impacts. The presence and locations of potential waters of the U.S., including wetlands, and of potential threatened / endangered species habitat will be identified. If the project requires a permit for activities regulated under Section 404 of the Clean Water Act or under the Endangered Species Act, then permitting recommendations will be documented. The preparation and submittal of a request for verification (RFV), pre-construction notification (PCN), or other Section 404 permit authorization from USACE (e.g., Individual Permit) can be provided as an additional service.

- b. Projects sponsored by a political subdivision of the State that disturb more than 5,000 cubic yards require consultation with the Texas Historical Commission (THC) according to Section 191.0525 (d) of the Antiquities Code of Texas. FNI will conduct a desktop cultural resources evaluation to be submitted to the THC for review by the State Historic Preservation Officer (SHPO). If archaeological or historical surveys are required by the THC, a Professional Archeologist will be sub-contracted to perform the surveys as an additional service upon the Client's written authorization.
4. **Design Development:** Prepare BIM models, drawings, specifications, Construction Contract Documents, designs, and layouts of improvements to be constructed for each milestone submittal described below. The scope of work assumes that the Design Criteria documented in the Preliminary Design Report (PDR) will be incorporated into the Final Design.

Drawings: Detailed design elements will be developed using AutoCAD and Autodesk Revit BIM software for modeling the plant arrangement, coordinating with the City on the detailed mechanical, equipment, and structures, and for the development of plan sheets for bidding purposes. As such, some reviews will include 3D BIM Model reviews, and some will incorporate traditional 2D plan reviews. Proposed review workshops and milestones are listed above and below.

Specifications and Contract Documents: This project assumes the use of FNI's standard Front-End i.e. Construction Contract Documents (Div. 00) modified for the CMAR process. FNI will use its technical standards for drawings and technical specifications (Div. 01 through Div. 46). FNI will coordinate a review of the Front-End Contract Documents with the City and CMAR, and will incorporate any changes to specification standards in the Supplemental Conditions and Front-End Contract Documents

- a. **30% Design/3D Model Development:**
- i. Develop site plans, yard piping plans, and 3D models of all proposed process structures.
 - ii. Develop P&IDs for all proposed processes.
 - iii. Develop electrical one-line diagram.
 - iv. Create scaled plan and section drawings for each major structure to aid CMAR in determining quantities for initial cost model. It is assumed that no labeling or details will be included in the drawings. One plan and up to two sections will be created per major structure.
 - v. Develop list of technical specifications.
 - vi. Conduct SCADA Monitoring and Control workshop.
 - vii. Develop SCADA Business Requirements TM.
 - viii. Develop HMI and Alarm Requirements.
 - ix. Conduct internal QC of the 30% deliverable.
 - x. Incorporate all review comments from the City and CMAR and provide 30% comment response form.
 - xi. Deliverables:
 - 1. One (1) 3D PDF electronic copy of 3D models of major proposed treatment units.

2. One (1) PDF copy of basic plan/section views of major proposed treatment units, site plans, yard piping plans, One-Line Diagram, P&IDs, and basic scaled plan and section drawings for major, proposed treatment units.
3. One (1) PDF electronic copy of 30% technical specification list.

b. 60% Design/GMP Package #1:

- i. Prepare 60% design plans and specifications. All specifications will be at 60% level except for the technical specifications for process mechanical equipment and electrical gear which will be expedited to include in GMP Package #1 as described below.
- ii. GMP Package #1 – Develop expedited technical specifications for equipment and materials to be pre-procured, up to the number described below:
 1. Level of effort assumes technical specifications for the following process mechanical equipment: (1) coarse screens, (2) influent lift pumps, (3) perforated plate fine screens, (4) grit removal equipment, (5) aeration basin blowers, (6) selector zone mixers, (7) clarifier mechanisms, (8) tertiary filters, (9) UV system, (10) rotary drum thickeners and associated polymer feed system, (11) RAS/WAS pumps, (12) scum pumps, (13) aerobic digester blowers, (14) centrifuge and digested feed pumps, (15) non-potable water pumps and automatic self-backwashing strainer, and (16) any other components associated with the above process equipment.
 2. The level of effort assumes technical specifications for the following electrical equipment: (1) Major (>2000 amp) breakers, (2) generators, (3) transformers, (4) switchgear, and (5) variable frequency drives.
- iii. Conduct internal QC of the 60% deliverable including GMP Package #1.
- iv. Incorporate all review comments, including constructability review comments, from the City and CMAR and provide 60% comment response form.
- v. Deliverables:
 1. One (1) PDF electronic copy of 60% design plans and specifications.
 2. One (1) PDF electronic copy of technical specifications to be included in the GMP Package #1 (Equipment and Materials Pre-procurement Package).
 3. One (1) Log of FNI's review comments on Cost Model and Schedule.
 4. One (1) Log of comment responses.

c. 90% Design/GMP Package #2 (Issued for Bid and Regulatory Review):

- i. Prepare 90% design plans and specifications.
- ii. Conduct internal QC of the 90% deliverable.
- iii. Incorporate all review comments, including biddability review comments, from the City and CMAR and provide 90% comment response form.
- iv. Issued for Bid: Upon receipt and inclusion of 90% comments from City and CMAR, the 90% documents shall be used for bidding and regulatory review.
- v. Deliverables:
 1. One (1) PDF electronic copy of 90% design plans and specifications.

2. One (1) Log of FNI's review comments on Cost Model and Schedule.
 3. One (1) Log of comment responses.
- d. 100% Design (Issued for Construction):
- i. Incorporate all changes made after bidding and regulatory review phase.
 - ii. Prepare final Issued for Construction (IFC) design plans.
 - iii. Prepare final IFC project specifications.
 - iv. Deliverables:
 1. One (1) PDF electronic copy of 100% design plans and specifications.
 2. One (1) Log of FNI's review comments on Cost Model and Schedule.
 3. One (1) Log of comment responses.
5. During preparation of 90% Plans and Specifications, coordinate with plant staff and assist the CMAR in the development of Preliminary Construction Sequencing and Maintenance of Plant Operations (MOPO)
- a. Preliminary Construction Sequencing and MOPO Plan. CMAR will lead the development of the Preliminary Construction Sequencing Plan with input from the City and FNI. The preliminary construction sequencing and MOPO plan will develop a logical sequence of construction to minimize the impact to plant staff. Detail key tie-ins and critical durations and constraints to be incorporated into the contract documents..
6. Coordinate with utility providers (electrical, natural gas) to provide increased service for the plant expansion as needed.
7. Furnish City, when requested, the engineering data necessary for applications for routine permits required by local, state and federal authorities. The City will take the lead and coordinate on obtaining all local government permits.
8. Submit Summary Transmittal Letter to the Texas Commission on Environmental Quality (TCEQ) for regulatory approval. As required, submit drawings, specifications, design documentation and Construction Contract Documents. No other submittals for regulatory or permitting reviews are anticipated or included in the Scope of Work.
- C. **BID PHASE:** Bid phase services assume the project is constructed based on a CMAR project delivery method. FNI will assist the CMAR and City with the following activities during the bidding process for up to two (2) guaranteed maximum price (GMP) proposal packages. The Balance of Plant GMP package will be divided by the CMAR into multiple bid packages according to the CMAR's subcontractor and vendor management plan.
1. Respond to questions and interpret bid documents. Prepare technical information to be incorporated into addenda by CMAR. The level of effort assumes twenty (20) bid phase Request for Information (RFI) requests.
 2. Attend up to two (2) pre-bid meetings and assist CMAR in describing technical aspects of the project to prospective bidders.

3. Generally, the CMAR tabulates and analyzes bids. However, if the CMAR elects to submit a bid in order to potentially self-perform a portion of the work, FNI will assist City to tabulate and analyze the bids received. FNI will review the qualification information provided by the apparent low bidder to determine if, based on the information available, they appear to be qualified to construct that portion of the project.
4. Recommend award of subcontracts for CMAR to self-perform work components as appropriate.
5. Deliverables:
 - a. Electronic copies of plans, specifications, bidding documents, and addenda.
 - b. Tabulation of selection criteria for Proposers if CMAR submits a bid.
 - c. Recommendation of Award with tabulation of bids if CMAR submits a bid.
 - d. Notice of award to selected bidder if CMAR submits a bid.

ARTICLE II

SPECIAL SERVICES: When requested by the City, FNI shall render the following professional services, which are not included in the Basic Services described above, in connection with the development of the Project:

A. INFLUENT LIFT STATION PHYSICAL MODEL HYDRAULIC TESTING:

1. Provide subconsultant services for physical model development and testing per Hydraulic Institute standards for the proposed influent lift station in a circular dual wet well configuration. An allowance of **\$77,000** is assumed for this effort. Hydraulic testing beyond this allowance is an Additional Service.

ARTICLE III

ADDITIONAL SERVICES: Any services performed by FNI that are not included in the Basic Services or Special Services described above are Additional Services. Additional Services to be performed by FNI, if authorized by City, are described as follows:

- A. Revisions to drawings, specifications or other documents when such revisions are 1) not consistent with approvals or instructions previously given by City or 2) due to other causes not solely within the control of FNI.
- B. GIS mapping services or assistance with these services.
- C. Providing services to investigate existing conditions or facilities, or to make measured drawings thereof, or to verify the accuracy of drawings or other information furnished by City.
- D. Preparing applications and supporting documents for government grants, loans, or planning advances and providing data for detailed applications.
- E. Preparing data and reports for assistance to City in preparation for hearings before regulatory agencies, courts, arbitration panels or any mediator, giving testimony, personally or by deposition, and preparations therefore before any regulatory agency, court, arbitration panel or mediator.
- F. Assisting City in preparing for, or appearing at litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings in the defense or prosecution of claims disputes with Contractor(s).
- G. Assisting City in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this Agreement. Such services, if any, shall be furnished by FNI on a fee basis negotiated by the respective parties outside of and in addition to this Agreement.
- H. Providing environmental support services not specifically listed in Basic Services, including the design and implementation of ecological baseline studies, environmental monitoring, impact assessment and analyses, permitting assistance, and other assistance required to address environmental issues.
- I. Design, contract modifications, studies or analysis required to comply with local, State, Federal or other regulatory agencies that become effective after the date of this agreement.
- J. Visits to the site more than the number of trips included in Basic and Special Services for periodic site visits, coordination meetings, or contract completion activities.
- K. Providing services on an accelerated time schedule. The scope of this service include cost for overtime wages of employees and consultants, inefficiencies in work sequence and plotting or reproduction costs directly attributable to an accelerated time schedule directed by the City.
- L. Preparing statements for invoicing or other documentation for billing other than for the standard invoice for services attached to this professional services agreement.
- M. Providing data, reports or briefings to City Council on the status of the project.
- N. Reviewing Bid Phase RFIs in excess of the number of reviews included in Basic Services.

ARTICLE IV

TIME OF COMPLETION: FNI is authorized to commence work on the Project upon execution of this Agreement and agrees to complete the services in accordance with the following schedule:

Task No.	Task Title	Time of Completion
1	Final Design	12 months from NTP
2	Bid Phase	3 months per GMP Package: <ul style="list-style-type: none"> Advertisement of GMP Package #1 (Procurement of major process equipment and electrical gear) will begin at the end of the 60% deliverable. Advertisement of GMP Package #2 (rest of the plant) will begin at the end of the 90% deliverable.

Tentative project schedule assuming Notice to Proceed in January 2024 is shown below:

	2024												2025						2026		2027		
Project Phase	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul - Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
Final Design																							
Project Kickoff	★																						
30% Design				★																			
60% Design/GMP Package #1								★															
90% Design/GMP Package #2 (Issued for Bid)												★											
Bid Phase																							
Advertisement and Bid Opening (Package #1)									★														
Package #1 Approval										★													
Advertisement and Bid Opening (Package #2)											★		★										
Package #2 Approval												★											
Council Approval														★									
Prepare Final Submittal (Issued for Construction Set)																							
Construction																							
Pre-Construction Meeting																		★					
Construction																							
Substantial Completion																							★
WWTP in Service																							★

If FNI's services are delayed through no fault of FNI, FNI shall be entitled to adjust contract schedule consistent with the number of days of delay. These delays may include but are not limited to delays in City or regulatory reviews, delays on the flow of information to be provided to FNI, governmental approvals, etc. These delays may result in an adjustment to compensation as outlined on the face of this Agreement and in Attachment CO.

ARTICLE V

RESPONSIBILITIES OF CITY: City shall perform the following in a timely manner so as not to delay the services of FNI:

- A. Designate in writing a person to act as City's representative with respect to the services to be rendered under this Agreement. Such person shall have contract authority to transmit instructions, receive information, interpret and define City's policies and decisions with respect to FNI's services for the Project.
- B. Provide all criteria and full information as to City's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which City will require to be included in the drawings and specifications.
- C. Assist FNI by placing at FNI's disposal all available information pertinent to the Project including previous reports and any other data relative to design or construction of the Project.
- D. Arrange for access to and make all provisions for FNI to enter upon public and private property as required for FNI to perform services under this Agreement.
- E. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by FNI, obtain advice of an attorney, insurance counselor and other consultants as City deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay, or cause rework in, the services of FNI.
- F. Furnish approvals and permits from all governmental authorities having jurisdiction over the Project and such approvals and consents from others as may be necessary for completion of the Project.
- G. City shall make or arrange to have made all subsurface investigations, including but not limited to borings, test pits, soil resistivity surveys, and other subsurface explorations. City shall also make or arrange to have made the interpretations of data and reports resulting from such investigations. All costs associated with such investigations shall be paid by City.
- H. Provide such accounting, independent cost estimating and insurance counseling services as may be required for the Project, such legal services as City may require or FNI may reasonably request with regard to legal issues pertaining to the Project including any that may be raised by Contractor(s), such auditing service as City may require to ascertain how or for what purpose any Contractor has used the moneys paid under the construction contract, and such inspection services as City may require to ascertain that Contractor(s) are complying with any law, rule, regulation, ordinance, code or order applicable to their furnishing and performing the work.
- I. If City designates a person to serve in the capacity of Resident Project Representative who is not FNI or FNI's agent or employee, the duties, responsibilities and limitations of authority of such Resident Project Representative(s) will be set forth in an Attachment attached to and made a part of this Agreement before the Construction Phase of the Project begins. Said attachment shall also set forth appropriate modifications of the Construction Phase General Representation services together with such adjustment of compensation as appropriate.

- J. Attend the pre-bid conference, bid opening, preconstruction conferences, construction progress and other job-related meetings and substantial completion inspections and final payment inspections.
- K. Give prompt written notice to FNI whenever City observes or otherwise becomes aware of any development that affects the scope or timing of FNI's services, or any defect or nonconformance of the work of any Contractor.
- L. Furnish, or direct FNI to provide, Additional Services as stipulated in Attachment SC, Article III of this Agreement or other services as required.
- M. Bear all costs incident to compliance with the requirements of this Article V.

ARTICLE VI

DESIGNATED REPRESENTATIVES: FNI and City designate the following representatives:

Owner's Designated Representative – Meagan Mageo
Project Manager
City of Tomball
501 James Street
Tomball, TX 77375
(281) 290-1411
MMageo@tomballtx.gov

FNI's Designated Representative – Murali Erat, P.E.
11200 Broadway St., Ste 2320
Pearland, TX 77584
(832) 456-4709
Murali.Erat@freese.com

FNI's Accounting Representative – Kristina Isaac
10497 Town and Country Way, Suite 600
Houston, TX 77024
(716) 600-6860
Kristina.Isaac@freese.com

COMPENSATION

FNI proposes to perform the services outlined in the above sections for a total lump sum fee of \$ as shown in the table below.

Phase	Fee	Fee Type
BASIC SERVICES		
Final Design	\$4,724,522	Lump Sum
Bid Phase	\$131,478	Lump Sum
Total Basic Services:	\$4,856,000	
SPECIAL SERVICES		
Influent Lift Station Physical Modeling	\$77,000	Not to Exceed
Total Special Services:		
Total Project (Basic + Special Services):	\$4,933,000	

COMPENSATION

ATTACHMENT CO

Compensation to FNI for Basic Services in Attachment SC shall be the lump sum of Four Million Eight Hundred Fifty Six Thousand Dollars (\$4,856,000).

Compensation to FNI for Special Services in Attachment SC shall be computed on the basis of the following Schedule of Charges, but shall not exceed Seventy Seven Thousand Dollars (\$77,000).

If FNI sees the Scope of Services changing so that Additional Services are needed, including but not limited to those services described as Additional Services in Attachment SC, FNI will notify OWNER for OWNER's approval before proceeding. Additional Services shall be computed based on the following Schedule of Charges.

<u>Position</u>	<u>Hourly Rate</u>	
	<u>Min</u>	<u>Max</u>
Professional 1	96	167
Professional 2	123	191
Professional 3	136	300
Professional 4	157	344
Professional 5	221	385
Professional 6	242	453
Construction Manager 1	113	153
Construction Manager 2	119	191
Construction Manager 3	143	194
Construction Manager 4	170	242
Construction Manager 5	204	286
Construction Manager 6	272	337
Construction Representative 1	79	85
Construction Representative 2	99	113
Construction Representative 3	126	181
Construction Representative 4	126	181
CAD Technician/Designer 1	85	116
CAD Technician/Designer 2	102	187
CAD Technician/Designer 3	147	238
Corporate Project Support 1	72	150
Corporate Project Support 2	82	211
Corporate Project Support 3	102	310
Intern / Coop	55	92

Rates for In-House Services and Equipment

<u>Mileage</u>	<u>Bulk Printing and Reproduction</u>			<u>Equipment</u>		
Standard IRS Rates		<u>B&W</u>	<u>Color</u>	Valve Crew Vehicle (hour)	\$75	
	Small Format (per copy)	\$0.10	\$0.25	Pressure Data Logger (each)	\$200	
<u>Technology Charge</u>	Large Format (per sq. ft.)			Water Quality Meter (per day)	\$100	
\$8.50 per hour	Bond	\$0.25	\$0.75	Microscope (each)	\$150	
	Glossy / Mylar	\$0.75	\$1.25	Pressure Recorder (per day)	\$100	
	Vinyl / Adhesive	\$1.50	\$2.00	Ultrasonic Thickness Guage (per day)	\$275	
				Coating Inspection Kit (per day)	\$275	
	Mounting (per sq. ft.)	\$2.00		Flushing / Cfactor (each)	\$500	
	Binding (per binding)	\$0.25		Backpack Electrofisher (each)	\$1,000	
				<u>Survey Grade</u>	<u>Standard</u>	
				Drone (per day)	\$200	\$100
				GPS (per day)	\$150	\$50

OTHER DIRECT EXPENSES:

Other direct expenses are reimbursed at actual cost times a multiplier of 1.10. They include outside printing and reproduction expense, communication expense, travel, transportation and subsistence away from the FNI office. For other miscellaneous expenses directly related to the work, including costs of laboratory analysis, test, and other work required to be done by independent persons other than staff members, these services will be billed at a cost times a multiplier of 1.10. For Resident Representative services performed by non-FNI employees and CAD services performed In-house by non-FNI employees where FNI provides workspace and equipment to perform such services, these services will be billed at cost times a multiplier of 2.0. This markup approximates the cost to FNI if an FNI employee was performing the same or similar services.

These ranges and/or rates will be adjusted annually in February. Last updated 2023.

TERMS AND CONDITIONS OF AGREEMENT

1. **DEFINITIONS:** As used herein: (1) City refers to the party named as such in the Agreement between the City and FNI; (2) FNI refers to Freese and Nichols, Inc., its employees and agents, and its subcontractors and their employees and agents; and (3) Services refers to the professional services performed by FNI pursuant to the Agreement.
2. **INFORMATION FURNISHED BY CITY:** City will assist FNI by placing at FNI's disposal all available information pertinent to the project, including previous reports and any other data relative to design or construction of the project. FNI shall have no liability for defects or negligence in the Services attributable to FNI's reliance upon or use of data, design criteria, drawings, specifications, or other information furnished by City. To the fullest extent permitted by law, City agrees to indemnify and hold FNI harmless from any and all claims and judgments, and all losses, costs, and expenses arising therefrom. FNI shall disclose to City, prior to use thereof, defects or omissions in the data, design criteria, drawings, specifications, or other information furnished by City to FNI that FNI may reasonably discover in its review and inspection thereof.
3. **STANDARD OF CARE:** FNI will perform all professional services under this Agreement with the professional skill and care ordinarily provided by competent members of the subject profession practicing under the same or similar circumstances and professional license as expeditiously as is prudent considering the ordinary professional skill and care of a competent member of the subject profession. FNI makes no warranties, express or implied, under this Agreement or otherwise, in connection with any Services performed or furnished by FNI.
4. **INSURANCE:** FNI shall provide City with certificates of insurance with the following minimum coverage:

Commercial General Liability

\$2,000,000 General Aggregate

Automobile Liability (Any Auto)

\$1,000,000 Combined Single Limit

Workers' Compensation

As required by Statute

Professional Liability

\$3,000,000 Annual Aggregate

5. **CHANGES:** City, without invalidating the Agreement, may order changes within the general scope of Services required by the Agreement by altering, adding, and/or deducting from the Services to be performed. If any such change under this clause causes an increase or decrease in FNI's cost or time required for the performance of any part of the Services, an equitable adjustment will be made by mutual agreement and the Agreement will be modified in writing accordingly.

FNI will make changes to the drawings, specifications, reports, documents, or other deliverables as requested by City. However, when such changes differ from prior comments, directions, instructions, or approvals given by City or are due to causes not solely within the control of FNI, FNI shall be entitled to additional compensation and time required for performance of such changes to the Services authorized under this Agreement.

6. **OPINION OF PROBABLE CONSTRUCTION COSTS:** No fixed limit of project construction cost shall be established as a condition of the Agreement, unless agreed upon in writing and signed by the parties hereto. If a fixed limit is established, FNI shall be permitted to include contingencies for design, bidding, and price escalation in the construction contract documents to make reasonable adjustments in the scope of the project to adjust the project construction cost to the fixed limit. Such contingencies may include bid allowances, alternate bids, or other methods that allow FNI to

determine what materials, equipment, component systems, and types of construction are to be included in the construction contract documents. Fixed limits, if any, shall be increased by the same amount as any increase in the contract price after execution of the construction contract.

FNI will furnish an opinion of probable construction or program cost based on present day pricing, but does not guarantee the accuracy of such estimates. Opinions of probable cost, financial evaluations, feasibility studies, economic analyses of alternate solutions, and utilitarian considerations of operations and maintenance costs prepared by FNI hereunder will be made on the basis of FNI's experience and qualifications and represent FNI's judgment as an experienced and qualified design professional. It is recognized, however, that FNI does not have control over the cost of labor, material, equipment, or services furnished by others or over market conditions or contractors' methods of determining prices. Accordingly, FNI cannot and does not warrant or represent that bids or cost proposals will not vary from the City's project budget or from any estimate or opinion of probable construction or program cost prepared by or agreed to by FNI.

7. **PAYMENT:** Progress payments may be requested by FNI based on the amount of Services completed. Payment for Services shall be due and payable upon submission of a statement for Services to City and in acceptance of Services as satisfactory by City. Statements for Services shall not be submitted more frequently than monthly. Any applicable taxes imposed upon the Services, expenses, and charges by any governmental body after the execution of this Agreement will be added to FNI's compensation.

If City fails to make any payment due FNI for Services, expenses, and charges within 30 days after receipt of FNI's statement for Services therefore, the amounts due FNI will be increased at the rate of 1 percent per month from said 30th day, and, in addition, FNI may, after giving 7 days' written notice to City, suspend Services under this Agreement until FNI has been paid in full for all amounts due for Services, expenses, and charges.

If FNI's Services are delayed or suspended by City or are extended for more than 60 days through no fault of FNI, FNI shall be entitled to equitable adjustment of rates and amounts of compensation to reflect reasonable costs incurred by FNI in connection with such delay or suspension and reactivation and the fact that the time for performance under this Agreement has been revised.

8. **OWNERSHIP OF DOCUMENTS:** All drawings, reports, data, and other project information developed in the execution of Services provided under this Agreement shall be the property of City upon payment of FNI's fees for Services. FNI may retain copies for record purposes. City agrees such documents are not intended or represented to be suitable for reuse by City or others. Any reuse by City or by those who obtained said documents from City without written verification or adaptation by FNI, will be at the City's sole risk and without liability or legal exposure to FNI, or to FNI's independent associates or consultants. To the fullest extent permitted by law, City shall indemnify and hold harmless FNI and FNI's independent associates and consultants from all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting therefrom. Any such verification or adaptation will entitle FNI to further reasonable compensation. FNI may reuse all drawings, report data, and other project information in the execution of Services provided under this Agreement in FNI's other activities. Any reuse by FNI will be at FNI's sole risk and without liability or legal exposure to City, and FNI shall indemnify and hold harmless City from all claims, damages, losses, and expenses including reasonable attorneys' fees arising out of or resulting therefrom.

9. **TERMINATION:** The obligation to provide Services under this Agreement may be terminated by either party upon 10 days' written notice. In the event of termination, FNI will be paid for all Services rendered and reimbursable expenses incurred to the date of termination and, in addition, all reimbursable expenses directly attributable to termination.
10. **CONSTRUCTION REPRESENTATION:** If required by the Agreement, FNI will furnish construction representation according to the defined scope for these Services. FNI will observe the progress and the quality of work to determine in general if the work is proceeding in accordance with the construction contract documents. In performing these Services, FNI will report any observed deficiencies to City, however, it is understood that FNI does not guarantee the contractor's performance, nor is FNI responsible for the supervision of the contractor's operation and employees. FNI shall not be responsible for the contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incident to the work of the contractor. FNI shall not be responsible for the acts or omissions of any person (except its own employees or agents) at the project site or otherwise performing any of the work of the project. If City designates a resident project representative that is not an employee or agent of FNI, the duties, responsibilities, and limitations of authority of such resident project representative will be set forth in writing and made a part of this Agreement before the construction phase of the project begins.
11. **GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT:** City agrees to include provisions in the general conditions of the construction contract that name FNI: (1) as an additional insured and in any waiver of subrogation rights with respect to such liability insurance purchased and maintained by the contractor for the project (except workers' compensation and professional liability policies); and (2) as an indemnified party in any indemnification provisions where City is named as an indemnified party.
12. **POLLUTANTS AND HAZARDOUS WASTES:** It is understood and agreed that FNI has neither created nor contributed to the creation or existence of any hazardous, radioactive, toxic, irritant, pollutant, or otherwise dangerous substance or condition at the project site, if any, and its compensation hereunder is in no way commensurate with the potential risk of injury or loss that may be caused by exposures to such substances or conditions. The parties agree that in performing Services required by this Agreement, FNI does not take possession or control of the subject site, but acts as an invitee in performing Services, and is not therefore responsible for the existence of any pollutant present on or migrating from the site. Further, FNI shall have no responsibility for any pollutant during clean-up, transportation, storage or disposal activities.
13. **SUBCONTRACTS:** If, for any reason and at any time during the progress of providing Services, City determines that any subcontractor for FNI is incompetent or undesirable, City shall notify FNI accordingly and FNI shall take immediate steps for cancellation of such subcontract. Subletting by subcontractors shall be subject to the same regulations. Nothing contained in the Agreement shall create any contractual relation between any subcontractor and City.
14. **PURCHASE ORDERS:** If a purchase order is used to authorize FNI's Services, only the terms, conditions, and instructions typed on the face of the purchase order shall apply to this Agreement. Should there be any conflict between the purchase order and the terms of this Agreement, then this Agreement shall prevail and be determinative of the conflict.

15. **CONSEQUENTIAL DAMAGES:** In no event shall FNI be liable in contract, tort, strict liability, warranty, or otherwise for any special, indirect, incidental, or consequential damages (such as loss of product, loss of use of equipment or systems, loss of anticipated profits or revenue, non-operation or increased expense of operation), arising out of, resulting from, or in any way related to this Agreement or the project.
16. **ARBITRATION:** No arbitration, arising out of or relating to this Agreement, involving one party to this Agreement may include the other party to this Agreement without their approval.
17. **SUCCESSORS AND ASSIGNMENTS:** City and FNI and the partners, successors, executors, administrators, and legal representatives of each are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators, and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.

Neither City nor FNI shall assign, sublet, or transfer any rights under or interest in (including, but without limitation, moneys that may become due or moneys that are due) this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated by law or the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Nothing contained in this paragraph shall prevent FNI from employing such independent associates and consultants as FNI may deem appropriate to assist in the performance of Services hereunder.

City Council Meeting

Agenda Item

Data Sheet

Meeting Date: December 18, 2023

Topic:

Approve a Professional Services Agreement with PLW Waterworks, LLC to provide design phase services for the South Wastewater Treatment Plant expansion, Project Number 2023-10003, for a not-to-exceed amount of \$595,699, authorize the expenditure of funds therefor, and authorize the City Manager to execute the agreement. This amount is included in the Fiscal Year 2023-2024 budget as a Capital Improvement Project.

Background:

On May 1, 2023 City Council approved Resolution No. 2023-27, approving the Construction-Manager-at-Risk (CMAR) delivery method for design assistance for the expansion of the South Wastewater Treatment Plant (SWWTP) after determining the use of the CMAR delivery method would provide the best value to the City.

CMAR is a delivery method which necessitates a commitment by the Construction Manager (CM) to serve as the general contractor and deliver the project within a Guaranteed Maximum Price (GMP) which is based on the construction documents and specifications at the time of the GMP plus, any reasonably inferred items or tasks. By bringing the CMAR on early in the design process, they can provide valuable input to the design and construction planning for the project (e.g., cost estimating, scheduling, solicitation of subcontractor bids, value engineering, construction phase operational coordination planning, etc.).

Staff is working with Freese & Nichols, Inc. to complete the design of the expansion, and as part of the CMAR process PLW Waterworks will be assisting during the design to provide expertise opinions based on their extensive experience and knowledge.

This delivery method has several unique benefits to the City for a project such as the South WWTP Expansion Project, including:

1. A higher level of cost control from design through construction. During the design development, the CMAR provides cost updates at contractually established points and monitors the cost impacts of design decisions as the design develops. If these cost estimates remain in line with the established budget, the Engineer then moves on to the next phase of design. If not, the CMAR, Owner and Engineer assess the cost estimate and make design changes to bring the design back into budget alignment. This process allows for the Engineer to “design to budget” and improves overall project budgetary performance.
2. The CMAR is an advocate for the Owner City and manages the project with the City’s best interest in mind.
3. The CMAR takes the burden off of the City in managing and coordinating the project.
4. The City’s risk is managed by the CMAR and the Engineer through the collaborative delivery process so that the construction documents are complete and proper allowances and contingencies are built into the GMP.

5. Constructability and value to the Owner are afforded by the value engineering and cost/risk management expertise brought to the process by the CMAR.
6. The CMAR process allows the City to select a general contractor based on their qualifications and demonstrated performance in construction/expansion work for treatment plant infrastructure similar to the South WWTP. This affords the City the opportunity to perform deeper due diligence on the primary construction partner than would be allowed under competitive fixed-price bidding or competitive sealed proposal bidding.
7. Generally, the thorough prequalification process used by a CMAR minimizes the number of low bidders disqualified and generally leads to lower long-term costs, higher quality, and fewer claims because only pre-qualified contractors are performing work.
8. CMAR services are professional services like architectural, engineering, surveying, etc. The CMAR's main purpose is not only to construct the project, but to manage the cost, schedule and overall quality of the project.

PLW Waterworks, LLC was selected through the Request for Qualification process (RFQ No. 2023-17), which allowed for interested parties to submit sealed qualifications to be considered for the project and a total of three submissions were received. After reviewing all submitted packets a scoring summary was generated and all three firms were interviewed with PLW Waterworks, LLC being deemed the most qualified and experienced contractor to complete the work requested. The selection and discussions were held in accordance with the City's adopted Procurement Policy and Manual and state procurement law.

This item authorizes an agreement with PLW Waterworks, LLC to assist in the design phase of the South Wastewater Treatment Plant expansion for an amount not-to-exceed \$595,699. Funds for completing the proposed project were allocated in the Fiscal Year 2023-2024 budget, as part of the Certificate of Obligation issuance that was approved at the December 4, 2023, City Council meeting.

Project Element	Total Contract	Remaining Contract Amount
Preliminary Engineering - FNI	\$506,085	\$0.00
Proposed Design Engineering - FNI	\$4,933,000	N/A
Proposed CMAR (Design Phase)	\$595,699	N/A
Pre-Procurement Packages (Pending)	Pending	N/A
Construction Management (Pending)	Pending	N/A
CMAR	Pending	N/A
Project Budget \$17,542,276	Total Current Contracts \$6,034,784	

Origination: Project Management

Recommendation:

Staff recommends approving an agreement with PLW Waterworks, LLC for design assistance with the South Wastewater Treatment Plant expansion for an amount no-to-exceed \$595,699.

Party(ies) responsible for placing this item on agenda:

Meagan Mageo, Project Manager

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: X No: _____

If yes, specify Account Number: #400-614-6409

If no, funds will be transferred from account # _____ To account # _____

Signed Meagan Mageo
Staff Member _____ Date _____

Approved by _____
City Manager _____ Date _____

**TOMBALL SOUTH WWTP EXPANSION
PROJECT - CMAR PROPOSAL REVIEW**
RFP NUMBER: 2023-17



Final Scores

Proposer	Total Points
Proposal A: PLW Water Works	93.2
Proposal B: CDM Smith	83.4
Propoal C: Wharton Smith-Reytec	90



CITY OF TOMBALL, TEXAS

**CONSTRUCTION MANAGER AT RISK FOR
SOUTH WASTEWATER TREATMENT PLANT EXPANSION PROJECT**

**CONSTRUCTION MANAGER AT RISK
DESIGN PHASE SERVICES**

PROJECT NO. 2023-10003

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CITY OF TOMBALL

Construction Manager at Risk for South Wastewater Treatment Plant Expansion Project

CONSTRUCTION MANAGER AT RISK DESIGN SERVICES

PROJECT NO. 2023-10003

THIS CONTRACT, is made and entered into by and between City of Tomball, Texas, hereinafter designated the "CITY" and PLW Waterworks, LLC, hereinafter designated the "CONSTRUCTION MANAGER AT RISK" or "CM@Risk."

RECITALS

- A. The City intends to construct the South Wastewater Treatment Plant Expansion Project as described in Exhibit A attached, hereinafter referred to as the "Project".
- B. To undertake the design of said Project the City has entered into a contract with FREESE AND NICHOLS, INC. hereinafter referred to as the "Design Professional."
- C. The CM@Risk has represented to the City its ability to provide design phase services and to construct the Project.
- D. Based on this representation, the City intends to enter into a contract under authority of Texas Government Code Chapter 2269 with the CM@Risk for the design phase services identified in this contract. At the end of the design phase, at the City's discretion, the City may enter into a separate construction contract with the CM@Risk for construction phase services.

AGREEMENT

NOW THEREFORE, for and in consideration of the mutual covenants and considerations hereinafter contained, it is agreed by and between the City and the CM@Risk as follows:

ARTICLE 1 – TERMS AND DEFINITIONS

Addenda – Written or graphic instruments issued prior to the submittal of the GMP Proposal(s) that clarify, correct, or change the GMP Proposal(s) requirements.

Agreement (Contract) – This written document signed by the City and CM@Risk covering the design phase of the Project, and including other documents itemized and referenced in or attached to and made part of this Contract.

Alternate Systems Evaluations – Alternatives for design, means and methods or other scope considerations that are evaluated using value engineering principles and have the potential to reduce construction costs while still delivering a quality and functional Project that meets City requirements.

Change Order (Amendment) – A written instrument issued after execution of the Contract Documents signed by the City and CM@Risk, stating their agreement upon all of the following: the addition, deletion or revision in the scope of services or Deliverables; the amount of the adjustment to the Contract Amount; the extent of the adjustment to the Contract Time; or modifications of other contract terms.

City (Owner) – The City of Tomball, a home-rule municipal corporation, with whom CM@Risk has entered into this Contract and for whom the services are to be provided pursuant to said Contract. Regulatory activities handled by the City of Tomball Building Department or any other City department are not subject to the responsibilities of the City under this Agreement. The City Council of the City of Tomball, Texas,

by majority vote, is the only representative of the Owner having the power to enter into a contract, to execute a change order requiring an increase in the contract sum or agree to an extension to the contractual completion date. The City Council designates the City Manager to act on its behalf during the course of construction. In the event that emergency changes in the scope of the work are required before the City Council's next regularly scheduled meeting or in order to facilitate and expedite the timely completion of the work, the City Manager representative may approve construction changes that do not exceed Fifty Thousand Dollars (\$50,000.00) in cumulative increased costs. Any such change(s) shall be confirmed in writing between the CM@Risk and the City Manager and notice of such approved changes shall be given to the City Council at its next regularly scheduled meeting. Any other changes in the scope of the work that are required that result in increased costs shall be determined by the City Council within thirty (30) days of the time that the proposed change is presented to the City by the City Manager and CM@Risk.

City's Designated Project Manager – The City Manager or the City Manager's designee.

Construction Contract Time(s) – The number of days or the dates related to the construction phase that as stated in Construction Documents applies to achievement of Substantial Completion of the Work.

Construction Documents – The plans, specifications and drawings prepared by the Design Professional after correcting for permit review requirements.

Construction Fee – The CM@Risk's administrative costs, home office overhead, and profit, whether at the CM@Risk's principal or branch offices.

Construction Manager at Risk (CM@Risk) – The firm, corporation, or other approved legal entity with whom the City has entered into this Contract to provide services as detailed in this Contract.

Construction Management Plan – Formal documentation prepared and maintained by the CM@Risk describing the sequence and duration of the activities to accomplish the Work within the Contract Time including but not limited to those items set forth in Section 2.2.

Contingency, CM@Risk's – A fund to cover cost growth during the Project used at the discretion of the CM@Risk usually for costs that result from Project circumstances. The amount of the CM@Risk's Contingency will be negotiated as a separate line item in each GMP package. Use and management of the CM@Risk's Contingency is described in Section 2.6.

Contingency, Owner's – A fund to cover cost growth during the Project used at the discretion of the City usually for costs that result from City directed changes or unforeseen site conditions. The amount of the Owner's Contingency will be set by the City and will be in addition to the project costs included in the CM@Risk's GMP packages. Use and management of the Owner's Contingency is described in Section 2.6.

Contract Amount – The cost for services for this Contract as identified in Article 4.

Contract Documents – means the following items and documents in descending order of precedence executed by the City and the CM@Risk: (i) all written modifications, amendments, and Change Orders; (ii) this Agreement, including all exhibits and attachments; (iii) Construction Documents; and (iv) GMP Plans and Specifications.

Contract Time(s) – The number of days or the dates stated in this Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

Cost of the Work – The direct costs or stipulated rates necessarily incurred by the CM@Risk in the proper performance of the Work. The Cost of the Work shall include direct labor costs, subcontract costs,

costs of materials and equipment incorporated in the completed construction, costs of other materials and equipment, temporary facilities, building permit fees (if not paid for by City), materials testing, General Conditions Costs, and related items. The Cost of the Work shall not include the following items:

1. CM@Risk's Construction Fee;
2. Salaries and other compensation of the CM@Risk's personnel stationed at the CM@Risk's principal office or offices other than the site office, except as specifically provided in Section X.2, or as may be provided in the GMP;
3. Bonuses, profit sharing, incentive compensation, and any other discretionary payments, paid to anyone hired by the CM@Risk or paid to any Subcontractor or vendor, unless the City has provided prior approval;
4. Expenses of the CM@Risk's principal office and offices other than the site office;
5. Overhead and general expenses, except as may be expressly included herein;
6. Rental costs of machinery and equipment, except as specifically provided herein;
7. The CM@Risk's capital expenses, including interest on the CM@Risk's capital employed for the Work;
8. Costs due to the negligence of, or failure to fulfill a specific responsibility of the Contract by, the CM@Risk, Subcontractors, and suppliers, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable;
9. Costs incurred in the performance of Preconstruction Phase Services (unless specifically stated in the GMP);
10. Any cost not specifically and expressly described in herein;
11. Costs, other than costs included in Change Orders approved by the City, that would cause the Guaranteed Maximum Price to be exceeded;
12. Services and expenses of the estimating, personnel, accounting, budget control, audit and management information systems relating to accounting in CM@Risk 's office and even if at the site, except as specifically identified herein;
13. Interest on CM@Risk 's capital or on money borrowed by CM@Risk, including the capital employed by CM@Risk in the performance of the Work.
14. Amounts required to be paid by CM@Risk for Federal and/or State income, franchise taxes or other business taxes, but not including any applicable sales taxes;
15. Legal, accounting, or other similar professional services provided by or to CM@Risk, in regard to disputes, arbitrations, litigations or other such proceedings with Subcontractors, with municipal authorities, with City, the Design Professional or any other person or entity relating to the Project or otherwise;
16. Sales, entertainment, and meal expenses;
17. Employee vehicle expenses, including fuel above the "Travel & Subsistence" not-to-exceed amount;
18. General Conditions, Weather Protection and Travel and Subsistence in excess of the line items shown in the GMP;
19. Costs related to CM@Risk's indemnification obligations;
20. The cost of Travel and Subsistence not in compliance with the requirements provided herein; and
21. Costs for insurance through a captive insurer owned or controlled by the CM@Risk.

Critical Path Schedule – The sequence of activities from the start of the Work to the Substantial Completion of the Project. Any delay in the completion of these activities will extend the Substantial Completion date.

Day – Calendar day unless otherwise specifically noted in the Contract Documents.

Deliverables – The work products prepared by the CM@Risk in performing the scope of work described in this Contract. Some of the major deliverables to be prepared and provided by the CM@Risk during the design phase may include but are not limited to: Construction Management Plan, Project Schedule, Schedule of Values, alternative system evaluations, procurement strategies and plans, cost estimates, construction market surveys, cash flow projections, GMP Proposals, Subcontractor procurement plan,

Statement of Proposed MBE/WBE Utilization, Subcontractor agreements, Subcontractor bid packages, Supplier agreements, and others as indicated in this Contract or required by the Project Team.

Design Professional – FREESE AND NICHOLS, INC., or another licensed person, firm or corporation who furnishes design and/or construction administration services required for the Project as designated by the City in writing.

Drawings (Plans) – Documents, which visually represent the scope, extent and character of the Work to be furnished and performed by the CM@Risk during the construction phase and which have been prepared or approved by the Design Professional and the City. Includes Drawings that have reached a sufficient stage of completion and released by the Design Professional solely for the purposes of review and/or use in performing constructability or biddability reviews and in preparing cost estimates (e.g., conceptual design Drawings, preliminary design Drawings, detailed design Drawings at 30%, 60%, 90% or 100% or schematic, design development, construction documents), but “*not for construction*”. Shop Drawings are not Drawings as so defined.

Engineer – The qualified, licensed person, firm or corporation who furnishes engineering services required for the Project.

Float – The number of Days by which an activity can be delayed without lengthening the Critical Path and extending the Substantial Completion date.

General Conditions Costs – Includes, but is not limited to the following types of costs for the CM@Risk during the construction phase: payroll costs for project manager or construction manager for Work conducted at the site; payroll costs for the superintendent and full-time general foremen; payroll costs for other management personnel resident and working on the site; workers not included as direct labor costs engaged in support (e.g., loading/unloading, clean-up, etc.); administrative office personnel; costs of offices and temporary facilities including office materials, office supplies, office equipment, minor expenses; utilities, fuel, sanitary facilities and telephone services at the site; costs of liability insurance premiums not included in labor burdens for direct labor costs; costs of bond premiums; costs of consultants not in the direct employ of the CM@Risk or Subcontractors; and fees for licenses.

Guaranteed Maximum Price (GMP) – The sum of the maximum Cost of the Work, the CM@Risk's Construction Fee, and CM@Risk's Contingency.

GMP Plans and Specifications – The plans and specifications provided pursuant to paragraph 2.6.5 upon which the Guaranteed Maximum Price Proposal is based.

Guaranteed Maximum Price (GMP) Proposal – The offer or proposal of the CM@Risk submitted on the prescribed form setting forth the GMP prices for the entire Work or portions of the Work to be performed during the construction phase. The GMP Proposal(s) are to be developed pursuant to Article 2 of this Contract.

Laws and Regulations – Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

Milestones – A principal event in the performance of the Work that the Contract requires CM@Risk to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

Notice of Intent to Award – The written notice by City to a respondent to the City's solicitation of the Project of City's intent to accept a certain respondent's proposal.

Notice to Proceed (NTP) Letter – A written notice given by City to the CM@Risk fixing the date on which the CM@Risk will start to perform the CM@Risk's obligations under this Contract.

Payment Request – The form that is accepted by the City and used by the CM@Risk in requesting progress payments or final payment and which will include such supporting documentation as is required by the Contract Documents and or the City.

Project – The works to be completed in the execution of this Contract as described in the Recitals above and Exhibit “A” attached.

Project Budget – The amount budgeted by the City for the Project and the Work.

Project Schedule – A schedule, prepared and maintained by CM@Risk, describing the sequence and duration of the activities comprising the CM@Risk's plan to accomplish the Work within the Contract Times.

Project Team – Design phase services team consisting of the Design Professional, CM@Risk, City's Project Manager, City's Client Department representatives and other stakeholders who are responsible for making decisions regarding the Project.

Schedule of Values (SOV) – Document specified in the construction phase Contract, which divides the Contract Price into pay items, such that the sum of all pay items equals the Contract Price for the construction phase Work, or for any portion of the Work having a separate specified Contract Price. The SOV may or may not be output from the Project Schedule depending on if the Project Schedule is cost-loaded or not.

Shop Drawings – All drawings, diagrams, schedules, and other data specifically prepared for the Work by the CM@Risk or a Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

Site – The land or premises on which the Project is located.

Specifications – The part(s) of the Contract Documents for the construction phase consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

Subconsultant – A person, firm or corporation having a contract with the CM@Risk at any tier to furnish services required as its independent professional associate or consultant with respect to the Project.

Subcontractor – An individual or firm having a direct contract with the CM@Risk or any other individual or firm having a contract with the aforesaid contractors at any tier, who undertakes to perform a part of the design phase services or construction phase Work at the site for which the CM@Risk is responsible. Subcontractors will be selected through the Subcontractor bid process described in paragraph 2.7 of this Contract.

Substantial Completion – When the Work, or an agreed upon portion of the Work, is sufficiently complete so that City can occupy and use the Project or a portion thereof for its intended purposes. This may include, but is not limited to: (i) approval by City Fire Marshall and local authorities, unless such approval is not granted for reasons beyond CM@Risk's responsibility or control; (ii) all systems in place, functional, and displayed to the City or its representative; (iii) all materials and equipment installed; (iv) all systems reviewed and accepted by the City; (v) draft O&M manuals and record documents reviewed and accepted by the City; (vi) City operation and maintenance training complete; (vii) landscaping and site work; and (viii) final cleaning. The conditions of Substantial Completion that do not apply to a specific GMP will be listed in the Notice to Proceed Letter pursuant to the Construction Phase contract.

Supplier – A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with CM@Risk or with any Subcontractor to furnish materials or equipment to be incorporated in the construction phase Work by CM@Risk or any Subcontractor.

Work – The entire completed construction or the various separately identifiable parts thereof, required to be furnished during the construction phase. Work includes and is the result of performing or furnishing labor, services and furnishing and incorporating materials, resources, and equipment into the construction, and performing or furnishing services and documents as required by the Contract Documents for the construction phase.

ARTICLE 2 – BASIC DESIGN PHASE SERVICES

2.1 GENERAL

- 2.1.1 The CM@Risk, to further the interests of the City, will perform the services required by, and in accordance with this Contract, to the satisfaction of the City's Designated Project Manager, exercising the degree of care, skill and judgment a professional construction manager performing similar services in Harris County, Texas would exercise at such time, under similar conditions. The CM@Risk will, at all times, perform the required services consistent with sound and generally accepted construction management and construction contracting practice. The services being provided under this Contract will not alter any real property owned by the City.
- 2.1.2 Program Evaluation: As a participating member of the Project Team, the CM@Risk will provide to the City and Design Professional a written evaluation of the Project and Project Budget, with recommendations as to the appropriateness of each.
- 2.1.3 Project Meetings: The CM@Risk will attend Project Team meetings which may include, but are not limited to, regular Project management meetings, Project workshops, special Project meetings, construction document rolling reviews and partnering sessions.
- 2.1.4 The CM@Risk will provide design phase services described herein, in a proactive manner and consistent with the intent of the most current Drawings and Specifications. The CM@Risk will promptly notify the City in writing whenever the CM@Risk determines that any Drawings or Specifications are inappropriate for the Project and/or cause changes in the scope of Work requiring an adjustment in the cost estimate, Project Schedule, GMP Proposals and/or in the Contract Time for the Work, to the extent such are established.
- 2.1.5 The CM@Risk, when requested by the City, will attend, make presentations, and participate as may be appropriate in public agency and or community meetings, germane to the Project. The CM@Risk will provide drawings, schedule diagrams, budget charts and other materials describing the Project, when their use is required or apropos in any such public/agency meetings.

2.2 CONSTRUCTION MANAGEMENT PLAN

- 2.2.1 The CM@Risk will prepare a Construction Management Plan (CMP), which may include the CM@Risk's professional opinions concerning: (a) Project Milestone dates and the Project Schedule, including the broad sequencing of the design and construction of the Project, (b) investigations, if any, to be undertaken to ascertain subsurface conditions and physical conditions of existing surface and subsurface facilities and underground utilities, (c) alternate strategies for fast-tracking and/or phasing the construction, (d) the number of separate sub-agreements to be awarded to Subcontractors and Suppliers for the Project construction, (e) permitting strategy, (f) safety and training programs, (g) construction quality control, (h) a commissioning program, (i) the cost estimate and basis of the model, and (j) a matrix summarizing each Project Team member's responsibilities and roles.
- 2.2.2 The CM@Risk will add detail to its previous version of the CMP to keep it current throughout the design phase, so that the CMP is ready for implementation at the start of the construction phase. The update/revisions may take into account (a) revisions in Drawings and Specifications; (b) the results of any additional investigatory reports of subsurface conditions, drawings of physical conditions of existing surface and subsurface facilities and documents depicting underground utilities placement and physical condition, whether obtained by the City, Design Professional, or the CM@Risk, (c) unresolved permitting issues, and significant issues, if any, pertaining to the acquisition of land and right of way, (d) the fast-tracking if any of the construction, or other chosen construction delivery method, (e) the requisite number of separate bidding documents to be advertised, (f) the status of the procurement of long-lead time equipment (if any) and/or materials, and (g) funding issues identified by the City.

2.3 PROJECT SCHEDULE

- 2.3.1 The fundamental purpose of the "Project Schedule" is to identify, coordinate, and record the tasks and activities to be performed by all of the Project Team members and then for the Project Team to utilize that Deliverable as a basis for managing and monitoring all member's compliance with the schedule requirements of the Project. Each Project Team member is responsible for its compliance with the Project Schedule requirements. The CM@Risk will, however, develop and maintain the "Project Schedule" on behalf of and to be used by the Project Team based on input from the other Project Team members. The Project Schedule will be consistent with the most recent revised/updated CMP. The Project Schedule will use the Critical Path Method (CPM) technique, unless required otherwise, in writing by the City. The CM@Risk will use scheduling software to develop the Project Schedule that is acceptable to the City. The Project Schedule shall be presented in graphical and tabular reports as agreed upon by the Project Team. If Project phasing as described below is required, the Project Schedule will indicate milestone dates for the phases once determined.
- 2.3.2 The Project Schedule shall include a Critical Path Method (CPM) diagram schedule that shall show the sequence of activities, the interdependence of each activity and indicate the Critical Path.
- 2.3.2.1 The CPM diagram schedule shall be in Days and indicate duration, earliest and latest start and finish dates for all activities, and total Float times for all activities except critical activities. The CPM diagram shall be presented in a time scaled graphical format for the Project as a whole.
- 2.3.2.2 The CPM diagram schedule shall indicate all relationships between activities.
- 2.3.2.3 The activities making up the schedule shall be sufficiently detail to assure that adequate planning has been done for proper execution of the Work and such that it provides an appropriate basis for monitoring and evaluating the progress of the Work.
- 2.3.2.4 The CPM diagram schedule shall be based upon activities, which would coincide with the schedule of values, but the Project Schedule is not required to be cost-loaded.
- 2.3.2.5 The CPM diagram schedule shall show all submittals associated with each work activity and the review time for each submittal.
- 2.3.2.6 The schedule shall show Milestones, including Milestones for City-furnished information, and shall include activities for City-furnished equipment and furniture when those activities are interrelated with the CM@Risk activities.
- 2.3.2.7 The schedule shall include a critical path activity that reflects anticipated rain delay during the performance of the contract. The duration shall reflect the average climatic range and usual industrial conditions prevailing in the locality of the site. Weather data shall be based on information provided by the National Weather Services or other approved source.
- 2.3.3 The Project Schedule shall consider the City's and the tenants' occupancy or beneficial use requirements showing portions of the Project having occupancy or beneficial use priority and Contract Time.
- 2.3.4 Float time shall be as prescribed below:
- 2.3.4.1 The total Float within the overall schedule, is not for the exclusive use of either the City or the CM@Risk, but is jointly owned by both and is a resource available to and shared by both parties as needed to meet contract milestones and the Project completion date.

- 2.3.4.2 The CM@Risk shall not sequester shared Float through such strategies as extending activity duration estimates to consume available Float, using preferential logic, or using extensive crew/resource sequencing, etc. Since Float time within the schedule is jointly owned, no time extensions will be granted nor will delay damages paid until a delay occurs which extends the Work beyond the Substantial Completion date.
- 2.3.4.3 Since Float time within the schedule is jointly owned, it is acknowledged that City-caused delays on the Project may be offset by City-caused time savings (i.e., critical path submittals returned in less time than allowed by the contract, approval of substitution requests and credit changes which result in savings of time to the CM@Risk, etc.). In such an event, the CM@Risk shall not be entitled to receive a time extension or delay damages until all City-caused time savings are exceeded, and the Substantial Completion date is also exceeded.
- 2.3.5 The Project Schedule will be updated and maintained by the CM@Risk throughout the design phase such that it will not require major changes at the start of the construction phase to incorporate the CM@Risk's plan for the performance of the construction phase Work. The CM@Risk will provide updates and/or revisions to the Project Schedule for use by the Project Team, whenever required, but no less often than at the monthly Project Team meetings. The CM@Risk will include with such submittals a narrative describing its analysis of the progress achieved to-date vs. that planned, any concerns regarding delays or potential delays, and any recommendations regarding mitigating actions.
- 2.3.6 Project Phasing: If phased construction is deemed appropriate and the City and Design Professional approve, the CM@Risk will review the design and make recommendations regarding the phased issuance of Construction Documents to facilitate phased construction of the Work, with the objective of reducing the Project Schedule and/or Cost of the Work. The CM@Risk will take into consideration such factors as natural and practical lines of work severability, sequencing effectiveness, access and availability constraints, total time for completion, construction market conditions, labor and materials availability, and any other factors pertinent to saving time and cost.
- 2.3.7 Long-Lead Items: The CM@Risk will provide services related to evaluations of and recommendations for long-lead time procurements in order to meet the Project Schedule requirements.

2.4 DESIGN DOCUMENT REVIEWS

- 2.4.1 The CM@Risk will evaluate periodically the availability of labor, materials/equipment, building systems, cost-sensitive aspects of the design; and other factors that may impact the cost estimate, GMP Proposals and/or the Project Schedule.
- 2.4.2 The CM@Risk will recommend, in conjunction with the Project Team, those additional surface and subsurface investigations that, in its professional opinion, are required to provide the necessary information for the CM@Risk to construct the Project. Before initiating construction operations, the CM@Risk may request additional investigations in their GMP Proposal to improve the adequacy and completeness of the site condition information and data made available with the Construction Documents.
- 2.4.3 The CM@Risk will meet with the Project Team as required to review designs during their development. The CM@Risk will familiarize itself with the evolving documents through the various design phases. The CM@Risk will proactively advise the Project Team and make recommendations on factors related to construction costs, and concerns pertaining to the feasibility and practicality of any proposed means and methods, selected materials, equipment and building systems, and labor and material availability. The CM@Risk will furthermore maintain a project decision and trend log as design develops and advise the Project Team on proposed site improvements, excavation and foundation considerations, as well as concerns that exist with

respect to coordination of the Drawings and Specifications. The CM@Risk will recommend cost effective alternatives.

- 2.4.4 The CM@Risk will routinely conduct constructability and biddability reviews of the Drawings and Specifications as necessary to satisfy the needs of the Project Team. The reviews will attempt to identify all discrepancies and inconsistencies in the Construction Documents, especially those related to clarity, consistency, and coordination of Work of Subcontractors and Suppliers.
- 2.4.4.1 Constructability Reviews: The CM@Risk will evaluate whether (a) the Drawings and Specifications are configured to enable efficient construction, (b) design elements are standardized, (c) construction efficiency is properly considered in the Drawings and Specifications, (d) module/preassembly design are prepared to facilitate fabrication, transport and installation, (e) the design promotes accessibility of personnel, material and equipment and facilitates construction under adverse weather conditions, (f) sequences of Work required by or inferable from the Drawings and Specifications are practicable, and (g) the design has taken into consideration efficiency issues concerning access and entrance to the site, laydown, and storage of materials, staging of site facilities, construction parking, and other similar pertinent issues.
- 2.4.4.2 Biddability Reviews: The CM@Risk will check cross-references and complementary Drawings and sections within the Specifications, and in general evaluate whether (a) the Drawings and Specifications are sufficiently clear and detailed to minimize ambiguity and to reduce scope interpretation discrepancies, (b) named materials and equipment are commercially available and are performing well or otherwise, in similar installations, (c) Specifications include alternatives in the event a requirement cannot be met in the field, and (d) in its professional opinion, the Project is likely to be subject to differing site conditions.
- 2.4.4.3 The results of the reviews will be provided to the City in formal, written reports clearly identifying all discovered discrepancies and inconsistencies in the Drawings and Specifications with notations and recommendations made on the Drawings, Specifications, and other documents. If requested by the City, the CM@Risk will meet with the City and Design Professional to discuss any findings and review reports.
- 2.4.4.4 The CM@Risk's reviews will be from a contractor's perspective, and though it will serve to reduce the number of Requests for Information (RFIs) and changes during the construction phase, responsibility for the Drawings and Specifications will remain with the Design Professional and not the CM@Risk.
- 2.4.5 Notification of Variance or Deficiency: It is the CM@Risk's responsibility to assist the Design Professional in ascertaining that, in the CM@Risk's professional opinion, the Construction Documents are in accordance with applicable laws, statutes, ordinances, building codes, rules and regulations. If the CM@Risk recognizes that portions of the Construction Documents are at variance with applicable laws, statutes, ordinances, building codes, rules, and regulations, it will promptly notify the Design Professional and City in writing, describing the apparent variance or deficiency. However, the Design Professional is ultimately responsible for the compliance with those laws, statutes, ordinances, building codes, rules, and regulations.
- 2.4.6 Alternate Systems Evaluations: The Project Team will routinely identify and evaluate using value engineering principles any alternate systems, approaches, design changes that have the potential to reduce Project costs while still delivering a quality and functional product. If the Project Team agrees, the CM@Risk in cooperation with the Design Professional will perform a cost/benefit analysis of the alternatives and submit such in writing to the Project Team. The Project Team will decide which alternatives will be incorporated into the Project. The Design Professional will have full responsibility for the incorporation of the alternatives into the Drawings and Specifications. The CM@Risk will include the cost of the alternatives into the cost estimate and any GMP Proposals.

2.5 COST ESTIMATES

- 2.5.1 CM@Risk will work with the Design Professional to provide an initial, baseline cost estimate for the project within 45 Days after NTP. Unless otherwise agreed by both parties, within 14 Days after receipt of the documents for the various phases of design, the CM@Risk shall provide a complete and detailed cost estimate and a written review of the documents. The cost estimate should include all cost categories necessary for delivery of a fully functional Project, except Owner's Contingency, included in the GMP Proposal identified in Exhibit "C" attached. The Design Professional and CM@Risk shall reconcile any disagreements on the estimate to arrive at an agreed cost. If no consensus is reached, the City will make the final determination.
- 2.5.2 If any estimate submitted to the City exceeds previously accepted estimates or the City's Project Budget, the CM@Risk shall make appropriate recommendations on methods and materials to the City and Design Professional that he believes will bring the project back into the Project Budget.
- 2.5.3 In between these Milestone estimates, the CM@Risk shall maintain a tracking report which identifies the upward or downward movements of costs due to design development, value engineering or scope changes. It shall be the responsibility of the CM@Risk to keep the City and Design Professional informed as to the major trend changes in costs relative to the City's budget.
- 2.5.4 If requested by the City, the CM@Risk shall prepare a preliminary "cash flow" projection based upon historical records of similar type projects to assist the City in the financing process.

2.6 GUARANTEED MAXIMUM PRICE (GMP) PROPOSALS

- 2.6.1.1 The proposed GMP for the entire Work (or portions thereof) will be presented in a format acceptable to the City (see Exhibit "C" attached). CM@Risk must verify with the City the current Exhibit C requirements and procedures when entering into these services.
- 2.6.1.2 The City may request a GMP Proposal for all or any portion of the Project and at any time during the design phase. Any GMP Proposals submitted by the CM@Risk will be based on and consistent with the current update/revised cost estimate at the time of the request, the associated estimates for construction costs and include any clarifications or assumptions upon which the GMP Proposal(s) are based.
- 2.6.2 Guaranteed Maximum Price is comprised of the sum of the following not-to-exceed cost reimbursable or lump sum amounts defined below.
 - 2.6.2.1 The Cost of the Work is actual costs and is a not-to-exceed, reimbursable amount.
 - 2.6.2.2 The General Conditions Costs are a firm fixed lump sum amount included as a Cost of the Work and that will include bonds and insurance premiums based on the full contract price for construction.
 - 2.6.2.3 The Construction Fee is 9.75% of the Cost of the Work.
 - 2.6.2.4 CM@Risk's Contingency is an amount the CM@Risk may use with written approval by the City for increases related to the cost of work or General Condition Costs.
 - 2.6.2.5 Taxes are deemed to include all sales, use, consumer, and other taxes that are legally enacted when negotiations of the GMP were concluded, whether or not yet effective or merely scheduled to go into effect. Taxes should be identified as a separate line item. No construction fee to be applied to taxes.
- 2.6.3 Owner's Contingency are funds to be used at the discretion of the Owner to cover any increases

in Project costs that result from Owner directed changes or unforeseen site conditions. Owner's Contingency will be added to the GMP amount provided by the CM@Risk, the sum of which will be the full contract price for construction. Markups for Construction Fee and taxes will be applied by the CM@Risk at the time that Owner's Contingency is used.

- 2.6.4 GMPs are cumulative including CM@Risk Contingency. The amount of CM@Risk Contingency for each GMP amendment will be negotiated separately and shall reflect the CM@Risk's risk from that point in the project forward.
- 2.6.5 The CM@Risk will prepare its GMP in accordance with the City's request for GMP Proposal requirements based on the most current completed plans and specifications at that time. The CM@Risk shall provide a list of drawings and specifications upon which its proposed GMP is based. These documents will be identified as the GMP Plans and Specifications.
- 2.6.6 An updated/revised Project Schedule will be included with any GMP Proposal(s) that reflects the GMP Plans and Specifications. Any such Project Schedule updates/revisions will continue to comply with the requirements of paragraph 2.3.
- 2.6.7 GMP savings resulting from lower Cost of Work actual costs remaining at the end of the project will revert to City. All monies remaining in the CM@Risk's or Owners contingency shall automatically revert back to the City at the end of the project.
 - 2.6.7.1 GMP Proposal(s) Review and Approval.
 - 2.6.7.2 The CM@Risk will meet with the City and Design Professional to review the GMP Proposal(s) and the written statement of its basis. As part of the statement of basis, the CM@Risk shall identify and justify any costs that are significantly different than the latest cost estimate provided by the CM@Risk. In the event the City or Design Professional discovers inconsistencies or inaccuracies in the information presented, the CM@Risk will make adjustments as necessary to the GMP Proposal, its basis or both.
 - 2.6.7.3 The City upon receipt of any GMP proposal from the CM@Risk, may submit the GMP Plans and Specifications to an independent third party or to the Design Professional for review and verification. The third party or Design Professional will develop an independent estimate of the Cost of the Work and review the Project Schedule for the associated scope of the GMP Proposals.
 - 2.6.7.4 If the CM@Risk GMP Proposal is greater than the independent third party or Design Professional's estimate, the City may require the CM@Risk to reconfirm its GMP Proposal. The CM@Risk will accept the independent third party's or Design Professional's estimate for the Cost of Work as part of his GMP or present a report within seven days of a written request to the City identifying, explaining, and substantiating the differences. The CM@Risk may be requested to, or at its own discretion, submit a revised GMP Proposal for consideration by the City. At that time, the City may do one of the following:
 - (a) Accept the CM@Risk original or revised GMP Proposal, if within the City's budget, without comment.
 - (b) Accept the CM@Risk original or revised GMP Proposal that exceeds the City's budget and indicate in writing to the CM@Risk that the Project Budget has been increased to fund the differences.
 - (c) Reject the CM@Risk's original or revised GMP Proposal because it exceeds the City's budget, the independent third parties or Design Professional's estimate, in which event, the City may terminate this Contract and/or elect to not enter into a separate contract with the CM@Risk for the construction phase associated with the scope of Work reflected in the GMP Proposal.

- 2.6.7.5 If during the review and negotiation of GMP Proposals design changes are required, the City will authorize and cause the Design Professional to revise the Construction Documents to the extent necessary to reflect the agreed-upon assumptions and clarifications contained in the final approved GMP Proposal. Such revised Construction Documents will be furnished to the CM@Risk. The CM@Risk will promptly notify the Design Professional and City in writing if any such revised Construction Documents are inconsistent with the agreed-upon assumptions and clarifications.

2.7 MAJOR SUBCONTRACTOR AND MAJOR SUPPLIER SELECTIONS

- 2.7.1 The selection of major Subcontractors and major Suppliers may occur prior to submission of a GMP Proposal. Major Subcontractors may be selected based on qualifications or a combination of qualifications and price. Subcontractors shall not be selected based on price alone. Except as noted below, the selection of major Subcontractors/Suppliers is the responsibility of the CM@Risk. In any case, the CM@Risk is solely responsible for the performance of the selected Subcontractors/Suppliers.
- 2.7.1.1 The CM@Risk will prepare a Subcontractor/Supplier selection plan and submit the plan to the City for approval. This subcontractor selection plan shall identify those subcontractor trades anticipated to be pre-qualified by qualifications and competitive bid in accordance with Section 2.7.2 and subcontractor trades that will not be pre-qualified through a formalized qualifications-based selection process (competitively bid only). The subcontractor selection plan must be consistent with the selection requirements included in this Contract and the provisions of Chapter 2269 of the Texas Government Code.
- 2.7.2 Selection by qualifications and competitive bid - The CM@Risk shall apply the subcontractor selection plan in the evaluation of the qualifications of a Subcontractor(s) or Supplier(s) and provide the City with its process to prequalify prospective subcontractors and suppliers. All Work for major Subcontractors, Subconsultants and major Suppliers shall then be competitively bid to the prequalified Subcontractors. Competitive bids may occur prior to or after the GMP Proposal(s).
- 2.7.2.1 The CM@Risk will develop Subcontractor and Supplier interest, submit the names of a minimum of three qualified Subcontractors or Suppliers for each trade in the Project for approval by the City and solicit bids for the various Work categories. If there are not three qualified Subcontractors/Suppliers available for a specific trade or there are extenuating circumstances warranting such, the CM@Risk may request approval by the City to submit less than three names. Without prior written notice to the City, no change in the recommended Subcontractors/Suppliers will be allowed.
- 2.7.2.2 If the City objects to any nominated Subcontractor/Supplier or to any recommended self-performed Work bidding opportunities for good reason, the CM@Risk will nominate a substitute Subcontractor/Supplier that is acceptable to the City.
- 2.7.2.3 The CM@Risk will distribute Drawings and Specifications, and when appropriate, conduct a prebid conference with prospective Subcontractors and Suppliers.
- 2.7.2.4 If the CM@Risk desires to self-perform certain portions of the Work, it will request to be one of the approved Subcontractor bidders for those specific bid packages. The CM@Risk's bid will be evaluated in accordance with the process identified below. If events warrant and the City concurs that in order to ensure compliance with the Project Schedule and/or cost, or if a Subcontractor is terminated the CM@Risk may self-perform Work without re-bidding the Work.
- 2.7.2.5 The CM@Risk shall request the pre-qualified subcontractors to provide a detailed bid for the services requested. The subcontractor bid, provided on the subcontractors' letterhead, shall contain sufficient

information (i.e., unit costs/amounts) to allow an evaluation of the reasonableness of bid costs. The CM@Risk shall receive, open, record and evaluate the bids. The apparent low bidders will be interviewed to determine the responsiveness of their proposals. In evaluating the responsiveness of bid proposals the CM@Risk, in addition to bid price, may consider the following factors: past performance on similar projects, qualifications and experience of personnel assigned, quality management plan, approach or understanding of the Work to be performed, and performance schedule to complete the Work. The final evaluation of Subcontractor/Supplier bids will be done with the City Representative in attendance to observe and witness the process. The CM@Risk will resolve any Subcontractor/Supplier bid withdrawal, protest or disqualification in connection with the award at no increase in the Cost of the Work.

- 2.7.3 The CM@Risk will be required to prepare two different reports on the subcontracting process.
- 2.7.3.1 Within fifteen (15) Days after each major Subcontractor/Supplier bid opening process, the CM@Risk will prepare a report for the City's review and approval identifying the recommended Subcontractors/Supplier for each category of Work. The report will provide (a) the name of the recommended Subcontractor/Supplier and the amount of the Subcontractor/Supplier bid for each sub-agreement, (b) the sum of all recommended Subcontractor/Supplier bids received, (c) a copy of the bids received from each Subcontractor, and (d) trade work and its cost that the CM@Risk intends to self-perform, if any.
- 2.7.3.2 Upon completion of the Subcontractor/Supplier bidding process, the CM@Risk shall submit a summary report to the City of the entire Subcontractor/Supplier selection process. The report will indicate, by bid process, all Subcontractors/Suppliers contacted to determine interest, the Subcontractors/Suppliers solicited, the bids received, and costs negotiated, and the recommended Subcontractors/Suppliers for each category of Work.
- 2.7.4 The approved Subcontractors/Suppliers will provide a Schedule of Values that reflects their final accepted bid proposal, which will be used to create the overall Project Schedule of Values.
- 2.7.5 If after receipt of sub-bids or after award of Subcontractors and Suppliers, the City objects to any nominated Subcontractor/Supplier or to any self-performed Work for good reason, the CM@Risk will nominate a substitute Subcontractor or Supplier, preferably, if such option is still available, from those who submitted Subcontractor bids for the Work affected. Once such substitute Subcontractors and Suppliers are consented to by the City, the CM@Risk's proposed GMP for the Work or portion thereof will be correspondingly adjusted to reflect any higher or lower costs from any such substitution.
- 2.7.6 Promptly after receipt of the Notice of Intent to Award, the City will conduct a pre-award conference with the CM@Risk and other Project Team members. At the pre-award conference, the CM@Risk will (a) review the nominated slate of Subcontractors and Suppliers and discuss any concerns with or objections that the City has to any nominated Subcontractor or Supplier; (b) discuss City concerns relating to any proposed self-performed Work; (c) review the CM@Risk's proposed Contract Price for the Work during the construction phase; (d) discuss the conditions, if any, under which the City will agree to leave any portion of the remaining CM@Risk Contingency within the Contract Price for the construction phase Work; (e) resolve possible time frames for the Date of commencement of the Contract Time for the construction phase Work; (f) schedule the pre-construction conference; and (g) discuss other matters of importance.

ARTICLE 3 – PERIOD OF SERVICES

- 3.1 The design phase services described in this Contract will be performed by CM@Risk in accordance with the most current update/revised Project Schedule. Failure on the part of the CM@Risk to adhere to the Project Schedule requirements for activities for which it is responsible will be sufficient grounds for termination of this Contract by the City.

- 3.1.1 Upon failure to adhere to the approved schedule, City may provide written notice to CM@Risk that it intends to terminate the Agreement unless the problem cited is cured, or commenced to be cured, within three (3) days of CM@Risk's receipt of such notice.
- 3.2 If the date of performance of any obligation or the last day of any time period provided for herein should fall on a Saturday, Sunday, or holiday for the City, then said obligation will be due and owing, and said time period will expire, on the first day thereafter which is not a Saturday, Sunday or legal City holiday. Except as may otherwise be set forth herein, any performance provided for herein will be timely made if completed no later than 5:00 p.m. (Tomball time) on the day of performance.

ARTICLE 4 – CONTRACT AMOUNT AND PAYMENTS

4.1 CONTRACT AMOUNT

- 4.1.1 Based on the design phase services fee proposal submitted by the CM@Risk and accepted by the City (which by reference is made a part of this Contract); the City will pay the CM@Risk a lump sum fee based on percent complete for work completed. The total amount of fee proposal submitted is in the amount of **\$595,699.00.**

Additional services and allowances, as described in subsection 4.3: N/A

Total Contract Amount, not to exceed, **\$595,699.00**

4.2 PAYMENTS

- 4.2.1 Requests for monthly payments by the CM@Risk for design phase services will be submitted in a form acceptable to the City and will be accompanied by a progress report, detailed invoices, and receipts, if applicable. Any requests for payment will include, as a minimum, a narrative description of the tasks accomplished during the billing period, a listing of any Deliverables submitted, and copies of any Subconsultants' requests for payment, plus similar narrative and listings of Deliverables associated with their Work. Payment for services negotiated as a lump sum shall be made in accordance with the percentage of work completed during the preceding month. Services negotiated as a not-to-exceed fee will be paid in accordance with the work effort expended on that service during the preceding month.
- 4.2.2 The fees for additional design phase services provided by the CM@Risk and any Subcontractors or Subconsultants will be based upon the hourly rate schedule included as Exhibit B, attached.
- 4.2.3 The CM@Risk will pay all sums due Subconsultants for services and reimbursable expenses within 14 calendar days after the CM@Risk has received payment for those services from the City. In no event will the City pay more than 95 percent of the Contract Amount until final acceptance of all design phase services, and award of the final approved GMP for the entire Project by City Council.
- 4.2.4 **THE CM@RISK AGREES THAT NO CHARGES OR CLAIMS FOR COSTS OR DAMAGES OF ANY TYPE WILL BE MADE BY IT FOR ANY DELAYS OR HINDRANCES BEYOND THE REASONABLE CONTROL OF THE CITY DURING THE PROGRESS OF ANY PORTION OF THE SERVICES SPECIFIED IN THIS CONTRACT. SUCH DELAYS OR HINDRANCES, IF ANY, WILL BE SOLELY COMPENSATED FOR BY AN EXTENSION OF TIME FOR SUCH REASONABLE PERIOD AS MAY BE MUTUALLY AGREED BETWEEN THE PARTIES. IT IS UNDERSTOOD AND AGREED, HOWEVER, THAT PERMITTING THE CM@RISK TO PROCEED TO COMPLETE ANY SERVICES, IN WHOLE OR IN PART AFTER THE DATE TO WHICH THE TIME OF COMPLETION MAY HAVE BEEN EXTENDED, WILL IN NO WAY ACT AS A WAIVER ON THE PART OF THE CITY OF ANY OF ITS LEGAL RIGHTS HEREIN.**

- 4.2.5 If any service(s) executed by the CM@Risk is abandoned or suspended in whole or in part, for a period of more than 180 days through no fault of the CM@Risk, the CM@Risk is to be paid for the services performed prior to the abandonment or suspension.

4.3 ADDITIONAL DESIGN PHASE SERVICES

- 4.3.1 No additional services are identified for the successful completion of this Project.
- 4.3.1.1 When authorized by the City in writing, the CM@Risk will be entitled to reimbursement at cost for direct expenses related to its performance of additional design phase services. Mark- ups are not authorized and only the reimbursables specifically identified in a request will be reimbursed as authorized herein.

ARTICLE 5 – CITY’S RESPONSIBILITIES

- 5.1 The City, at no cost to the CM@Risk, will furnish the following information:
- 5.1.1 One copy of data the City determines pertinent to the work. However, the CM@Risk will be responsible for searching the records and requesting information it deems reasonably required for the Project.
- 5.1.2 All available data and information pertaining to relevant policies, standards, criteria, studies, etc.
- 5.1.3 The name of the City employee or City’s representative who will serve as the Project Manager during the term of this Contract. The Project Manager has the authority to administer this Contract and will monitor the CM@Risk’s compliance with all terms and conditions stated herein. All requests for information from or decisions by the City on any aspect of the work or Deliverables will be directed to the Project Manager. Provided, however, only the City Council, acting as the City’s governing body, has authority to: execute any change to the terms or conditions of this Contract.
- 5.2 The City additionally will:
- 5.2.1 Contract separately with one or more design professionals to provide architectural and/or engineering design services for the Project. The scope of services for the Design Professional will be provided to the CM@Risk for its information. The CM@Risk will have no right, to limit or restrict any changes of such services that are otherwise mutually acceptable to the City and Design Professional.
- 5.2.2 Supply, without charge, all necessary copies of programs, reports, drawings, and specifications reasonably required by the CM@Risk except for those copies whose cost has been reimbursed by the City.
- 5.2.3 Provide the CM@Risk with adequate information in its possession or control regarding the City’s requirements for the Project.
- 5.2.4 Give prompt written notice to the CM@Risk when the City becomes aware of any default or defect in the Project or non-conformance with the Drawings and Specifications, or any of the services required hereunder. Upon notice of failure to perform, the City may provide written notice to CM@Risk that it intends to terminate the Agreement unless the problem cited is cured, or commenced to be cured, within three (3) days of CM@Risk’s receipt of such notice.
- 5.2.5 Notify the CM@Risk of changes affecting the budget allocations or schedule.

- 5.3 Subject to the limitations in Section 5.1.3, the City's Project Manager will have authority to approve the Project Budget and Project Schedule, and render decisions and furnish information the City's Project Manager deems appropriate to the CM@Risk.

ARTICLE 6 – CONTRACT CONDITIONS

6.1 PROJECT DOCUMENTS AND COPYRIGHTS

- 6.1.1 City Ownership of Project Documents: All work products (electronically or manually generated) including but not limited to: cost estimates, studies, design analyses, Computer Aided Drafting and Design (CADD) digital files, and other related documents that are prepared specifically in the performance of this Contract (collectively referred to as Project Documents) are to be and remain the property of the City and are to be delivered to the Project Manager before the final payment is made to the CM@Risk. Nonetheless, in the event these Projects Documents are altered, modified, or adapted without the written consent of the CM@Risk, which consent the CM@Risk will not unreasonably withhold, the City agrees to hold the CM@Risk harmless to the extent permitted by law, from the legal liability arising out of and or resulting from the City's alteration, modification, or adaptation of the Project Documents.
- 6.1.2 CM@Risk to Retain Copyrights: The copyrights, patents, trade secrets or other intellectual property rights associated with the ideas, concepts, techniques, inventions, processes or works of authorship developed or created by the CM@Risk, its Subconsultants or personnel, during the course of performing this Contract or arising out of the Project will belong to the CM@Risk, but will remain available for use by the City for this Project under the terms of this Contract.
- 6.1.3 License to City for Reasonable Use: The CM@Risk hereby grants, and will require its Subconsultants to grant, a royalty free license to the City, its agents, employees, and representatives for an indefinite period of time to reasonably use, make copies, and distribute as appropriate the Project Documents, works or Deliverables developed or created for the Project and this Contract. This license will also include the making of derivative works. In the event that the derivative works require the City to alter or modify the Project Documents, then paragraph 6.1.1 applies.
- 6.1.4 Documents to Bear Seal: When applicable and required by state law, the CM@Risk and its Subconsultants will endorse by a Texas professional seal all plans, works, and Deliverables prepared by them for this Contract.

6.2 COMPLETENESS AND ACCURACY OF CM@RISK'S WORK

- 6.2.1 The CM@Risk will be responsible for the completeness and accuracy of its reviews, reports, supporting data, and other design phase Deliverables prepared or compiled pursuant to its obligations under this Contract and will at its sole own expense correct its work or Deliverables. Any damage incurred by the City as a result of additional construction cost caused by such willful or negligent errors, omissions or acts shall be chargeable to the CM@Risk to the extent that such willful or negligent errors, omissions and acts fall below the standard of care and skill that a professional CM@Risk in Tomball, Texas would exercise under similar conditions. The fact that the City has accepted or approved the CM@Risk's work or Deliverables will in no way relieve the CM@Risk of any of its responsibilities under the Contract, nor does this requirement to correct the work or Deliverable constitute a waiver of any claims or damages otherwise available by law or Contract to the City. Correction of errors, omissions and acts discovered on architectural or engineering plans and specifications shall be the responsibility of the Design Professional.

6.3 ALTERATION IN CHARACTER OF WORK

- 6.3.1 In the event an alteration or modification in the character of Work or Deliverable results in a substantial change in this Contract, thereby materially increasing or decreasing the scope of services, cost of performance, or Project Schedule, the Work or Deliverable will nonetheless be performed as directed by the City. However, before any altered or modified Work begins, a Change Order or amendment will be approved and executed by the City and the CM@Risk. Such Change Order or amendment will not be effective until approved by the City.
- 6.3.2 Additions to, modifications, or deletions from the Project provided herein may be made, and the compensation to be paid to the CM@Risk may accordingly be adjusted by mutual agreement of the contracting parties.
- 6.3.3 No claim for extra work done or materials furnished by the CM@Risk will be allowed by the City except as provided herein, nor will the CM@Risk do any work or furnish any material(s) not covered by this Contract unless such work or material is first authorized in writing. Work or material(s) furnished by the CM@Risk without such prior written authorization will be the CM@Risk's sole jeopardy, cost, and expense, and the CM@Risk hereby agrees that without prior written authorization no claim for compensation for such work or materials furnished will be made.

6.4 DATA CONFIDENTIALITY

- 6.4.1 As used in the Contract, data means all information, whether written or verbal, including plans, photographs, studies, investigations, audits, analyses, samples, reports, calculations, internal memos, meeting minutes, data field notes, work product, proposals, correspondence, and any other similar documents or information prepared by or obtained by the CM@Risk in the performance of this Contract.
- 6.4.2 The parties agree that all data, including originals, images, and reproductions, prepared by, obtained by, or transmitted to the CM@Risk in connection with the CM@Risk's performance of this Contract is confidential and proprietary information belonging to the City to the extent allowed by Texas law.
- 6.4.3 The CM@Risk will not divulge data to any third party without prior written consent of the City. The CM@Risk will not use the data for any purposes except to perform the services required under this Contract. These prohibitions will not apply to the following data:
 - 6.4.3.1 Data which was known to the CM@Risk prior to its performance under this Contract unless such data was acquired in connection with work performed for the City.
 - 6.4.3.2 Data which was acquired by the CM@Risk in its performance under this Contract and which was disclosed to the CM@Risk by a third party, who to the best of the CM@Risk's knowledge and belief, had the legal right to make such disclosure and the CM@Risk is not otherwise required to hold such data in confidence; or
 - 6.4.3.3 Data, which is required to be disclosed by the CM@Risk by virtue of law, regulation, or court, including but not limited to the Texas Public Information Act, Texas Government Code Chapter 552.
- 6.4.4 In the event the CM@Risk is required or requested to disclose data to a third party, or any other information to which the CM@Risk became privy as a result of any other contract with the City, the CM@Risk will first notify the City as set forth in this Article of the request or demand for the data. The CM@Risk will timely give the City sufficient facts, such that the City can have a meaningful opportunity to either first give its consent or take such action that the City may deem appropriate to protect such data or other information from disclosure.

- 6.4.5 The CM@Risk, unless prohibited by law, within ten (10) calendar days after completion of services for a third party on real or personal property owned or leased by the City, will promptly deliver, as set forth in this section, a copy of all data to the City. All data will continue to be subject to the confidentiality agreements of this Contract.
- 6.4.6 The CM@Risk assumes all liability for maintaining the confidentiality of the data in its possession and agrees to compensate the City if any of the provisions of this section are violated by the CM@Risk, its employees, agents or Subconsultants. Solely for the purposes of seeking injunctive relief, it is agreed that a breach of this section will be deemed to cause irreparable harm that justifies injunctive relief in court.

6.5 PROJECT STAFFING

- 6.5.1 Prior to the start of any work or Deliverable under this Contract, the CM@Risk will submit to the City, an organization chart for the CM@Risk staff and Subconsultants and detailed resumes of key personnel listed in its response to the City's Request for Qualifications or subsequent fee proposals (or revisions thereto), that will be involved in performing the services prescribed in the Contract. Unless, otherwise informed, the City hereby acknowledges its acceptance of such personnel to perform such services under this Contract. In the event the CM@Risk desires to change such key personnel from performing such services under this Contract, the CM@Risk will submit the qualifications of the proposed substituted personnel to the City for prior approval. Key personnel will include, but are not limited to, principal-in-charge, project manager, superintendent, project director or those persons specifically identified to perform services of cost estimating, scheduling, value engineering, and procurement planning.
- 6.5.2 The CM@Risk will maintain an adequate number of competent and qualified persons, as determined by the City, to ensure acceptable and timely completion of the scope of services described in this Contract throughout the period of those services. If the City objects, with reasonable cause, to any of the CM@Risk's staff, the CM@Risk will take prompt corrective action acceptable to the City and, if required, remove such personnel from the Project and replace with new personnel acceptable to the City.

6.6 INDEPENDENT CONTRACTOR

- 6.6.1 The CM@Risk is and will be an independent contractor and whatever measure of control the City exercises over the work or Deliverable pursuant to the Contract will be as to the results of the work only. No provision in this Contract will give or be construed to give the City the right to direct the CM@Risk as to the details of accomplishing the work or Deliverable. These results will comply with all applicable laws and ordinances.

6.7 SUBCONSULTANTS

- 6.7.1 Prior to beginning the work or Deliverable, the CM@Risk will furnish the City for approval, the names of all Subconsultants, if any, to be used on this Project. Subsequent changes are subject to the approval of the City.

6.8 TERMINATION

- 6.8.1 The City and the CM@Risk hereby agree to the full performance of the covenants contained herein, except that the City reserves the right, at its discretion and without cause, to terminate or abandon any or all services provided for in this Contract or abandon any portion of the Project for which services have been performed by the CM@Risk.
- 6.8.2 In the event the City abandons any or all of the services or any part of the services as herein provided, the City will so notify the CM@Risk in writing, and the CM@Risk will immediately after receiving such notice is to discontinue advancing the Work specified under this Contract and

mitigate the expenditure, if any, of costs resulting from such abandonment or termination.

- 6.8.3 The CM@Risk, upon such termination or abandonment, will promptly deliver to the City all reports, estimates and other work or Deliverable entirely or partially completed, together with all unused materials supplied by the City.
- 6.8.4 The CM@Risk will appraise the work completed and submit an appraisal to the City for evaluation. The City will have the right to inspect the CM@Risk's work or Deliverable to appraise the work completed.
- 6.8.5 The CM@Risk will receive compensation in full for services satisfactorily performed to the date of such termination and the reasonable costs and expenses attributable to such termination. The fee will be paid in accordance with Article 4 of this Contract and will be an amount mutually agreed upon by the CM@Risk and the City. If there is no mutual agreement, the final determination will be made in accordance with paragraph 6.9, "Disputes". However, in no event will the fee exceed that set forth in Article 4 or as amended in accordance with paragraph 6.3, "Alteration in Character of Work". The City will make the final payment within sixty Days after the CM@Risk has delivered the last of the partially or otherwise completed work items and the final fee has been agreed upon.

6.9 DISPUTES

- 6.9.1 In any unresolved dispute arising out of an interpretation of this Contract or the duties required therein, the final determination at the administrative level will be made by the City Manager or their designee.

6.10 WITHHOLDING PAYMENT

- 6.10.1 The City reserves the right to withhold funds from the City's progress payments up to the amount equal to the claims the City may have against the CM@Risk, until such time that a settlement on those claims has been reached. This Agreement is subject to the provisions of the Texas Prompt Payment Act, Texas Government Code Chapter 2251.

6.11 RECORDS/AUDIT

- 6.11.1 Records of the CM@Risk's direct personnel payroll, reimbursable expenses pertaining to this Project, and records of accounts between the City and CM@Risk will be kept on a generally recognized accounting basis and shall be available for up to three (3) years following final completion of the Project. The City, its authorized representative, and/or the appropriate federal agency, reserve the right to audit the CM@Risk's records to verify the accuracy and appropriateness of all pricing data, including data used to negotiate this Contract and any Change Orders. The City reserves the right to decrease Contract Amount and/or payments made on this Contract if, upon audit of the CM@Risk's records, the audit discloses the CM@Risk has provided false, misleading, or inaccurate cost and pricing data.
- 6.11.2 The CM@Risk will include a provision similar to paragraph 6.11.1 in all of its agreements with Subconsultants, Subcontractors, and Suppliers providing services under this Contract to ensure the City, its authorized representative, and/or the appropriate federal agency, has access to the Subconsultants', Subcontractors', and Suppliers' records to verify the accuracy of cost and pricing data. The City reserves the right to decrease Contract Amount and/or payments made on this Contract if the above provision is not included in Subconsultant, Subcontractor, and Supplier contracts, and one or more of those parties do not allow the City to audit their records to verify the accuracy and appropriateness of pricing data.

6.12 INDEMNIFICATION

6.12.1 **THE CM@RISK AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE CITY OF TOMBALL, ITS OFFICERS, AGENTS AND EMPLOYEES, AND ANY JURISDICTION OR AGENCY ISSUING PERMITS FOR ANY WORK INCLUDED IN THE PROJECT, THEIR OFFICERS, AGENTS AND EMPLOYEES, HEREINAFTER INDIVIDUALLY AND COLLECTIVELY REFERRED TO AS "INDEMNITEE", FROM ALL SUITS AND CLAIMS, INCLUDING ATTORNEY'S FEES AND COST OF LITIGATION, ACTIONS, LOSSES, DAMAGE, EXPENSES, COSTS OR CLAIMS OF ANY CHARACTER OR ANY NATURE ARISING OUT OF THE WORK OR DELIVERABLE DONE IN FULFILLING THE TERMS OF THIS CONTRACT, OR ON ACCOUNT OF ANY ACT, CLAIM OR AMOUNT ARISING OUT OF OR RECOVERED UNDER WORKERS' COMPENSATION LAW, OR ARISING OUT OF THE FAILURE OF THE CM@RISK TO CONFORM TO ANY STATUTES, ORDINANCES, REGULATION, LAW OR COURT DECREE. IT IS AGREED THAT THE CM@RISK WILL BE RESPONSIBLE FOR PRIMARY LOSS INVESTIGATION, DEFENSE, AND JUDGMENT COSTS WHERE THIS CONTRACT OF INDEMNITY APPLIES. IN CONSIDERATION OF THE AWARD OF THIS CONTRACT, THE CM@RISK AGREES TO WAIVE ALL RIGHTS OF SUBROGATION AGAINST THE CITY, ITS OFFICERS, OFFICIALS, AGENTS AND EMPLOYEES FOR LOSSES ARISING FROM THE WORK PERFORMED BY THE CM@RISK FOR THE CITY.**

6.13 NOTICES

6.13.1 Unless otherwise provided, any notice, request, instruction, or other document to be given under this Agreement by any party to any other party shall be in writing and shall be delivered in person or by courier or facsimile transmission or mailed by certified mail, postage prepaid, return receipt requested and shall be deemed given upon (a) confirmation of receipt of a facsimile transmission, (b) confirmed delivery by hand or standard overnight mail, or (c) upon the expiration of three (3) business days after the day mailed by certified mail, as follows:

To City:	City of Tomball Attn: City Manager 401 Market Street Tomball, Texas 77375
To CM@Risk	PLW Waterworks, LLC. Attn: Richard Gomez 1725 Hughes Landing Blvd., Suite 1200 The Woodlands, Texas 77380
Copy to: Design Professional (if applicable)	Freese & Nichols, Inc Attn: Murali Erat 801 Cherry Street, Suite 2800 Fort Worth, Texas 76102

Or to other such place and with such other copies as either Party may designate as to itself by written notice to the other Party. Rejection, any refusal to accept, or the inability to deliver because of changed address of which no notice was given shall be deemed to be receipt of the notice as of the date of such rejection, refusal, or inability to deliver.

6.14 EQUAL OPPORTUNITY/AFFIRMATIVE ACTION

- 6.14.1 The CM@Risk will comply with the provisions of this Contract, pertaining to discrimination and accepting applications or hiring employees. The CM@Risk will not discriminate against any worker, employee or applicant, or any member of the public, because of race, color, religion, gender, national origin, age, or disability nor otherwise commit an unfair employment practice. The CM@Risk will take affirmative action to ensure that applicants are employed, and employees are dealt with during employment, without regard to their race, color, religion, gender or national origin, age or disability. Such action will include but not be limited to the following: employment, promotion, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship as well as all other labor organizations furnishing skilled, unskilled and union labor, or who may perform any such labor or services in connection with this Contract. The CM@Risk further agrees that this clause will be incorporated in all Subcontracts, and Subconsultants and Suppliers contracts associated with the Project and entered into by the CM@Risk.

6.15 COMPLIANCE WITH FEDERAL AND STATE LAWS

- 6.15.1 The CM@Risk understands and acknowledges the applicability of the Americans With Disabilities Act, the Immigration Reform and Control Act of 1986 and the Drug Free Workplace Act of 1989 to it. The CM@Risk agrees to comply with these and all laws in performing this Contract and to permit the City to verify such compliance.
- 6.15.2 CM@Risk hereby certifies that it and its parent company, wholly-owned or majority-owned subsidiaries, and other affiliates comply with and agree to abide by the requirements of Texas Government Code Chapter 2252 (foreign terrorist organizations prohibited), Chapter 2264 (undocumented workers), Chapter 2270 (boycott-Israel), and Chapter 2274, Texas Government Code (boycotts-energy company; discrimination – firearms entity or trade association).

6.16 CONFLICT OF INTEREST

- 6.16.1 To evaluate and avoid potential conflicts of interest, the CM@Risk will provide written notice to the City, as set forth in this section, of any work or services performed by the CM@Risk for third parties that may involve or be associated with any real property or personal property owned or leased by the City. Such notice will be given seven business days prior to commencement of the Project by the CM@Risk for a third party, or seven business days prior to an adverse action as defined below. Written notice and disclosure will be sent to:

City of Tomball
Utility Billing Building
Attn: City Engineer
501 James Street
Tomball, Texas 77375

- 6.16.2 Actions considered to be adverse to the City under this Contract include but are not limited to:
- (a) Using data as defined in the Contract, acquired in connection with this Contract to assist a third party in pursuing administrative or judicial action against the City;
 - (b) Testifying or providing evidence on behalf of any person in connection with an administrative

or judicial action against the City; and

- (c) Using data to produce income for the CM@Risk or its employees independently of performing the services under this Contract, without the prior written consent of the City.

6.16.3 The CM@Risk represents that except for those persons, entities and projects previously identified in writing to the City, the services to be performed by the CM@Risk under this Contract are not expected to create an interest with any person, entity, or third-party project that is or may be adverse to the interests of the City.

6.16.4 The CM@Risk's failure to provide a written notice and disclosure of the information as set forth in this section will constitute a material breach of this Contract.

6.17 CONTRACTOR'S LICENSE

6.17.1 Prior to award of the Contract, the CM@Risk must provide to the City's Project Manager, its Contractor's License Classification and number, if any, and its Federal Tax I.D. number.

6.18 SUCCESSORS AND ASSIGNS

6.18.1 The City and the CM@Risk will each bind itself, and their partners, successors, assigns, and legal representatives to the other party to this Contract and to the partners, successors, assigns, and legal representatives of such other party in respect to all covenants of this Contract. Neither the City nor the CM@Risk will assign, sublet, or transfer its interest in this Contract without the written consent of the other. In no event will any contractual relation be created or be construed to be created as between any third party and the City.

6.19 FORCE MAJEURE

6.19.1 The City of Tomball, the CM@Risk, and any Subcontractors shall not be responsible for performance under this Contract should it be prevented from performance by an act of war, order of legal authority, act of God, or other unavoidable cause not attributable to the fault or negligence of the City of Tomball, the CM@Risk, and any Subcontractors. In the event of an occurrence under this Section, the City of Tomball, the CM@Risk, and any Subcontractors will be excused from any further performance or observance of the requirements so affected for as long as such circumstances prevail and the City of Tomball, the CM@Risk, and any Subcontractors continues to use commercially reasonable efforts to recommence performance or observance whenever and to whatever extent possible without delay. The CM@Risk and any Subcontractors shall immediately notify the City of Tomball Project Manager by telephone (to be confirmed in writing within five (5) calendar days of the inception of such occurrence) and describe at a reasonable level of detail the circumstances causing the non-performance or delay in performance.

6.20 COVENANT AGAINST CONTINGENT FEES

6.20.1 The CM@Risk warrants that no person has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, and that no member of the City Council, or any employee of the City of Tomball has any interest, financially, or otherwise, in the firm. The City of Tomball will in the event of the breach or violation of this warranty, have the right to annul this Contract without liability, or at its discretion to deduct from the Contract Amount or consideration, the full amount of such commission, percentage, brokerage, or contingent fee.

6.21 NON-WAIVER PROVISION

6.21.1 The failure of either party to enforce any of the provisions of this Contract or to require performance

by the other party of any of the provisions hereof will not be construed to be a waiver of such provisions, nor will it affect the validity of this Contract or any part thereof, or the right of either party to thereafter enforce each and every provision.

6.22 JURISDICTION

- 6.22.1 This Contract will be deemed to be made under and will be construed in accordance with and governed by the laws of the State of Texas, without regard to the conflicts or choice of law provisions thereof. An action to enforce any provision of this Contract or to obtain any remedy with respect hereto will be brought and tried in the State District Courts located in Harris County, Texas, and for this purpose, each party hereby expressly and irrevocably consents to the sole and exclusive jurisdiction and venue of such Court.

6.23 SURVIVAL

- 6.23.1 All warranties, representations, and indemnifications by the CM@Risk will survive the completion or termination of this Contract.

6.24 MODIFICATION

- 6.24.1 No supplement, modification, or amendment of any term of this Contract will be deemed binding or effective unless in writing and signed by the parties hereto and in conformation with provisions of this Contract, except as expressly provided herein to the contrary.

6.25 SEVERABILITY

- 6.25.1 If any provision of this Contract or the application thereof to any person or circumstance will be invalid, illegal or unenforceable to any extent, the remainder of this Contract and the application thereof will not be affected and will be enforceable to the fullest extent permitted by law.

6.26 INTEGRATION

- 6.26.1 This Contract contains the full agreement of the parties hereto. Any prior or contemporaneous written or oral agreement between the parties regarding the subject matter hereof is merged and superseded hereby.

6.27 TIME IS OF THE ESSENCE

- 6.27.1 Time of each of the terms, covenants, and conditions of this Contract is hereby expressly made of the essence.

6.28 NO THIRD PARTY BENEFICIARY

- 6.28.1 This Contract will not be construed to give any rights or benefits in the Contract to anyone other than the City and the CM@Risk. All duties and responsibilities undertaken pursuant to this Contract will be for the sole and exclusive benefit of the City and the CM@Risk and not for the benefit of any other party.

6.29 COOPERATION AND FURTHER DOCUMENTATION

- 6.29.1 The CM@Risk agrees to provide the City such other duly executed documents as may be reasonably requested by the City to implement the intent of this Contract.

6.30 CONFLICT IN LANGUAGE

- 6.30.1 All work or Deliverables performed will conform to all applicable City of Tomball codes, ordinances

and requirements as outlined in this Contract. If there is a conflict in interpretation between provisions in this Contract and any Exhibits, the provisions in this Contract will prevail.

6.31 CITY'S RIGHT OF CANCELLATION

- 6.31.1 All parties hereto acknowledge that this Contract is subject to cancellation by the City of Tomball pursuant to the provisions of Texas Local Government Code Chapter 272 and Texas Government Code Chapter 2269.

6.32 CONFIDENTIALITY OF PLANS & SPECIFICATIONS

- 6.32.1 Any plans or specifications received by the CM@Risk regarding this project are for official use only. The CM@Risk may not share them with others except as required to fulfill contract obligations with the City of Tomball.
- 6.32.2 Any plans the CM@Risk generates must include the following statement in the Title Block on every page: "These plans are for Official use only and may not be shared with others except as required to fulfill the obligations of CM@Risk's contract with the City of Tomball. This document must be kept secure at all times."

ARTICLE 7 – INSURANCE REQUIREMENTS

The CM@Risk. Subcontractors and Subconsultants shall procure and maintain until all of their obligations have been discharged, including any warranty periods under this Contract are satisfied, insurance against claims for injury to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the CM@Risk, its agents, representatives, employees, or Subconsultants.

The insurance requirements herein are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract.

The City in no way warrants that the minimum limits contained herein are sufficient to protect the CM@Risk from liabilities that might arise out of the performance of the work under this Contract by the CM@Risk, his agents, representative, employees, or Subconsultants. CM@Risk is free to purchase such additional insurance as may be determined necessary.

7.1 MINIMUM SCOPE AND LIMITS OF INSURANCE

- 7.1.1 CM@Risk will provide coverage at least as broad and with limits of liability not less than those stated below.

7.1.1.1 Commercial General Liability-Occurrence Form

Policy shall include bodily injury, property damage, broad form contractual liability and XCU coverage.

General Aggregate	\$2,000,000
Products-Completed Operations Aggregate	\$1,000,000
Personal & Advertising Injury	\$1,000,000
Each Occurrence	\$1,000,000

- (a) The policy shall be endorsed to include the following additional insured language: "The City of Tomball shall be named as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the CM@Risk". Policy shall contain waiver of

subrogation against the City of Tomball.

7.1.1.2 Automobile Liability

Bodily injury and property damage for any owned, hired, and non-owned vehicles used in the performance of this Contract.

Combined Single Limit (CSL)	\$1,000,000
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- (a) The policy shall be endorsed to include the following additional insured language: "The City of Tomball shall be named as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the CM@Risk", including automobiles owned, leased or hired or borrowed by the CM@Risk".

7.1.1.3 Workers Compensation and Employers Liability

Workers Compensation	Statutory
Employers Liability	

Each Accident	\$ 100,000
Disease – Each Employee	\$ 100,000
Disease – Policy Limit	\$ 500,000

- (a) Policy shall contain waiver of subrogation against the City of Tomball.

7.2 ADDITIONAL INSURANCE REQUIREMENTS

7.2.1 The policies shall include, or be endorsed to include the following provisions:

7.2.2 On insurance policies where the City of Tomball is named as additional insured, the City of Tomball shall be an additional insured to the full limits of liability purchased by the CM@Risk even if those limits of liability are in excess of those required by this Contract.

7.2.3 The CM@Risk's insurance coverage shall be primary insurance and non-contributory with respect to all other available sources.

7.2.4 Coverage provided by the CM@Risk shall not be limited to the liability assumed under the indemnification provisions of this Contract.

7.3 SUBCONSULTANT INSURANCE

7.3.1 CM@Risk's certificate(s) shall include all subcontractors as additional insureds under its policies or subconsultants shall maintain separate insurance as determined by the CM@Risk, however, subconsultants limits of liability shall not be less than \$1,000,000 per occurrence / \$2,000,000 aggregate.

7.4 NOTICE OF CANCELLATION

7.4.1 Each insurance policy required by the insurance provisions of this Contract will provide the required coverage and not be suspended, voided, canceled, reduced in coverage or endorsed to lower limits except after thirty (30) days prior written notice has been given to the City. Such notice shall be sent by certified mail, return receipt requested and sent directly to the City's Purchasing Manager at:

City of Tomball
Utility Billing Building
Attn: City Engineer

501 James Street
Tomball, Texas 77375

7.5 ACCEPTABILITY OF INSURERS

- 7.5.1 Insurance is to be placed with insurers duly licensed or approved unlicensed companies in the State of Texas, and with an "A.M. Best" rating of not less than A-. The City in no way warrants that the above required minimum insurer rating is sufficient to protect the CM@Risk from potential insurer insolvency.

7.6 VERIFICATION OF COVERAGE

- 7.6.1 The CM@Risk will furnish the City, Certificates of Insurance (ACORD form or equivalent approved by the City) as required by this Contract. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.
- 7.6.2 All certificates and endorsements are to be received and approved by the City before work commences. Each insurance policy required by this Contract must be in effect at or prior to the earlier of commencement of work under this Contract and remain in effect for the duration of the Project. Failure to maintain the insurance policies as required by this Contract or to provide evidence of renewal is a material breach of contract.
- 7.6.3 All certificates required by this Contract will be sent directly to the Engineering and Architectural Services Department Contracts Administration Section contracts officer for this Project. The City project/contract number and project description shall be noted on the certificates of insurance. The City reserves the right to require complete, certified copies of all insurance policies required by this Contract, at any time. DO NOT SEND CERTIFICATES OF INSURANCE TO THE CITY'S RISK MANAGEMENT DIVISION.

7.7 APPROVAL

- 7.7.1 Any modification or variation from the insurance requirements in this Contract must be approved by the City Manager and City Attorney, whose decision will be final. Such action will not require a formal contract amendment but may be made by administrative action.

This Contract will be in full force and effect only when it has been approved and executed by the duly authorized City officials.

IN WITNESS WHEREOF, the parties hereto have executed this Contract on_____.

CITY OF TOMBALL, TEXAS

BY:

Printed Name

Title

ATTEST:

City Secretary

CM@Risk

BY: *Emilio Lopez Pacetti*

Emilio Lopez Pacetti

Printed Name

President

Title

APPROVED AS TO FORM:

City Attorney

EXHIBIT A – PROJECT DESCRIPTION

Following is a brief description of the Project for which the design phase service services specified in this Contract are to be performed:

The project includes expanding the South Wastewater Treatment Plant (WWTP) from 1.5 million gallons per day (MGD) to 3.0 MGD. The expansion includes the following components:

- Conversion of the existing influent lift station into a coarse screen structure, including a new dumpster building.
- New influent lift station.
- Headworks improvements: addition of a second fine screen, replacement of grit removal system, new dumpster building.
- New aeration basins and blower building.
- New clarifiers and Return Activated Sludge (RAS) pump station.
- Replacement of existing RAS pump station (for existing clarifiers).
- Waste Activated Sludge (WAS) pump station.
- New filters.
- New Ultraviolet (UV) disinfection system.
- New sludge rotary drum thickeners.
- New aerobic digester blowers.
- Replacement of existing digested sludge feed pumps.
- Replacement of centrifuge in the existing dewatering building.
- Addition of two new non-potable water pumps.
- New vacuum truck receiving station.
- New natural gas generators.
- Expansion of administration building.
- Two new electrical buildings.
- Electrical and instrumentation improvements associated with the above items.

The estimated construction budget is \$56 million.

EXHIBIT B - HOURLY RATE SCHEDULE

The schedule of hourly labor rates for employees of the CM@Risk and its Subconsultants follow and are based on the approved proposal submitted to the City on -----DATE-----, 2023.

LIST OF CLASSIFICATIONS:

<u>Classification</u>	<u>Direct Labor Rate</u>	<u>Total Labor Rate</u>
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EXHIBIT C - SUBMITTAL REQUIREMENTS FOR THE GMP

GMP submittal, one copy for review.

One printed, signed original copy and a digital copy in searchable PDF format will be requested by the City of Tomball prior to contract execution.

Table of Contents:

1. Scope of Work
 2. Summary of the GMP
 3. List of clarification and assumptions
 4. Project Schedule
 5. Schedule of Values – summary spreadsheet and backup documents
 6. Supporting Documentation (Subcontractors, equipment suppliers, vendors, etc.)
 7. List of Plans and Specifications used for GMP Proposal
1. Scope of work will consist of a brief description of the work to be performed by CM@Risk and major points that the CM@Risk and the City must be aware of pertaining to the scope. (normally one paragraph is sufficient.)
 2. A summary of the GMP with a total for each of the components of the GMP as listed in its definition in Article 1 as shown in the table below:

The general conditions fee includes bond and insurance cost. All costs should be listed individually for future use.

PROJECT #:
PROJECT NAME:

DATE:

GMP Summary			AMOUNT
A.	Cost of the Work (Labor, Materials, Equipment, Warranty)		\$
B.	CM@Risk's Contingency		\$
INDIRECT COSTS		RATE	
C.	Construction Fee	%	\$
D.	General Conditions	%	\$
	D1 Payment and Performance Bond	\$	%
	D2 Insurance	\$	%
E.	Sales Taxes	%	\$
F. TOTAL GMP			\$
G. Owner's Contingency			\$
H. Contract Amount			\$

Formulas: Total GMP: A+B+C+D+E = F

Rates (Percentages) are calculated by dividing each amount by F, such as B/F, D/F, and D1/F
(Do not acquire bond or insurance until notified by the City's Project Manager.)

3. Schedule of Values - spread sheet with the estimated bid or cost organized by subcontract categories, allowances, bid contingency, general conditions costs, taxes, bonds, insurances, and the CM@Risk's construction phase fee. The supporting document for the spreadsheet must be provided in an organized manner that correlates with the schedule of values. The backup information shall consist of the request for bids, bids received, and clarification assumptions used for the particular bid item listed on the schedule of values, if applicable.
4. A list of the Plans and Specifications with latest issuance date including all addenda used in

PROJECT NO.____, CONTRACT NO.____.

Construction Manager at Risk for South Wastewater Treatment Plant Expansion Project

preparation of the GMP proposal. The plans used for the GMP must be date stamped and signed by CM@Risk, Design Consultant, and City's Project Manager using the format below.

Plans Used For Preparation of GMP No.	
CM@Risk	Date
Design Consultant	Date
Project Manager	Date

5. A list of the clarifications and assumptions made by the CM@Risk in the preparation of the GMP proposal, to supplement the information contained in the documents.
6. A Critical Path Method (CPM) diagram construction schedule.

NOTE: The submittal package must be kept as simple as possible all on 8 ½ x 11 sheets. Color or shading must be kept to a minimum. If used, make sure the color or shading will not affect the reproduction of the submittal in black and white.

Final GMP submittal will consist of the following:

1. One printed copy of the GMP and one digital copy in searchable PDF format.
2. One copy of the plans and technical specifications used to arrive at the GMP (signed by Design Professional, CM@Risk and City's Project Manager).

For questions regarding the submittal requirements, please contact City of Tomball Project Manager.



City Council Meeting

Agenda Item

Data Sheet

Meeting Date: December 18, 2023

Topic:

Resolution No. 2023-56, a Resolution of the City Council of the City of Tomball, Texas, calling for a public hearing on January 15, 2024, for the creation of Tomball Public Improvement District No. 15 (Graylou Grove) and being located within the City of Tomball.

Background:

Resolution No. 2023-56 pertains to Tomball Public Improvement District No. 15, also known as Graylou Grove, which encompasses approximately 43.149 acres located on the east side of Hufsmith-Kohrville Road, at the intersection of Medical Complex Drive. The resolution will accept the PID petition received from FLS Development, LLC, and calls for a public hearing on DATE to consider the creation of a PID.

On September 19, 2022 City Council approved an amendment to the Administrative Policy for Public Improvement Districts (PIDs). The PID Policy amendment specified that the maximum term and assessment for a debt PID as \$0.48 per \$100 assessed value for 30 years and \$0.96 per \$100 assessed value for 15 years. Additionally, the development provides amenities but none than provide a unique or special benefit to the City of Tomball compared to amenities that have been included in both non-PID developments and PID developments.

The submitted petition requests the creation of a bond PID. Staff is recommending denial of the petition for the following reasons based on the adopted PID policy:

- Maximum term and assessment for debt PID.
 - The development is requesting a 30-year debt PID at a \$0.95 per \$100 assessed value.
- Minimum acreage of 50-acres for a debt PID.
 - The PID petition states acreage for requested PID is 43.149 acres.
- Non-adherence to adopted Master Plans and development ordinances.
 - Section II – E of the adopted PID policy requires that requested PID’s increase or enhance the City’s transportation and roadway plans. The preliminary concept plan submitted with the PID application, does not show the road being constructed to and through the residential portion of the development as previously discussed with City Council and staff.
 - Code of Ordinances, Section 38-125 (When Construction is Permitted):
“...must construct street or drainage facilities in such a manner that they will benefit other property owners, may at their cost and expense construct such street and drainage facilities in accordance with the master plan of the city and in accordance with such conditions as may be prescribed by the ordinances of the city or the city council.”
 - Code of Ordinances, Section 40-64 (Public Streets; General Arrangement and Layout): *“Provide adequate street connections to adjacent properties to ensure adequate traffic circulation within the general area.”*

- Section X-A of the adopted PID policy requires that plans for proposed development shall be prepared and reviewed by the City in compliance with the City's development ordinances regarding land use, development, infrastructure design, permitting, and inspections.
 - Based on the Code of Ordinances, Section 40-65 (Streets, specific standards), (f) (Dead-end Streets): *"Dead-end streets shall not be approved except in those instances where the street is terminated by a temporary circular cul-de-sac turnaround or where the street is designated to be extended into adjacent property..."*, the development is not proposing a connection to the neighboring development thus creating a dead-end in the adjacent development.

Staff has provided a copy of the PID policy to the developer and discussed the policy requirements with them. Since the proposed PID application and development does not meet requirements as defined in the adopted PID policy.

The PID policy does maintain that Council has the flexibility to consider unique and desirable elements, and grants Council the final authority for PID creation if the proposed development does not meet the minimum requirements.

Origination: Project Management

Recommendation:

Staff recommends denial of the PID Petition received from FLS Development, LLC for Public Improvement District No. 15, Graylou Grove, with no further action required.

Party(ies) responsible for placing this item on agenda: Meagan Mageo, Project Manager

FUNDING (IF APPLICABLE)

Are funds specifically designated in the current budget for the full amount required for this purpose?

Yes: _____ No: _____ If yes, specify Account Number: # _____

If no, funds will be transferred from account # _____ To account # _____

Signed	Meagan Mageo			Approved by			
	Staff Member		Date		City Manager		Date

RESOLUTION NO. 2023-56

**A RESOLUTION OF THE CITY OF TOMBALL, TEXAS, STATING
THAT THE CITY COUNCIL CALLING FOR A PUBLIC HEARING
ON THE CREATION OF A PUBLIC IMPROVEMENT DISTRICT
AND BEING LOCATED WITHIN THE CITY OF TOMBALL; AND
PROVIDING AN EFFECTIVE DATE.**

* * * * *

WHEREAS, the City Council (the “City Council”) of the City of Tomball, Texas (the “City”) has received a petition (the “Petition”) requesting creation of a public improvement district (the “PID”) under Chapter 372 of the Texas Local Government Code (the “Act”), from the record owners of taxable real property representing more than fifty percent (“50%”) of the appraised value of the real property liable for assessment (as determined by the most recent certified appraisal roll for Harris County) in the proposed PID and the record owners of taxable real property that constitute more than 50% of all of the area of all taxable real property that is liable for assessment in the proposed PID; and

WHEREAS, the Petition, a copy of which is attached hereto as Exhibit 1, has been examined, verified, and found to meet the requirements of Sections 372.005(a) and 372.005(b) of the Act and to be sufficient for consideration by the City Council; and

WHEREAS, the boundaries of the proposed PID are described in the Exhibit A to the Petition, said area for the PID being partially within the extraterritorial jurisdiction of the City and partially within the corporate limits of the City; and

WHEREAS, the City Council accepts the Petition and desires to schedule a public hearing to consider the creation of the PID to finance the following public improvements (collectively, the “Authorized Improvements”): (i) design, construction and other allowed costs related to street and roadway improvements, including related sidewalks, drainage, utility relocation, signalization, landscaping, lighting, signage, off-street parking, and right-of-way; (ii) design construction and other allowed costs related to improvement of parks and open space, together with any ancillary structures, features or amenities such as trails, playgrounds, walkways, lighting, and any similar items located therein; (iii) design, construction, and other allowed costs related to sidewalks and landscaping and hardscaping, fountains, lighting and signage; (iv) design, construction, and other allowed costs related to gas, water, wastewater, and drainage (including detention) improvements and facilities; (v) design, construction, and other allowed costs related to projects similar to those listed in subsections (i) – (iv) above authorized by the Act, including similar off-site projects that provide a benefit to the property within the District; (vi) special supplemental services for improvement and promotion of the district; (vii) payment of costs associated with operating and maintaining the public improvements listed in subparagraphs (i) – (v) above; and (viii) payment of costs associated with developing and financing the public improvements listed in subparagraphs (i) – (v) above, and costs of establishing, administering and operating the district. These Authorized Improvements shall promote the interests of the City and confer a special benefit upon the Property.

NOW, THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF TOMBALL, TEXAS:

Section 1. That a public hearing is hereby scheduled at 6:00 P.M. on January 15, 2024, in the City Council Chamber at Tomball City Hall, 401 Market Street, Tomball, Texas 77375 to receive public comment on the creation of the PID in the area described in Exhibit A to the Petition, pursuant to the Act; and

Section 2. That notice of said hearing, in the substantially final form set forth in Exhibit 2 attached hereto, with such changes as may be approved by the City's counsel, shall be published in a newspaper of general circulation in the City and in a newspaper of general circulation in the City before the 15th day prior to the hearing as required by the Act; and

Section 3. That written notice, in the substantially final form set forth in Exhibit 2 attached hereto with such changes as may be approved by the City's counsel, shall be mailed to each property owner, as reflected on the tax rolls, of property subject to assessment within the PID, before the 15th day prior to the date set for the hearing; and

Section 4. That all of the above recitals are hereby found to be true and correct factual determinations of the City and are hereby approved and incorporated by reference as though fully set forth herein; and

Section 5. That if any portion of this Resolution shall, for any reason, be declared invalid by any court of competent jurisdiction, such invalidity shall not affect the remaining provisions hereof and the City Council hereby determines that it would have adopted this Resolution without the invalid provision; and

Section 6. That this Resolution shall be in full force and effect from and after its passage, and it is accordingly resolved.

PASSED, APPROVED, AND RESOLVED this _____ day of _____ 2023.

Lori Klein Quinn, Mayor

ATTEST:

Tracylynn Garcia, City Secretary



FLS Development

Public Improvement District Creation Request Letter

November 14, 2023

City of Tomball
Special Financing Districts
501 James Street
Tomball, TX 77357

To Whom It May Concern:

FLS Development LLC, as applicant, requests the City of Tomball consider its application, attached as Exhibit A, for the creation of the Graylou Grove Public Improvement District. Petition is attached as Exhibit B. The below information and attached documentation are being provided in support of this application.

As outlined in the PD application, attached as Exhibit C, the Graylou Grove Estates development seeks to lift the quality and experience of residential life in Tomball. Residents will have access to larger lot sizes, a varied architectural canvas, and popular amenities, including but not limited to parks and trails, a large fishing dock, and pickle ball court, all of which will generate attainable but elevated home prices. This will support the City's goal of establishing superior developments and create an economic benefit by providing higher per acre tax revenue to the city. A detailed overview of the enhanced architectural standards, landscaping, amenities, and design of lots or buildings is provided in Exhibit C.

Located between two neighborhoods, Country Club Greens and Willow Creek Estates, Graylou Grove, will allow improvements in the public right of way including a dedicated right-of-way which will also provide public access to parks and trails created within the PID boundary. This will support Tomball's future thoroughfare vision by dedicating right-of-way through the property and paving a majority of Medical Complex Drive for future connection to Mahaffey.

The FLS partners represent 75+ years of experience in real estate acquisition and development and over 100 years of construction experience in both commercial and residential markets. While primarily focused on the Houston, and more specifically the North Houston market, our partners have years of experience in both development and construction in national markets including DFW, Atlanta, Phoenix and North Carolina.

With strong and long-standing relationships with financial institutions, primarily through construction financing agreements, FLS and its partners have access to funding from well-established banks.

November 14, 2023

Page 2

Our team is excited to continue building in the City of Tomball and appreciate your assisted efforts serving our fellow locals.

Sincerest Regards,

Kyle Friedman
Development Coordinator

Enclosures:

- Exhibit A: PID Petition
- Exhibit B: City of Tomball PID Application
- Exhibit C: Graylou Grove Planned Development Application
- Exhibit D: Project Expenses
- Exhibit E: Financial Study relating to PID creation
- Exhibit F: Draft Development Agreement

**PETITION FOR THE CREATION OF A PUBLIC IMPROVEMENT DISTRICT
WITHIN THE CITY OF TOMBALL, TEXAS**

This petition (“Petition”) is submitted and filed with the City Secretary of the City of Tomball, Texas (“City”), by FLS Development, LLC., a Texas Limited Liability Corporation (the “Petitioner”), the owner of the approximately 43.149 acres described in Exhibit “A” (“Property”) located within the proposed boundaries of the District, as hereinafter defined. Acting pursuant to the provisions of Chapter 372, Texas Local Government Code, as amended (the “Act”), the Petitioner requests that the City create a public improvement district (the “District”), encompassing the Property. The Property is located in part within the extraterritorial jurisdiction (“ETJ”) of the City, and in part within the corporate limits of the City. The remainder is not within the corporate limits or extraterritorial jurisdiction of any other city, town, or village. In support of this Petition, the Petitioner would present the following:

Section 1. General Nature of the Authorized Improvements. The general nature of the proposed public improvements (collectively, the “Authorized Improvements”) may include: (i) design, construction and other allowed costs related to street and roadway improvements, including related sidewalks, drainage, utility relocation, signalization, landscaping, lighting, signage, off-street parking, and right-of-way; (ii) design, construction and other allowed costs related to improvement of parks and open space, together with any ancillary structures, features, or amenities such as trails, playgrounds, walkways, lighting, and any similar items located therein; (iii) design, construction, and other allowed costs related to sidewalks and landscaping and hardscaping, fountains, lighting, and signage; (iv) design, construction, and other allowed costs related to gas, water, wastewater, and drainage (including detention) improvements and facilities; (v) design, construction, and other allowed costs related to projects similar to those listed in subsections (i) - (iv) above authorized by the Act, including similar off-site projects that provide a benefit to the property within the District; (vi) special supplemental services for improvement and promotion of the district; (vii) payment of costs associated with operating and maintaining the public improvements listed in subparagraphs (i) - (v) above; and (viii) payment of costs associated with developing and financing the public improvements listed in subparagraphs (i) - (v) above, and costs of establishing, administering, and

operating the District. These Authorized Improvements shall promote the interests of the City and confer a special benefit upon the Property.

Section 2. Estimated Cost of the Authorized Improvements. The estimated cost to design, acquire, and construct the Authorized Improvements, together with bond issuance costs, eligible legal and financial fees, eligible credit enhancement costs, and eligible costs incurred in the establishment administration and operation of the District, is \$8,000,000.00. The City will pay none of the costs of the proposed improvements from funds other than such assessments. The remaining costs of the proposed improvements will be paid from sources other than the City or assessments of property owners.

Section 3. Boundaries of the Proposed District. The District is proposed to include the Property.

Section 4. Proposed Method of Assessment. The City shall levy assessments on each parcel within the District in a manner that results in imposing equal shares of the costs on property similarly benefited. All assessments may be paid in full at any time (including interest and principal), and certain assessments may be paid in annual installments (including interest and principal). If an assessment is allowed to be paid in installments, then the installments must be paid in amounts necessary to meet annual costs for those Authorized Improvements financed by the assessment, and must continue for a period necessary to retire the indebtedness of those Authorized Improvements (including interest).

Section 5. Proposed Apportionment of Costs between the District and the City. The City will not be obligated to provide any funds to finance the Authorized Improvements, other than from assessments levied on the District and possible tax increment reinvestment zone revenue. The Petitioner may also pay certain costs of the improvements from other funds available to the Petitioner.

Section 6. Management of the District. The Petitioner proposes that the District be managed by the City, with the assistance of a consultant, who shall, from time to time, advise the City regarding certain operations of the District.

Section 7. The Petitioner Requests Establishment of the District. The person(s) signing this Petition request(s) the establishment of the District, is duly authorized, and has the corporate authority to execute and deliver the Petition.

Section 8. Advisory Board. The Petitioner proposes that the District be established and managed without the creation of an advisory board. If an advisory board is created, the Petitioner requests that a representative of the Petitioner be appointed to the advisory board.

Section 9. Landowner(s). This Petition has been signed by (1) the owners of taxable real property representing more than 50 percent of the appraised value of taxable real property liable for assessment under the proposal, as determined by the current roll of the appraisal district in which the property is located; and (2) record owners of real property liable for assessment under the proposal who: (A) constitute more than 50 percent of all record owners of property that is liable for assessment under the proposal; or (B) own taxable real property that constitutes more than 50 percent of the area of all taxable real property that is liable for assessment under the proposal.

This Petition is hereby filed with the City Secretary of the City, or other officer performing the functions of the municipal secretary, in support of the creation of the District by the City Council of the City as herein provided. The undersigned request that the City Council of the City call a public hearing on the advisability of the Authorized Improvements, give notice thereof as provided by law and grant all matters requested in this Petition and grant such other relief, in law or in equity, to which Petitioner may show itself to be entitled.

RESPECTFULLY SUBMITTED, on this the 15th day of November 2023.

PETITIONER

FLS Development, LLC

By: [Signature]
Name: Shawn Speer
Title: Manager

By: [Signature]
Name: Shona Speer
Title: Manager

STATE OF TEXAS

COUNTY OF Harris

§
§
§

This instrument was acknowledged before me on November 15, 2023, by Shawn Speer, Shonna Speer of FLS Development, LLC, a Texas Limited Liability Company, on behalf of said company.



[Signature]
Notary Public, State of Texas

EXHIBIT A

Metes and Bounds Description

PROPERTY DESCRIPTION

43.149 acres of land situated in the Jesse Pruitt Survey, Abstract Number 629, Harris County, Texas, being that certain called 31.994 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2023-170674, a portion of that certain called 17.307 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2023-171232, a portion of that certain Reserve "A" and Lot 1 of Brandt Holdings, a subdivision as shown on map or plat recorded under Film Code Number 679589 of the Map Records of Harris County, Texas, a portion of those certain Lots 489, 490, 495, 496, 497 and 498 of Tomball Townsite, a subdivision as shown on map or plat recorded under Volume 2, Page 65 of the Map Records of Harris County, Texas and those certain Lots 491, 492, 493 and 494 of said Tomball Townsite, said 43.149 acres of land being more particularly described by metes and bounds as follows:

BEGINNING at a 5/8 inch iron rod with cap found in the Southerly line of that certain Restricted Reserve "J" of The Estates at Willow Creek, a subdivision as shown on map or plat recorded under Film Code Number 540246 of the Map Records of Harris County, Texas, for the Northeasterly corner of that certain called 2.3291 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2016-558665 and the most Northerly Northwest corner of said 17.307 acre tract;

Thence, N 87°49'35" E, along the Southerly line of said Restricted Reserve "J" of The Estates at Willow Creek, the Southerly line of that certain called 11.98 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number U517222 and the Southerly line of that certain Restricted Reserve "A" of Willow Creek Pet Ranch of Tomball, a subdivision as shown on map or plat recorded under Film Code Number 683259 of the Map Records of Harris County, Texas, a distance of 2,003.38 feet to the Northwesterly corner of that certain called 0.5045 of one acre of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number V343704;

Thence, S 03°07'21" E, along the Westerly line of said 0.5045 acre tract, a distance of 232.39 feet to a 1/2 inch iron rod found in the Northwesterly line of that certain Block 2 of Country Club Greens Section Two Replat, a subdivision as shown on map or plat recorded under Film Code Number 548068 of the Map Records of Harris County, Texas, for the Southwesterly corner of said 0.5045 acre tract;

Thence, S 42°56'22" W, along the Northwesterly line of said Block 2 of Country Club Greens Section Two-Replat, the Northwesterly line of that certain Block 1 of said Country Club Greens Section Two-Replat, the Northwesterly line of that certain Block 2 of Country Club Greens Partial Replat-Phase Two, a subdivision as shown on map or plat recorded under Film Code Number 540231 of the Map Records of Harris County, Texas and the Northwesterly line of that certain Block 2 of Country Club Greens Partial Replat, a subdivision as shown on map or plat recorded under Film Code Number 519225 of the Map Records of Harris County, Texas, a distance of 1,846.30 feet to a 5/8 inch iron rod found for the Southeasterly corner of that certain called 5.3977 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number P792577 and the most Southerly corner of said 31.994 acre tract;

Thence, N 13°37'50" W, along the Easterly line of said 5.3977 acre tract and the Easterly line of that certain called 5.5000 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number P964270, a distance of 558.86 feet to a 5/8 inch iron rod found for the Northeasterly corner of said 5.5000 acre tract and the Southeasterly corner of said 17.307 acre tract;

Thence, S 56°48'54" W, along the Northerly line of said 5.5000 acre tract and the Northerly line of that certain called 1.000 acre of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number X517792, a distance of 423.87 feet to a 5/8 inch iron rod with cap found for the Southeasterly corner of that certain Lot 1 of Huffsmith Kohrville Food Court, a subdivision as shown on map or plat recorded under Film Code Number 701507 of the Map Records of Harris County, Texas;

Thence, N 11°23'19" W, along the Easterly line of said Lot 1 of Huffsmith Kohrville Food Court, a distance of 290.49 feet to a 5/8 inch iron rod with cap found for the Northeasterly corner of said Lot 1 of Huffsmith Kohrville Food Court and an interior corner of said 17.307 acre tract;

Thence, N 14°21'35" W, severing said 17.307 acre tract, a distance of 261.11 feet to a point for corner;

Thence, S 60°51'41" W, a distance of 38.37 feet to an angle point;

Thence, S 65°38'25" W, a distance of 46.09 feet to a point of curvature to the right;

Thence, in a Southwesterly direction, with said curve to the right, having a central angle of 04°19'22", a radius of 1200.00 feet, an arc length of 90.53 feet, a chord bearing of S 67°48'06" W and a chord distance of 90.51 feet to a point of tangency;

Thence, S 69°57'46" W, a distance of 219.80 feet to a point for corner;

Thence, S 24°51'39" W, a distance of 28.07 feet to the proposed Northeasterly right-of-way line of Huffsmith Kohrville Road;

Thence, N 20°18'43" W, along the proposed Northeasterly right-of-way line of Huffsmith Kohrville Road, a distance of 139.94 feet to a point for corner;

Thence, S 65°08'21" E, a distance of 28.42 feet to a point for corner;

Thence, N 69°57'46" E, a distance of 220.16 feet to a point of curvature to the left;

Thence, in a Northeasterly direction, with said curve to the left, having a central angle of 04°19'22", a radius of 1100.00 feet, an arc length of 82.99 feet, a chord bearing of N 67°48'06" E and a chord distance of 82.97 feet to a point of tangency;

Thence, N 65°38'25" E, a distance of 46.09 feet to an angle point;

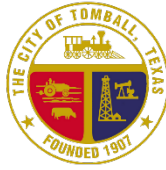
Thence, N 70°25'08" E, a distance of 54.69 feet to a point for corner;

Thence, N 14°21'35" W, a distance of 293.28 feet to a point for corner;

Thence, N 70°47'20" W, a distance of 43.49 feet to a 5/8 inch iron rod with cap found for the Southeasterly corner of said 2.3291 acre tract and an interior corner of said 17.307 acre tract;

Thence, N 02°23'19" W, along the Easterly line of said 2.3291 acre tract, a distance of 269.92 feet to the POINT OF BEGINNING and containing 43.149 acres of land.

BEARING ORIENTATION BASED ON TEXAS STATE PLANE COORDINATE GRID SYSTEM OF 1983, DERIVED FROM CORS SITE RODS.



**City of Tomball
Public Improvement District (PID) Application**

APPLICANT INFORMATION

Name: FLS Development, LLC Title: Developer

Mailing Address: 17119 Lakeway Park Drive, Tomball, Texas 77375

Phone: (832) 515-1858 Email: kyle@flsdevelopers.com

Please attach additional applicant information as necessary.

OWNER INFORMATION

Name: Shawn Speer and Shonna Speer Title: Developer Partner

Mailing Address: 17119 Lakeway Park Drive, Tomball, Texas 77375

Phone: (713) 285-9367 Email: Shawn@harrisburgtx.com

PROJECT INFORMATION

Description of Proposed Project: Mixed use commercial/residential development along
Hufsmith Kohrville Rd.

Physical Location of Property: 22110 Hufsmith Kohrville Rd (Portion of)

HCAD Identification No.: Pending Acreage: 50.1051

Current Use of Property: Undeveloped agricultural

Proposed Use of Property: Mixed use residential/commercial

PID CONSIDERATIONS

Please intimal which consideration from the “Development Policy for Special Financing Districts” the PID request adheres to and provide detailed reasoning as to how.

KF	1. Generates economic and superior development benefits to the City beyond what normal development would generate.
KF	2. Provide for improvements in the public right of way (e.g. entryways, landscaping, fountains, specialty lighting, art, decorative and landscaped streets and sidewalks, bike lanes, multi-use trails, signage, etc.)
	3. Meet community needs (e.g. enhanced drainage improvements, parks and off-street public parking facilities, pedestrian connectivity, water and wastewater on or off-site improvements) including without limitation development’s pro-rate share of the regional facilities and services.
KF	4. Implement City of Tomball master plans, including water, wastewater, parks, and trails.
KF	5. Increase or enhance the City’s transportation and roadway plans.
	6. Exceed development requirements in the City, including but not limited to enhanced architectural standards, enhanced landscaping, enhanced amenities, and provide for the superior design of lots or buildings.
KF	7. Preserve and protect natural amenities and environmental assets such as lakes, trees, creeks, ponds, floodplains, slopes, hills, and wildlife habitats.
	8. Willing to annex into the City of Tomball, if applicable, in exchange for the creation of a PID.
KF	9. Provide a unique or special development to the Tomball community (e.g. amenity centers, play areas, pools, picnic facilities, multi-purpose trails.)
KF	10. Have the support of 100% of the owners of the property within the PID.

1. The elevated single family home prices within the lot coverage and land-use area provide higher tax revenue per acre than what can typically be found throughout Tomball.

2. Public ROW is being dedicated to-and-through the property with public access to parks and trails created within the PID boundary.

3. NA

4. Parks and trails as defined in the PD documents.

5. Public ROW is being dedicated to-and-through the property to connect future major thoroughfares.

6. Elevated development requirements are defined in the PD documents.

7. NA

8. This property will be annexed into the City of Tomball in exchange for the creation of a PID.

9. The PD documents describe a unique and special development to the Tomball Community.

10. All owners are in agreement and support the creation of a PID for the property.

<u>Exhibit A</u>	Completed PID petition
<u>Delivered 11/14</u>	Non-refundable payment of PID Application Review Fee
<u>Cover Letter</u>	Letter from Developer/Applicant requesting consideration of PID
<u>Exhibit C</u>	General summary and description of proposed development
<u>Exhibit C</u>	Site plan or general plan that shows land use and thoroughfare connections
<u>Exhibit C</u>	Demonstration of how the development is in compliance with the City's Comprehensive Plan and Future Land Use Plan
<u>Exhibit C</u>	Demonstration of how the proposed development is in compliance with the zoning of the property
<u>Exhibit C</u>	Description of any amenities for the proposed development
<u>Exhibit C</u>	Description of any elevated design and landscaping standards for the proposed development
<u>Cover Letter</u>	Summary of special benefits to be received by the development
<u>Cover Letter</u> <u>Exhibit D</u> <u>Exhibit E</u>	Evidence the developer has the expertise, experience, necessary capital, and financial backing to complete the new development to be supported by the District financing
<u>Exhibit D</u>	Identify all project expenses and costs, including acquisition, construction, and any applicable long-term management cost
<u>Exhibit D & E</u>	Description and preliminary estimate of public infrastructure included with development (include both developer-funded and proposed PID-funded elements)
<u>Exhibit F</u>	Propose total assessment and tax rate equivalent
<u>Exhibit F</u>	Description of any property that will be subject to or exempt from assessments
<u>N/A</u>	Any additional information which you believe would be necessary for the City to evaluate the proposed project.

ACKNOWLEDGEMENT

I, Kyle Friedman, certify that the information on this form and included in the attached City of Tomball PID Application is true and correct to the best of my knowledge and the undersigned is authorized to make this application. I understand that submitting this application does not constitute approval, and incomplete applications will result in possible delays and/or denial.

Signature of Applicant: _____



Date: 11-14-23

Signature of Owner: _____



Date: 11/15/23

FLS Development
Planned Development Regulations
(Medical Complex Blvd & Hufsmith Kohville Rd)

Contents

- a. General Provisions
- b. Land Uses
- c. Development Regulations
- d. Architecture Standards
- e. Landscape/Buffer Regulations
- f. Amenities

a. General Provisions

The Planned Development, PD, approved herein must be constructed, developed, and maintained in compliance with this ordinance and other applicable ordinances of the City of Tomball. If any provisions or regulations of any City of Tomball ordinance applicable in GR or SF-9 zoning districts is not contained in this ordinance, all of the regulations contained in the Development Code applicable to the GR and SF-9 zoning district in effect on the effective date of this ordinance shall apply to this PD.

Except as otherwise provided herein, the words used in this Planned Development have the same meaning established by the Development Code.

b. Land Uses

Permitted Land Uses are listed below. All others are prohibited.

- 1) Any use permitted by right in SF-9
- 2) Any use permitted in the General Retail District (GR) Zoning Code of Ordinances. In addition, the following uses will not be permitted as-of-right:
 - a) All-terrain vehicle dealer/sales
 - b) Amusement devices/arcade
 - c) Amusement, commercial (indoor)
 - d) Amusement, commercial (outdoor)
 - e) Animal Kennel (outdoor pens)
 - f) Appliance Repair
 - g) Automobile Wash (full service)
 - h) Automobile Wash (self-service)
 - i) Drinking Establishment
 - j) Gasoline Station
 - k) Mini-warehouse/ self storage
 - l) Mobile Food Court
 - m) Non-city public assembly
 - n) Paint manufacture and/or mixing
 - o) Pawn shop
 - p) Propane sales filling (retail)
 - q) Quick lube/oil change/minor inspection
 - r) School, college or university

- | | |
|--|---|
| s) School, commercial trade (vocational) | v) Scientific and industrial research laboratories (nonhazardous) |
| t) School, other than public or denominational | w) Skating rink |
| u) School, public or demoninational | x) Taxidermist |
| | y) Temporary real estate field office |
| | z) Wedding chapel |

c. Development Regulations

1) Area regulations for Single Family Lots

- a) Minimum Lot Size – 8,400 Square Feet
- b) Minimum Lot Width – 65 Feet
- c) Minimum Lot Depth – 130 Feet
- d) Minimum Front Yard – 25 Feet (35' adjacent to Arterial Street)
- e) Minimum Side Yard – 5 Feet (15' adjacent to street, 25' adjacent to Arterial Street)
- f) Minimum Rear Yard – 15 Feet (25' adjacent to Arterial)
- g) Maximum Lot Coverage – 55% (including main buildings and accessory buildings)
- h) Maximum Height – Two stories not to exceed 35 feet for the main building/house

2) Area Regulations for nonresidential uses

- a) Minimum Lot Area – 6,000 Square Feet
- b) Minimum Lot Width – 60 Feet
- c) Minimum Lot Depth – 100 Feet
- d) Minimum Front Yard – 35 feet
- e) Minimum Side Yard (Interior) – 5 Feet (25' Adjacent to Arterial)
- f) Minimum Side Yard Adjacent to Single Family – 25 Feet
- g) Minimum Rear Yard – 15 Feet
- h) Maximum floor area ratio (FAR) is 1:1

3) Develop full boulevard of Medical Complex Drive to serve the development (through the extent of single family residential construction) as shown in Exhibit A.

d. Architecture Standards

These recommendations and standards are meant to foster a sense of design continuity that will deliver the desired aesthetic of the planned residential development. The follow architectural criteria are intended to make the home builder and building designer aware of the architectural context, not to inhibit or limit unique design.

1) Building façade criteria and features:

- a) Each residence must present an exterior design within the classification of “Modern Farmhouse” or “Craftsman” design.
- b) Combined exterior materials and colors must vary from those within 4 residences of the subject. Crossing the street will count as one residence.
- c) Primary brick material may not be repeated within 4 residences

- d) A variation of garage entries and garage sizes is expected as a general method of breaking up the street scene for the subdivision. This will include front loading 2 and 3 car garages as well as “J-Swing” garage entries.

2) Building façade finishes and materials:

- a) Each residence must include the following materials in varied methods of use.
- b) Brick and/or Stone
- c) Board and Batten siding or similar painted material
- d) Cedar or other stained or painted decorative wood detailing
- e) Minimum 8:12 Side to side roof pitch

e. Landscape/Buffer Regulations

1) Single Family Lot Requirements

- a) Each lot shall be fully landscaped with either trees, plants or otherwise coved with grass
- b) Each lot shall have at least one 3.5” caliper shade tree planted in the front yard
- c) See attached (Exhibit B) for landscaping guidelines.

2) Non-residential Requirements

- a) Provide 30’ landscape buffer and tree preservation between commercial reserve tracts and single family lots
- b) Common areas near community signage, amenities, and within the esplanade for Medical Complex will be consistently landscaped with seasonal vegetation and flowers

- 3) The community park, fishing dock and shade structure shall be maintained with irrigated grass and seasonal landscaping.

f. Amenities

Amenities will be designed and built to complement the overall concept of the community with a similar use of materials and design concepts related to the home design requirements for the subdivision. When completed, the combination of the architectural design of the Amenities, the consistent branding of each area and the complimentary design of the commercial section of the community will complete a destination environment combining a modern design with a nod to the history of Tomball.

The following amenities are required as shown on Exhibit A.

- 1) Wet amenity detention pond with fountains
- 2) Designated walking trails around amenity ponds (w/ workout equipment)
- 3) Playground structure
- 4) Fishing Dock
- 5) Shade structure
- 6) Up to two (2) monument signs within platted area
- 7) Two (2) Pickle ball courts with fence and seating.

EXHIBIT B

Landscaping Guidelines

Just as all structures built throughout Graylou Grove from commercial to residences to amenity structures will be required to include design elements consistent with one another, landscaping in all of these areas will be expected to create a consistent and beautiful vegetation concept throughout the development.

A focus will be made on trees, plants and flowers which are native to the area and the State of Texas in general. Trees planted will be Oaks, implementation of plants will have a focus on evergreen selections and color will be provided by plants and flowers which do well in the environment and seasonal use of their intent.

All areas landscaped as part of the development will remain on an ongoing maintenance plan including irrigation and landscaping maintenance workers who will perform work on a regular basis.

Treelines:

Areas designated as treelines will be completed with selected Oaks of 6" in diameter or greater.

Common Areas:

Common areas in the development will include areas around signage, inside medians of Medical Complex, and throughout the amenity area at east end of the community.

These areas will require coverage by landscaping. Medians will be presented with a combination of mulch, St Augustine Grass, Evergreen plants and seasonal plants and flowers. These areas will be maintained through irrigation and ongoing care through landscaping professionals.

Areas immediately surrounding amenities or signage will be maintained with a combination of St. Augustine grass, mulch, evergreen plants and seasonal color.

Smaller, more detailed areas that require grass will be completed with the laying of sod while larger open areas will be completed through the use of grass seed.

Residential Requirements:

In order to be considered complete per community guidelines, each residence must include at least one 3.5 caliper tree of Oak or other approve tree, a fully sodded and irrigated front yard (to front corner of home at a minimum) and a landscaping area which must be a minimum of 5' x 20' in size. Landscaped should include a combination of mulch beds, evergreen plants and seasonal plants with color or seasonal flowers.

DESCRIPTION
OVERALL ACREAGE

49.301 acres of land situated in the Jesse Pruitt Survey, Abstract Number 629, Harris County, Texas, being that certain called 31.994 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2023-170674, that certain called 17.307 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2023-171232, a portion of that certain Reserve "A" and Lot 1 of Brandt Holdings, a subdivision as shown on map or plat recorded under Film Code Number 679589 of the Map Records of Harris County, Texas, a portion of those certain Lots 489, 490, 495, 496, 497 and 498 of Tomball Townsite, a subdivision as shown on map or plat recorded under Volume 2, Page 65 of the Map Records of Harris County, Texas and those certain Lots 491, 492, 493 and 494 of said Tomball Townsite, said 49.301 acres of land being more particularly described by metes and bounds as follows:

BEGINNING at a 5/8 inch iron rod with cap found in the Southerly line of that certain Restricted Reserve "J" of The Estates at Willow Creek, a subdivision as shown on map or plat recorded under Film Code Number 540246 of the Map Records of Harris County, Texas, for the Northeasterly corner of that certain called 2.3291 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2016-558665 and the Northerly Northwest corner of said 17.307 acre tract;

Thence, N 87°49'35" E, along the Southerly line of said Restricted Reserve "J" of The Estates at Willow Creek, the Southerly line of that certain called 11.98 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number U517222 and the Southerly line of that certain Restricted Reserve "A" of Willow Creek Pet Ranch of Tomball, a subdivision as shown on map or plat recorded under Film Code Number 683259 of the Map Records of Harris County, Texas, a distance of 2,003.38 feet to the Northeasterly corner of said 31.994 acre tract;

Thence, S 03°07'21" E, along the Westerly line of that certain called 0.5045 of one acre of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number V343704, a distance of 232.39 feet to a 1/2 inch iron rod found in the Northwesterly line of that certain Block 2 of Country Club Greens Section Two-Replat, a subdivision as shown on map or plat recorded under Film Code Number 548068 of the Map Records of Harris County, Texas, for the Southwesterly corner of said 0.5045 acre tract;

Thence, S 42°56'22" W, along the Northwesterly line of said Block 2 of Country Club Greens Section Two-Replat, the Northwesterly line of that certain Block 1 of said Country Club Greens Section Two-Replat, the Northwesterly line of that certain Block 2 of Country Club Greens Partial Replat-Phase Two, a subdivision as shown on map or plat recorded under Film Code Number 540231 of the Map Records of Harris County, Texas and the Northwesterly line of that certain Block 2 of Country Club Greens Partial Replat, a subdivision as shown on map or plat recorded under Film Code Number 519225 of the Map Records of Harris County, Texas, a distance of 1,846.30 feet to a 5/8 inch iron rod found for the Southeasterly corner of that certain called 5.3977 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number P792577 and the most Southerly corner of said 31.994 acre tract;

Thence, N 13°37'50" W, along the Easterly line of said 5.3977 acre tract and the Easterly line of that certain called 5.5000 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number P964270, a distance of 558.86 feet to a 5/8 inch iron rod found for the Northeasterly corner of said 5.5000 acre tract and the Southeasterly corner of said 17.307 acre tract;

Thence, S 56°48'54" W, along the Northerly line of said 5.5000 acre tract and the Northerly line of that certain called 1.000 acre of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number X517792, a distance of 423.87 feet to a 5/8 inch iron rod with cap found for the Southeasterly corner of that certain Lot 1, Block 1 of Huffsmith Kohrville Food Court, a subdivision as shown on map or plat recorded under Film Code Number 701507 of the Map Records of Harris County, Texas;

Thence, N 11°23'19" W, along the Easterly line of said Lot 1, Block 1 of Huffsmith Kohrville Food Court, a distance of 290.49 feet to a 5/8 inch iron rod with cap found for the Northeasterly corner of said Lot 1, Block 1 of Huffsmith Kohrville Food Court and an interior corner of said 17.307 acre tract;

Thence, S 76°00'34" W, along the Northerly line of said Lot 1, Block 1 of Huffsmith Kohrville Food Court, a distance of 412.84 feet to a 5/8 inch iron rod with cap found in the Easterly right-of-way line of Huffsmith Kohrville Road (variable width right-of-way);

Thence, along the Easterly right-of-way line of said Huffsmith Kohrville Road, the following courses and distances:

N 20°20'37" W, a distance of 284.48 feet to a 5/8 inch iron rod found for the Southwesterly corner of that certain called 0.3634 of one acre of land dedicated for the widening of Huffsmith Kohrville Road by said map or plat of Brandt Holdings;

N 87°26'22" E, a distance of 24.68 feet to a 5/8 inch iron rod with cap found for the Southwesterly corner of said Reserve "A" of Brandt Holdings and the Southeasterly corner of said dedication;

N 20°18'43" W, a distance of 437.48 feet to a 5/8 inch iron rod with cap found for a point of curvature to the right;

In a Northwesterly direction, with said curve to the right, having a central angle of 01°25'11", a radius of 1950.00 feet, an arc length of 48.32 feet, a chord bearing of N 19°36'08" W and a chord distance of 48.32 feet to a 5/8 inch iron rod with cap found for the Southwesterly corner of said 2.3291 acre tract;

Thence, N 87°37'27" E, along the Southerly line of said 2.3291 acre tract, a distance of 441.49 feet to a 5/8 inch iron rod with cap found for the Southeasterly corner of said 2.3291 acre tract;

Thence, N 02°23'19" W, along the Easterly line of said 2.3291 acre tract, a distance of 269.92 feet to the POINT OF BEGINNING and containing 49.301 acres of land.

BEARING ORIENTATION BASED ON TEXAS STATE PLANE COORDINATE GRID SYSTEM OF 1983, DERIVED FROM CORS SITE RODS.

TRACT BEING SHOWN ON MAP (SEE HSC NO. 2115000OVERALL.dwg)
HOVIS SURVEYING COMPANY, INC.
Texas Firm Registration No. 10030400

By: _____

Date: October 30, 2023
Job No: 21-150-00
File No: F21-150.00D
Dwg File: 2115000OVERALL.dwg



EXHIBIT D



FLS Development, LLC - Hufmish Kohrville

CSE Job No.: 852302



<u>Description</u>		<u>WSD</u>	<u>Roadway</u>	<u>Out-of-District</u>	<u>Total</u>
B1. General & Site Preparation Items	\$	496,180	\$ -	\$ -	\$ 496,180
B2. SWPPP Items	\$	194,081	\$ 194,081	\$ 2,910	\$ 391,072
B3. Water Distribution Items	\$	781,915	\$ -	\$ -	\$ 781,915
B4. Wastewater Collection Items	\$	552,860	\$ -	\$ -	\$ 552,860
B5. Stormwater Collection Items	\$	1,480,189	\$ -	\$ 12,536	\$ 1,492,725
B6. Natural Gas Distribution Items	\$	189,635	\$ -	\$ -	\$ 189,635
B7. Excavation and Paving Items	\$	-	\$ 2,822,700	\$ 129,595	\$ 2,952,295
B7. Traffic and Traffic Control Items	\$	-	\$ 80,000	\$ -	\$ 80,000
C. Extra Unit Price Items	\$	106,900	\$ -	\$ -	\$ 106,900
D. Cash Allowances	\$	125,000	\$ 535,000	\$ 130,000	\$ 790,000
Subtotal	\$	3,926,759	\$ 3,631,781	\$ 275,042	\$ 7,833,582
Construction Staking (1.5%)	\$	58,901	\$ 54,477	\$ 4,126	\$ 117,504
City of Tomball Construction Permit Fee (2%)	\$	78,535	\$ 72,636	\$ 5,501	\$ 156,672
Certification of Insurance, Performance, Payment and Maintenance Bonds (2%)	\$	80,000	\$ 74,000	\$ 6,000	\$ 160,000
Contingency (5%)	\$	207,210	\$ 191,645	\$ 14,533	\$ 413,388
Sub-Total Construction Cost	\$	4,133,969	\$ 3,823,426	\$ 289,575	\$ 8,681,145
Drainage Impact Fee	\$	-	\$ -	\$ -	\$ -
Engineering Fees (8%)	\$	330,718	\$ 305,874	\$ 23,166	\$ 659,758
Geotechnical Eng. & Construction Material Testing (2%)	\$	82,679	\$ 76,469	\$ 5,792	\$ 164,939
Sub-Total Engineering and Fees	\$	413,397	\$ 382,343	\$ 28,958	\$ 824,697
Total Preliminary Construction Cost Estimate	\$	4,547,366	\$ 4,205,768	\$ 318,533	\$ 9,505,842
Cost per Lot	87	\$ 52,269	\$ 48,342	-	\$ 109,263
Cost per Acre	47.9	\$ 94,956	\$ 87,823	-	\$ 198,496

Notes

- 1 Estimate does not include any additional costs that may be required for development outside the scope outlined above. These fees may include street lighting, dry utilities, etc.
- 2 The quantities reflected on this estimate were tabulated from 30% preliminary engineering drawings. The unit prices shown hereon are based on current bid prices received in this office, are valid for 30 days from tabulation, and are subject to change pending approved construction plans and market conditions.

Preliminary Estimate of Potential Construction Costs
Client: ELS Development, LLC
Project Address: Hufsmith Kohrville
CSE Project No.: 852302
Phase: 30%

Detention Pro-Rata			
Total Plot Area	49.150	AC	
Commercial Reserves	5.999	AC	
Total Detention Volume	33.88	ac-ft	
Detention Rate	0.689	ac-ft/ac	
PID Detention (Pro-rata)	88.0%		
Commercial Detention (Pro-rata)	12.0%		

B1. General & Site Preparation Items

Item No.	Control No.	Item Description	Unit Measure	Unit		Total	In District	Out-of-District	Shared Quantities
				Quantity	Unit Price				
1	01502	Mobilization (4%)	LS	1	\$ 200,000	\$ 200,000	\$ 200,000	\$ -	-
2	01578	Ground Water Control for Open-Cut Construction	LF	27,725	\$ 2	\$ 55,449	\$ 55,449	\$ -	-
3	01740	Site Restoration	SY	-	\$ 3	\$ -	\$ -	\$ -	-
4	02221	Removing Existing Asphalt Pavement	SY	-	\$ -	\$ -	\$ -	\$ -	-
5	02221	Removing Existing Concrete Driveway	SY	-	\$ -	\$ -	\$ -	\$ -	-
6	02221	Removing Existing Concrete Curb	LF	150	\$ 10	\$ 1,500	\$ 1,500	\$ -	-
7	02221	Fence Removal	LS	1	\$ 5,000	\$ 5,000	\$ 5,000	\$ -	-
8	02233	Clearing & Grubbing (Heavy Clearing)	AC	47.9	\$ 2,000	\$ 95,779	\$ 95,779	\$ -	-
9	02233	Clearing & Grubbing (Underbrushing)	AC	47.9	\$ 1,420	\$ 68,003	\$ 68,003	\$ -	-
10	02221	Removal and Abandonment of Utilities	LS	1	\$ 15,000	\$ 15,000	\$ 15,000	\$ -	-
11	02260	Trench Safety	LF	27,725	\$ 2	\$ 55,449	\$ 55,449	\$ -	-
Total General & Site Preparation Items						\$ 496,180	\$ 496,180	\$ -	

B2. SWPPP Items

Item No.	Control No.	Item Description	Unit Measure	Unit		Total	In District	Out-of-District	Shared Quantities
				Quantity	Unit Price				
12	01570;01410	BMP Implementation and Maintenance	MO	9	\$ 2,000	\$ 18,000	\$ 18,000	\$ -	-
13	01574	Filter Fabric Fence (Install & Remove)	LF	7,175	\$ 2	\$ 14,350	\$ 11,440	\$ 2,910	1,455
14	01574	Temporary Type II Filter Dam (Install & Remove)	EA	1	\$ 4,000	\$ 4,000	\$ 4,000	\$ -	-
15	01575	Stabilized Construction Exit (Install & Remove)	SY	444	\$ 35	\$ 15,540	\$ 15,540	\$ -	-
16	01577	Inlet Protection Barrier (Wattle)(Install & Remove)	LF	380	\$ 8	\$ 3,040	\$ 3,040	\$ -	-
17	01577	Inlet Protection Barrier (Stage 1)(Install & Remove)	LF	136	\$ 5	\$ 680	\$ 680	\$ -	-
18	01577	Inlet Protection Barrier (Catch Basin)(Install & Remove)	EA	2	\$ 25	\$ 50	\$ 50	\$ -	-
19	02921	Hydromulch Seeding	AC	25.2	\$ 2,000	\$ 50,400	\$ 50,400	\$ -	-
20	02922	Solid Sod	SY	71,253	\$ 4	\$ 285,012	\$ 285,012	\$ -	-
Total SWPPP Items						\$ 391,072	\$ 388,162	\$ 2,910	

B3. Water Distribution Items

Item No.	Control No.	Item Description	Unit Measure	Unit		Total	In District	Out-of-District	Shared Quantities
				Quantity	Unit Price				
21	02511	4-inch Diameter PVC by Open Cut (C900)(DR 18)	LF	480	\$ 40	\$ 19,200	\$ 19,200	\$ -	-
22	02511	8-inch Diameter PVC by Open Cut (C900)(DR 18)	LF	3,973	\$ 75	\$ 297,975	\$ 297,975	\$ -	-
23	02511	8-inch Diameter PVC w/ RJ by Open Cut (C900)(DR 18)	LF	348	\$ 150	\$ 52,200	\$ 52,200	\$ -	-
24	02511	12-inch Diameter PVC by Open Cut (C900)(DR 18)	LF	1,341	\$ 85	\$ 113,985	\$ 113,985	\$ -	-
25	02511	12-inch Diameter PVC w/ RJ by Open Cut (C900)(DR 18)	LF	175	\$ 170	\$ 29,750	\$ 29,750	\$ -	-
26	02511	12-inch Diameter Steel Casing by Open Cut	LF	348	\$ 130	\$ 45,240	\$ 45,240	\$ -	-
27	02511	16-inch Diameter Steel Casing by Open Cut	LF	90	\$ 160	\$ 14,400	\$ 14,400	\$ -	-
28	02511	16-inch Diameter Steel Casing by Trenchless	LF	85	\$ 210	\$ 17,850	\$ 17,850	\$ -	-
29	02511	8-inch Diameter PVC Plug & Clamp	EA	1	\$ 500	\$ 500	\$ 500	\$ -	-
30	02511	12-inch Diameter PVC Plug & Clamp	EA	1	\$ 750	\$ 750	\$ 750	\$ -	-
31	02512	12"x12" TS&V and Wet Connect	EA	1	\$ 4,000	\$ 4,000	\$ 4,000	\$ -	-
32	02512	Long Side Service Lead	EA	19	\$ 1,000	\$ 19,000	\$ 19,000	\$ -	-
33	02512	Short Side Service Lead	EA	32	\$ 2,000	\$ 64,000	\$ 64,000	\$ -	-
34	02520	Fire Hydrant Assembly Includ. GV&B	EA	9	\$ 5,000	\$ 45,000	\$ 45,000	\$ -	-
35	02520	6-inch Diameter Fire Hydrant Branch by Open Cut (C900)(DR 18)	LF	136	\$ 30	\$ 4,065	\$ 4,065	\$ -	-
36	02521;02085	4-inch Diameter Gate Valve & Box w/ Lid	EA	2	\$ 1,500	\$ 3,000	\$ 3,000	\$ -	-
37	02521;02085	8-inch Diameter Gate Valve & Box w/ Lid	EA	13	\$ 3,000	\$ 39,000	\$ 39,000	\$ -	-
38	02521;02085	12-inch Diameter Gate Valve & Box w/ Lid	EA	3	\$ 4,000	\$ 12,000	\$ 12,000	\$ -	-
Total Water Items						\$ 781,915	\$ 781,915	\$ -	

B4. Wastewater Collection Items

Item No.	Control No.	Item Description	Unit Measure	Unit		Total	In District	Out-of-District	Shared Quantities
				Quantity	Unit Price				
39	02082	4-foot Diameter Precast Concrete Manhole w/ Lining	EA	22	\$ 5,000	\$ 110,000	\$ 110,000	\$ -	-
40	02082	4-foot Diameter Precast Concrete Manhole w/ Lining (Shallow Depth)	EA	2	\$ 8,000	\$ 16,000	\$ 16,000	\$ -	-
41	02082	5-foot Diameter Precast Concrete Manhole w/ Lining	EA	1	\$ 6,500	\$ 6,500	\$ 6,500	\$ -	-
42	02082	Extra Depth 5-foot Diameter Precast Concrete Manhole	VF	-	\$ 500	\$ -	\$ -	\$ -	-
43	02082	Extra Depth 4-foot Diameter Precast Concrete Manhole	VF	-	\$ 350	\$ -	\$ -	\$ -	-
44	02531	8-inch Diameter PVC by Open Cut (C900)(SDR 26)	LF	3,192	\$ 60	\$ 191,520	\$ 191,520	\$ -	-
45	02531	10-inch Diameter PVC by Open Cut (C900)(SDR 26)	LF	1,518	\$ 80	\$ 121,440	\$ 121,440	\$ -	-
46	02534	Sanitary Sewer Service Lead (Short Side)(w/o stack)	EA	22	\$ 1,300	\$ 28,600	\$ 28,600	\$ -	-
47	02534	Sanitary Sewer Service Lead (Long Side)(w/o stack)	EA	17	\$ 2,500	\$ 42,500	\$ 42,500	\$ -	-
48	02534	Sanitary Sewer Service Lead (Long Side)(w/o stack)(Over 75')	EA	12	\$ 3,000	\$ 36,000	\$ 36,000	\$ -	-
48	02534	10-inch Diameter Sanitary Sewer Plug and Cap	EA	1	\$ 300	\$ 300	\$ 300	\$ -	-
Total Sanitary Items						\$ 552,860	\$ 552,860	\$ -	

B5. Stormwater Collection Items

Item No.	Control No.	Item Description	Unit Measure	Unit		Total	In District	Out-of-District	Shared Quantities
				Quantity	Unit Price				
48	02631	24-inch Diameter Storm Sewer by Open Cut (RCP)(CL III)	LF	2,264	\$ 95	\$ 215,080	\$ 214,442	\$ 638	56
49	02631	24-inch Diameter Storm Sewer Lead by Open Cut (RCP)(CL III)	LF	884	\$ 100	\$ 88,400	\$ 88,400	\$ -	-
50	02631	30-inch Diameter Storm Sewer by Open Cut (RCP)(CL III)	LF	521	\$ 130	\$ 67,730	\$ 67,730	\$ -	-
51	02631	30-inch Diameter Storm Sewer Lead by Open Cut (RCP)(CL III)	LF	66	\$ 135	\$ 8,910	\$ 8,910	\$ -	-
52	02631	36-inch Diameter Storm Sewer by Open Cut (RCP)(CL III)	LF	690	\$ 170	\$ 117,300	\$ 109,446	\$ 7,854	385
53	HCFC	36-inch Diameter Storm Sewer by Open Cut (HDPE) w/ Timber Bents	LF	78	\$ 150	\$ 11,700	\$ 10,296	\$ 1,404	78
54	02631	42-inch Diameter Storm Sewer by Open Cut (RCP)(CL III)	LF	325	\$ 210	\$ 68,250	\$ 68,250	\$ -	-
55	02631	48-inch Diameter Storm Sewer by Open Cut (RCP)(CL III)	LF	121	\$ 245	\$ 29,645	\$ 29,645	\$ -	-
56	02631	54-inch Diameter Storm Sewer by Open Cut (RCP)(CL III)	LF	123	\$ 345	\$ 42,435	\$ 42,435	\$ -	-

57	02631	60-inch Diameter Storm Sewer by Open Cut (RCP)(CL III)	LF	988	\$	375	\$	370,500	\$	370,500	\$	-	-
58	02632	Cast-in-place Headwall (5-inch Concrete Slope Paving)(24" Stm)	EA	3	\$	2,500	\$	7,500	\$	7,200	\$	300	1
59	02632	Cast-in-place Headwall (5-inch Concrete Slope Paving)(60" Stm)	EA	2	\$	15,000	\$	30,000	\$	30,000	\$	-	-
60	02633	Standard Type C Precast Concrete Inlet	EA	23	\$	5,000	\$	115,000	\$	115,000	\$	-	-
61	02633	Standard Type C-1 Precast Concrete Inlet	EA	10	\$	5,500	\$	55,000	\$	55,000	\$	-	-
62	02633	Standard Type D Precast Concrete Inlet	EA	2	\$	3,500	\$	7,000	\$	7,000	\$	-	-
63	02633	Standard Type E Precast Concrete Inlet	EA	2	\$	4,500	\$	9,000	\$	9,000	\$	-	-
64	02633	Standard Type "C" Storm Manhole (48-inch Diameter)	EA	19	\$	5,000	\$	95,000	\$	95,000	\$	-	-
65	02633	Standard Type "C" Storm Manhole (60-inch Diameter)	EA	8	\$	6,500	\$	52,000	\$	49,660	\$	2,340	3
66	02633	Standard Type "C" Storm Manhole (72-inch Diameter)	EA	1	\$	8,250	\$	8,250	\$	8,250	\$	-	-
67	02633	Standard Type "C" Storm Manhole (84-inch Diameter)	EA	5	\$	9,500	\$	47,500	\$	47,500	\$	-	-
68	02633	Precast Concrete Junction Box (8'x8') w/ Type E Inlet	EA	2	\$	18,000	\$	36,000	\$	36,000	\$	-	-
69	HCFC	Riprap Grade No.1	TON	75	\$	95	\$	7,125	\$	7,125	\$	-	-
70	HCED	SET (TY II)(4:1)(24 IN)(4:1)(P)	EA	2	\$	1,700	\$	3,400	\$	3,400	\$	-	-
Total Stormwater Items								\$	1,492,725	\$	1,480,189	\$	12,536

B6. Natural Gas Distribution Items

Item No.	Control No.	Item Description	Unit Measure	Unit		Total							
				Quantity	Unit Price								
71	02685	4-inch Diameter PE Pipe (PE2406)	LF	1,505	\$	35	\$	52,675	\$	52,675	\$	-	-
72	02685	4-inch Diameter Valve and Box	EA	3	\$	1,800	\$	5,400	\$	5,400	\$	-	-
73	02685	4-inch Diameter Plug	EA	1	\$	400	\$	400	\$	400	\$	-	-
74	02685	2-inch Diameter PE Pipe (PE2406)	LF	4,788	\$	20	\$	95,760	\$	95,760	\$	-	-
75	02685	2-inch Diameter Valve and Box	EA	10	\$	1,200	\$	12,000	\$	12,000	\$	-	-
76	02685	Zinc Anode	EA	14	\$	70	\$	980	\$	980	\$	-	-
77	02685	Test Station	EA	7	\$	60	\$	420	\$	420	\$	-	-
78	02685	8-inch Diameter Steel Casing by Trenchless w/ 2-inch SCH 40 Steel Ve	LF	110	\$	200	\$	22,000	\$	22,000	\$	-	-
79	02685	8-inch Diameter Steel Casing by Open Cut w/ 2-inch SCH 40 Steel Ve	LF	150	\$	85	\$	12,750	\$	12,750	\$	-	-
80	02685	6-inch Diameter Steel Casing by Open Cut w/ 2-inch SCH 40 Steel Ve	LF	310	\$	65	\$	20,150	\$	20,150	\$	-	-
81	02685	Pipline Markers	EA	6	\$	200	\$	1,200	\$	1,200	\$	-	-
Total Gas Items								\$	189,635	\$	189,635	\$	-

B7. Excavation and Paving Items

Item No.	Control No.	Item Description	Unit Measure	Unit		Total							
				Quantity	Unit Price								
78	02315	Excavation (On-Site)(Complete In Place)	CY	102,654	\$	6	\$	615,923	\$	542,012	\$	73,911	12,318
79	02319	Fill (On-Site)(Complete In Place)	CY	104,880	\$	4	\$	419,519	\$	369,177	\$	50,342	12,586
80	02319	Imported Fill	CY	2,226	\$	20	\$	44,520	\$	39,177	\$	5,342	267
81	02337	Fly Ash (8%) for 6-inch Stabilized Subgrade	TON	495	\$	140	\$	69,300	\$	69,300	\$	-	-
82	02337	Lime (4%) for 6-inch Stabilized Subgrade	TON	248	\$	360	\$	89,280	\$	89,280	\$	-	-
83	02337	Lime/Fly-Ash Stabilized Subgrade	SY	23,872	\$	5	\$	119,360	\$	119,360	\$	-	-
84	02711	Hot Mix Asphalt Base Course (9-inch)	SY	426	\$	60	\$	25,533	\$	25,533	\$	-	-
85	02741	Asphaltic Concrete Pavement (2-inch)	SY	402	\$	12	\$	4,822	\$	4,822	\$	-	-
86	02741	Hot Mix-Hot Laid Asphalt Concrete	TON	45	\$	120	\$	5,400	\$	5,400	\$	-	-
87	02751	Reinforced Concrete Pavement (9-inch)	SY	8,753	\$	75	\$	656,509	\$	656,509	\$	-	-
88	02751	Reinforced Concrete Pavement (7-inch)	SY	13,495	\$	60	\$	809,687	\$	809,687	\$	-	-
89	02751	Reinforced Concrete Driveway (6-inch)	SY	204	\$	55	\$	11,214	\$	11,214	\$	-	-
90	02767	Pavement Markings & Signs (All Types and Colors)	LS	1	\$	10,000	\$	10,000	\$	10,000	\$	-	-
91	02771	Pavement Header	LF	175	\$	15	\$	2,625	\$	2,625	\$	-	-
92	02771	4"x12" Laydown Concrete Curb	LF	7,435	\$	5	\$	37,175	\$	37,175	\$	-	-
93	02771	6" Concrete Curb (Monolithic)	LF	5,238	\$	6	\$	31,428	\$	31,428	\$	-	-
94	02772	Colored Concrete Median (Brick Pavers or Stamped Conc)	SY	320	\$	110	\$	35,200	\$	35,200	\$	-	-
95	02775	Concrete Sidewalk	SF	13,845	\$	6	\$	83,070	\$	83,070	\$	-	-
95	02775	Concrete Sidewalk (Wheelchair Ramp)	SF	650	\$	20	\$	13,000	\$	13,000	\$	-	-
96	COT STR-27	Standard Type III Barricade	EA	4	\$	1,000	\$	4,000	\$	4,000	\$	-	-
Total Paving Items								\$	2,952,295	\$	2,822,700	\$	129,595

B7. Traffic and Traffic Control Items

Item No.	Control No.	Item Description	Unit Measure	Unit		Total							
				Quantity	Unit Price								
97	HCED	Traffic Signal Adjustment	LS	1	\$	50,000	\$	50,000	\$	50,000	\$	-	-
98	01555	Traffic Control and Regulation	LS	1	\$	20,000	\$	20,000	\$	20,000	\$	-	-
99	01555	Flagger	LS	1	\$	10,000	\$	10,000	\$	10,000	\$	-	-
Total Traffic and Traffic Control Items							\$	80,000	\$	80,000	\$	-	

C. Extra Unit Price Items

Item No.	Control No.	Item Description	Unit Measure	Unit		Total							
				Quantity	Unit Price								
100	02221	Extra Removal of Exist Pvm (Including Sawcuts)	SY	100	\$	10	\$	1,000	\$	1,000	\$	-	-
101	02314	Regrade roadside ditch/swale	LF	300	\$	18	\$	5,400	\$	5,400	\$	-	-
102	02314	Extra Roadway Excavation & Haul Off	CY	100	\$	10	\$	1,000	\$	1,000	\$	-	-
103	02318	Extra Hand Excavation	CY	100	\$	25	\$	2,500	\$	2,500	\$	-	-
104	02318	Extra Machine Excavation	CY	100	\$	30	\$	3,000	\$	3,000	\$	-	-
105	02318	Extra Bank Sand Backfill	CY	100	\$	18	\$	1,800	\$	1,800	\$	-	-
106	02321	Extra Cement Stabilized Sand	CY	100	\$	22	\$	2,200	\$	2,200	\$	-	-
107	02319	Extra Borrow	CY	1,000	\$	80	\$	80,000	\$	80,000	\$	-	-
108	02921	Extra Hydromulch Seeding	AC	2	\$	2,000	\$	4,000	\$	4,000	\$	-	-
109	02922	Extra Sodding	SY	1,000	\$	6	\$	6,000	\$	6,000	\$	-	-
Total Extra Unit Price Items								\$	106,900	\$	106,900	\$	-

D. Cash Allowances

Item No.	Control No.	Item Description	Unit Measure	Unit		Total							
				Quantity	Unit Price								
110		Pipelines/Flowline Removal and Disposal	CA	1	\$	15,000	\$	15,000	\$	15,000	\$	-	-
111		Oil/Gas Well Modifications (lowering and recapping)	CA	1	\$	200,000	\$	200,000	\$	100,000	\$	100,000	50%
112		Pond Dewatering	CA	1	\$	25,000	\$	25,000	\$	25,000	\$	-	-
113		Landscaping & Irrigation & Amenities	CA	1	\$	500,000	\$	500,000	\$	470,000	\$	30,000	6%
114		Amenity Pond Fountains	CA	1	\$	20,000	\$	20,000	\$	20,000	\$	-	-
115		CCN 13203 Water Relocation	CA	1	\$	10,000	\$	10,000	\$	10,000	\$	-	-
116		HCED Permits	CA	1	\$	10,000	\$	10,000	\$	10,000	\$	-	-
117		HCFC Permits	CA	1	\$	10,000	\$	10,000	\$	10,000	\$	-	-

Total Cash Allowances

\$	790,000	\$	660,000	\$	130,000
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Summary

B1. General & Site Preparation Items

B2. SWPPP Items

B3. Water Distribution Items

B4. Wastewater Collection Items

B5. Stormwater Collection Items

B6. Natural Gas Distribution Items

B7. Excavation and Paving Items

B7. Traffic and Traffic Control Items

C. Extra Unit Price Items

D. Cash Allowances

Sub Total

\$	496,180	\$	496,180	\$	-
\$	391,072	\$	388,162	\$	2,910
\$	781,915	\$	781,915	\$	-
\$	552,860	\$	552,860	\$	-
\$	1,492,725	\$	1,480,189	\$	12,536
\$	189,635	\$	189,635	\$	-
\$	2,952,295	\$	2,822,700	\$	129,595
\$	80,000	\$	80,000	\$	-
\$	106,900	\$	106,900	\$	-
\$	790,000	\$	660,000	\$	130,000
\$	7,833,582	\$	7,558,540	\$	275,042

EARTHWORK COMPUTATION						
DESCRIPTION	EXCAVATION			FILL		
	AREA (sq.ft)	DEPTH (ft)	VOL (CY)	AREA (sq.ft)	DEPTH (ft)	VOL (CY)
SITE STRIPPING/SOD	2,086,060	0.33	25,754	0	0.33	0
CONCRETE SIDEWALK	0	0.54	0	13,845	0.54	(278)
ADA RAMP	0	0.50	0	650	0.71	(17)
CONCRETE PVM T (9")	0	0.75	0	78,781	0.75	(2,188)
CONCRETE PVM T (7")	0	0.42	0	121,453	0.58	(2,624)
ASPHALT PVM T	0	0.17	0	402	0.17	(2)
ASPHALT BASE	0	0.50	0	426	0.67	(11)
GRAVEL	0	0.67	0	0	0.67	0
SURFACE	-	-	76,900.00	-	-	110,000.00
TOTAL			102,654			104,880
BALANCE (NET FILL)			2,226			

City of Tomball, Texas
Special Assessment Revenue Bonds
(Hufmish Kohrville Public Improvement District)

EXHIBIT E

Estimated Sources and Uses of Funds ¹

Estimated Delivery Date:	3/1/2024	9/1/2025	
	Improvement	Improvement	
	Area #1-A	Area #1-B	Total
SOURCES OF FUNDS			
Bond Par	\$ 3,262,000.00	\$ 2,128,000.00	\$ 5,390,000.00
Total Sources of Funds	\$ 3,262,000.00	\$ 2,128,000.00	\$ 5,390,000.00
USES OF FUNDS			
Project Fund	\$ 2,301,182.50	\$ 1,742,217.50	\$ 4,043,400.00
Capitalized Interest Fund ²	354,742.50	-	354,742.50
Debt Service Reserve Fund ³	277,495.00	185,542.50	463,037.50
Costs of Issuance Fund ⁴	195,720.00	127,680.00	323,400.00
Underwriter's Discount	65,240.00	42,560.00	107,800.00
Underwriter's Counsel Fee	32,620.00	30,000.00	62,620.00
Administrative Fund ⁵	35,000.00	-	35,000.00
Total Uses of Funds	\$ 3,262,000.00	\$ 2,128,000.00	\$ 5,390,000.00

Notes:

1. Preliminary and subject to change. Subject to approval by the Issuer
2. Assumes capitalized interest through September 2025 on A bond only.
3. Funded to 100% of maximum annual debt service.
4. Estimated at 6.0% of bond par. Actual costs may vary.
5. First year deposit collected at bond closing. B bond shares costs with A bond.

City of Tomball, Texas
Special Assessment Revenue Bonds
(Hufmish Kohrville Public Improvement District)

Improvement Area Development Assumptions ¹

Lot Type	Number of Units ²	Developed Unit Value ²	Estimated Appraised Unit Value ³	Appraisal Value ³	Estimated Buildout Unit Value ²	Total Improvement Area Value ²	"A" Bond Assessment	"A" Bond Value to Lien	"B" Bond Assessment	Total Assessment	Assessment Unit Value ²	Maximum Annual Installment ⁴	Max Annual Installment per Unit ⁴	Estimated Equivalent Tax Rate ²
Improvement Area #1														
SF	87	\$ 125,000	\$ 112,500	\$ 9,787,500	\$ 625,000	\$ 54,375,000	\$ 3,262,000	3.0 : 1	\$ 2,128,000	\$ 5,390,000	\$ 61,954	\$ 516,563	\$ 5,938	\$ 0.9500
Total / Avg	87		\$ 112,500	\$ 9,787,500	\$ 625,000	\$ 54,375,000	\$ 3,262,000	3.0 : 1	\$ 2,128,000	\$ 5,390,000	\$ 61,954	\$ 516,563	\$ 5,938	\$ 0.9500

Notes:

- 1. Preliminary and subject to change. Subject to approval by the Issuer.
- 2. Lot count, buildout values and equivalent tax rate per the Developer. Developed lot value assumes 1/5th of buildout values. Actual values may vary.
- 3. Assumes 90% of developed lot values. Actual appraised value may vary.
- 4. Represents maximum annual installment based on buildout value at the estimated equivalent tax rate.

City of Tomball, Texas
Special Assessment Revenue Bonds, Series 2024
(Hufmish Kohrville Public Improvement District)

Estimated Net Annual Installments - Improvement Area No. 1 ¹

Maturity	Maximum Annual Installment ²	Principal	Interest Rate ³	Interest	Debt Service	Capitalized Interest ⁴	Debt Service Reserve Fund ⁵	Net Debt Service ⁶	Additional Interest ⁷	PID Admin Fee ⁸	Net IA #1 Annual Requirements ⁹	Remaining Installment Revenues ¹⁰
9/1/2024	\$ -	\$ -	7.250%	\$ 118,248	\$ 118,248	\$ 118,248	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9/1/2025	516,563	-	7.250%	236,495	236,495	236,495	-	-	16,310	35,700	52,010	464,553
9/1/2026	516,563	41,000	7.250%	236,495	277,495	-	-	277,495	16,310	36,414	330,219	186,344
9/1/2027	516,563	43,000	7.250%	233,523	276,523	-	-	276,523	16,105	37,142	329,770	186,793
9/1/2028	516,563	46,000	7.250%	230,405	276,405	-	-	276,405	15,890	37,885	330,180	186,382
9/1/2029	516,563	48,000	7.250%	227,070	275,070	-	-	275,070	15,660	38,643	329,373	187,190
9/1/2030	516,563	51,000	7.250%	223,590	274,590	-	-	274,590	15,420	39,416	329,426	187,137
9/1/2031	516,563	54,000	7.250%	219,893	273,893	-	-	273,893	15,165	40,204	329,261	187,301
9/1/2032	516,563	58,000	7.250%	215,978	273,978	-	-	273,978	14,895	41,008	329,881	186,682
9/1/2033	516,563	62,000	7.250%	211,773	273,773	-	-	273,773	14,605	41,828	330,206	186,357
9/1/2034	516,563	65,000	7.250%	207,278	272,278	-	-	272,278	14,295	42,665	329,237	187,325
9/1/2035	516,563	70,000	7.250%	202,565	272,565	-	-	272,565	13,970	43,518	330,053	186,509
9/1/2036	516,563	74,000	7.250%	197,490	271,490	-	-	271,490	13,620	44,388	329,498	187,064
9/1/2037	516,563	79,000	7.250%	192,125	271,125	-	-	271,125	13,250	45,276	329,651	186,911
9/1/2038	516,563	84,000	7.250%	186,398	270,398	-	-	270,398	12,855	46,182	329,434	187,128
9/1/2039	516,563	90,000	7.250%	180,308	270,308	-	-	270,308	12,435	47,105	329,848	186,715
9/1/2040	516,563	96,000	7.250%	173,783	269,783	-	-	269,783	11,985	48,047	329,815	186,748
9/1/2041	516,563	102,000	7.250%	166,823	268,823	-	-	268,823	11,505	49,008	329,336	187,227
9/1/2042	516,563	109,000	7.250%	159,428	268,428	-	-	268,428	10,995	49,989	329,411	187,151
9/1/2043	516,563	117,000	7.250%	151,525	268,525	-	-	268,525	10,450	50,988	329,963	186,599
9/1/2044	516,563	125,000	7.250%	143,043	268,043	-	-	268,043	9,865	52,008	329,916	186,647
9/1/2045	516,563	133,000	7.250%	133,980	266,980	-	-	266,980	9,240	53,048	329,268	187,294
9/1/2046	516,563	143,000	7.250%	124,338	267,338	-	-	267,338	8,575	54,109	330,022	186,541
9/1/2047	516,563	153,000	7.250%	113,970	266,970	-	-	266,970	7,860	55,191	330,021	186,541
9/1/2048	516,563	163,000	7.250%	102,878	265,878	-	-	265,878	7,095	56,295	329,268	187,295
9/1/2049	516,563	175,000	7.250%	91,060	266,060	-	-	266,060	6,280	57,421	329,761	186,801
9/1/2050	516,563	187,000	7.250%	78,373	265,373	-	-	265,373	5,405	58,570	329,347	187,215
9/1/2051	516,563	201,000	7.250%	64,815	265,815	-	-	265,815	4,470	59,741	330,026	186,536
9/1/2052	516,563	215,000	7.250%	50,243	265,243	-	-	265,243	3,465	60,936	329,643	186,919
9/1/2053	516,563	231,000	7.250%	34,655	265,655	-	-	265,655	2,390	62,155	330,200	186,363
9/1/2054	516,563	247,000	7.250%	17,908	264,908	-	277,495	(12,588)	1,235	63,398	329,540	187,022
	\$ 15,496,875	\$ 3,262,000		\$ 4,926,448	\$ 8,188,448	\$ 354,743	\$ 277,495	\$ 7,556,210	\$ 331,600	\$ 1,448,280	\$ 9,613,585	\$ 5,883,290

Notes:

1. Preliminary and subject to change. Subject to approval by the Issuer.
2. Based on buildout value and maximum equivalent tax rate at closing date.
3. Rates are for discussion and illustration purposes only and are preliminary and subject to change.
4. Assumes capitalized interest through September 2025.
5. Sized to 100% of maximum annual debt service.
6. Net of capitalized interest and debt service reserve fund release at maturity.
7. Assumes 0.50% of outstanding bond par. Sized as a continuous fund for conservative modelling purposes.
8. Assumes 2.0% annual escalation factor.
9. Net of capitalized interest but excludes release of debt service reserve fund at maturity.
10. For modeling purposes only.

City of Tomball, Texas
Special Assessment Revenue Bonds, Series 2025
(Hufmish Kohrville Public Improvement District)

Estimated Net Annual Installments - Improvement Area No. 1-B ¹

Maturity	Maximum Annual Installment ²	Less: IA #1-A Installments	Principal	Interest Rate ³	Interest	Debt Service	Capitalized Interest ⁴	Debt Service Reserve Fund ⁵	Net Debt Service ⁶	Additional Interest ⁷	PID Admin Fee ⁸	Net IA #1-B Annual Requirements ⁹	Remaining Installment Revenues ¹⁰
9/1/2024													
9/1/2025													
9/1/2026	\$ 516,563	\$ 330,219	\$ 21,000	7.250%	\$ 154,280	\$ 175,280	\$ -	\$ -	\$ 175,280	\$ 10,640	\$ -	\$ 185,920	\$ 424
9/1/2027	516,563	329,770	23,000	7.250%	152,758	175,758	-	-	175,758	10,535	-	186,293	500
9/1/2028	516,563	330,180	24,000	7.250%	151,090	175,090	-	-	175,090	10,420	-	185,510	872
9/1/2029	516,563	329,373	27,000	7.250%	149,350	176,350	-	-	176,350	10,300	-	186,650	540
9/1/2030	516,563	329,426	29,000	7.250%	147,393	176,393	-	-	176,393	10,165	-	186,558	579
9/1/2031	516,563	329,261	31,000	7.250%	145,290	176,290	-	-	176,290	10,020	-	186,310	991
9/1/2032	516,563	329,881	33,000	7.250%	143,043	176,043	-	-	176,043	9,865	-	185,908	774
9/1/2033	516,563	330,206	36,000	7.250%	140,650	176,650	-	-	176,650	9,700	-	186,350	7
9/1/2034	516,563	329,237	39,000	7.250%	138,040	177,040	-	-	177,040	9,520	-	186,560	765
9/1/2035	516,563	330,053	41,000	7.250%	135,213	176,213	-	-	176,213	9,325	-	185,538	972
9/1/2036	516,563	329,498	45,000	7.250%	132,240	177,240	-	-	177,240	9,120	-	186,360	704
9/1/2037	516,563	329,651	49,000	7.250%	128,978	177,978	-	-	177,978	8,895	-	186,873	39
9/1/2038	516,563	329,434	53,000	7.250%	125,425	178,425	-	-	178,425	8,650	-	187,075	53
9/1/2039	516,563	329,848	56,000	7.250%	121,583	177,583	-	-	177,583	8,385	-	185,968	747
9/1/2040	516,563	329,815	61,000	7.250%	117,523	178,523	-	-	178,523	8,105	-	186,628	120
9/1/2041	516,563	329,336	66,000	7.250%	113,100	179,100	-	-	179,100	7,800	-	186,900	327
9/1/2042	516,563	329,411	71,000	7.250%	108,315	179,315	-	-	179,315	7,470	-	186,785	366
9/1/2043	516,563	329,963	76,000	7.250%	103,168	179,168	-	-	179,168	7,115	-	186,283	317
9/1/2044	516,563	329,916	82,000	7.250%	97,658	179,658	-	-	179,658	6,735	-	186,393	254
9/1/2045	516,563	329,268	89,000	7.250%	91,713	180,713	-	-	180,713	6,325	-	187,038	257
9/1/2046	516,563	330,022	95,000	7.250%	85,260	180,260	-	-	180,260	5,880	-	186,140	401
9/1/2047	516,563	330,021	102,000	7.250%	78,373	180,373	-	-	180,373	5,405	-	185,778	764
9/1/2048	516,563	329,268	111,000	7.250%	70,978	181,978	-	-	181,978	4,895	-	186,873	422
9/1/2049	516,563	329,761	119,000	7.250%	62,930	181,930	-	-	181,930	4,340	-	186,270	531
9/1/2050	516,563	329,347	129,000	7.250%	54,303	183,303	-	-	183,303	3,745	-	187,048	168
9/1/2051	516,563	330,026	138,000	7.250%	44,950	182,950	-	-	182,950	3,100	-	186,050	486
9/1/2052	516,563	329,643	149,000	7.250%	34,945	183,945	-	-	183,945	2,410	-	186,355	564
9/1/2053	516,563	330,200	160,000	7.250%	24,143	184,143	-	-	184,143	1,665	-	185,808	555
9/1/2054	516,563	329,540	173,000	7.250%	12,543	185,543	-	185,543	-	865	-	186,408	615
	\$ 14,980,313	\$ 9,561,575	\$ 2,128,000		\$ 3,065,228	\$ 5,193,228	\$ -	\$ 185,543	\$ 5,007,685	\$ 211,395	\$ -	\$ 5,404,623	\$ 14,115

Notes:

1. Preliminary and subject to change. Subject to approval by the Issuer.
2. Based on buildout value and maximum equivalent tax rate at closing date.
3. Rates are for discussion and illustration purposes only and are preliminary and subject to change.
4. Assumes no capitalized interest on B Bonds.
5. Sized to 100% of maximum annual debt service.
6. Net of debt service reserve fund release at maturity.
7. Assumes 0.50% of outstanding bond par. Sized as a continuous fund for conservative modelling purposes.
8. Assumes B Bond shares collection costs with A Bond.
9. Excludes release of debt service reserve fund at maturity.
10. For modeling purposes only.

GRAYLOU GROVE PUBLIC IMPROVEMENT DISTRICT

DEVELOPMENT AGREEMENT

BETWEEN

FLS DEVELOPMENT, LLC, A LIMITED LIABILITY COMPANY

AND

THE CITY OF TOMBALL, TEXAS

Dated: _____, 2023

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**TOMBALL PUBLIC IMPROVEMENT DISTRICT
DEVELOPMENT AGREEMENT**

This Graylou Grove Public Improvement District Development Agreement (this “**Agreement**”), dated as of _____, 2023 (the “**Effective Date**”), (subject to termination as provided in Article 11) is entered into between FLS Development, LLC a Texas limited liability company (the “**Developer**”), and the City of Tomball Texas (the “**City**”), a home-rule city and municipal corporation, acting by and through its duly authorized representative.

Recitals:

WHEREAS, unless otherwise defined: (1) all references to “sections” shall mean to sections of this Agreement; (2) all references to “exhibits” shall mean exhibits to this Agreement which are incorporated as part of this Agreement for all purposes; and (3) all references to “ordinances” or “resolutions” shall mean ordinances or resolutions adopted by the City Council of the City of Tomball, Texas (the “City Council”); and

WHEREAS the Developer has acquired for development the approximately 50.105 acres of real property described in Exhibit A-1 attached hereto (the “Property”) located in part within the corporate limits of the City, and in part within the extraterritorial jurisdiction of the City (“ETJ”), and intends to develop it for single-family residential purposes, in accordance with the terms of this Agreement (the “Project”); and

WHEREAS, in order to incentivize the development of the Property and encourage and support economic development within the City and to promote employment, the City desires to facilitate the development of the Property through the financing of certain public infrastructure (the “Public Improvements” as defined herein) and constructing additional public improvements within the Property; and

WHEREAS, in order to finance the Public Improvements, the City Council intends to create a public improvement district that is coterminous with the boundaries of the portion of the Property (the “PID”), described in Exhibit A-2 attached hereto, in accordance with Chapter 372 Texas Local Government Code, as amended (the “PID Act”); and

WHEREAS, the City recognizes that financing of the Public Improvements confers a special benefit to the property within the PID; and

WHEREAS, the City intends to (upon satisfaction of the conditions and in accordance with the terms set forth in this Agreement), adopt the Assessment Ordinance (as defined herein) and adopt a Service and Assessment Plan (“SAP”) (as defined herein) which provide for the construction, and financing of the Public Improvements pursuant to the Service and Assessment Plan, payable in whole or in part by and from Assessments levied against property within the PID (whether through a cash reimbursement or through an issuance of PID Bonds); and

WHEREAS the Property currently lies within an area certificated for retail water service under a CCN granted to Aqua Texas. The Developer intends to, upon satisfaction of the conditions

and in accordance with the terms set forth in this Agreement, cause the release of the Property from the Aqua Texas CCN.

WHEREAS, upon satisfaction of the conditions and in accordance with the terms set forth in this Agreement, the City intends to levy Assessments on all benefitted property located within the PID and issue PID Bonds (as defined herein) up to a maximum aggregate principal amount of \$8,000,000.00 for payment or reimbursement of the Public Improvements included in the SAP; and

WHEREAS the payment or reimbursement for the Public Improvements shall be solely from the installment payments of Assessments and/or proceeds of the PID Bonds and the City shall never be responsible for the payment of the Public Improvements or the PID Bonds from its general fund, or its ad valorem tax collections, past or future, or any other source of City revenue, or any assets of the City of whatsoever nature; and

WHEREAS, the City recognizes the positive impact that the construction and installation of the Public Improvements for the PID will bring to the City and will promote state and local economic development; to stimulate business and commercial activity in the City; for the development and diversification of the economy of the State; development and expansion of commerce in the State, and elimination of employment or underemployment in the State;

WHEREAS, the Parties acknowledge that, as to the portion of the Property located in the ETJ, this Agreement is a development agreement as provided for by law, including Section 212.171 et seq of the Texas Local Government Code.

NOW, THEREFORE, for and in consideration of the mutual agreements, covenants, and conditions contained herein, and other good and valuable consideration, the parties hereto agree as follows:

ARTICLE I

DEFINITIONS

For all purposes of this Agreement, except as otherwise expressly provided or unless the context otherwise requires, the terms defined in this Article have the meanings assigned to them in the Recitals or this Article, and all such terms include the plural as well as the singular.

“Actual Costs” is defined in the Service and Assessment Plan.

“Affiliates” of FLS Development, LLC means any other person directly controlling, or directly controlled by or under direct common control with the Developer. As used in this definition, the term “control,” “controlling” or “controlled by” shall mean the possession, directly, of the power either to (a) vote fifty percent (50%) or more of the securities or interests having ordinary voting power for the election of directors (or other comparable controlling body) of the Developer, or (b) direct or cause the direction of management or policies of the Developer, whether through the ownership of voting securities or interests, by contract or otherwise, excluding in each case, any lender of the Developer or any affiliate of such lender.

“Agreement” has the meaning stated in the first paragraph of this Agreement.

“Amenities” means the amenities to be constructed by the Developer and owned by the Developer or the HOA, as set forth in Exhibit J.

“Annual Installments” means with respect to each parcel subject to Assessments, each annual payment of the Assessments, including any applicable interest, as set forth and calculated in the SAP.

“Applicable Law” means any statute, law, treaty, rule, code, ordinance, regulation, permit, interpretation, certificate or order of any Governmental Authority, or any judgment, decision, decree, injunction, writ, order or like action of any court, arbitrator or other Governmental Authority. Applicable Laws shall include, but not be limited to, City Regulations.

“Appraisal” means an appraisal of the property to be assessed in each PID by a licensed MAI Appraiser, such Appraisal to include as-complete improvements, including the Public Improvements to be financed in part with PID Bonds (i.e., “as-complete”) and the construction and installation of the Private Improvements, necessary to get a Final Lot Value.

“Assessment Ordinance” means one or more of the City’s ordinances approving a SAP and levying Assessments on the benefitted Property within the PID.

“Assessments” means those certain assessments levied by the City pursuant to the PID Act and on benefitted parcels within the PID for the purpose of paying the costs of the Public Improvements, which Assessments shall be structured to be amortized over 30 years, including interest, all as set forth in or modified by the Service and Assessment Plan.

“Certificate of Convenience and Necessity” or “CCN” means a certificate of that name issued by the Texas Public Utility Commission or its predecessor or successor agency pursuant to Chapter 13, Texas Water Code.

“City” means the City of Tomball, Texas.

“City Regulations” mean provisions of the City’s Code of Ordinances, ordinances not codified, design standards, uniform and international building and construction codes, and other policies duly adopted by the City, which shall be applied to the Development, including zoning and the approved Planned Development.

“City Representative” means the City Manager or designee which may include a third-party inspector or representative.

“Closing Disbursement Request” means the Closing Disbursement Request described in Section 8.03, the form of which is attached as Exhibit G.

“Commencement of Construction” shall mean that (i) the plans have been prepared and all approvals thereof required by applicable governmental authorities have been obtained for construction of the applicable improvement, or portion thereof, as the case may be, on the Property; (ii) all necessary permits for the initiation of construction of the improvement, or portion thereof,

as the case may be, on the Property pursuant to the respective plans therefore having been issued by all applicable governmental authorities; and (iii) grading of the Property for the construction of the applicable improvement, or portion thereof, as the case may be, has commenced.

“Completion of Construction” shall mean that the City has with respect to applicable Public Improvements accepted the respective Public Improvements and confirmed that Final Completion has been reached with respect to such Public Improvements.

“Completed Lots” means Fully Developed and Improved Lots for which (i) water, sanitary sewer, drainage and roads have been extended, and (ii) the City has authorized that a building permit may be obtained for construction on each lot.

“Construction Agreements” mean the contracts for the construction of the Public Improvements.

“Cost Overruns” means those Public Improvement Project Costs that exceed the budget cost set forth in the SAP(s) plus the Developer Cash Contribution.

“Cost Underruns” means Public Improvement Project Costs that are less than the budgeted cost set forth in the SAP(s).

“Delinquent Collection Costs” shall be defined in the SAP(s).

“Developer” means FLS Development, LLC a Texas limited liability company, its successors and permitted assigns.

“Development” means the Graylou Grove Development, a residential development to be developed and constructed on the Property pursuant to the terms of this Agreement.

“Development Standards” means those standards set forth in Exhibit D.

“Effective Date” means the date set forth in the first paragraph of this Agreement which shall be the earliest date on which (i) the Developer has executed this Agreement and (ii) the Agreement is approved by City Council in open session.

“End Buyer” means any developer, homebuilder, tenant, user, or owner of a Fully Developed and Improved Lot.

“Estimated Build Out Value” means the estimated value of an assessed property with fully constructed buildings, as provided by the Developer and confirmed by the City by considering such factors as density, lot size, estimated square footage of the homes to be built, proximity to amenities, view premiums, location, market conditions, historical sales, builder contracts, discussions with homebuilders, reports from third party consultants, or any other factors that, in the judgment of the City, may impact value.

“Final Completion” means as the point in the construction of the project when the City determines that the project is 100% completed, including punch list work.

“Final Lot Value” means the developed lot values established by an Appraisal.

“Force Majeure” means any act that (i) materially and adversely affects the affected Party’s ability to perform the relevant obligations under this Agreement or delays such affected Party’s ability to do so, (ii) is beyond the reasonable control of the affected Party, (iii) is not due to the affected Party’s fault or negligence and (iv) could not be avoided, by the Party who suffers it, by the exercise of commercially reasonable efforts. “Force Majeure” shall include: (a) natural phenomena, such as storms, floods, lightning and earthquakes; (b) wars, civil disturbances, revolts, insurrections, terrorism, sabotage and threats of sabotage or terrorism; (c) transportation disasters, whether by ocean, rail, land or air; (d) strikes or other labor disputes that are not due to the breach of any labor agreement by the affected Party; (e) fires; (f) epidemics or pandemics where shut-down of residential construction or the manufacturing of supplies relating thereto has been ordered by a Governmental Authority; and (g) actions or omissions of a Governmental Authority (including the actions of the City in its capacity as a Governmental Authority) that were not voluntarily induced or promoted by the affected Party, or brought about by the breach of its obligations under this Agreement or any Applicable Law or failure to comply with City Regulations; provided, however, that under no circumstances shall Force Majeure include any of the following events: (g) economic hardship; (h) changes in market condition; (i) any strike or labor dispute involving the employees of the Developer or any Affiliate of the Developer, other than industry or nationwide strikes or labor disputes; (j) during construction, weather conditions which could reasonably be anticipated by experienced contractors operating the relevant location; (k) the occurrence of any manpower, material or equipment shortages except as set forth in (f) above; or (l) any delay, default or failure (financial or otherwise) of the general contractor or any subcontractor, vendor or supplier of the Developer, or any construction contracts for the Project Improvement and Public Improvements.

“Fully Developed and Improved Lot” means any lot in the Property, regardless of proposed use, intended to be served by the Public Improvements and for which a final plat has been approved by the City and recorded in the Real Property Records of Harris County, Texas.

“Governmental Authority” means any Federal, state or local governmental entity (including any taxing authority) or agency, court, tribunal, regulatory commission or other body, whether legislative, judicial or executive (or a combination or permutation thereof) and any arbitrator to whom a dispute has been presented under Applicable Law, pursuant to the terms of this Agreement or by agreement of the Parties.

“HOA” is defined in Section 11.01.

“HOA Maintenance Agreement” is defined in Section 11.01

“HOA Maintained Improvements” is defined in Section 11.01.

“Home or Property Buyer Disclosure Program” means the disclosure program, as set forth in a document in the form of Exhibit H that establishes a mechanism to disclose to each End Buyer the terms and conditions under which their lot is burdened by the PID.

“Impact Fees” means all utility and roadway impact fees relating to capital improvements that may be assessed and collected by the City on the Property in accordance with Chapter 395, Texas Local Government Code.

“Indenture(s)” means the applicable indenture of trust pursuant to which PID Bonds are issued.

“Landscape Regulations” means those regulations and standards for landscaping as contained in the PD.

“Landowner Consent” means a consent executed by the applicable owner(s) of the Property consenting to the formation of the PID and the levy of Assessments, in form attached hereto as Exhibit E.

“Impact Fees” means all utility impact fees relating to the Public Improvements in each case assessed, imposed and collected by the City on the Property in accordance with the City Regulations adopted by the City, as may be revised or amended from time to time.

“Impositions” shall mean all taxes, assessments, use and occupancy taxes, sales taxes, charges, excises, license and permit fees, and other charges by public or governmental authority, which are or may be assessed, charged, levied, or imposed by any public or governmental authority on Developer, or any property or any business owned by Developer within City.

“Indenture(s)” means the applicable trust indenture pursuant to which PID Bonds are issued.

“Lot(s)” means a parcel of land zoned for single family use and final platted for such use.

“Net Bond Proceeds” means the proceeds of the PID Bonds issued pursuant to Sections 3.02, net of costs of issuance, capitalized interest, reserve funds and other financing costs, that are deposited to the project fund for such bonds.

“Parties” or “Party” means the City and the Developer as parties to this Agreement.

“Payment Certificate” means a Payment Certificate as set forth in Section 8.03, the form of which is attached as Exhibit F.

“PD” or “PD Zoning” means the Planned Development Zoning District Ordinance to be approved by the City.

“PID Act” means Chapter 372, Texas Local Government Code, as amended.

“PID Bond Proceeds” means the proceeds of the PID Bonds, net of costs of issuance, capitalized interest, reserve funds and other financing costs, that are deposited to the Project Fund.

“PID Bonds” means one or more series special assessment revenue bonds issued by the City pursuant to the PID Act for the reimbursement of the Public Improvement Project Costs.

“PID” or “Public Improvement District” means the Graylou Grove Public Improvement District encompassing that portion of the Property described in **Exhibit A-2**.

“Plans and Specifications” means the plans and specifications for Public Improvements approved by the City.

“Private Improvements” means these horizontal improvements described in the Plans and Specifications submitted to the City as part of the zoning process, other than the Public Improvements, being constructed to get to a Final Lot Value.

“Professional Services Agreement” means that certain agreement between the City and the Developer pursuant to which the Developer shall pay certain City costs with respect to the Development and PID financing.

“Project Fund” means the fund by that name created under each Indenture into which PID Bond Proceeds shall be deposited.

“Property” means approximately 50.105 acres of real property located in part within the corporate limits of the City, in part within the extraterritorial jurisdiction of the City, and described in Exhibit A-1.

“Public Improvement Financing Date” means the date the City levies Assessments on the Property, such date to be the date the Lots become Fully Developed and Improved Lots, which date may be extended by written agreement of the Parties.

“Public Improvement Project Costs” means the estimated cost of the Public Improvements to be constructed to benefit the land within the PID as set forth in Exhibit C, as may be amended pursuant to this Agreement, such costs to be eligible “project costs,” as defined in the PID Act.

“Public Improvements” means public improvements to be developed and constructed or caused to be developed or constructed inside and outside the PID by the Developer to benefit the PID and the Property, which will include improvements described in Exhibit C.

“Public Improvement Completion Date” means a date that is no later than twenty-four (24) months after Commencement of Construction for the Public Improvements to be funded by the PID Bonds. Such date may be extended by two six (6) month extensions that may be granted by the City Manager upon request of the Developer.

“Reimbursement Agreement(s)” means the agreement(s) between the City and the Developer in which Developer agrees to fund the certain costs of Public Improvements and the City agrees to reimburse the Developer for a portion of such costs of the Public Improvements from the proceeds of Assessments pursuant to the SAP(s) or from future PID Bond proceeds, if any.

“Reimbursement Cap” means the amount of \$8,000,000.00.

“Service and Assessment Plan” or “SAP” means the service and assessment plans drafted pursuant to the PID Act for the PID and any amendments or updates thereto, adopted and approved

by the City that identifies and allocates the Assessments on benefitted parcels within the PID and sets forth the method of assessment, the parcels assessed, the amount of the Assessments, the Public Improvements and the method of collection of the Assessment.

“Trustee” means the trustee under the Indenture.

“Waiver of Liens” means a complete, final and unconditional waiver of all liens with respect to the Public Improvements.

ARTICLE II

THE DEVELOPMENT

Section 2.01. Scope of Agreement. This Agreement establishes provisions for the apportionment, levying, and collection of Assessments on the portion of the Property within the PID, the construction of the Public Improvements, reimbursement, acquisition, ownership and maintenance of the Public Improvements, and the issuance of PID Bonds for the financing of the Public Improvements benefitting the property within the PID.

Section 2.02. Project Overview – The Development.

(a) The Developer will undertake or cause the undertaking of the design, development, construction, maintenance, management, use and operation of the Development, and will undertake the design, development and construction of the Public Improvements. The Development will consist of the following elements:

- (i) Up to 87 single family homes; and.
- (ii) the Amenities.

(b) Subject to the terms and conditions set forth in this Agreement, the Developer shall plan, design, construct, and complete or cause the planning, designing, construction, and completion of the Public Improvements to the City’s standards and specifications and subject to the City’s approval as provided herein and in accordance with City Regulations, the Development Regulations, and Applicable Law.

(c) Upon completion and acceptance by the City, the City shall own and maintain all of the Public Improvements.

(d) The Developer shall construct or cause to be constructed, the Amenities as set forth in Exhibit J and such Amenities shall not be owned by the City and shall not be paid or reimbursed as a Public Improvement Project Cost.

ARTICLE III

PUBLIC IMPROVEMENT DISTRICT

Section 3.01. Creation.

The Developer intends to request the creation of the PID that encompasses a portion of the Property by submitting a petition to the City that contains a list of the Public Improvements to be funded or acquired with the PID Bond Proceeds and the estimated or actual costs of such Public Improvements. Such petition shall also allow for the City's levy of Assessments for maintenance purposes and for administration of the PID. Upon receipt and acceptance of such petition, the City shall hold a public hearing to consider the creation of the PID in accordance with the PID Act. Developer has previously entered into Professional Services Agreement that obligates Developer to fund the costs of the City's professionals relating to the creation of the PID, which amount shall be considered a cost payable from PID Bond Proceeds.

Section 3.02. Issuance of PID Bonds.

(a) Subject to the terms and conditions set forth in this Article III, the City intends to levy Assessments on the Property and thereafter authorize the issuance of PID Bonds in one or more series up to an aggregate principal amount of \$8,000,000.00 to directly fund or reimburse the Public Improvements Project Costs. The Public Improvements to be constructed and reimbursed in connection with the PID Bonds are detailed in Exhibit C, which may be amended from time to time, and in the Service and Assessment Plan for the PID or any updates thereto. The net proceeds from the sale of each series of PID Bonds (i.e., net of costs and expenses of issuance of each series of PID Bonds and amounts for debt service reserves and capitalized interest) will be used to reimburse the Public Improvement Project Costs. Notwithstanding anything in this Agreement, the issuance of PID Bonds and the levy of Assessments is a discretionary governmental action by the City Council and subject to the City's approval and the issuance of PID Bonds is also subject to market conditions at the time of issuance. The issuance of PID Bonds and the levy of Assessments is an action to be taken by a future City Council and such future City Council shall not be bound by the terms of this Agreement with respect to the issuance of PID Bonds and the levy of Assessments.

(b) The issuance of PID Bonds is subject to the discretion of the City Council and each series of PID Bonds shall be issued with the terms deemed appropriate by the City Council at the time of issuance, if at all.

(c) The following conditions must be satisfied prior to the City's consideration of the sale of PID Bonds:

(i) The date of the levy of Assessments is on or before the Public Improvement Financing Date.

(ii) The total maximum aggregate par amount of the PID Bonds to be issued by the City shall not exceed \$8,000,000.00

(iii) The maximum “tax rate” (annual assessment) to be levied on the Lots, shall be no greater than \$0.95 per \$100 of assessed value at the time of the levy of the Assessment on each Lot based on the Estimated Build Out Value of each Lot; such rate limit for each Lot as determined at the time of the levy of the Assessments applies on an individual assessed parcel basis by lot type based on Estimated Build Out Value, as will be set forth in more detail in the Service and Assessment Plan.

(iv) the total assessment value to lien (“VTL”) ratio is at least 1:8:1 at the time of the levy of Assessments and the total assessment value to lien ratio of each series of PID Bonds for is at least 3:1 at the time of the issuance of PID Bonds; such values shall be confirmed by appraisal from licensed MAI appraiser.

(v) The Developer or its Affiliates, or another entity that has purchased a portion of the Property for development shall own all property within the PID prior to the levy of Assessments, or have otherwise complied with Section 3.04 herein. The City shall not levy Assessments without a recorded consent to the creation of the PID and the levy of Assessments from each property owner within the area to be assessed by the City.

(vi) No Event of Default by the Developer has occurred or no event has occurred which but for notice, the lapse of time or both, would constitute an Event of Default by the Developer pursuant to this Agreement, except that if an Event of Default has occurred and has been cured by the Developer, it shall not prevent the issuance of PID Bonds by the City;

(vii) The limitation imposed by subsections (iii) and (iv) above may result in the City issuing a series of PID Bonds to fund the construction of the Authorized Improvements at a VTL of 1:8:1 and the City holding a portion of the PID Bond Proceeds in escrow (to reimburse Developer) until a sufficient number of homes are built within the assessed area to meet VTL of 3:1 ratio.

(d) In no event shall the Developer be paid and/or reimbursed from PID Bond Proceeds, or Assessment revenues for all Public Improvement Project Costs in an amount in excess of the Reimbursement Cap.

Section 3.03. Apportionment and Levy of Assessments.

(a) The City intends to levy Assessments on property located within the PID in accordance with this Agreement, the Service and Assessment Plans (as such plans are amended supplemented or updated from time to time), and the Assessment Ordinance on or before the Public Improvement Financing Date. The Assessments, if levied, shall be levied and a reimbursement agreement entered into, prior to the City’s acceptance of the Public Improvements, subject to the City Council’s discretion. At the time of such levy, the City intends to enter into a Reimbursement Agreement with the Developer for all of the land in the PID. The City’s apportionment and levy of Assessments shall be made in accordance with the PID Act.

(b) Concurrently with the levy of the Assessments, the Developer and its Affiliates shall execute and deliver a Landowner Consent in the form attached as Exhibit E for all land owned

or controlled by Developer or its Affiliates, or otherwise evidence consent to the creation of the and the levy of Assessments therein and shall record evidence and notice of the Assessments in the real property records of Harris County. The City shall not levy Assessments on property within the PID without an executed Landowner Consent from each landowner within the PID whose property is being assessed.

Section 3.04. Transfer of Property. Notwithstanding anything to the contrary contained herein, no sale of property within the PID shall occur prior to the City's levy of Assessments in the PID unless the Developer provides the City with an executed consent to the creation of the PID and the levy of Assessments, in a form acceptable to the City with respect to the purchased property, signed by the transferee of such property. In addition, evidence of any transfer of property in the PID prior to the levy of Assessments on such property shall be provided to the City prior to the levy of Assessments on such property. The City shall require consent of each of the owners of Assessed Property in the PID to the levy of Assessments on each property and to the creation of the PID prior to Assessments being levied on such owner's property. The Developer understands and acknowledges that evidence of land transfer, the execution of the Landowner Consent, appraisal district certificate and property record recording will be required from each Assessed Property Owner in order to levy the Assessments. The Developer shall provide all necessary documentation to the City with respect to any land transfers.

ARTICLE IV

DEVELOPMENT

Section 4.01. Full Compliance with City Standards.

Development and use of the Property by Developer and its Affiliates, including, without limitation, the construction, installation, maintenance, repair, and replacement of all buildings and all other improvements and facilities of any kind whatsoever on and within the Property, shall be in compliance with the then current applicable City Regulations, the Development Standards and with the PD. In the event of any conflict between this Agreement (including the PD) and the City Regulations or Development Standards, the terms of this Agreement shall apply.

Section 4.02. Development Standards and Planned Development. As consideration for the City's obligations under this Agreement and in consideration for the funding or reimbursement of the Public Improvement Project Costs, the Developer agrees that its development and use of the Property, including, without limitation, the construction, installation, maintenance, repair and replacement of all buildings and all other improvements and facilities of any kind whatsoever on and within the Property, shall be in compliance with the City Regulations, the Development Standards attached hereto as Exhibit D, the PD attached as Exhibit B. Any material changes (as determined by the City) to the PD, or the Development Standards attached hereto must be approved by the City. Upon approval by the City of an updated PD, or Development Standards, this Agreement shall be deemed amended to include such approved updated items.

Section 4.03. Property Acquisition. With the exception of the acquisition of easement rights as set forth in Article VI hereof, the Parties acknowledge that the Developer is responsible for the acquisition of certain off-site property rights and interests to allow the Public Improvements to be constructed to serve the Property. The City agrees to allow Developer the use of any City easements, rights of way or owned property as is reasonably necessary for the construction and installation of the Public Improvements. If the Developer is unable to obtain such third-party rights-of-way, consents, or easements, the City agrees to take reasonable steps to secure same (subject to City Council authorization after a finding of public necessity), at Developer's cost, through the use of the City's power of eminent domain. Developer shall be responsible for funding all reasonable and necessary legal proceeding/litigation costs, attorney's fees and related expenses, and appraiser and expert witness fees actually incurred by the City in the exercise of its eminent domain powers, such costs to be paid by the Developer pursuant to the Professional Services Agreement.

Section 4.04. Zoning of Property. The Developer consents and agrees to the zoning of the Property pursuant to the planned development process and that such zoning shall be consistent with the PD set forth in Exhibit B.

Section 4.05. Conflicts. In the event of any conflict between this Agreement and any City Regulation, the terms of this Agreement shall control.

Section 4.06. Replat. The Developer may submit a replat for all or any portion of the Property. Any replat shall be in conformance with City Regulations, the PD, the Development Standards and the PID and may require a prepayment of Assessments as set forth in the applicable SAP.

ARTICLE V

DEVELOPMENT CHARGES

Section 5.01. Plat Review Fees. Development of the Property shall be subject to payment to the City of the reasonable fees and charges applicable to the City's preliminary and final plat review and approval process according to the fee schedule adopted by the City Council and in effect at the time of platting.

Section 5.02. Plan Review and Permit Fees. Development of the Property shall be subject to payment to the City of the reasonable fees and charges applicable to the City's review of plans and specifications and issuance of permits (including building permits) for construction of the Public Improvements and any other improvements requiring City review, according to the fee schedule adopted by the City Council at the time of plan review and permit issuance.

Section 5.03. Inspection Fees. Development of the Property shall be subject to the payment to the City of inspection fees according to the fee schedule adopted by the City Council at the time of inspection.

Section 5.04. Park Fees. The park, open space and Amenities set forth in the PD and in Exhibit J shall satisfy the requirement for any parkland or open space dedication requirements or fees in lieu of as well as any park development fees.

Section 5.05. Inspection Fees. Development of the Property shall be subject to the payment to the City of inspection fees according to the fee schedule adopted by the City Council at the time of inspection.

Section 5.06. Impact Fees. All impact fees associated with the Development shall be paid pursuant to the City Regulations.

ARTICLE VI

ANNEXATION AND ZONING MATTERS; DISTRICTS

Section 6.01. Annexation of Land into City. Following the City creating the PID and entering into the Reimbursement Agreement, Developer shall petition the City to annex that portion of the Property currently located in the ETJ into the corporate limits of the City (“Annexation Petition”).

Section 6.02. Zoning. In conjunction with Developer annexing into the City corporate limits that portion of the Property located in the ETJ, Developer shall deliver an application for the zoning of Property consistent with the PD (“Zoning Application”). The City shall process the Zoning Application concurrently with the Annexation Petition and shall set votes on approval of the annexation and zoning ordinance at the same City Council meeting. In the event of a conflict between this Agreement and any zoning ordinance adopted by the City Council relating to the portion of the Property currently located in the ETJ, this Agreement shall apply.

ARTICLE VII

DEVELOPMENT SPECIFIC REQUIREMENTS

Section 7.01. Scope of Development. The Developer will develop the property in accordance with the Planned Development (“PD”) attached as Exhibit “B”.

Section 7.02. Limitations on Development. The Developer will not be responsible for paving Medical Complex Boulevard to and through, nor shall Developer be responsible for connecting by pavement [or utility] with Country Club Green South.

ARTICLE VIII

CONSTRUCTION OF THE PUBLIC IMPROVEMENTS

Section 8.01. Designation of Construction Manager, Construction Engineers.

(a) Prior to construction of any Public Improvement, Developer shall make, or cause to be made, application for any necessary permits and approvals required by City and any applicable Governmental Authority to be issued for the construction of the Public Improvements

and shall obligate each general contractor, architect, and consultants who work on the Public Improvements to obtain all applicable permits, licenses or approvals as required by Applicable Law. The Developer shall require or cause the design, inspection, and supervision of the construction of the Public Improvements to be undertaken in accordance with City Regulations, the Development Standards, and Applicable Law.

(b) The Developer shall design and construct or cause the design and construction of the Public Improvements, together with and including the acquisition, at its sole costs, of any and all easements or fee simple title to such land necessary to provide for and accommodate the Public Improvements.

(c) Developer shall comply, or shall require its contractors to comply, with all local and state laws and regulations, including the City Regulations, regarding the design and construction of the Public Improvements applicable to similar facilities constructed by City, including, but not limited to, the requirement for payment, performance and two- year maintenance bonds for the Public Improvements at 100%.

(d) Upon Completion of Construction of the Public Improvements, Developer shall provide City with a final cost summary of all Public Improvement Project Costs incurred and paid associated with the construction of that portion of the Public Improvements and provide proof that all amounts owing to contractors and subcontractors have been paid in full evidenced by the “all bills paid” affidavits and lien releases executed by Developer and/or its contractors with regard to that portion of the Public Improvements. Evidence of payment to the applicable contractors and subcontractors shall be provided prior to the reimbursement of the costs of any portion of the Public Improvements.

(e) Developer agrees to require the contractors and subcontractors which construct the Public Improvements to provide payment, performance and two-year maintenance bonds in forms reasonably satisfactory to the City Attorney. Any surety company through which a bond is written shall be a surety company duly authorized to do business in the State of Texas, provided that the City Attorney has the right to reasonably reject any surety company regardless of such company’s authorization to do business in Texas. Evidence of payment and performance bonds shall be delivered to the City prior to Commencement of Construction of any such Public Improvements.

(f) Unless otherwise approved in writing by the City, all Public Improvements shall be constructed and dedicated to the City in accordance with City Regulations, the Development Standards and Applicable Law. The Public Improvements shall reach Completion of Construction by the Public Improvement Completion Date.

(g) The Developer shall dedicate or convey by final plat or separate instrument, without cost to the City and in accordance with the Applicable Law, all property rights (which may be an easement) necessary for the construction, operation, and maintenance of the road, water, drainage, and sewer Public Improvements, at the completion of the Public Improvements and acceptance by the City.

Section 8.02. Construction Agreements. The Construction Agreements shall be let in the name of the Developer. The Developer’s engineers shall prepare and provide, or cause the

preparation and provision of, all contract specifications and necessary related documents. The Developer shall provide all construction documents for the Public Improvements and shall acknowledge that the City has no obligations and liabilities thereunder. The Developer shall include a provision in the construction documents for the Public Improvements that the contractor will indemnify the City and its officers and employees against any costs or liabilities thereunder, as follows:

CITY OF TOMBALL, TEXAS ("CITY") SHALL NOT BE LIABLE OR RESPONSIBLE FOR, AND SHALL BE INDEMNIFIED, HELD HARMLESS AND RELEASED BY CONTRACTOR FROM AND AGAINST ANY AND ALL SUITS, ACTIONS, LOSSES, DAMAGES, CLAIMS, OR LIABILITY OF ANY CHARACTER, TYPE, OR DESCRIPTION, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR ANY LOSS, DAMAGE, INJURY OF ANY KIND OR CHARTER, INCLUDING DEATH, TO ANY PERSON, ENTITY, OR PROPERTY ARISING OUT OF OR OCCASIONED BY, DIRECTLY OR INDIRECTLY, THE PERFORMANCE OF CONTRACTOR UNDER THIS CONTRACT, WITHOUT, HOWEVER, WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO THE CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW. THE PROVISIONS OF THIS INDEMNIFICATION ARE SOLELY FOR THE BENEFIT OF THE PARTIES HERETO AND NOT INTENDED TO CREATE OR GRANT ANY RIGHTS, CONTRACTUAL OR OTHERWISE, TO ANY OTHER PERSON OR ENTITY. IT IS THE EXPRESSED INTENT OF THE PARTIES TO THIS CONTRACT THAT THE INDEMNITY PROVIDED FOR IN THIS CONTRACT IS AN INDEMNITY EXTENDED BY CONTRACTOR TO INDEMNIFY AND PROTECT CITY FROM THE CONSEQUENCES OF THE CONTRACTOR'S ACTS, INCLUDING NEGLIGENCE, WHETHER SUCH ACTS OR NEGLIGENCE IS THE SOLE OR PARTIAL CAUSE OF ANY SUCH INJURY, DEATH, OR DAMAGE. CONTRACTOR AGREES TO INDEMNIFY, DEFEND, AND SAVE CITY HARMLESS FROM ALL CLAIMS GROWING OUT OF ANY DEMANDS OF SUBCONTRACTORS, LABORERS, WORKMEN, MECHANICS, MATERIALMEN, OR SUPPLIERS OF MACHINERY AND PARTS THEREOF, EQUIPMENT, POWER TOOLS, OR SUPPLIES OBTAINED IN FURTHERANCE OF THE PERFORMANCE OF THIS CONTRACT

The Developer or its designee shall administer the contracts. The Public Improvement Project Costs, which are estimated on Exhibit C, shall be (i) paid by the Developer or caused to be paid by the Developer, and reimbursed by the Assessments levied pursuant to the terms of a Reimbursement Agreement or (ii) paid from the proceeds of PID Bonds issued to pay the Public Improvement Project Costs.

(a) The following requirements apply to Construction Agreements for Public Improvements:

(i) Plans and specifications shall comply with all Applicable Law, the Development Standards and City Regulations and all Plans and Specification shall be reviewed and approved by the City prior to the issuance of permits. The City shall have thirty (30) business days from its receipt of the first submittal of the Plans and Specifications to approve or deny the Plans and Specifications or to provide comments to the submitter. If any approved Plans and Specifications are amended or supplemented, the City shall have thirty (30) business days from its receipt of such amended or supplemented Plans and Specifications to approve or deny the Plans and Specification or provide comments back to the submitter. Any written City approval or denial must be based on compliance with applicable City Regulations or other regulatory agencies that have jurisdiction over the Development.

(ii) Each Construction Agreement shall provide that the Contractor is an independent contractor, independent of and not the agent of the City and that the Contractor is responsible for retaining, and shall retain, the services of necessary and appropriate architects and engineers; and

(iii) Each Construction Agreement for improvements not yet under construction shall provide that the Contractor shall indemnify the City, its officers and employees for any costs or liabilities thereunder and for the negligent acts or omissions of the Contractor.

(b) City's Role.

The City shall have no responsibility for the cost of planning, design, engineering construction, furnishing/equipping the Public Improvements (before, during or after construction) except to the extent of the reimbursement the Public Improvements Project Costs as set forth in this Agreement. The Developer will not hold the City responsible for any costs of the Public Improvements other than the reimbursements described in this Agreement. The City shall have no liability for any claims that may arise out of design or construction of the Public Improvements, and the Developer shall cause all of its contractors, architects, engineers, and consultants to agree in writing that they will look solely to the Developer, not to the City, for payment of all costs and valid claims associated with construction of the Public Improvements.

Section 8.03. Project Scope Verification.

The Developer will from time to time, as reasonably requested by the City Representative, verify to the City Representative that the Public Improvements are being constructed substantially in accordance with the Plans and Specifications approved by the City. To the extent the City has concerns about such verification that cannot be answered by the Developer, to the City's reasonable satisfaction, the Developer will cause the appropriate architect, engineer or general contractor to consult with the Developer and the City regarding such concerns.

Section 8.04. Joint Cooperation; Access for Planning and Development.

During the planning, design, development and construction of the Public Improvements, the parties agree to cooperate and coordinate with each other, and to assign appropriate, qualified personnel to this project. The City staff will make reasonable efforts to accommodate urgent or emergency requests during construction. In order to facilitate a timely review process, the Developer shall cause the architect, engineer and other design professionals to attend City meetings if requested by the City.

Section 8.05. City Not Responsible.

By performing the functions described in this Article, the City shall not, and shall not be deemed to, assume the obligations or responsibilities of the Developer, whose obligations under this Agreement and under Applicable Law shall not be affected by the City's exercise of the functions described in this Article. The City's review of any Plans and Specifications is solely for the City's own purposes, and the City does not make any representation or warranty concerning the appropriateness of any such Plans and Specifications for any purpose. The City's approval of (or failure to disapprove) any such Plans and Specifications, including the Site Plan, submitted with such Plans and Specifications and any revisions thereto, shall not render the City liable for same, and the Developer assumes and shall be responsible for any and all claims arising out of or from the use of such Plans and Specifications.

Section 8.06. Construction Standards and Inspection.

The Public Improvements will be installed within the public right-of-way or in easements granted to the City. Such easements may be granted at the time of final platting in the final plat or by separate instrument. The Public Improvements shall be constructed and inspected in accordance with applicable state law, and City Regulations, and all other applicable development requirements, including those imposed by any other governing body or entity with jurisdiction over the Public Improvements, and this Agreement, provided, however, that if there is any conflict, the regulations of the governing body or entity with jurisdiction over the Public Improvement being constructed shall control.

Section 8.07. Public Improvements to be Owned by the City – Title Evidence.

The Developer shall furnish to the City a preliminary title report for land with respect to the Public Improvements, including any related rights-of-way, easements, and open spaces if any, to be acquired and accepted by the City from the Developer and not previously dedicated or otherwise conveyed to the City, for review and approval at least 30 calendar days prior to the transfer of title of a Public Improvement to the City. The City Representative shall approve the preliminary title report unless it reveals a matter which, in the reasonable judgment of the City, could materially affect the City's use and enjoyment of any part of the property or easement covered by the preliminary title report. In the exercise of reasonable judgment, the City Representative shall review the title report using their normal and customary review process for an easement and shall only object to matters in the title report if they would do so for any other easement granted directly to the City or to be obtained by the City for a public improvement. In the event the City Representative does not approve the preliminary title report, the City shall not

be obligated to accept title to the Public Improvement until the Developer has cured such objections to title to the satisfaction of the City Representative.

Section 8.08. Public Improvement Constructed on City Land or the Property.

If the Public Improvement is on land owned by the City, the City hereby grants to the Developer a temporary easement to enter upon such land for purposes related to construction (and maintenance pending acquisition and acceptance) of the Public Improvement. If the Public Improvement is on land owned by the Developer, the Developer shall dedicate easements by plat or shall execute and deliver to the City such access and maintenance easements as the City may reasonably require in recordable form, and the Developer hereby grants to the City a permanent access and maintenance easement by plat or separate instrument to enter upon such land for purposes related to inspection and maintenance of the Public Improvement. The grant of the permanent easement shall not relieve the Developer of any obligation to grant the City title to property and/or easements related to the Public Improvement as required by this Agreement or as should in the City's reasonable judgment be granted to provide for convenient access to and routine and emergency maintenance of such Public Improvement. The provisions for inspection and acceptance of such Public Improvement otherwise provided herein shall apply.

Section 8.09. Additional Requirements.

In connection with the design and construction of the Public Improvements, the Developer shall take or cause the following entities or persons to take the following actions and to undertake the following responsibilities:

(a) The Developer shall provide to the City electronic copies of the Plans and Specifications for the Public Improvements (including revisions) as such Plans and Specifications are currently in existence and as completed after the date hereof and shall provide the City one complete set of record drawings (in electronic format) for the Public Improvements, in accordance with Applicable Law;

(b) In accordance with the requirements between the Developer and the City with regard to the development and construction of the Public Improvements, the Developer or such person selected by and contracting with the Developer shall provide the City with a copy of the detailed construction schedule outlining the major items of work of each major construction contractor. Such schedule shall be updated monthly and submitted to the City.

(c) The Developer shall provide construction documents, including the Plans and Specifications to the City, signed and sealed by one or more registered professional architects or engineers licensed in the State of Texas at the time the construction documents are submitted to the City for approval;

(d) The Developer shall provide the City with reasonable advance notice of any scheduled construction meetings as set forth in the construction contracts for the Public Improvements, and shall permit the City to attend and observe such meetings as the City so chooses in order to monitor the project;

(e) The Developer or any general contractor shall comply with, and shall require that its agents and subcontractors comply with, all Applicable Laws regarding the use, removal, storage, transportation, disposal and remediation of hazardous materials;

(f) The Developer or any general contractor shall notify and obtain the City's approval for all field changes that directly result in material changes to the portion of the Plans and Specifications for the Public Improvements that describe the connection of such improvements with City streets, storm sewers and utilities;

(g) Upon notice from the City, the Developer shall or shall cause any general contractor to promptly repair, restore or correct, on a commercially reasonable basis, all damage caused by the general contractor or its subcontractors to property or facilities of the City during construction of the Public Improvements and the City shall pay for any damage repair from funds on hand from the Developer pursuant to the Professional Services Agreement, as such funds are available, or from other funds of the City. If the City pays for such damage repair from other City funds, the Developer shall reimburse or cause the general contractor to reimburse the City for out-of-pocket costs actually incurred by the City that are directly related to the City's necessary repairs of such damage;

(h) Upon notice from the City, the Developer shall promptly cause the correction of defective work and shall cause such work to be corrected in accordance with the construction contracts for the Public Improvements and with City Regulations;

(i) If the Developer performs any soils, construction and materials testing during construction of the Public Improvements, the Developer shall make available to the City copies of the results of all such tests; and

(j) If any of the foregoing entities or persons shall fail in a material respect to perform any of its obligations described above (or elsewhere under this Agreement), the Developer shall use its good faith efforts to enforce such obligations against such entities or persons, or the Developer may cure any material failure of performance as provided herein; and

(k) The Developer shall provide any other information or documentation or services required by City Regulations; and

(l) The Developer shall allow the City Representative to conduct a reasonable pre-final and final inspection of the Public Improvements. Upon acceptance by the City of the Public Improvements, the City shall become responsible for the maintenance of the Public Improvements and making any bond or warranty claim, if applicable.

Section 8.10. Revisions to Scope and Cost of Public Improvements.

(a) The Public Improvement Project Costs, as set forth in Exhibit C, may be modified or amended from time to time upon the approval of the City Representative, provided that the total cost of the Public Improvements shall not exceed such amounts as set forth in the applicable SAP or the Project and Financing Plan. Should the Public Improvements be amended by the City Council in a SAP pursuant to the PID Act, the City Representative shall be authorized to make

corresponding changes to the applicable Exhibits attached hereto and shall keep official record of such amendments.

(b) Should the Public Improvement Project Costs exceed the amounts set forth in the SAPs, the Developer shall be responsible for such excess costs and such excess costs shall not be reimbursed by the City. The City shall only reimburse the Public Improvement Project Costs in the amounts set forth in the applicable SAP.

Section 8.11. City Police Powers.

The Developer recognizes the authority of the City pursuant to the Texas Constitution together with the City's charter and ordinances to exercise its police powers in accordance with applicable laws to protect the public health, safety, and welfare. The City retains its police powers over the Developer's or its general contractor's construction activities on or at the Property, and the Developer recognizes the City's authority to take appropriate enforcement action in accordance with Applicable Law to provide such protection. No lawful action taken by the City pursuant to these police powers shall subject the City to any liability under this Agreement, including without limitation liability for costs incurred by any general contractor or the Developer, and as between the Developer and the City, any such costs shall be the sole responsibility of the Developer and any of its general contractors and shall not be reimbursable from PID Bond Proceeds.

Section 8.12. Title and Mechanic's Liens.

(a) Title. The Developer agrees that the Public Improvements shall not have a lien or cloud on title upon their dedication to and acceptance by the City.

(b) Mechanic's Liens. Developer shall not create nor allow or permit any liens, encumbrances, or charges of any kind whatsoever against the Public Improvements arising from any work performed by any contractor by or on behalf of the Developer. The Developer shall not permit any claim of lien made by any mechanic, materialman, laborer, or other similar liens to stand against the Public Improvements for work or materials furnished to the Developer in connection with any construction, improvements, renovation, maintenance or repair thereof made by the Developer or any contractor, agent or representative of the Developer. The Developer shall cause any such claim of lien to be fully discharged prior to the earlier of (i) the date of acceptance of the applicable Public Improvement by the City of the related Public Improvement or (ii) 180 days.

Section 8.13. City Consents.

Any consent or approval by or on behalf of the City required in connection with the design, construction, improvement or replacement of the Public Improvements or otherwise under this Agreement shall not be unreasonably withheld, delayed, or conditioned. Any review associated with any determination to give or withhold any such consent or approval shall be conducted in a timely and expeditious manner with due regard to the cost to the Developer associated with delay.

Section 8.14. Right of the City to Make Inspection.

(a) At any time during the construction of the Public Improvements, the City shall have the right to enter the Property for the purpose of inspection of the progress of construction on the Public Improvements; provided, however, the City Representative shall comply with reasonable restrictions generally applicable to all visitors to the Development that are imposed by the Developer or its General Contractor or subcontractors. The Developer shall pay the standard City inspection fees.

(b) Inspection of the construction of all Public Improvements shall be by the City Representative or his/her designee. In accordance with Sections 5.03, the Developer shall pay the inspection fee which may be included as a Public Improvement Project Cost.

(c) City may enter the Property in accordance with customary City procedures and Applicable Law to make any repairs or perform any maintenance of Public Improvements which the City has accepted for maintenance. If, during construction of the Public Improvements, the Developer is in default under this Agreement beyond any applicable cure period or in the event of an emergency which is not being timely addressed, the City may enter the Property to make any repairs to the Public Improvements that have not been accepted for maintenance by the City, of every kind or nature, which the Developer is obligated under this Agreement to repair or maintain but which the Developer has failed to perform after reasonable notice (other than in the case of an emergency in which notice is impossible or impractical). The Developer shall be obligated to reimburse the City the reasonable costs incurred by the City for any such repairs. Nothing contained in this paragraph shall be deemed to impose on the City any obligation to actually make repairs or alterations on behalf of the Developer.

Section 8.15. Competitive Bidding. The construction of the Public Improvements (which are funded from Assessments) is anticipated to be exempt from competitive bidding pursuant to Texas Local Government Code Section 252.022(a)(9). In the event that the actual costs of the Public Improvement do not meet the parameters for exemption from the competitive bid requirement, then either competitive bidding or alternative delivery method may be utilized by the City as allowed by Applicable Law.

ARTICLE IX

PAYMENT OF PUBLIC IMPROVEMENTS

Section 9.01. Overall Requirements.

(a) The City shall not be obligated to provide funds for any Public Improvement except from the proceeds of the PID Bonds or from Assessments pursuant to a Reimbursement Agreement. The City makes no warranty, either express or implied, that the proceeds of the PID Bonds available for reimbursement of the Public Improvement Project Costs will be sufficient for the construction or acquisition of all of the Public Improvements. Any costs of the Public Improvements in excess of the available PID Bond Proceeds or Assessments pursuant to a Reimbursement Agreement, shall not be paid or reimbursed by the City. The Developer acknowledges and agrees that any lack of availability of monies in the Project Funds established

under the Indentures to reimburse the costs of the Public Improvements shall in no way diminish any obligation of the Developer with respect to the construction of or contributions for the Public Improvements required by this Agreement, or any other agreement to which the Developer is a party, or any governmental approval to which the Developer or Property is subject.

(b) Upon written acceptance of a Public Improvement, and subject to any applicable maintenance-bond period, the City shall be responsible for all operation and maintenance of such Public Improvement, including all costs thereof and relating thereto.

(c) The City's obligation with respect to the reimbursement from Assessments of the Public Improvement Project Costs as finally set forth in the Service and Assessment Plan, shall be limited to the lower of Actual Costs or the available Net PID Bond Proceeds or Assessment revenues, and shall be reimbursed solely from amounts on deposit in the Project Funds from the sale of the PID Bonds as provided herein and in the Indentures, or from Assessments collected for the reimbursement or payment of such costs pursuant to Reimbursement Agreement. The Developer agrees and acknowledges that it is responsible for all costs and all expenses related to the Public Improvements in excess of the Reimbursement Cap.

(d) The City shall have no responsibility whatsoever to the Developer with respect to the investment of any funds held in the Project Fund by the Trustee under the provisions of the Indenture, including any loss of all or a portion of the principal invested or any penalty for liquidation of an investment. Any such loss may diminish the amounts available in the Project Fund to reimburse the Public Improvement Project Costs in the PID. The obligation of Developer to pay the Assessments is not in any way dependent on the availability of amounts in the Project Fund to pay for all or any portion of the Public Improvements Project Costs hereunder.

Section 9.02. Remaining Funds after Completion of a Public Improvement.

The Service and Assessment Plan shall be updated or amended, as applicable, such that the costs of the Public Improvements in the SAP match the costs set forth in the applicable construction contracts; provided that such adjustment of the SAP does not affect the benefit analysis. Then, the Completion of Construction of a Public Improvement (or segment or stage thereof) and payment or reimbursement for such Public Improvement, there are Cost Underruns, any remaining budgeted cost(s) may be available to reimburse Cost Overruns on any other Public Improvement with the approval of the City Representative, such approval not to be unreasonably withheld, at completion of the Public Improvements and provided that all Public Improvements, as set forth in the Service and Assessment Plan are undertaken at least in part. The elimination of a category of Public Improvements as set forth in the Service and Assessment Plan will require an amendment to the Service and Assessment Plan. Upon receipt of all acceptance letters from the City for the Public Improvements within an improvement category as set forth in the Service and Assessment Plan, any Underruns from that category may be released to reimburse for Overruns in another improvement category, as approved by the City.

Section 9.03. Payment Process for Public Improvements.

(a) The City shall authorize reimbursement of the Public Improvement Project Costs from (i) PID Bond Proceeds or from (ii) Assessments collected in the PID as set forth in 8.04

below. The Developer shall submit a Payment Certificate to the City for Public Improvement Project Costs. The form of the Payment Certificate is set forth in Exhibit F, as may be modified by the applicable Indenture or Reimbursement Agreement. The City shall review the sufficiency of each Payment Certificate with respect to compliance with this Agreement, compliance with the Development Standards, and Applicable Law, and compliance with the applicable SAP and Plans and Specifications within fifteen (15) business days of receipt from the Developer. After review, the City shall send notice to the Developer of what is approved in each Payment Certificate and what is denied and will notify Developer of additional documentation needed. Approved costs in a Payment Certificate shall be forwarded for payment in a timely manner and the City will work with the Developer to resolve amounts not approved in each Payment Certificate.

(b) The City shall reimburse the Public Improvement Project Costs as set forth in Exhibit C and the SAP, from funds available pursuant to the applicable Indenture or Reimbursement Agreement.

(c) Reimbursement to the Developer and the City for administrative costs relating to the creation of the PID, the levy of assessments and issuance of the PID Bonds may be distributed at closing of the applicable series of PID Bonds pursuant to a Closing Disbursement Request, in the form attached as Exhibit G.

Section 9.04. Public Improvements Reimbursement from Assessment Fund In the Event of a Non-Issuance of PID Bonds.

(a) The reimbursement for costs of the Public Improvements set forth in Exhibit C and in the Service and Assessments Plan shall be made on an annual basis from Assessments levied by the City for the Public Improvements pursuant to Chapter 372, Texas Local Government Code, as amended. Such reimbursement shall be made pursuant to the terms and provisions of one or more Reimbursement Agreements. Such Reimbursement Agreements shall set forth the terms of the annual reimbursement for the costs of the Public Improvements.

(b) Reimbursement or payment of the costs of the Public Improvements shall only be made from the levy of Assessments within the PID as set forth herein.

(c) The term, manner and place of payment or reimbursement to the Developer under this Section shall be set forth in the Reimbursement Agreement.

(d) Reimbursement or payment shall be made only for the costs of the Public Improvements as set forth in this Agreement, the Service and Assessment Plan or in the Reimbursement Agreement, as approved by the City. Any additional public improvements other than the Public Improvements constructed by the Developer and dedicated to the City, shall not be subject to payment or reimbursement under the terms of this Agreement.

Section 9.05. Rights to Audit.

(a) The City shall have the right to audit, upon reasonable notice and at the City's own expense, records of the Developer with respect to the expenditure of funds to pay Public Improvement Project Costs. Upon written request by the City, the Developer shall give the City

or its agent, access to those certain records controlled by, or in the direct or indirect possession of, the Developer (other than records subject to legitimate claims of attorney-client privilege) with respect to the expenditure of Public Improvement Project Costs, and permit the City to review such records in connection with conducting a reasonable audit of such fund and account. The Developer shall make these records available to the City electronically or at a location that is reasonably convenient for City staff.

(b) The City and the Developer shall reasonably cooperate with the assigned independent auditors (internal or external) in this regard, and shall retain and maintain all such records for at least 2 years from the date of Completion of Construction of the Public Improvements. All audits must be diligently conducted and once begun, no records pertaining to such audit shall be destroyed until such audit is completed.

ARTICLE X

REPRESENTATIONS AND WARRANTIES

Section 10.01. Representations and Warranties of City.

The City makes the following representation and warranty for the benefit of the Developer:

(a) Due Authority; No Conflict. The City represents and warrants that this Agreement has been approved by official action by the City Council of the City in accordance with all applicable public notice requirements (including, but not limited to, notices required by the Texas Open Meetings Act). The City has all requisite power and authority to execute this Agreement and to carry out its obligations hereunder and the transactions contemplated hereby. This Agreement has been, and the documents contemplated hereby will be, duly executed and delivered by the City and constitute legal, valid and binding obligations enforceable against the City in accordance with the terms subject to principles of governmental immunity and the enforcement of equitable rights. The consummation by the City of the transactions contemplated hereby is not in violation of or in conflict with, nor does it constitute a default under, any of the terms of any agreement or instrument to which the City is a Party, or by which the City is bound, or of any provision of any applicable law, ordinance, rule or regulation of any governmental authority or of any provision of any applicable order, judgment or decree of any court, arbitrator or governmental authority.

(b) Due Authority; No Litigation. No litigation is pending or, to the knowledge of the City, threatened in any court to restrain or enjoin the construction of or the Public Improvements or the City's payment and reimbursement obligations under this Agreement, or otherwise contesting the powers of the City or the authorization of this Agreement or any agreements contemplated herein.

Section 10.02. Representations and Warranties of Developer.

The Developer makes the following representations, warranties and covenants for the benefit of the City:

(a) Due Organization and Ownership. The Developer is Texas Limited Liability Company validly existing under the laws of the State of Texas and is duly qualified to do business in the State of Texas; and that the person executing this Agreement on behalf of it is authorized to enter into this Agreement.

(b) Due Authority: No Conflict. The Developer has all requisite power and authority to execute and deliver this Agreement and to carry out its obligations hereunder and the transactions contemplated hereby. This Agreement has been, and the documents contemplated hereby will be, duly executed and delivered by the Developer and constitute the Developer's legal, valid and binding obligations enforceable against the Developer in accordance with their terms. The consummation by the Developer of the transactions contemplated hereby is not in violation of or in conflict with, nor does it constitute a default under, any term or provision of the organizational documents of the Developer, or any of the terms of any agreement or instrument to which the Developer is a Party, or by which the Developer is bound, or of any provision of any applicable law, ordinance, rule or regulation of any governmental authority or of any provision of any applicable order, judgment or decree of any court, arbitrator or governmental authority.

(c) Consents. No consent, approval, order or authorization of, or declaration or filing with any governmental authority is required on the part of the Developer in connection with the execution and delivery of this Agreement or for the performance of the transactions herein contemplated by the respective Parties hereto.

(d) Litigation/Proceedings. To the best knowledge of the Developer, after reasonable inquiry, there are no pending or, to the best knowledge of the Developer, threatened, judicial, municipal or administrative proceedings, consent decree or, judgments which might affect the Developer's ability to consummate the transaction contemplated hereby, nor is there a preliminary or permanent injunction or other order, decree, or ruling issued by a governmental entity, and there is no statute, rule, regulation, or executive order promulgated or enacted by a governmental entity, that is in effect which restrains, enjoins, prohibits, or otherwise makes illegal the consummation of the transactions contemplated by this Agreement.

(e) Legal Proceedings. There is no action, proceeding, inquiry or investigation, at law or in equity, before any court, arbitrator, governmental or other board or official, pending or, to the knowledge of the Developer, threatened against or affecting the Developer, any of the principals of the Developer and any key person or their respective Affiliates and representatives which the outcome of which would (a) materially and adversely affect the validity or enforceability of, or the authority or ability of the Developer under, this Agreement to perform its obligations under this Agreement, or (b) have a material and adverse effect on the consolidated financial condition or results of operations of the Developer or on the ability of the Developer to conduct its business as presently conducted or as proposed or contemplated to be conducted.

ARTICLE XI

MAINTENANCE OF LANDSCAPE IMPROVEMENTS

Section 11.01. Mandatory Homeowners' Association.

(a) The Developer will create a mandatory homeowners' association ("HOA") over the portion of the Property then being developed as single family homes ("the "Single Family Property"), which HOA, through its conditions and restrictions filed of record in the property records of Harris County, shall be required to assess and collect from owners annual fees in an amount calculated to maintain the open spaces, common areas, right-of-way irrigation systems, raised medians and other right-of-way landscaping, detention areas, drainage areas, screening walls, trails, lawns, landscaped entrances to the Single Family Property and any other common improvements or appurtenances (the "HOA Maintained Improvements"). Maintenance of any HOA Maintained Improvements on land owned by the City shall be pursuant to a maintenance agreement between the HOA and the City (the "HOA Maintenance Agreement").

(b) The Developer and the HOA shall maintain and operate any open spaces, nature trails, amenity center, common areas, landscaping, detention ponds, screening walls, development signage, and any other common improvements or appurtenances within the Property that are not maintained or operated by the City, including without limitation such facilities financed by the PID.

(c) While the Parties anticipate that the HOA established to maintain and operate the HOA Maintained Improvements, will adequately perform such duties, in the event that the City determines that the HOA is not adequately performing the duties for which it was created, which non-performance shall be evidenced by violations of the HOA Maintenance Agreement, applicable deed restrictions and/or applicable City ordinances, the City reserves the right to levy an assessment each year equal to the actual costs of operating and maintaining the HOA Maintained Improvements that are owned by the City. The City agrees that it will not levy such assessments without first giving the HOA written notice of the deficiencies and providing the HOA with sixty (60) days in which to cure the deficiencies. Covenants, conditions and restrictions for the HOA must be filed and the HOA Maintenance Agreement, if any, must be approved and executed before any Assessments are levied by the City.

ARTICLE XII

TERMINATION EVENTS

Section 12.01. Developer Termination Events.

(a) The Developer may terminate this Agreement, (i) upon an Event of Default by the City, or (ii) if the City does not enter into a Reimbursement Agreement, or (iii) the City does not levy assessments on the Property by the Public Improvement Financing Date, or (iv) the City does not create the PID encompassing all of the land described in **Exhibit A-2** by the Public

Improvement Financing Date, or (v) failure of the City to adopt the PD. Developer shall evidence such termination by recording in the Real Property Records its notice of termination and provide a recorded copy of such notice to the City.

Section 12.02. City Termination Events.

(a) The City may terminate this Agreement if the City determines both (i) not to issue PID Bonds by the Public Improvement Financing Date, and (ii) not to levy Assessments and enter into a Reimbursement Agreement Development by the Public Improvement Financing Date.

(b) The City may terminate this Agreement and any Reimbursement Agreement upon an uncured Event of Default by the Developer pursuant to Article XIV herein.

(c) The City may terminate this Agreement and any Reimbursement Agreement, if Commencement of Construction of the private horizontal improvements within the Development has not occurred within three (3) years of the Effective Date.

(d) The City may terminate this Agreement, and any Reimbursement Agreement, at any time if the Public Improvements do not reach Public Improvement Completion Date, as may have been extended pursuant to the term of this Agreement.

Section 12.03. Termination Procedure.

If either Party determines that it wishes to terminate this Agreement pursuant to this Article, such Party must deliver a written notice to the other Party specifying in reasonable detail the basis for such termination and electing to terminate this Agreement. Upon such a termination, the Parties hereto shall have no duty or obligation one to the other under this Agreement, with the exception of any of Developer's Public Improvement Project Costs that were previously advanced or incurred as of the date of termination, provided that a Payment Certificate for such Public Improvement Project Costs is submitted within ninety (90) days of the termination and is approved by the City pursuant to its normal and usual process for approving such Payment Certificate. The City must approve such Payment Certificate within thirty (30) days or submit to the Developer its objections/issues with such Payment Certificate and reasonably consult with the Developer to cure any insufficiencies in the Payment Certificate within an additional thirty (30) days.

Section 12.04. City Actions Upon Termination.

Upon termination the Developer shall have no claim or right to any further payments for Public Improvements Project Costs pursuant to this except that, (i) any Public Improvements completed and accepted by the City or (ii) Public Improvement Project Costs submitted pursuant to a Payment Certificate and approved by the City shall still be subject to reimbursement.

ARTICLE XIII

TERM

This Agreement shall terminate upon the earlier of: (i) the expiration of forty (40) years from the Effective Date, (ii) the date on which the City and the Developer discharge all of their obligations hereunder, including Completion of Construction of the Public Improvements and payment of or reimbursement for the Public Improvement Project Costs pursuant to this Agreement (up to the Reimbursement Cap), (iii) an Event of Default under Article XIII, or (iv) the occurrence of a termination event under Article XI. Notwithstanding the above, the provisions of Article VII of this Agreement shall survive termination.

ARTICLE XIV

DEFAULT AND REMEDIES

Section 14.01. Developer Default.

Each of the following events shall be an “Event of Default” by the Developer under this Agreement:

(a) The Developer shall fail to pay to the City any monetary sum hereby required of it as and when the same shall become due and payable and shall not cure such default within thirty (30) calendar days after the later of the date on which written notice thereof is given by the City to the Developer, as provided in this Agreement. The Developer shall fail in any material respect to maintain any of the insurance or bonds required by this Agreement; provided, however, that if a contractor fails to maintain any of the insurance or bonds required by this Agreement, the Developer shall have thirty (30) calendar days to cure.

(b) The Developer shall fail to comply in any material respect with any term, provision or covenant of this Agreement (other than the payment of money to the City), and shall not cure such failure within ninety (90) calendar days after written notice thereof is given by the City to the Developer;

(c) The filing by Developer of a voluntary proceeding under present or future bankruptcy, insolvency, or other laws respecting debtors, rights;

(d) The consent by Developer to an involuntary proceeding under present or future bankruptcy, insolvency, or other laws respecting debtor’s rights;

(e) The entering of an order for relief against Developer or the appointment of a receiver, trustee, or custodian for all or a substantial part of the Property or assets of Developer in any involuntary proceeding, and the continuation of such order, judgment or degree unstayed for any period of ninety (90) consecutive days;

(f) The failure by Developer or any Affiliate to pay Impositions, and Assessments on property owned by the Developer and/or any Affiliates within the PID if such failure is not cured within thirty (30) calendar days after written notice by the City; OR

(g) Any representation or warranty confirmed or made in this Agreement by the Developer was untrue in any material respect as of the Effective Date.

Section 14.02. Notice and Cure Period.

(a) Before any Event of Default under this Agreement shall be deemed to be a breach of this Agreement, the Party claiming such Event of Default shall notify, in writing, the Party alleged to have failed to perform the alleged Event of Default and shall demand performance (with the exception of 13.01(f) above). Except with respect to cure periods set forth in 13.01 above, which shall be controlling, no breach of this Agreement may be found to have occurred if performance has commenced to the reasonable satisfaction of the complaining Party within thirty (30) calendar days of the receipt of such notice (or thirty (30) calendar days in the case of a monetary default), with completion of performance within ninety (90) calendar days.

(b) Notwithstanding any provision in this Agreement to the contrary, if the performance of any covenant or obligation to be performed hereunder by any Party is delayed by Force Majeure, the time for such performance shall be extended by the amount of time of the delay directly caused by and relating to such uncontrolled circumstances. The Party claiming delay of performance as a result of any of the foregoing Force Majeure events shall deliver written notice of the commencement of any such delay resulting from such Force Majeure event and the length of the Force Majeure event is reasonably expected to last not later than seven (7) days after the claiming Party becomes aware of the same, and if the claiming Party fails to so notify the other Party of the occurrence of a Force Majeure event causing such delay, the claiming Party shall not be entitled to avail itself of the provisions for the extension of performance contained in this Article. The number of days a Force Majeure event is in effect shall be determined by the City based upon commercially reasonable standards.

Section 14.03. City's Remedies.

With respect to the occurrence of an Event of Default the City may pursue the following remedies:

(a) The City may pursue any legal or equitable remedy or remedies, including, without limitation, specific performance, damages, and termination of this Agreement. The City shall not terminate this Agreement unless it delivers to the Developer a second notice expressly providing that the City will terminate within thirty (30) additional days. Termination or non-termination of this Agreement upon a Developer Event of Default shall not prevent the City from suing the Developer for specific performance, damages, actual damages, excluding punitive, special and consequential damages, injunctive relief or other available remedies with respect to obligations that expressly survive termination. In the event the Developer fails to pay any of the expenses or amounts or perform any obligation specified in this Agreement, then to the extent such failure constitutes an Event of Default hereunder, the City may, but shall not be obligated to do so, pay any such amount or perform any such obligations and the amount so paid and the reasonable out

of pocket costs incurred by the City in said performance shall be due and payable by the Developer to the City within thirty (30) days after the Developer's receipt of an itemized list of such costs.

(b) No remedy herein conferred or reserved is intended to be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder now or hereafter existing at law or in equity.

(c) The exercise of any remedy herein conferred or reserved shall not be deemed a waiver of any other available remedy.

Section 14.04. City Default.

Each of the following events shall be an Event of Default by the City under this Agreement:

(a) The City shall fail to pay to the Developer, so long as the Developer has complied with the terms and provisions of this Agreement, any monetary sum hereby required of it and shall not cure such default within thirty (30) calendar days after the later of the date on which written notice thereof is given to the City by the Developer.

(b) The City shall fail to comply in any material respect with any term, provision or covenant of this Agreement, other than the payment of money, and shall not cure such failure within sixty (60) calendar days after written notice thereof is given by the Developer to the City.

Section 14.05. Developer's Remedies.

(a) Upon the occurrence of any Event of Default by the City, the Developer may pursue any legal remedy or remedies specifically including damages as set forth below (specifically excluding specific performance and other equitable remedies), and termination of this Agreement; provided, however, that the Developer shall have no right to terminate this Agreement unless the Developer delivers to the City a second notice which expressly provides that the Developer will terminate within thirty (30) days if the default is not addressed as herein provided.

(b) No remedy herein conferred or reserved is intended to be inclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder now or hereafter existing.

(c) The exercise of any remedy herein conferred or reserved shall not be deemed a waiver of any other available remedy.

Section 14.06. No Waiver of Immunity.

(a) Nothing contained in this Agreement shall be deemed to waive the City's governmental immunity nor the official immunity of any City officer, official, employee or agent.

(b) Should a court of competent jurisdiction determine the City's immunity from suit is waived in any manner other than as provided in Subchapter I of Chapter 271, Texas Local Government Code, as amended, the Parties hereby acknowledge and agree that in such suit against the City for breach of this Agreement:

- (i) The total amount of money awarded is limited to actual damages in an amount not to exceed the balance due and owed by City under this Agreement or any Reimbursement Agreement and is payable solely from Assessment revenues;
- (ii) The recovery of damages against City or the Developer may not include consequential damages or exemplary damages;
- (iii) The Parties may not recover attorney's fees; and
- (iv) The Parties are not entitled to specific performance or injunctive relief against the City.

Section 14.07. Limitation on Damages.

In no event shall any Party have any liability under this Agreement for any exemplary or consequential damages.

Section 14.08. Waiver.

Forbearance by the non-defaulting Party to enforce one or more of the remedies herein provided upon the occurrence of an Event of Default by the other Party shall not be deemed or construed to constitute a waiver of such default. One or more waivers of a breach of any covenant, term or condition of this Agreement by either Party hereto shall not be construed by the other Party as a waiver of a different or subsequent breach of the same covenant, term or condition. The consent or approval of either Party to or of any act by the other Party of a nature requiring consent or approval shall not be deemed to waive or render unnecessary the consent to or approval of any other subsequent similar act.

ARTICLE XV

INSURANCE, INDEMNIFICATION AND RELEASE

Section 15.01. Insurance.

With no intent to limit any contractor's liability or obligation for indemnification, the Developer shall maintain or cause to be maintained, by the persons constructing the Public Improvements, certain insurance, as provided below in full force and effect at all times during construction of the Public Improvements and shall require that the City is named as an additional insured under such contractor's insurance policies.

(a) With regard to the obligations of this Agreement, the Developer shall obtain and maintain in full force and effect at its expense, or shall cause each contractor to obtain and maintain at their expense, the following policies of insurance and coverage:

- (i) Commercial general liability insurance insuring the City, contractor and the Developer against liability for injury to or death of a person or persons and for damage to

property occasioned by or arising out of the activities of Developer, the contractor, the City and their respective officers, directors, agents, contractors, or employees, in the amount of \$500,000 Per Occurrence or a limit equal to the amount of the contract amount, \$2,000,000 General Aggregate Bodily Injury and Property Damage. The contractor may procure and maintain a Master or Controlled Insurance policy to satisfy the requirements of this section, which may cover other property or locations of the contractor and its affiliates, so long as the coverage required in this section is separate;

(ii) Worker's Compensation insurance as required by law;

(iii) Business automobile insurance covering all operations of the contractor pursuant to the Construction Agreement involving the use of motor vehicles, including all owned, non-owned and hired vehicles with minimum limits of not less than One Million Dollars (\$1,000,000) combined single limit for bodily injury, death and property damage liability.

(iv) To the extent available, each policy shall be endorsed to provide that the insurer waives all rights of subrogation against the City;

(v) Each policy of insurance with the exception of Worker's Compensation and professional liability shall be endorsed to include the City (including its former, current, and future officers, directors, agents, and employees) as additional insureds;

(vi) Each policy, with the exception of Worker's Compensation and professional liability, shall be endorsed to provide the City sixty (60) days' written notice prior to any cancellation, termination or material change of coverage; and

(vii) The Developer shall cause each contractor to deliver to the City the policies, copies of policy endorsements, and/or certificates of insurance evidencing the required insurance coverage before the Commencement of Construction of the Public Improvements and within 10 days before expiration of coverage, or as soon as practicable, deliver renewal policies or certificates of insurance evidencing renewal and payment of premium. On every date of renewal of the required insurance policies, the contractor shall cause a Certificate of Insurance and policy endorsements to be issued evidencing the required insurance herein and delivered to the City. In addition, the contractor shall within ten (10) business days after written request provide the City with the Certificates of Insurance and policy endorsements for the insurance required herein (which request may include copies of such policies).

Section 15.02. Waiver of Subrogation Rights.

The Commercial General Liability, Worker's Compensation, Business Auto and Excess Liability Insurance required pursuant to this Agreement shall provide for waivers of all rights of subrogation against the City.

Section 15.03. Additional Insured Status.

With the exception of Worker's Compensation Insurance and any Professional Liability Insurance, all insurance required pursuant to this Agreement shall include and name the City as additional insureds using Additional Insured Endorsements that provide the most comprehensive coverage to the City under Texas law including products/completed operations.

Section 15.04. Certificates of Insurance.

Certificates of Insurance and policy endorsements in a form satisfactory to City shall be delivered to City prior to the commencement of any work or services on the Public Improvements. All required policies shall be endorsed to provide the City with sixty (60) days advance notice of cancellation or non-renewal of coverage. The Developer shall provide sixty (60) days written notice of any cancellation, non-renewal or material change in coverage for any of the required insurance in this Article.

On every date of renewal of the required insurance policies, the Developer shall cause (and cause its contractors) to provide a certificate of insurance and policy endorsements to be issued evidencing the required insurance herein and delivered to the City. In addition, the Developer shall, within ten (10) business days after written request, provide the City with certificates of insurance and policy endorsements for the insurance required herein (which request may include copies of such policies). The delivery of the certificates of insurance and the policy endorsements (including copies of such insurance policies) to the City is a condition precedent to the payment of any amounts to the Developer by the City.

Section 15.05. Carriers.

All policies of insurance required to be obtained by the Developer and its contractors pursuant to this Agreement shall be maintained with insurance carriers that are satisfactory to and as reasonably approved by City, and lawfully authorized to issue insurance in the state of Texas for the types and amounts of insurance required herein. All insurance companies providing the required insurance shall be authorized to transact business in Texas and rated at least "A" by AM Best or other equivalent rating service. All policies must be written on a primary basis, non-contributory with any other insurance coverage and/or self-insurance maintained by the City. All insurance coverage required herein shall be evidenced by a certificate of insurance and policy endorsements submitted by the Developer's and its contractors' insurer or broker. Certificates of insurance and policy endorsements received from any other source will be rejected.

Section 15.06. INDEMNIFICATION.

DEVELOPER AGREES TO DEFEND, INDEMNIFY, AND HOLD THE CITY AND ITS RESPECTIVE OFFICERS, AGENTS AND EMPLOYEES, HARMLESS AGAINST ANY AND ALL CLAIMS, LAWSUITS, JUDGMENTS, FINES, PENALTIES, COSTS, AND EXPENSES FOR PERSONAL INJURY (INCLUDING DEATH), PROPERTY DAMAGE OR OTHER HARM OR VIOLATIONS FOR WHICH RECOVERY OF DAMAGES, FINES, OR PENALTIES IS SOUGHT, SUFFERED BY ANY PERSON OR PERSONS, THAT MAY ARISE OUT OF OR BE OCCASIONED BY DEVELOPER'S ACT OR OMISSION, INCLUDING BUT

NOT LIMITED TO BREACH OF ANY OF THE TERMS OR PROVISIONS OF THIS CONTRACT, VIOLATIONS OF LAW, ANY ACT OR OMISSION, INCLUDING BUT NOT LIMITED TO ANY NEGLIGENT, GROSSLY NEGLIGENT, INTENTIONAL, OR STRICTLY LIABLE ACT OR OMISSION OF THE CONTRACTOR, ITS OFFICERS, AGENTS, EMPLOYEES, INVITEES, SUBCONTRACTORS, OR SUB-SUBCONTRACTORS AND THEIR RESPECTIVE OFFICERS, AGENTS, OR REPRESENTATIVES, OR ANY OTHER PERSONS OR ENTITIES FOR WHICH THE CONTRACTOR IS LEGALLY RESPONSIBLE IN THE PERFORMANCE OF THIS CONTRACT. THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH SHALL NOT APPLY TO ANY LIABILITY RESULTING FROM THE SOLE NEGLIGENCE OF THE CITY, AND ITS OFFICERS, AGENTS, EMPLOYEES OR SEPARATE CONTRACTORS. THE CITY DOES NOT WAIVE ANY GOVERNMENTAL IMMUNITY OR OTHER DEFENSES AVAILABLE TO IT UNDER TEXAS OR FEDERAL LAW. THE PROVISIONS OF THIS PARAGRAPH ARE SOLELY FOR THE BENEFIT OF THE PARTIES HERETO AND ARE NOT INTENDED TO CREATE OR GRANT ANY RIGHTS, CONTRACTUAL OR OTHERWISE, TO ANY OTHER PERSON OR ENTITY.

DEVELOPER AT ITS OWN EXPENSE IS EXPRESSLY REQUIRED TO DEFEND CITY AGAINST ALL SUCH CLAIMS. CITY RESERVES THE RIGHT TO PROVIDE A PORTION OR ALL OF ITS OWN DEFENSE; HOWEVER, CITY IS UNDER NO OBLIGATION TO DO SO. ANY SUCH ACTION BY CITY IS NOT TO BE CONSTRUED AS A WAIVER OF DEVELOPER'S OBLIGATION TO DEFEND CITY OR AS A WAIVER OF DEVELOPER'S OBLIGATION TO INDEMNIFY CITY PURSUANT TO THIS AGREEMENT. DEVELOPER SHALL RETAIN DEFENSE COUNSEL WITHIN SEVEN (7) BUSINESS DAYS OF CITY'S WRITTEN NOTICE THAT CITY IS INVOKING ITS RIGHT TO INDEMNIFICATION UNDER THIS AGREEMENT. IF DEVELOPER FAILS TO RETAIN COUNSEL WITHIN THE REQUIRED TIME PERIOD, CITY SHALL HAVE THE RIGHT TO RETAIN DEFENSE COUNSEL ON ITS OWN BEHALF AND DEVELOPER SHALL BE LIABLE FOR ALL COSTS INCURRED BY THE CITY.

ARTICLE XVI

GENERAL PROVISIONS

Section 16.01. Notices.

Any notice, communication or disbursement required to be given or made hereunder shall be in writing and shall be given or made by facsimile or other electronic transmittal, hand delivery, overnight courier, or by United States mail, certified or registered mail, return receipt requested, postage prepaid, at the addresses set forth below or at such other addresses as may be specified in writing by any Party hereto to the other parties hereto. Each notice which shall be mailed or delivered in the manner described above shall be deemed sufficiently given, served, sent and received for all purpose at such time as it is received by the addressee (with return receipt, the delivery receipt or the affidavit of messenger being deemed conclusive evidence of such receipt) at the following addresses:

To the City: City Manager
401 Market Street
Tomball, TX 77375

With a copy to: Attn: City Attorney
Olson & Olson, LLP
2727 Allen Parkway, Suite 600
Houston, TX 77019

To the Developer: Attn: Kyle Friedman
FLS Development, LLC
17119 Lakeway Park Drive
Tomball, Texas 77375

With a copy to: Attn: Timothy Green
c/o Coats Rose, P.C.
9 Greenway Plaza, Suite 1000
Houston, Texas 77046

Section 16.02. Make-Whole Provision.

(a) If in any calendar year the City issues debt obligations that would be qualified tax-exempt obligations but for the issuance or proposed issuance of PID Bonds, the Developer shall pay to the City a fee (the “PID Bond Fee”) to compensate the City for the interest savings the City would have achieved had the debt issued by the City been qualified tax-exempt obligations. Prior to issuance of any PID Bonds, the City’s financial advisor shall calculate the PID Bond Fee based on the issued and planned debt issuances for the City and shall notify the Developer of the total amount of the PID Bond Fee prior to the issuance of the PID Bonds. The Developer agrees to pay the PID Bond Fee to the City within ten (10) business days after receiving notice from the City of the amount of PID Bond Fee due to the City. If the City has not forgone the ability to issue a series of obligations as qualified tax exempt obligations, the PID Bond Fee shall be held in a segregated account of the City and if the total amount of debt obligations sold or entered into by the City in the calendar year in which the PID Bonds are issued are less than the bank qualification limits (currently \$10 million per calendar year), then the PID Bond Fee shall be returned to the Developer. The City shall not be required to sell any series of PID Bonds until the Developer has paid the estimated PID Bond Fee.

(b) If the City is planning to issue debt obligations as qualified tax-exempt obligations prior to the issuance of PID Bonds in any calendar year, the City may (but is not obligated to) notify the Developer that it is planning to issue qualified tax-exempt obligations that may limit the amount of debt that the City can issue in a calendar year. In connection with the delivery of such notice, the City’s financial advisor shall provide a calculation of the interest savings that the City would achieve by issuing the obligations the City plans to issue in the year as qualified tax-exempt obligations as opposed to non-qualified tax-exempt obligations. If following the receipt of such notice the Developer asks the City to forego designating the obligations as qualified tax-exempt obligations in order to preserve capacity for PID Bonds, the Developer shall pay to the City a fee

to compensate the City for the interest savings the City would have achieved had the debt issued by the City been qualified tax-exempt obligations. The Developer agrees to pay the PID Bond Fee to the City within ten (10) business days after receiving notice from the City of the amount of PID Bond Fee due to the City. Upon receipt of the PID Bond Fee, the City agrees not to designate the obligations planned for issuance as qualified tax-exempt obligations. Such payment is compensation to the City for choosing to forego the designation of obligations as qualified tax exempt obligations, and the PID Bond Fee may be used for any lawful purpose of the City.

Section 16.03. Assignment.

(a) This Agreement shall be binding upon and inure to the benefit of the successors and assigns of the Parties. The obligations, requirements or covenants to develop the Property, including construction of the Public Improvements may be assigned to any Affiliate thereof without the prior written consent of the City. The obligations, requirements or covenants to the development of the Property, including construction of the Public Improvements shall not be assigned to any non-Affiliate without the prior written consent of the City Council, which consent shall not be unreasonably withheld if the assignee demonstrates the financial ability to perform in the reasonable judgment of the City Council. Each assignment shall be in writing executed by Developer and the assignee and shall obligate the assignee to be bound by this Agreement to the extent this Agreement applies or relates to the obligations, rights, title or interests being assigned. No assignment by Developer shall release Developer from any liability that resulted from an act or omission by Developer that occurred prior to the effective date of the assignment unless the City approves the release in writing. Developer shall maintain written records of all assignments made by Developer to assignee, including a copy of each executed assignment and the assignee's notice information as required by this Agreement, and, upon written request from the City, any Party or assignee, shall provide a copy of such records to the requesting person or entity, and this obligation shall survive the assigning Party's sale, assignment, transfer or other conveyance of any interest in this Agreement or the Property. The City shall not be required to execute any consent with respect to assignment to an Affiliate nor shall the City be required to make any representations with respect to any assignment.

(b) Developer may assign any receivables or revenues due pursuant to this Agreement or any Reimbursement Agreement to a third party without the consent of, but upon written notice to the City. Provided, however, that notwithstanding the above, the City shall not be required to make partial payments to more than two parties as a result of an assignment and shall not execute any consent or make any representations with respect thereto.

(c) The Developer and assignees have the right, from time to time, to collaterally assign, pledge, grant a lien or security interest in, or otherwise encumber any of their respective rights, title, or interest under this Agreement for the benefit of (a) their respective lenders without the consent of, but with prompt written notice to, the City. The collateral assignment, pledge, grant of lien or security interest, or other encumbrance shall not, however, obligate any lender to perform any obligations or incur any liability under this Agreement unless the lender agrees in writing to perform such obligations or incur such liability. Provided the City has been given a copy of the documents creating the lender's interest, including notice information for the lender, then that lender shall have the right, but not the obligation, to cure any default under this Agreement within thirty (30) days written notice to the lender. A lender is not a party to this Agreement unless this

Agreement is amended, with the consent of the lender, to add the lender as a Party. Notwithstanding the foregoing, however, this Agreement shall continue to bind the Property and shall survive any transfer, conveyance, or assignment occasioned by the exercise of foreclosure or other rights by a lender, whether judicial or non-judicial. Any purchaser from or successor owner through a lender of any portion of the Property, except an in-user homeowner, shall be bound by this Agreement and shall not be entitled to the rights and benefits of this Agreement with respect to the acquired portion of the Property until all defaults under this Agreement with respect to the acquired portion of the Property have been cured. The City shall not be required to make partial payments to more than two parties as a result of an assignment and shall not execute any consent or make any representations with respect thereto.

(d) The City shall not be required to acknowledge the receipt of any Assignment by the Developer; however, to the extent the City does acknowledge receipt of any assignment pursuant to this Section, such acknowledgment does not evidence the City's agreement, acceptance or acknowledgment of the content of the assignment documents or any rights accruing thereunder; it is solely an acknowledgment of receipt of the notice via mail, express mail or email.

(e) The City does not and shall not consent to nor participate in any third-party financing based upon the Developer's assignment of its right to receive funds pursuant to this Agreement or any Reimbursement Agreement.

Section 16.04. Table of Contents; Titles and Headings.

The titles of the articles, and the headings of the sections of this Agreement are solely for convenience of reference, are not a part of this Agreement, and shall not be deemed to affect the meaning, construction, or effect of any of its provisions.

Section 16.05. Entire Agreement; Amendment.

This Agreement is the entire agreement between the Parties with respect to the subject matter covered in this Agreement. There is no other collateral oral or written agreement between the Parties that in any manner relates to the subject matter of this Agreement. This Agreement may only be amended by a written agreement executed by all Parties.

Section 16.06. Time.

In computing the number of days for purposes of this Agreement, all days will be counted, including Saturdays, Sundays, and legal holidays; however, if the final day of any time period falls on a Saturday, Sunday, or legal holiday, then the final day will be deemed to be the next day that is not a Saturday, Sunday, or legal holiday.

Section 16.07. Counterparts.

This Agreement may be executed in any number of counterparts, each of which will be deemed to be an original, and all of which will together constitute the same instrument.

Section 16.08. Severability; Waiver.

If any provision of this Agreement is illegal, invalid, or unenforceable, under present or future laws, it is the intention of the parties that the remainder of this Agreement not be affected and, in lieu of each illegal, invalid, or unenforceable provision, a provision be added to this Agreement which is legal, valid, and enforceable and is as similar in terms to the illegal, invalid, or enforceable provision as is possible.

Any failure by a Party to insist upon strict performance by the other party of any material provision of this Agreement will not be deemed a waiver or of any other provision, and such Party may at any time thereafter insist upon strict performance of any and all of the provisions of this Agreement.

Section 16.09. No Third-Party Beneficiaries.

The City and the Developer intend that this Agreement shall not benefit or create any right or cause of action in or on behalf of any third party beneficiary, or any individual or entity other than the City, the Developer or assignees of such Parties.

Section 16.10. Notice of Assignment. Developer shall not transfer any portion of the Property prior to the levy of Assessments, except as provided in Section 3.05. Subject to Section 15.03 herein, the requirements set forth below shall apply in the event that the Developer sells, assigns, transfers or otherwise conveys the Property or any part thereof and/or any of its rights, benefits or obligations under this Agreement. Developer must provide the following:

- (a) within 30 days after the effective date of any such sale, assignment, transfer, or other conveyance, the Developer must provide written notice of same to the City;
- (b) the Notice must describe the extent to which any rights or benefits under this Agreement have been sold, assigned, transferred, or otherwise conveyed;
- (c) the Notice must state the name, mailing address, and telephone contact information of the person(s) acquiring any rights or benefits as a result of any such sale, assignment, transfer, or other conveyance;
- (d) the Notice must be signed by a duly authorized person representing the Developer and a duly authorized representative of the person that will acquire any rights or benefits as a result of the sale, assignment transfer or other conveyance.

Section 16.11. No Joint Venture.

Nothing contained in this Agreement or any other agreement between the Developer and the City is intended by the Parties to create a partnership or joint venture between the Developer, on the one hand, and the City on the other hand and any implication to the contrary is hereby expressly disavowed. It is understood and agreed that this Agreement does not create a joint enterprise, nor does it appoint either Party as an agent of the other for any purpose whatsoever.

Neither Party shall in any way assume any of the liability of the other for acts of the other or obligations of the other. Each Party shall be responsible for any and all suits, demands, costs or actions proximately resulting from its own individual acts or omissions.

Section 16.12. Estoppel Certificates. From time to time within fifteen (15) business days of a written request of the Developer or any future Developer, and upon the payment of a \$100.00 fee to the City, the City Manager, or his/her designee is authorized, in his official capacity and to his reasonable knowledge and belief, to execute a written estoppel certificate in form approved by the City Attorney, identifying any obligations of a Developer under this Agreement that are in default. No other representations in the Estoppel shall be made by the City.

Section 16.13. Independence of Action.

It is understood and agreed by and among the Parties that in the design, construction and development of the Public Improvements and any of the related improvements described herein, and in the Parties' satisfaction of the terms and conditions of this Agreement, that each Party is acting independently, and the City assumes no responsibility or liability to any third parties in connection to the Developer's obligations hereunder.

Section 16.14. Limited Recourse.

No officer, director, employee, agent, attorney or representative of the Developer shall be deemed to be a Party to this Agreement or shall be liable for any of the contractual obligations created hereunder. No elected official of the City and no agent, attorney or representative of the City shall be deemed to be a Party to this Agreement or shall be liable for any of the contractual obligations created hereunder.

Section 16.15. Exhibits.

All exhibits to this Agreement are incorporated herein by reference for all purposes wherever reference is made to the same.

Section 16.16. No Consent to Third Party Financing.

The City does not and shall not consent to nor participate in any way in any third-party financing based upon the Developer's assignment of its right to receive funds pursuant to this Agreement or any Reimbursement Agreement.

Section 16.17. Survival of Covenants.

Any of the representations, warranties, covenants, and obligations of the Parties, as well as any rights and benefits of the Parties, pertaining to a period of time following the termination of this Agreement shall survive termination.

Section 16.18. No Acceleration.

All amounts due pursuant to this Agreement and any remedies under this Agreement are not subject to acceleration.

Section 16.19. Conditions Precedent.

This Agreement is expressly subject to, and the obligations of the Parties are conditioned upon the City levy of the Assessments or approval of a Reimbursement Agreement.

Section 16.20. No Reduction of Assessments.

Following the issuance of each series of PID Bonds, the Developer agrees not to take any action or actions to reduce the total amount of the Assessments levied in payment of such PID Bonds.

Section 16.21. Recording Fees.

Any fees associated with the recording of documents in the real property records of Harris County in order to give initial notice of the Assessments or made pursuant to the Act, shall be paid by the Developer. Ongoing recording in the real property records of Harris County of updates to the Service and Assessment Plan shall be paid as an administrative expense of the PID.

Section 16.22. Governing Law.

The Agreement shall be governed by the laws of the State of Texas without regard to any choice of law rules; and venue for any action concerning this Agreement and the Reimbursement Agreement shall be in the State District Court of Harris County, Texas. The Parties agree to submit to the personal and subject matter jurisdiction of said court.

Section 16.23. Anti-Boycott Verification.

The Developer hereby verifies that it and its parent company, wholly- or majority-owned subsidiaries, and other affiliates, if any, do not boycott Israel and, to the extent this Agreement is a contract for goods or services, will not boycott Israel during the term of this Agreement. The foregoing verification is made solely to comply with Section 2271.002, Texas Government Code, and to the extent such Section does not contravene applicable Federal law. As used in the foregoing verification, 'boycott Israel' means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes. The Developer understands 'affiliate' to mean an entity that controls, is controlled by, or is under common control with the Developer and exists to make a profit.

Section 16.24. Iran, Sudan and Foreign Terrorist Organizations

The Developer represents that neither it nor any of its parent company, wholly- or majority-owned subsidiaries, and other affiliates is a company identified on a list prepared and maintained by the Texas Comptroller of Public Accounts under Section 2252.153 or Section 2270.0201, Texas Government Code, and posted on any of the following pages of such officer's internet website: <https://comptroller.texas.gov/purchasing/docs/sudan-list.pdf>, <https://comptroller.texas.gov/purchasing/docs/iran-list.pdf>, or <https://comptroller.texas.gov/purchasing/docs/fto-list.pdf>. The foregoing representation is made solely to comply with Section 2252.152, Texas Government Code, and to the extent such Section does not

contravene applicable Federal law and excludes the Developer and each of its parent company, wholly- or majority-owned subsidiaries, and other affiliates, if any, that the United States government has affirmatively declared to be excluded from its federal sanctions regime relating to Sudan or Iran or any federal sanctions regime relating to a foreign terrorist organization. The Developer understands “affiliate” to mean any entity that controls, is controlled by, or is under common control with the Developer and exists to make a profit.

Section 16.25. Petroleum.

To the extent this Agreement constitutes a contract for goods or services for which a written verification is required under Section 2274.002 (as added by Senate Bill 13 in the 87th Texas Legislature, Regular Session), Texas Government Code, as amended, the Developer hereby verifies that it and its parent company, wholly- or majority-owned subsidiaries, and other affiliates, if any, do not boycott energy companies and will not boycott energy companies during the term of this Agreement. The foregoing verification is made solely to enable the Issuer to comply with such Section and to the extent such Section does not contravene applicable Texas or federal law. As used in the foregoing verification, “boycott energy companies” shall mean, without an ordinary business purpose, refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company (A) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or (B) does business with a company described by (A) above. The Developer understands “affiliate” to mean an entity that controls, is controlled by, or is under common control with the Developer within the meaning of SEC Rule 133(f), 17 C.F.R. §230.133(f), and exists to make a profit.

Section 16.26. Firearms.

To the extent this Agreement constitutes a contract for goods or services for which a written verification is required under Section 2274.002 (as added by Senate Bill 19 in the 87th Texas Legislature, Regular Session), Texas Government Code, as amended, the Developer hereby verifies that it and its parent company, wholly- or majority-owned subsidiaries, and other affiliates, if any, do not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of this Agreement against a firearm entity or firearm trade association. The foregoing verification is made solely to enable the Issuer to comply with such Section and to the extent such Section does not contravene applicable Texas or federal law. As used in the foregoing verification, ‘discriminate against a firearm entity or firearm trade association’ (A) means, with respect to the firearm entity or firearm trade association, to (i) refuse to engage in the trade of any goods or services with the firearm entity or firearm trade association based solely on its status as a firearm entity or firearm trade association, (ii) refrain from continuing an existing business relationship with the firearm entity or firearm trade association based solely on its status as a firearm entity or firearm trade association, or (iii) terminate an existing business relationship with the firearm entity or firearm trade association based solely on its status as a firearm entity or firearm trade association and (B) does not include (i) the established policies of a merchant, retail seller, or platform that restrict or prohibit the listing or selling of ammunition, firearms, or firearm accessories and (ii) a company’s

refusal to engage in the trade of any goods or services, decision to refrain from continuing an existing business relationship, or decision to terminate an existing business relationship (aa) to comply with federal, state, or local law, policy, or regulations or a directive by a regulatory agency or (bb) for any traditional business reason that is specific to the customer or potential customer and not based solely on an entity's or association's status as a firearm entity or firearm trade association. As used in the foregoing verification, (b) 'firearm entity' means a manufacturer, distributor, wholesaler, supplier, or retailer of firearms (i.e., weapons that expel projectiles by the action of explosive or expanding gases), firearm accessories (i.e., devices specifically designed or adapted to enable an individual to wear, carry, store, or mount a firearm on the individual or on a conveyance and items used in conjunction with or mounted on a firearm that are not essential to the basic function of the firearm, including detachable firearm magazines), or ammunition (i.e., a loaded cartridge case, primer, bullet, or propellant powder with or without a projectile) or a sport shooting range (as defined by Section 250.001, Texas Local Government Code), and (c) 'firearm trade association' means a person, corporation, unincorporated association, federation, business league, or business organization that (i) is not organized or operated for profit (and none of the net earnings of which inures to the benefit of any private shareholder or individual), (ii) has two or more firearm entities as members, and (iii) is exempt from federal income taxation under Section 501(a), Internal Revenue Code of 1986, as an organization described by Section 501(c) of that code. The Developer understands "affiliate" to mean an entity that controls, is controlled by, or is under common control with the Developer within the meaning of SEC Rule 133(f), 17 C.F.R. §230.133(f), and exists to make a profit.

Section 16.27. Conflict.

In the event of any conflict between this Agreement and any Indenture authorizing the PID Bond, the Indenture controls. In the event of any conflict between this Agreement and the Reimbursement Agreement, the Reimbursement Agreement shall control, except that in all cases, Applicable Law shall control.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

CITY OF TOMBALL

By: _____

Name: _____

Title: City Manager

ATTEST:

City Secretary

[SIGNATURES CONTINUE ON NEXT PAGE]

DEVELOPER

FLS DEVELOPMENT LLC,

a Texas corporation

By: _____

Name: _____

Title: _____

Date: _____

STATE OF TEXAS §

§

COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be one of the persons whose names are subscribed to the foregoing instrument; he/she acknowledged to me that he/she is the _____ and duly authorized representative of FLS Development, LLC., a Texas Limited Liability Company, and that he/she executed said instrument for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this ____ day of _____, 2023.

Notary Public, State of Texas

My Commission Expires: _____

EXHIBIT A-1

DESCRIPTION

OVERALL ACREAGE

49.301 acres of land situated in the Jesse Pruitt Survey, Abstract Number 629, Harris County, Texas, being that certain called 31.994 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2023-170674, that certain called 17.307 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2023-171232, a portion of that certain Reserve "A" and Lot 1 of Brandt Holdings, a subdivision as shown on map or plat recorded under Film Code Number 679589 of the Map Records of Harris County, Texas, a portion of those certain Lots 489, 490, 495, 496, 497 and 498 of Tomball Townsite, a subdivision as shown on map or plat recorded under Volume 2, Page 65 of the Map Records of Harris County, Texas and those certain Lots 491, 492, 493 and 494 of said Tomball Townsite, said 49.301 acres of land being more particularly described by metes and bounds as follows:

BEGINNING at a 5/8 inch iron rod with cap found in the Southerly line of that certain Restricted Reserve "J" of The Estates at Willow Creek, a subdivision as shown on map or plat recorded under Film Code Number 540246 of the Map Records of Harris County, Texas, for the Northeasterly comer of that certain called 2.3291 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2016-558665 and the Northerly Northwest corner of said 17.307 acre tract;

Thence, N 87° 49'3 5" E, along the Southerly line of said Restricted Reserve "I" of The Estates at Willow Creek, the Southerly line of that certain called 11.98 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number U517222 and the Southerly line of that certain Restricted Reserve "A" of Willow Creek Pet Ranch of Tomball, a subdivision as shown on map or plat recorded under Film Code Number 683259 of the Map Records of Harris County, Texas, a distance of 2,003.38 feet to the Northeasterly corner of said 31.994 acre tract;

Thence, S 03°07'21" E, along the Westerly line of that certain called 0.5045 of one acre of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number V343704, a distance of 232.39 feet to a 1/2 inch iron rod found in the Northwesterly line of that certain Block 2 of Country Club Greens Section Two-Replat, a subdivision as shown on map or plat recorded under Film Code Number 548068 of the Map Records of Harris County, Texas, for the Southwesterly corner of said 0.5045 acre tract;

Thence, S 42°56'22" W, along the Northwesterly line of said Block 2 of Country Club Greens Section Two-Replat, the Northwesterly line of that certain Block I of said Country Club Greens Section Two-Replat, the Northwesterly line of that certain Block 2 of Country Club Greens Partial Replat-Phase Two, a subdivision a shown on map or plat recorded under Film Code Number 540231 of the Map Records of Harris County, Texas and the Northwesterly

line of that certain Block 2 of Country Club Greens Partial Replat, a subdivision as shown on map or plat recorded under Film Code Number 519225 of the Map Records of Harris County, Texas, a distance of 1,846.30 feet to a 5/8 inch iron rod found for the Southeasterly comer of that certain called 5.3977 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number P792577 and the most Southerly comer of said 31.994 acre tract;

Thence, N 13°37'50" W, along the Easterly line of said 5.3977 acre tract and the Easterly line of that certain called 5.5000 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number P964270, a distance of 558.86 feet to a 5/8 inch iron rod found for the Northeasterly comer of said 5.5000 acre tract and the Southeasterly corner of said 17.307 acre tract;

Thence, S 56 ° 48'54" W, along the Northerly line of said 5.5000 acre tract and the Northerly line of that certain called 1.000 acre of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number X5 1 7792, a distance of 423.87 feet to a 5/8 inch iron rod with cap found for the Southeasterly corner of that certain Lot 1, Block I of Huffsmith Kohrville Food Court, a subdivision as shown on map or plat recorded under Film Code Number 701507 of the Map Records of Harris County, Texas;

Thence, N 11 °23' 19" W, along the Easterly line of said Lot 1, Block I of Huffsmith Kohrville Food Court, a distance of 290.49 feet to a 5/8 inch iron rod with cap found for the Northeasterly corner of said Lot 1, Block 1 of Huffsmith Kohrville Food Court and an interior corner of said 17.307 acre tract;

Thence, S 76° 00'34" W, along the Northerly line of said Lot I, Block 1 of Huffsmith Kohrville Food Court, a distance of 412.84 feet to a 5/8 inch iron rod with cap found in the Easterly right-of-way line of Huffsmith Kohrville Road (variable width right-of-way);

Thence, along the Easterly right-of-way line of said Hufsmith Kohrville Road, the following courses and distances:

N 20°20'37" W, a distance of 284.48 feet to a 5/8 inch iron rod found for the Southwesterly corner of that certain called 0.3634 of one acre of land dedicated for the widening of Hufsmith Kohrville Road by said map or plat of Brandt Holdings;

N 87° 26'22" E, a distance of 24.68 feet to a 5/8 inch iron rod with cap found for the Southwesterly corner of said Reserve "A" of Brandt Holdings and the Southeasterly corner of said dedication;

N 20' 18'43" W, a distance of 437.48 feet to a 5/8 inch iron rod with cap found for a point of curvature to the right;

In a Northwesterly direction, with said curve to the right, having a central angle of 0 1 '25' 11 ", a radius of 1950.00 feet, an arc length of 48.32 feet, a chord bearing of N 19'36'08" W and

a chord distance of 48.32 feet to a 5/8 inch iron rod with cap found for the Southwesterly corner of said 2.3291 acre tract;

Thence, N 87° 37'27" E, along the Southerly line of said 2.3291 acre tract, a distance of 441.49 feet to a 5/8 inch iron rod with cap found for the Southeasterly corner of said 2.3291 acre tract;

Thence, N 02'23'19" W, along the Easterly line of said 2.3291 acre tract, a distance of 269.92 feet to the POINT OF BEGINNING and containing 49.301 acres of land.

BEARING ORIENTATION BASED ON TEXAS STATE PLANE COORDINATE GRID SYSTEM OF 1983, DERIVED FROM CORS SITE RODS.

TRACT 1

0.8041 of one acre or 35,026 square feet of land situated in the Elizabeth Smith Survey, Abstract Number 70, Harris County, Texas, being a portion of that certain Unrestricted Reserve "A" of Tomball Greens, a subdivision as shown on map or plat recorded under Film Code Number 440128 of the Map Records of Harris County, Texas, said 0.8041 of one acre or 35,026 square feet of land being more particularly described by metes and bounds as follows:

BEGINNING at a 1/2 inch iron rod found in the Southeasterly line of that certain called 0.1262 of one acre of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number V308253, for the Northeasterly corner of that certain Lot 9, Block 2 of Country Club Greens Section Two-Replat, a subdivision as shown on map or plat recorded under Film Code Number 548068 of the Map Records of Harris County, Texas;

Thence, N 42'56'22" E, along the Southeasterly line of said 0.1262 acre tract and the Southeasterly line of that certain called 1.879 acres of land described deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2020-279347, a distance of 163.90 feet to a 1/2 inch iron rod found for the Northwesterly corner of that certain Lot 6, Block 2 of Country Club Greens Sec. Two, a subdivision as shown on map or plat recorded under Film Code Number 491143 of the Map Records of Harris County, Texas;

Thence, S 15' 43'52" E, along the Westerly line of said Lot 6, a distance of 270.27 feet to a 1/2 inch iron rod found for the Northwesterly right-of-way line of North Country Club Green Drive (60 foot Permanent access easement), for the Southwesterly corner of said Lot 6;

Thence, S 56'26'08" W, along the Northwesterly right-of-way line of said North Country Club Green Drive, a distance of 147.07 feet to a 1/2 inch iron rod found for the Southeasterly corner of said Lot 9;

Thence, N 15°43'52" W, along the Easterly line of said Lot 9, a distance of 230.09 feet to the POINT OF BEGINNING and containing 0.8041 of one acre or 35,026 square feet of land.

BEARING ORIENTATION BASED ON TEXAS STATE PLANE COORDINATE GRID SYSTEM OF 1983, DERIVED FROM CORS SITE RODS.

EXHIBIT A-2

PROPERTY DESCRIPTION

43.149 acres of land situated in the Jesse Pruitt Survey, Abstract Number 629, Harris County, Texas, being that certain called 31.994 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2023-170674, a portion of that certain called 17.307 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2023-171232, a portion of that certain Reserve "A" and Lot 1 of Brandt Holdings, a subdivision as shown on map or plat recorded under Film Code Number 679589 of the Map Records of Harris County, Texas, a portion of those certain Lots 489, 490, 495, 496, 497 and 498 of Tomball Townsite, a subdivision as shown on map or plat recorded under Volume 2, Page 65 of the Map Records of Harris County, Texas and those certain Lots 491, 492, 493 and 494 of said Tomball Townsite, said 43.149 acres of land being more particularly described by metes and bounds as follows:

BEGINNING at a 5/8 inch iron rod with cap found in the Southerly line of that certain Restricted Reserve "J" of The Estates at Willow Creek, a subdivision as shown on map or plat recorded under Film Code Number 540246 of the Map Records of Harris County, Texas, for the Northeasterly corner of that certain called 2.3291 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number RP-2016-558665 and the most Northerly Northwest corner of said 17.307 acre tract;

Thence, N 87°49'35" E, along the Southerly line of said Restricted Reserve "J" of The Estates at Willow Creek, the Southerly line of that certain called 11.98 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number U517222 and the Southerly line of that certain Restricted Reserve "A" of Willow Creek Pet Ranch of Tomball, a subdivision as shown on map or plat recorded under Film Code Number 683259 of the Map Records of Harris County, Texas, a distance of 2,003.38 feet to the Northwesterly corner of that certain called 0.5045 of one acre of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number V343704;

Thence, S 03°07'21" E, along the Westerly line of said 0.5045 acre tract, a distance of 232.39 feet to a 1/2 inch iron rod found in the Northwesterly line of that certain Block 2 of Country Club Greens Section Two Replat, a subdivision as shown on map or plat recorded under Film Code Number 548068 of the Map Records of Harris County, Texas, for the Southwesterly corner of said 0.5045 acre tract;

Thence, S 42°56'22" W, along the Northwesterly line of said Block 2 of Country Club Greens Section Two-Replat, the Northwesterly line of that certain Block 1 of said Country Club Greens Section Two-Replat, the Northwesterly line of that certain Block 2 of Country Club Greens Partial Replat-Phase Two, a subdivision a shown on map or plat recorded under Film Code Number 540231 of the Map Records of Harris County, Texas and the Northwesterly line of that certain Block 2 of Country Club Greens Partial Replat, a subdivision as shown on map or plat recorded under Film Code Number 519225 of the Map Records of Harris County, Texas, a distance of 1,846.30 feet to a 5/8 inch iron rod found for the Southeasterly corner of that certain called 5.3977 acres of land described in deed recorded in the Official

Public Records of Real Property of Harris County, Texas, under County Clerk's File Number P792577 and the most Southerly corner of said 31.994 acre tract;

Thence, N 13°37'50" W, along the Easterly line of said 5.3977 acre tract and the Easterly line of that certain called 5.5000 acres of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number P964270, a distance of 558.86 feet to a 5/8 inch iron rod found for the Northeasterly corner of said 5.5000 acre tract and the Southeasterly corner of said 17.307 acre tract;

Thence, S 56°48'54" W, along the Northerly line of said 5.5000 acre tract and the Northerly line of that certain called 1.000 acre of land described in deed recorded in the Official Public Records of Real Property of Harris County, Texas, under County Clerk's File Number X517792, a distance of 423.87 feet to a 5/8 inch iron rod with cap found for the Southeasterly corner of that certain Lot 1 of Huffsmith Kohrville Food Court, a subdivision as shown on map or plat recorded under Film Code Number 701507 of the Map Records of Harris County, Texas;

Thence, N 11°23'19" W, along the Easterly line of said Lot 1 of Huffsmith Kohrville Food Court, a distance of 290.49 feet to a 5/8 inch iron rod with cap found for the Northeasterly corner of said Lot 1 of Huffsmith Kohrville Food Court and an interior corner of said 17.307 acre tract;

Thence, N 14°21'35" W, severing said 17.307 acre tract, a distance of 261.11 feet to a point for corner;

Thence, S 60°51'41" W, a distance of 38.37 feet to an angle point;

Thence, S 65°38'25" W, a distance of 46.09 feet to a point of curvature to the right;

Thence, in a Southwesterly direction, with said curve to the right, having a central angle of 04°19'22", a radius of 1200.00 feet, an arc length of 90.53 feet, a chord bearing of S 67°48'06" W and a chord distance of 90.51 feet to a point of tangency;

Thence, S 69°57'46" W, a distance of 219.80 feet to a point for corner;

Thence, S 24°51'39" W, a distance of 28.07 feet to the proposed Northeasterly right-of-way line of Huffsmith Kohrville Road;

Thence, N 20°18'43" W, along the proposed Northeasterly right-of-way line of Huffsmith Kohrville Road, a distance of 139.94 feet to a point for corner;

Thence, S 65°08'21" E, a distance of 28.42 feet to a point for corner;

Thence, N 69°57'46" E, a distance of 220.16 feet to a point of curvature to the left;

Thence, in a Northeasterly direction, with said curve to the left, having a central angle of 04°19'22", a radius of 1100.00 feet, an arc length of 82.99 feet, a chord bearing of N 67°48'06" E and a chord distance of 82.97 feet to a point of tangency;

Thence, N 65°38'25" E, a distance of 46.09 feet to an angle point;

Thence, N 70°25'08" E, a distance of 54.69 feet to a point for corner;

Thence, N 14°21'35" W, a distance of 293.28 feet to a point for corner;

Thence, N 70°47'20" W, a distance of 43.49 feet to a 5/8 inch iron rod with cap found for the Southeasterly corner of said 2.3291 acre tract and an interior corner of said 17.307 acre tract;

Thence, N 02°23'19" W, along the Easterly line of said 2.3291 acre tract, a distance of 269.92 feet to the POINT OF BEGINNING and containing 43.149 acres of land.

BEARING ORIENTATION BASED ON TEXAS STATE PLANE COORDINATE GRID SYSTEM OF 1983, DERIVED FROM CORS SITE RODS.

EXHIBIT B

PLANNED DEVELOPMENT

FLS Development

Planned Development Regulations

(Medical Complex Blvd & Hufsmith Kohville Rd)

Contents

- a. General Provisions
- b. Land Uses
- c. Development Regulations
- d. Architecture Standards
- e. Landscape/Buffer Regulations
- f. Amenities

a. General Provisions

The Planned Development, PD, approved herein must be constructed, developed, and maintained in compliance with this ordinance and other applicable ordinances of the City of Tomball. If any provisions or regulations of any City of Tomball ordinance applicable in GR or SF-9 zoning districts is not contained in this ordinance, all of the regulations contained in the Development Code applicable to the GR and SF-9 zoning district in effect on the effective date of this ordinance shall apply to this PD.

Except as otherwise provided herein, the words used in this Planned Development have the same meaning established by the Development Code.

b. Land Uses

Permitted Land Uses are listed below. All others are prohibited.

- 1) Any use permitted by right in SF-9
- 2) Any use permitted in the General Retail District (GR) Zoning Code of Ordinances. In addition, the following uses will not be permitted as-of-right:
 - a) All-terrain vehicle dealer/sales
 - b) Amusement devices/arcade
 - c) Amusement, commercial (indoor)
 - d) Amusement, commercial (outdoor)
 - e) Animal Kennel (outdoor pens)
 - f) Appliance Repair
 - g) Automobile Wash (full service)
 - h) Automobile Wash (self-service)
 - i) Drinking Establishment
 - j) Gasoline Station
 - k) Mini-warehouse/ self-storage
 - l) Mobile Food Court
 - m) Non-city public assembly
 - n) Paint manufacture and/or mixing
 - o) Pawn shop
 - p) Propane sales filling (retail)
 - q) Quick lube/oil change/minor inspection
 - r) School, college or university
 - s) School, commercial trade (vocational)
 - t) School, other than public or denominational
 - u) School, public or denominational
 - v) Scientific and industrial research laboratories (nonhazardous)
 - w) Skating rink
 - x) Taxidermist
 - y) Temporary real estate field office
 - z) Wedding chapel

c. Development Regulations

- 1) Area regulations for Single Family Lots
 - a) Minimum Lot Size – 8,400 Square Feet
 - b) Minimum Lot Width – 65 Feet
 - c) Minimum Lot Depth – 130 Feet
 - d) Minimum Front Yard – 25 Feet (35' adjacent to Arterial Street)
 - e) Minimum Side Yard – 5 Feet (15' adjacent to street, 25' adjacent to Arterial Street)
 - f) Minimum Rear Yard – 15 Feet (25' adjacent to Arterial)
 - g) Maximum Lot Coverage – 55% (including main buildings and accessory buildings)
 - h) Maximum Height – Two stories not to exceed 35 feet for the main building/house
- 2) Area Regulations for nonresidential uses
 - a) Minimum Lot Area – 6,000 Square Feet
 - b) Minimum Lot Width – 60 Feet

- c) Minimum Lot Depth – 100 Feet
 - d) Minimum Front Yard – 35 feet
 - e) Minimum Side Yard (Interior) – 5 Feet (25' Adjacent to Arterial)
 - f) Minimum Side Yard Adjacent to Single Family – 25 Feet
 - g) Minimum Rear Yard – 15 Feet
 - h) Maximum floor area ratio (FAR) is 1:1
- 3) Develop full boulevard of Medical Complex Drive to serve the development (through the extent of single-family residential construction) as shown in Exhibit A.

d. Architecture Standards

These recommendations and standards are meant to foster a sense of design continuity that will deliver the desired aesthetic of the planned residential development. The follow architectural criteria are intended to make the home builder and building designer aware of the architectural context, not to inhibit or limit unique design.

1) Building façade criteria and features:

- a) Each residence must present an exterior design within the classification of “Modern Farmhouse” or “Craftsman” design.
- b) Combined exterior materials and colors must vary from those within 4 residences of the subject. Crossing the street will count as one residence.
- c) Primary brick material may not be repeated within 4 residences
- d) A variation of garage entries and garage sizes is expected as a general method of breaking up the street scene for the subdivision. This will include front loading 2 and 3 car garages as well as “J-Swing” garage entries.

2) Building façade finishes and materials:

- a) Each residence must include the following materials in varied methods of use.
- b) Brick and/or Stone
- c) Board and BaNen siding or similar painted material
- d) Cedar or other stained or painted decorative wood detailing
- e) Minimum 8:12 Side to side roof pitch

e. Landscape/Buffer Regulations

1) Single Family Lot Requirements

- a) Each lot shall be fully landscaped with either trees, plants or otherwise coved with grass

- b) Each lot shall have at least one 3.5" caliper shade tree planted in the front yard
- c) See attached (Exhibit B) for landscaping guidelines.

2) Non-residential Requirements

- a) Provide 30' landscape buffer and tree preservation between commercial reserve tracts and single-family lots
- b) Common areas near community signage, amenities, and within the esplanade for Medical Complex will be consistently landscaped with seasonal vegetation and flowers

- 3) The community park, fishing dock and shade structure shall be maintained with irrigated grass and seasonal landscaping.

f. Amenities

Amenities will be designed and built to complement the overall concept of the community with a similar use of materials and design concepts related to the home design requirements for the subdivision. When completed, the combination of the architectural design of the Amenities, the consistent branding of each area and the complimentary design of the commercial section of the community will complete a destination environment combining a modern design with a nod to the history of Tomball.

The following amenities are required as shown on Exhibit A.

- 1) Wet amenity detention pond with fountains
- 2) Designated walking trails around amenity ponds (w/ workout equipment)
- 3) Playground structure
- 4) Fishing Dock
- 5) Shade structure
- 6) Up to two (2) monument signs within platted area
- 7) Two (2) Pickle ball courts with fence and seating.

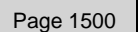


EXHIBIT B

Landscaping Guidelines

Just as all structures built throughout Graylou Grove from commercial to residences to amenity structures will be required to include design elements consistent with one another, landscaping in all of these areas will be expected to create a consistent and beautiful vegetation concept throughout the development.

A focus will be made on trees, plants and flowers which are native to the area and the State of Texas in general. Trees planted will be Oaks, implementation of plants will have a focus on evergreen selections and color will be provided by plants and flowers which do well in the environment and seasonal use of their intent.

All areas landscaped as part of the development will remain on an ongoing maintenance plan including irrigation and landscaping maintenance workers who will perform work on a regular basis.

Treelines:

Areas designated as treelines will be completed with selected Oaks of 6" in diameter or greater.

Common Areas:

Common areas in the development will include areas around signage, inside medians of Medical Complex, and throughout the amenity area at east end of the community.

These areas will require coverage by landscaping. Medians will be presented with a combination of mulch, St Augustine Grass, Evergreen plants and seasonal plants and flowers. These areas will be maintained through irrigation and ongoing care through landscaping professionals.

Areas immediately surrounding amenities or signage will be maintained with a combination of St. Augustine grass, mulch, evergreen plants and seasonal color.

Smaller, more detailed areas that require grass will be completed with the laying of sod while larger open areas will be completed through the use of grass seed.

Residential Requirements:

In order to be considered complete per community guidelines, each residence must include at least one 3.5 caliper tree of Oak or other approve tree, a fully sodded and irrigated front yard (to front corner of home at a minimum) and a landscaping area which must be a minimum of 5' x 20' in size. Landscaped should include a combination of mulch beds, evergreen plants and seasonal plants with color or seasonal flowers.

EXHIBIT C

PUBLIC IMPROVEMENTS AND PROJECT COSTS

The Projects listed and their costs are estimates and final projects and costs of the Public Improvements shall be as set forth in the applicable Service and Assessment Plan. The Service and Assessment Plan will also include costs of issuance for the PID Bonds.

EXHIBIT D
DEVELOPMENT STANDARDS

EXHIBIT E

LANDOWNER CONSENT

CONSENT AND AGREEMENT OF LANDOWNERS

This Consent and Agreement of Landowner is issued by _____, an _____, as the landowner (the “Landowner”) who collectively hold record title to all property located within the [_____ Public Improvement District] (the “PID”) created by the City of _____ pursuant to a petition of Landowner. Capitalized terms used herein and not otherwise defined shall have the meaning given to such terms in the City’s ordinance levying assessments on property within the PID, dated _____, 202_, including the Service and Assessment Plan and Assessment Rolls attached thereto (the “Assessment Ordinance”). [TO BE EXECUTED PRIOR TO THE LEVY OF ASSESSMENTS]

Landowner hereby declare and confirm that they collectively hold record title to all property in the PID which are subject to the Assessment Ordinances, as set forth on Exhibit A. Further, Landowner hereby ratify, declare, consent to, affirm, agree to and confirm each of the following:

1. The creation and boundaries of the PID, the boundaries of each Assessed Property, and the Authorized Improvements for which the Assessments are being made, as set forth in the Service and Assessment Plan.
2. The determinations and findings as to benefits by the City in the Assessment Ordinance and the Service and Assessment Plan.
3. The Assessment Ordinance and the Service and Assessment Plan and Assessment Roll.
4. The right, power and authority of the City Council to adopt the Assessment Ordinances and the Service and Assessment Plans and Assessment Roll;
5. Each Assessment levied on each Assessed Property as shown in the Service and Assessment Plan (including interest and Administrative Expenses as identified in the Service and Assessment Plan and as updated from time to time as set forth in the Service and Assessment Plan).
6. The Authorized Improvements specially benefit the Assessed Property in an amount in excess of the Assessment levied on each Assessed Property, as such Assessments are shown on the Assessment Roll.
7. Each Assessment is final, conclusive and binding upon such Landowners, regardless of whether such Landowners may be required to pay Assessments under certain circumstances pursuant to the Service and Assessment Plan.

Exhibit E

8. The then-current owner of each Assessed Property shall pay the Assessment levied on the Assessed Property owned by it when due and in the amount required by and stated in the Service and Assessment Plan and the Assessment Ordinance.
9. Delinquent installments of the Assessment shall incur and accrue interest, penalties, and attorney's fees as provided in the PID Act.
10. The "Annual Installments" of the Assessments may be adjusted, decreased and extended in accordance with the Service and Assessment Plan, and the then-current owner of each Assessed Property shall be obligated to pay its revised amounts of the Annual Installments, when due, and without the necessity of further action, assessments or reassessments by the City.
11. All notices required to be provided to it under the PID Act have been received and to the extent of any defect in such notice, Landowners hereby waive any notice requirements and consents to all actions taken by the City with respect to the creation of the PID and the levy of the Assessments.
12. That the resolution creating the PID, the Ordinance levying the Assessments, the Service and Assessment Plan and a Notice of Creation of Special Assessment District and Imposition of Special Assessment to be provided by the City, shall be filed in the records of the County Clerk of Harris County, with copies of the recorded documents delivered to the City promptly after receipt thereof by the recording party, as a lien and encumbrance against the Assessed Property.
13. Each Assessed Property owned by the Landowner identified in the Service and Assessment Plan and Assessment Roll are wholly within the boundaries of the PID.
14. There are no Parcels owned by the Landowners within the boundaries of the PID that are not identified in the Service and Assessment Plan and the Assessment Roll.
15. Each Parcel owned by the Landowners identified in the Service and Assessment Plan and Assessment Roll against which no Assessment has been levied was Non-Benefited Property as of _____, 20__.

Originals and Counterparts. This Agreement may be executed in a number of identical counterparts, each of which shall be deemed an original for all purposes.

[Execution page follows]

IN WITNESS WHEREOF, the undersigned has caused this Agreement and Consent of Landowner to be executed as of _____, 202_.

By: _____

Name: _____

Date: _____

STATE OF TEXAS §
 §
COUNTY OF HARRIS §

This instrument was acknowledged before me on the _____ day of _____, 20____ by _____, as, _____ of FLS Development, LLC. a Texas Limited Liability Company on behalf of said company.

Notary Public, State of Texas

Exhibit E

EXHIBIT F

FORM OF PAYMENT CERTIFICATE

PAYMENT CERTIFICATE NO. _____

Reference is made to that certain Indenture of Trust by and between the City and the Trustee dated as of _____ (the “Indenture”) relating to the “City of _____, Texas, Special Assessment Revenue Bonds, Series 20__ (_____ Public Improvement District Project)” (the “Bonds”). Unless otherwise defined, any capitalized terms used herein shall have the meanings ascribed to them in the _____, LLC an Texas limited liability company (the “Developer”) and requests payment to the Developer (or to the person designated by the Developer) from:

_____ the Public Improvement Account of the Project Fund
from _____, N.A., (the “Trustee”), in the amount of _____
(\$ _____) for labor, materials, fees, and/or other general costs related to the creation, acquisition, or construction of certain Public Improvements providing a special benefit to property within the _____ Public Improvement District.

In connection with the above referenced payment, the Developer represents and warrants to the City as follows:

1. The undersigned is a duly authorized officer of the Developer, is qualified to execute this Certificate for Payment Form on behalf of the Developer, and is knowledgeable as to the matters set forth herein.
2. The itemized payment requested for the below referenced Public Improvements has not been the subject of any prior payment request submitted for the same work to the City or, if previously requested, no disbursement was made with respect thereto.
3. The itemized amounts listed for the Public Improvements below is a true and accurate representation of the Public Improvements associated with the creation, acquisition, or construction of said Public Improvements and such costs (i) are in compliance with the Development Agreement, and (ii) are consistent with and within the cost identified for such Public Improvements as set forth in the Service and Assessment Plan.
4. The Developer is in compliance with the terms and provisions of the Development Agreement, the Indenture, and the Service and Assessment Plan.
5. The Developer has timely paid all ad valorem taxes and Annual Installments of Public Assessments it owes or an entity the Developer controls owes, located in the _____ Public Improvement District and has no outstanding delinquencies for such Public Assessments.

Exhibit F

6. All conditions set forth in the Indenture and the Development Agreement for the payment hereby requested have been satisfied.

7. The work with respect to Public Improvements referenced below (or its completed segment) has been completed, and the City has inspected such Public Improvements (or its completed segment).

8. The Developer agrees to cooperate with the City in conducting its review of the requested payment, and agrees to provide additional information and documentation as is reasonably necessary for the City to complete said review.

Payments requested are as follows:

Payee / Description of Public Improvement	Total Cost Public Improvement	Budgeted Cost of Public Improvement	Amount requested be paid from the Public Improvement Account

Attached hereto are receipts, purchase orders, change orders, and similar instruments which support and validate the above requested payments. Also attached hereto are "bills paid" affidavits and supporting documentation in the standard form for City construction projects.

Pursuant to the Development Agreement, after receiving this payment request, the City has inspected the Public Improvements (or completed segment) and confirmed that said work has been completed in accordance with approved plans and all applicable governmental laws, rules, and regulations.

Payments requested hereunder shall be made as directed below:

- a. X amount to Person or Account Y for Z goods or services.
- b. Payment instructions

I hereby declare that the above representations and warranties are true and correct.

_____,
LLC, an _____ limited liability company

By: _____

Exhibit F

Name: _____

Title: _____

APPROVAL OF REQUEST

The City is in receipt of the attached Certificate for Payment, acknowledges the Certificate for Payment, and finds the Certificate for Payment to be in order. After reviewing the Certificate for Payment, the City approves the Certificate for Payment and authorizes and directs payment of the amounts set forth below by Trustee from the Project Fund to the Developer or other person designated by the Developer as listed and directed on such Certificate for Payment. The City's approval of the Certificate for Payment shall not have the effect of estopping or preventing the City from asserting claims under the Development Agreement, the Reimbursement Agreement, the Indenture, the Service and Assessment Plan, or any other agreement between the parties or that there is a defect in the Public Improvements.

Amount of Payment Certificate Request	Amount to be Paid by Trustee from Improvement Account
\$ _____	\$ _____

CITY OF TOMBALL, TEXAS

By: _____

Name: _____

Title: _____

Date: _____

Exhibit F

EXHIBIT G

FORM OF CLOSING DISBURSEMENT REQUEST

The undersigned is an agent for _____, LP, (the “Developer”) and requests payment from:

[the Cost of Issuance Account of the Project Fund][the Improvement Account of the Project Fund] from _____, (the “Trustee”) in the amount of _____ DOLLARS (\$ _____) for costs incurred in the establishment, administration, and operation of the _____ Public Improvement District (the “District”), as follows:

Closing Costs Description	Cost	PID Allocated Cost
TOTAL		

In connection to the above referenced payments, the Developer represents and warrants to the City as follows:

1. The undersigned is a duly authorized officer of the Developer, is qualified to execute this Closing Disbursement Request on behalf of the Developer, and is knowledgeable as to the matters set forth herein.
2. The payment requested for the above referenced establishment, administration, and operation of the District at the time of the delivery of the Bonds has not been the subject of any prior payment request submitted to the City.
3. The amount listed for the below itemized costs is a true and accurate representation of the Actual Costs incurred by Developer with the establishment of the District at the time of the delivery of the Bonds, and such costs are in compliance with and within the costs as set forth in the Service and Assessment Plan.
4. The Developer is in compliance with the terms and provisions of the Development Agreement, the Indenture, and the Service and Assessment Plan.
5. All conditions set forth in the Indenture for the payment hereby requested have been satisfied.
6. The Developer agrees to cooperate with the City in conducting its review of the requested payment, and agrees to provide additional information and documentation as is reasonably necessary for the City to complete said review.

Payments requested hereunder shall be made as directed below:

- a. X amount to Person or Account Y for Z goods or services.
- b. Payment instructions

I hereby declare that the above representations and warranties are true and correct.

_____, LLC, an _____ limited liability company

By: _____

Name: _____

Title: _____

Date: _____

APPROVAL OF REQUEST

The City is in receipt of the attached Closing Disbursement Request, acknowledges the Closing Disbursement Request, and finds the Closing Disbursement Request to be in order. After reviewing the Closing Disbursement Request, the City approves the Closing Disbursement Request to the extent set forth below and authorizes and directs payment by Trustee in such amounts and from the accounts listed below, to the Developer or other person designated by the Developer herein.

Closing Costs	Amount to be Paid by Trustee from Cost of Issuance Account
\$ _____	\$ _____

CITY OF TOMBALL, TEXAS

By: _____

Name: _____

Title: _____

Date: _____

EXHIBIT H

HOME BUYER DISCLOSURE PROGRAM

The Developer of _____ Public Improvement district (the “PID”) shall record notice of the PID in the appropriate land records for the Property. The Developer shall require in its contracts with builders within the PID that the builders provide notice to prospective home buyers in accordance with the following minimum requirements:

1. Attach the Recorded Notice of the Establishment of the PID and the final Assessment Roll for such Assessed Parcel (or if the Assessment Roll is not available for such Assessed Parcel, then a schedule showing the maximum 30-year payment for such Assessed Parcel) in an addendum to each residential home buyer’s contract.
2. Collect a copy of the addendum signed by each buyer at closing and provide to the City.
3. Require signage indicating that the Property for sale is located in a special assessment district and require that such signage be located in conspicuous places in all model homes.
4. If the homebuilders estimate monthly ownership costs, they must include special assessments in estimated property taxes.
5. Notify Settlement Companies that they are required to include special taxes on HUD 1 forms and include in total estimated taxes for the purpose of setting up tax escrows

EXHIBIT I

RESERVED

EXHIBIT J

AMENITIES

- Wet amenity detention pond with fountains
- Designated walking trails around amenity ponds (w/ workout equipment)
- Playground structure
- Fishing Dock
- Shade structure
- Up to two (2) monument signs within platted area
- Two (2) Pickle ball courts with fence and seating.

City Council Meeting

Agenda Item

Data Sheet

Meeting Date: December 18, 2023

Topic:

Executive Session: The City Council will meet in Executive Session as Authorized by Title 5, Chapter 551, Government Code, the Texas Open Meetings Act, for the Following Purpose(s):

- Sec. 551.071 – Consultation with the City Attorney regarding a matter which the Attorney’s duty requires to be discussed in closed session.
- Sec. 551.072 – Deliberations regarding Real Property
- Sec. 551.074 – Personnel Matters; Deliberation of the Appointment, Employment, and Duties of a Public Officer or Employee-IT Director

Background:

Origination: David Esquivel, City Manager

Recommendation:

Party(ies) responsible for placing this item on agenda: David Esquivel, City Manager