CITY OF ANGLETON
PLANNING AND ZONING COMMISSION

120 S. CHENANGO STREET, ANGLETON, TEXAS 77515
THURSDAY, JANUARY 07, 2021 AT 12:00 PM

AGENDA

NOTICE IS HEREBY GIVEN PURSUANT TO V.T.C.A., GOVERNMENT CODE, CHAPTER 551, THAT THE PLANNING AND ZONING COMMISSION OF ANGLETON WILL CONDUCT A MEETING, OPEN TO THE PUBLIC, ON THURSDAY, JANUARY 7, 2021, AT 12:00 P.M., AT THE CITY OF ANGLETON COUNCIL CHAMBERS LOCATED AT 120 S. CHENANGO STREET ANGLETON, TEXAS 77515.

In accordance with an Order of the Office of the Governor issued March 16, 2020, this meeting scheduled is in person and open to the public at The City of Angleton Council Chambers located at 120 S. Chenango Street Angleton, Texas 77515. In order to advance the public health goal of limiting face-to-face meetings (also called "social distancing") to slow the spread of the Coronavirus (COVID-19), seating will be limited to 50% Fire Code capacity or 24 people to allow for 6 feet of separation.

Citizens who wish to attend the Meeting in person must abide by the following requirements:

- Do not enter the building if you are having symptoms. Go home.
- Maintain a minimum distance of 6 feet from other citizens.
- Families or persons traveling together may sit together but maintain social distancing from others.

The City will be using a telephone/video conferencing tool called ZOOM to make the meeting available to the public. You have several options to participate:

1. Click the link to join the webinar: https://us02web.zoom.us/j/870256631 Passcode: 4364

2. Phone in at (346) 248-7799 or (669) 900-9128 or (253) 215-8782 or (312) 626-6799 or (646) 558-8656 or (301) 715-8592 or (888) 475-4499 and enter Meeting ID: 870-256-631

3. Download the ZOOM app to your phone and enter Meeting ID: 870-256-631

This meeting will also be live-streamed on Facebook Live at https://www.facebook.com/cityofangleton/.

The public will be permitted to offer public comments on each agenda item by emailing the City Secretary at citysecretary@angleton.tx.us by Wednesday, January 6, 2021 at 5:00 p.m., prior to the meeting. The request must include the meeting title, speaker's name, address, and the agenda item number.

CALL TO ORDER

DECLARATION OF A QUORUM

MINUTES

PUBLIC HEARINGS AND ACTION ITEMS

1. Conduct a public hearing, discussion and possible action on an ordinance amending Ordinance No. 20200609-006 Exhibit "A" Permitted Uses for Riverwood Ranch Planned Development Overlay District to add "Farms, General (Livestock/Ranch) and Farms, General (Crops) as permitted uses within the Riverwood Ranch Planned Development Overlay District. The subject property consists of 78.10 acres, is located between Downing Road and Buchta Road on the north side of Hospital Drive and is more commonly known as 2324 Downing Street.

2. Conduct a public hearing, discussion and possible action on an ordinance to rezone an approximate 0.50 acres of land out of Tract No. 44 of the New York and Texas Land Company Subdivision situated in the J. de J. Valderas Survey, Abstract No. 380, Brazoria County, Texas from the Single-Family Residential 6.3 (SF-6.3) and Commercial-Neighborhood (C-N) Districts to the Single-Family Residential 5 (SF-5) District. The subject property is located on the north side of W. Miller Street approximately 250 feet west of Warren Street.

3. Conduct a public hearing, discussion and possible action on a recommendation regarding a request for approval of the Heritage Oaks Section 7 Final Replat, being a portion of lots 47, 48,49, 50 and 51 of the New York and Texas Land Company Subdivision located in the J.D.J. Valderas Survey. The propose final replat consists of 34 lots and 2 reserve lots on 27.122 acres, is zoned Single Family Residential 7.2 (SF-7.2) and is located on the extension of Oak Ridge Drive.

4. Conduct a public hearing, discussion and possible action on a recommendation regarding a request for approval of the Final Replat of Gifford Meadows Subdivision being all of Lots 1-7 and Lot 16 of the Gifford Meadows Subdivision. The proposed final replat consists of 85 lots and 2 reserve lots on 17.31 acres, is zoned a Planned Development Overlay district and is located on the east side of Gifford Road approximately 700 feet south of Cemetery Road.

5. Conduct a public hearing, discussion and possible action on a recommendation regarding a request for approval of the Final Replat of Angleton Village being a portion of Lots 27 and 28 of the Oliver and Barrow Subdivision. The proposed final replat consists of one lot on 14.571 acres, is in the Multi-Family Residential - 29 (MFR-29) district and is located on the north side of Henderson Road approximately 900 feet east of Buchta Road.

WORKSHOP

EXECUTIVE SESSION

CONSIDER AND TAKE ANY ACTION RESULTING FROM EXECUTIVE SESSION

FUTURE AGENDA ITEMS

REVIEW MEETING CALENDAR FOR CHANGES OR CANCELLATIONS

6. List of 2021 Planning & Zoning Commission Meetings.

ADJOURNMENT

CERTIFICATION

I, Walter Reeves, Development Services Director, do hereby certify that this Notice of a Meeting was posted on the City Hall bulletin board, a place convenient and readily accessible to the general public at all times and to the City's website, www.angleton.tx.us, in compliance with Chapter 551, Texas Government Code. The said Notice was posted on the following date and time: Monday, January 4, 2021 by 12:00 p.m. and remained so posted continuously for at least 72 hours proceeding the scheduled time of said meeting.

/S/ Walter Reeves
Walter Reeves
Development Services Director

In compliance with the Americans with Disabilities Act, the City of Angleton will provide reasonable accommodations for persons attending City meetings. The facility is wheelchair accessible and accessible parking spaces are available. Please contact the City Secretary at 979-849-4364, extension 2115 or email faguilar@angleton.tx.us.

AGENDA ITEM SUMMARY FORM

MEETING DATE: January 7, 2021

PREPARED BY: Walter E. Reeves jr., AICP Development Services Director

AGENDA CONTENT: Conduct a public hearing, discussion and possible action on an ordinance amending Ordinance No. 20200609-006 Exhibit "A" Permitted Uses for Riverwood Ranch Planned Development Overlay District to add "Farms, General (Livestock/Ranch) and Farms, General (Crops) as permitted uses within the Riverwood Ranch Planned Development Overlay District. The subject property consists of 78.10 acres, is located between Downing Road and Buchta Road on the north side of Hospital Drive and is more commonly known as 2324 Downing Street.

AGENDA ITEM SECTION: Public Hearing

BUDGETED AMOUNT: None **FUNDS REQUESTED:** None

FUND: None

EXECUTIVE SUMMARY:

This is a request to amend Ordinance No. 20200609-006, Exhibit "A" Permitted Uses for Riverwood Ranch Planned Development Overlay District to add "Farms, General (Livestock/Ranch) and Farms, General (Crops) as permitted uses within the Riverwood Ranch Planned Development Overlay District. The reason for the amendment is that the owner of the property wishes to attempt to obtain an agricultural property tax exemption on the currently undeveloped portions of the property. Brazoria County will not consider granting the exemption as the City of Angleton cannot verify that agricultural uses are permitted uses on the property, which they are not due to these uses not being included as part of Exhibit "A."

Apparently, agricultural uses (cattle) had been done on the property in the past, but with the adoption of Ordinance No. 20200609-006 agricultural uses are no longer permitted. Rather than pursue reestablishment of a non-conforming use through the Board of Adjustment it is easier to process an amendment to Exhibit "A" and makes the use a "by-right" use that cannot be lost due to failing to maintain non-conforming status.

RECOMMENDATION:

Staff recommends approval of the amendment to Ordinance No. 20200609, Exhibit “A” Permitted Uses for Riverwood Ranch Planned Development Overlay District to add “Farms, General (Livestock/Ranch) and Farms, General (Crops).

ORDINANCE NO. XXXXXXXXXXXXXXXXX

AN ORDINANCE OF THE CITY OF ANGLETON, TEXAS AMENDING ORDINANCE NO. 20200609-006 EXHIBIT "A" PERMITTED USES FOR RIVERWOOD RANCH PLANNED DEVELOPMENT OVERLAY DISTRICT TO ADD "FARMS, GENERAL (LIVSTOCK/RANCH)" and "FARMS, GENERAL (CROPS)" AS PERMITTED USES WITHIN THE RIVERWOOD RANCH PLANNED DEVELOPMENT OVERLAY DISTRICT; PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR A PENALTY; AND PROVIDING FOR REPEAL AND AN EFFECTIVE DATE.

Whereas, the City is authorized by Chapter 211 of the Texas Local Government Code to promulgate rules and regulations governing regulation of land use, structures, businesses and related activities; and

Whereas, the City Council further finds that the rules and regulations governing land use, structures and related activities within the territorial limits of the City promote the safe, orderly and healthful development of the City; and

Whereas, on January 7, 2021 the Angleton Planning and Zoning Commission conducted a public hearing regarding a request by Riverwood Ranch Land Holdings LLC to amend Ordinance No 20200609-006 Exhibit "A" Permitted Uses for Riverwood Ranch Planned Development Overlay District to add "Farms, General (Livestock/Ranch)" and "Farms, General (Crops)" as permitted uses within the Riverwood Ranch Planned Development Overlay District following lawful publication of the notice of said public hearing; and

Whereas, on January 7, 2021 after considering the public testimony received at such hearing, if any, the Planning and Zoning Commission has recommended that the request by Riverwood Ranch Land Holdings LLC to amend Ordinance No 20200609-006 Exhibit "A" Permitted Uses for Riverwood Ranch Planned Development Overlay District to add "Farms, General (Livestock/Ranch)" and "Farms, General (Crops)" as permitted uses within the Riverwood Ranch Planned Development Overlay District be approved; and

Whereas, on January 12, 2021 the City Council of the City of Angleton conducted a public hearing regarding a by Riverwood Ranch Land Holdings LLC to amend Ordinance No 202000609-006 Exhibit "A" Permitted Uses for Riverwood Ranch Planned Development Overlay District to add "Farms, General (Livestock/Ranch)" and "Farms, General (Crops)" as permitted uses within the Riverwood Ranch Planned Development Overlay District; and

Whereas, on January 12, 2021 the City Council of the City of Angleton, Texas approved the request by Riverwood Ranch Land Holdings LLC to amend Ordinance No 20200609-006 Exhibit "A" Permitted Uses for Riverwood Ranch Planned Development Overlay District to add "Farms, General (Livestock/Ranch)" and "Farms, General (Crops)" as permitted uses within the Riverwood Ranch Planned Development Overlay District; and

Whereas, each and every applicable requirement set forth in Chapter 211, Subchapter A, Texas Local Government Code and the Code of Ordinance of the City of Angleton, Texas, concerning public notices, hearings and other procedural matters have been fully met; and

Whereas, the City Council desires to amend Ordinance No 20200609-006 Exhibit "A" Permitted Uses for Riverwood Ranch Planned Development Overlay District to add "Farms, General

DRAFT

(Livestock/Ranch)" and "Farms, General (Crops)" as permitted uses within the Riverwood Ranch Planned Development Overlay District;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ANGLETON, TEXAS;

Section 1. That all of the facts recited in the preamble to this Ordinance are hereby found by the City Council to be true and correct and are incorporated herein by this reference and expressly made a part hereof as if copied herein verbatim.

Section 2. That the request by Riverwood Ranch Land Holdings LLC to amend Ordinance No 20200609-006 Exhibit "A" Permitted Uses for Riverwood Ranch Planned Development Overlay District to add "Farms, General (Livestock/Ranch)" and "Farms, General (Crops)" as permitted uses within the Riverwood Ranch Planned Development Overlay District be approved and that all other existing terms, requirements and conditions of Ordinance 20200609-006 shall remain in effect.

Section 3. Penalty. Any person who violates or causes, allows, or permits another to violate any provision of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than Two Thousand and No/100 Dollars ($2,000.00). Each occurrence of any such violation of this Ordinance shall constitute a separate offense. Each day on which any such violation of the Ordinance occurs shall constitute a separate offense.

Section 4. Repeal. All ordinances or parts of ordinances inconsistent with the terms of this ordinance are hereby repealed; provided, however, that such repeal shall be only to the extent of such inconsistency and in all other respects this ordinance shall be cumulative of other ordinances regulating and governing the subject matter covered by this ordinance.

Section 5. Severablity. In the event any clause, phrase provision, sentence or part of this Ordinance or the application of the same to any person or circumstances 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 than the part declared to be invalid or unconstitutional; and the City Council of the City of Angleton, Texas declares that it would have passed each and every part of the same notwithstanding the omission of any part thus declared to be invalid or unconstitutional, or whether there be on or more parts.

Section 6. Effective date. That this ordinance shall be effective and in full force immediately upon its adoption.

Section 7. Proper Notice and Meeting

It is hereby officially found and determined that the meeting at which this Ordinance was passed was open to the public, and that public notice of the time, place and purpose of said meeting was given as required by the Open Meetings Act, Texas Government Code, Chapter 551. Notice was also provided as required by Chapter 52 of the Texas Local Government Code.

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PASSED, APPROVED and ADOPTED this, the _____day of _____.

ATTEST: Jason Perez, Mayor

Frances Aguilar, City Secretary

DRAFT

AGENDA ITEM SUMMARY FORM

MEETING DATE: January 7, 2020

PREPARED BY: Walter E. Reeves Jr., AICP Development Services Director

AGENDA CONTENT: Conduct a public hearing, discussion and possible action on an ordinance to rezone an approximate 0.50 acres of land out of Tract No. 44 of the New York and Texas Land Company Subdivision situated in the J. de J. Valderas Survey, Abstract No. 380, Brazoria County, Texas from the Single-Family Residential 6.3 (SF-6.3) and Commercial-Neighborhood (C-N) Districts to the Single-Family Residential 5 (SF-5) District. The subject property is located on the north side of W. Miller Street approximately 250 feet west of Warren Street.

AGENDA ITEM SECTION: Public Hearing

BUDGETED AMOUNT: None **FUNDS REQUESTED:** None

FUND: None

EXECUTIVE SUMMARY:

This is a request from Mr. Rogelio Rodrigues, represented by Mr. Martin Rodriguez, to rezone 0.5 acres of land located on the north side of Miller Street approximately 250 feet west of Warren Street from the SF-6.3 and C-N Districts to the SF-5.

The Future Land Use Plan from the Angleton Comprehensive Plan Update designates the subject property as being appropriate for residential use. The proposed rezoning is further supported by Goals 1 & 2 of Chapter 8 Housing of the Comprehensive Plan.

Goal One: A community in which quality housing is attractive available and affordable to all residents.
Goal Two: A variety of housing options that meets the needs of an increasingly diverse population.

Existing Land Use and Zoning

North: Undeveloped land in the SF 6.3 District.

East: Undeveloped City of Angleton land in street right-of-way.

South: Some residential development in SF-6.3 zoning and some C-N zoning.

West: Scattered residential development in the SF-6.3 District.

Miller street is designated as a Minor Collector on the Mobility Plan in this area but based on the existing development pattern in the area it is hard to imagine the existing street every needing to be improved to that standard (60'-70' of right-of-way and 32' of pavement).

The proposed rezoning is consistent with the Future Land Use Plan and is supported by Chapter 8 Housing, Goals 1 & 2 and is in keeping with the existing development pattern in the area. The proposed rezoning and any subsequent development of the property will have little impact upon the City's infrastructure.

RECOMMENDATION:

Staff recommends approval of the proposed rezoning for 0.50 acres from the SF-6.3 and C-N Districts to the SF-5 District.

ORDINANCE NO. XXXXXXXXXXXXXXXX

AN ORDINANCE OF THE CITY OF ANGLETON, TEXAS REZONING 0.5 ACRES FROM CHAPTER 28 ZONING SEC. 46 SINGLE FAMILY RESIDENTIAL 6.3 DISTRICT AND CHAPTER 28 ZONING SEC. 55 COMMERCIAL - NEIGHBORHOOD DISTRICT TO THE CHAPTER 28 SECTION 47 SINGLE FAMILY RESIDENTIAL 5 DISTRICT OF THE ANGLETON CODE OF ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR A PENALTY; AND PROVIDING FOR REPEAL AND AN EFFECTIVE DATE.

Whereas, the City is authorized by Chapter 211 of the Texas Local Government Code to promulgate rules and regulations governing regulation of land use, structures, businesses and related activities; and

Whereas, the City Council further finds that the rules and regulations governing land use, structures and related activities within the territorial limits of the City promote the safe, orderly and healthful development of the City; and

Whereas, on January 7, 2021 the Angleton Planning and Zoning Commission conducted a public hearing regarding a request by Mr. Rogelio Rodriguez to rezone 0.5 acres from Chapter 28 Zoning Sec. 46 Single Family Residential 6.3 District and Chapter 28 Zoning Sec. 55 Commercial - Neighborhood District to the Chapter 28 Sec. 47 Single Family Residential 5 District of the Angleton Code of Ordinances following lawful publication of the notice of said public hearing; and

Whereas, on January 7, 2021 after considering the public testimony received at such hearing, if any, the Planning and Zoning Commission has recommended that the request by Mr. Rogelio Rodriguez to rezone 0.5 acres from Chapter 28 Zoning Sec. 6.3 District and Chapter 28 Zoning Sec. 55 Commercial - Neighborhood District to the Chapter 28 Sec. 47 Single Family Residential 5 District be approved; and

Whereas, on January 12, 2021 the City Council of the City of Angleton conducted a public hearing regarding a request by Mr. Rogelio Rodriguez to rezone 0.5 acres from Chapter 28 Zoning Sec. 46 Single Family Residential 6.3 District and Chapter 28 Zoning Sec. 55 Commercial - Neighborhood District to the Chapter 28 Sec. 47 Single Family Residential 5 District of the Angleton Code of Ordinances; and

Whereas, on January 12, 2021 the City Council of the City of Angleton, Texas approved the request by Mr. Rogelio Rodriguez to rezone 0.5 acres from Chapter 28 Zoning Sec. 46 Single Family Residential 6.3 District and Chapter 28 Zoning Sec. 55 Commercial - Neighborhood District to the Chapter 28 Sec. 47 Single Family Residential 5 District of the Angleton Code of Ordinances; and

Whereas, each and every applicable requirement set forth in Chapter 211, Subchapter A, Texas Local Government Code and the Code of Ordinance of the City of Angleton, Texas, concerning public notices, hearings and other procedural matters have been fully met; and

Whereas, the City Council desires to rezone 0.5 acres from Chapter 28 Zoning Sec. 46 Single Family Residential 6.3 District and Chapter 28 Zoning Sec. 55 Commercial - Neighborhood District to the Chapter 28 Sec. 47 Single Family Residential 5 District of the Angleton Code of Ordinances;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ANGLETON, TEXAS;

Section 1. That all of the facts recited in the preamble to this Ordinance are hereby found by the City Council to be true and correct and are incorporated herein by this reference and expressly made a part hereof as if copied herein verbatim.

Section 2. That the request by Mr. Rogelio Rodriguez to rezone 0.5 acres, as described and depicted in Exhibit "A," from Chapter 28 Zoning Sec. 46 Single Family Residential 6.3 District and Chapter 28 Zoning Sec. 55 Commercial - Neighborhood District to the Chapter 28 Sec. 47 Single Family Residential 5 District of the Angleton Code of Ordinances be approved.

Section 3. Penalty. Any person who violates or causes, allows, or permits another to violate any provision of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than Two Thousand and No/100 Dollars ($2,000.00). Each occurrence of any such violation of this Ordinance shall constitute a separate offense. Each day on which any such violation of the Ordinance occurs shall constitute a separate offense.

Section 4. Repeal. All ordinances or parts of ordinances inconsistent with the terms of this ordinance are hereby repealed; provided, however, that such repeal shall be only to the extent of such inconsistency and in all other respects this ordinance shall be cumulative of other ordinances regulating and governing the subject matter covered by this ordinance.

Section 5. Severablity. In the event any clause, phrase provision, sentence or part of this Ordinance or the application of the same to any person or circumstances 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 than the part declared to be invalid or unconstitutional; and the City Council of the City of Angleton, Texas declares that it would have passed each and every part of the same notwithstanding the omission of any part thus declared to be invalid or unconstitutional, or whether there be on or more parts.

Section 6. Effective date. That this ordinance shall be effective and in full force immediately upon its adoption.

Section 7. Proper Notice and Meeting

It is hereby officially found and determined that the meeting at which this Ordinance was passed was open to the public, and that public notice of the time, place and purpose of said meeting was given as required by the Open Meetings Act, Texas Government Code, Chapter 551. Notice was also provided as required by Chapter 52 of the Texas Local Government Code

PASSED, APPROVED and ADOPTED this, the _____day of _____.

_____

ATTEST: Jason Perez, Mayor

_____

Frances Aguilar, City Secretary

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STATE OF TEXAS - COUNTY OF BRAZORIA

I, ROGELIO RODRIGUEZ, OWNER OF THE PROPERTY SUBDIVIDED IN THE ATTACHED RE-PLAT OF 0.50 ACRES, AS RECORDED IN COUNTY CLERK'S FILE NO. 2020-033011 OF THE OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS, DO HEREBY MAKE SUBDIVISION OF SAID PROPERTY ACCORDING TO THE LINES, LOTS, BUILDING LINES, STREETS, EASEMENTS, AND RIGHT-OF-WAY SHOWN HEREON, AND DESIGNATE SAID SUBDIVISION, AND ALL BEING OUT OF THE J. DE J. VALDERAS SURVEY, ABSTRACT 380, BRAZORIA COUNTY, TEXAS, AND DO HEREBY DEDICATE TO THE PUBLIC USE ALL STREETS, EASEMENTS AND RIGHT-OF-WAY SHOWN HEREON, FOR THEIR USE FOREVER; AND DO HEREBY WAIVE ANY CLAIMS FOR DAMAGES OCCASIONED BY THE ESTABLISHING OF GRADES AS APPROVED FOR THE STREETS OR ALLEYS, OR OCCASIONED BY THE ALTERATION OF THE SURFACE OF ANY PORTION OF STREETS OR ALLEYS TO CONFORM TO SUCH GRADES, AND DO HEREBY BIND MY SELF, MY HEIRS, SUCCESSORS AND ASSIGNS, TO WARRANT AND DEFEND THE TITLE OF THE LAND SO DEDICATED.

_____
ROGELIO RODRIGUEZ

STATE OF TEXAS - COUNTY OF BRAZORIA

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED, ROGELIO RODRIGUEZ, KNOWN TO ME TO BE THE OWNER WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____ 2020.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS.
MY COMMISSION EXPIRES _____.

PROPERTY DESCRIPTION

Being a 0.50 acre tract of land out of Tract No. 44 of the New York and Texas Land Company Subdivision and all being situated in the J. de J. Valderas Survey, Abstract No. 380, Brazoria County, Texas and being all of the same tracts of land labeled "Tracts I, II, III & IV" conveyed to Alex I. Osorio Fabela recorded in County Clerk's File No. 2015-043197 of the Official Records of Brazoria County, Texas and being all previously recorded as a called 70 foot by 135 foot tract conveyed to Willie and Alice Flake recorded in Volume 343, Page 240 of the Deed Records of Brazoria County, Texas, a called 60 foot by 135 foot tract conveyed to Ira Jackson recorded in Volume 658, Page 11 of the Deed Records of Brazoria County, Texas and a tract labeled "Lot 44B" conveyed to the City of Angleton recorded in County Clerk's File No. 1999-026166 of the Official Records of Brazoria County, Texas and being more fully described by metes and bounds as follows: (All bearings based on the South line of Tract 44 being - West)

BEGINNING at a ½" iron rod set marked with a plastic cap labeled "PINPOINT RPLS 6086" for the intersection of the Southwest right-of-way of an abandoned H. & B.V. R.R. [being offset 100 feet and parallel to Anchor Road, (AKA County Road 44),] and the North R.O.W. of Miller Street for the Southeast corner of Tract 44, the Southeast corner of said Flake tract and being Southeast corner and **TRUE PLACE OF BEGINNING** of the herein described tract

THENCE West [Reference Bearing], along the North R.O.W. of Miller Street, the South line of Tract 44 and the South line of Flake tract, at 127.85 feet pass an axle found for the Southwest corner of said Flake tract and the Southeast corner of said Jackson tract, continuing along the North R.O.W. of Miller Street, the South line of Tract 44 and the South line of said Jackson tract, at 187.85 feet pass a ½" iron rod found for the Southwest corner of said Jackson tract and the Southeast corner of said City of Angleton tract and continuing along the North R.O.W. of Miller Street, the South line of Tract 44 and the South line of said City of Angleton tract for a total distance of 225.00 feet to a ½" iron rod found for the Southwest corner of said City of Angleton tract, the Southeast corner of a called 70 foot by 135 foot tract conveyed to Clarence Youngblood recorded in Volume 1247, Page 36 of the Deed Records of Brazoria County, Texas and being the Southwest corner of the herein described tract, said iron rod bears East - 70.00 feet from a ½" iron rod found for the Southwest corner of said Youngblood tract and the Southeast corner of a called 0.165 acre tract conveyed to Floyd and Hallie Rogers recorded in (88) Volume 625, Page 190 of the Official Records of Brazoria County, Texas;

THENCE North - 135.00 feet along the common line of the Youngblood and City of Angleton tract to a ½" iron rod set marked with a plastic cap labeled "PINPOINT RPLS 6086" in the South line of a called 3.835 acre tract conveyed to Community of Love, United Methodist Church recorded in County Clerk's File No. 2013-025739 of the Official Records of Brazoria County, Texas for the Northwest corner of the City of Angleton tract, the Northeast corner of the Youngblood tract and being the Northwest corner of the herein described tract;

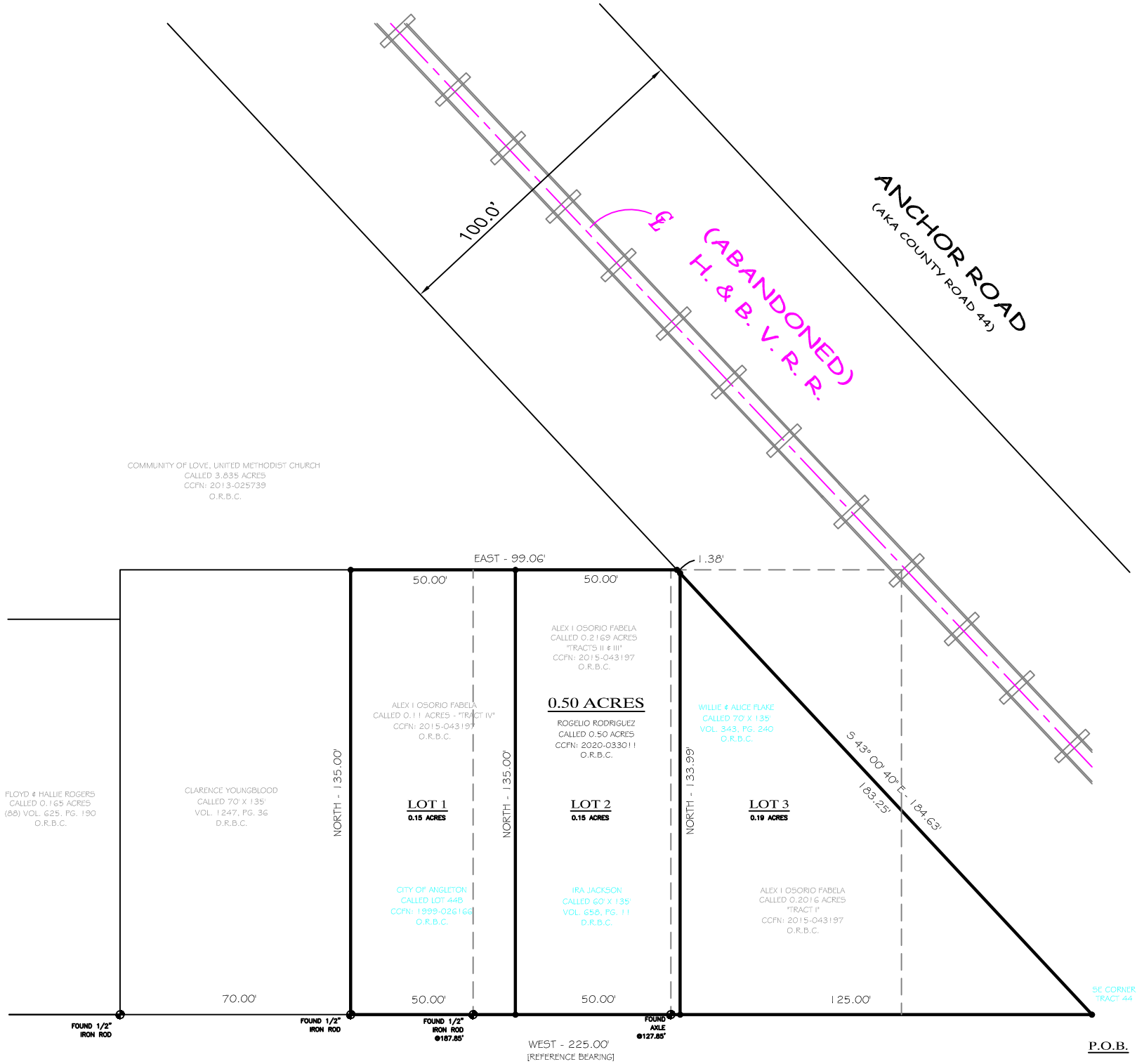
THENCE East - 99.06 feet along the South line of called 3.835 acre tract, North line of the City of Angleton tract, the North line of the Jackson tract and the North line of the Flake tract to a ½" iron rod set marked with a plastic cap labeled "PINPOINT RPLS 6086" in the Southwest R.O.W. of said abandoned H. & B.V. R.R. and the Northeast line of Tract 44 for the Northeast corner of the herein described tract;

THENCE South 43° 00' 40" East - 184.63 feet along the Southwest R.O.W. of said abandoned H. & B.V. R.R. and the Northeast line of Tract 44 to the **PLACE OF BEGINNING** and containing 0.50 acres of land, more or less. *This description is based on an actual survey made on the ground and is accompanied by a plat prepared under the direct supervision of George K. Lane, RPLS No. 6086 on May 27th, 2020.*

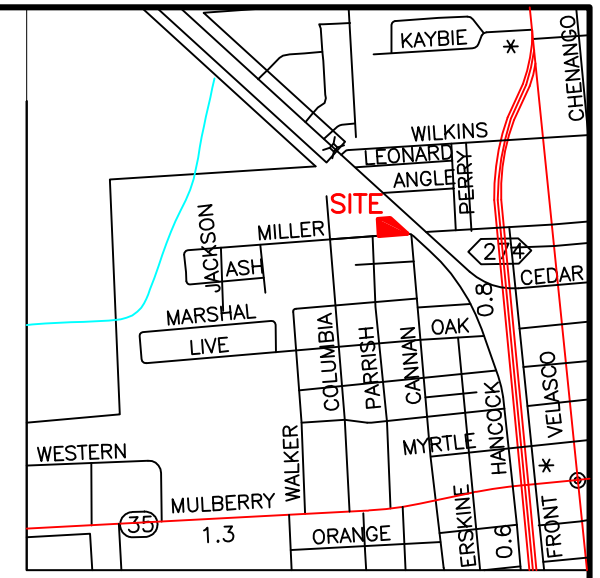
PIN POINT Surveying & Mapping, LLC
PO Box 3344, Lake Jackson, Texas
Phone (979) 299-3373
October 30th, 2020

0 20' 40'
0 1" 2"

Exhibit "A"



MILLER STREET
(A.K.A. WEST MILLER STREET)



VICINITY MAP
NOT TO SCALE

SUBDIVISION APPROVALS

CITY MANAGER

I HEREBY CERTIFY THAT THE ABOVE AND FOREGOING STYLE S/D AND BEING A PLAT OF A CALLED 0.50 ACRES, SITUATED IN THE J. DE J. VALDERAS SURVEY, ABSTRACT NO. 380, IN THE CITY OF ANGLETON, TEXAS WAS APPROVED THIS THE __ DAY OF _____, 2020

_____
CITY MANAGER

SAID ADDITION SHALL BE SUBJECT TO ALL THE REQUIREMENTS OF THE CODE OF ORDINANCES OF THE CITY OF ANGLETON, TEXAS.

WITNESS MY HAND THIS THE _____ DAY OF _____, 2020.

_____
CITY SECRETARY

ANGLETON DRAINAGE DISTRICT

ACCEPTED, THIS THE _____ DAY OF _____, 2020.
THE BOARD OF SUPERVISORS OF THE ANGLETON DRAINAGE DISTRICT DOES NOT WARRANT, REPRESENT OR GUARANTEE:

1. THAT DRAINAGE FACILITIES OUTSIDE THE BOUNDARIES OF THE SUBDIVISION PLAT ARE AVAILABLE TO RECEIVE RUNOFF FROM THE FACILITIES DESCRIBED IN THIS PLAT.
2. THAT DRAINAGE FACILITIES DESCRIBED IN THIS PLAT ARE ADEQUATE FOR RAINFALL IN EXCESS OF ANGLETON DRAINAGE DISTRICT MINIMUM REQUIREMENTS.
3. THAT BUILDING ELEVATION REQUIREMENTS HAVE BEEN DETERMINED BY THE ANGLETON DRAINAGE DISTRICT.
4. THAT DISTRICT ASSUMES ANY RESPONSIBILITY FOR CONSTRUCTION, OPERATION OR MAINTENANCE OF SUBDIVISION DRAINAGE FACILITIES.

THE DISTRICT'S REVIEW IS BASED SOLELY ON THE DOCUMENTATION SUBMITTED FOR REVIEW, AND ON THE RELIANCE ON THE REPORT SUBMITTED BY THE TEXAS REGISTERED PROFESSIONAL ENGINEER.

THE DISTRICT'S REVIEW IS NOT INTENDED NOR WILL SERVE AS A SUBSTITUTION OF THE OVERALL RESPONSIBILITIES AND/OR DECISION MAKING POWER OF THE PARTY SUBMITTING THE PLAT OR PLAN HEREIN, THEIR OR ITS PRINCIPALS OR AGENTS.

_____ _____
CHAIRMAN MEMBER

_____
MEMBER

NOTES:

1) ALL DRAINAGE EASEMENTS AND RIGHT-OF-WAYS SHALL BE KEPT CLEAR OF FENCES, BUILDINGS, FOUNDATIONS, PLANTINGS AND OTHER OBSTRUCTIONS TO THE OPERATION AND MAINTENANCE OF THE DRAINAGE FACILITY.

2) THIS PROPERTY IS LOCATED WITHIN ZONE "X" UNSHADED AND IS NOT WITHIN THE 100 YEAR FLOOD PLAIN, ACCORDING TO THE FLOOD HAZARD MAP OF BRAZORIA COUNTY, TEXAS, COMMUNITY NO. 480458, PANEL NO. 0430, SUFFIX "H", DATED: JUNE 5, 1989.

3) ALL CORNERS ARE 1/2" IRON RODS 18" IN DEPTH MARKED WITH A PLASTIC CAP LABELED "PINPOINT RPLS 6086" UNLESS OTHERWISE LABELED AS FOUND.

4) THE PURPOSE OF THIS PLAT IS TO MAKE A S/D OF 3 LOTS FROM A CALLED 0.50 ACRE TRACT.

STATE OF TEXAS - COUNTY OF BRAZORIA

I, GEORGE K. LANE, A REGISTERED PROFESSIONAL LAND SURVEYOR OF THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THE ATTACHED PLAT OF A CALLED 0.50 ACRES, ALL BEING OUT OF THE J. DE J. VALDERAS SURVEY, ABSTRACT NO. 380, BRAZORIA COUNTY, TEXAS AND WAS PREPARED FROM A BOUNDARY SURVEY MADE ON THE GROUND UNDER MY SUPERVISION, AND THAT THIS PLAT CORRECTLY REPRESENTS THAT SURVEY.

I FURTHER CERTIFY THAT THE ABOVE FACTS ARE CORRECT, AND DO FURTHER CERTIFY THAT THE LOCATION AND CONFIGURATION OF SAID SUBDIVISION ARE AS SHOWN AND ARE IN ACCORDANCE WITH THE CODE OF REGULATIONS OF THE CITY OF ANGLETON, TEXAS.

_____
GEORGE K. LANE, RPLS
REGISTERED PROFESSIONAL LAND SURVEYOR
LICENSE NO. 6086

STYLE SUBDIVISION

Being a Plat of a called 0.50 acre tract of land in the J. De J. Valderas Survey, Abstract 380, Brazoria County, Texas.

AGENDA ITEM SUMMARY FORM

MEETING DATE: January 7, 2021

PREPARED BY: Walter E. Reeves jr., AICP Development Services Director

AGENDA CONTENT: Conduct a public hearing, discussion and possible action on a recommendation regarding a request for approval of the Heritage Oaks Section 7 Final Replat, being a portion of lots 47, 48,49, 50 and 51 of the New York and Texas Land Company Subdivision located in the J.D.J. Valderas Survey. The propose final replat consists of 34 lots and 2 reserve lots on 27.122 acres, is zoned Single Family Residential 7.2 (SF-7.2) and is located on the extension of Oak Ridge Drive.

AGENDA ITEM SECTION: Public Hearing

BUDGETED AMOUNT: None **FUNDS REQUESTED:** None

FUND: None

EXECUTIVE SUMMARY:

This is a request for approval of the Heritage Oaks Section 7 Final Replat. The propose final replat consists of 34 lots and 2 reserve lots on 27.122 acres in the Single Family Residential 7.2 (SF-7.2) zoning district. The proposed final replat meets all requirements of the Code of Ordinances of the City of Angleton except as otherwise noted in the City Engineer memo.

RECOMMENDATION:

Staff recommends approval of the Heritage Oaks Section 7 Final Replat subject to addressing the outstanding comments in the City Engineer memo prior to recording of final plat.

December 17, 2020

Mr. Walter Reeves
Development Services Director
City of Angleton
121 S. Velasco
Angleton, TX 77515

Re: On-Going Services
Heritage Oaks Sec. 7 Subdivision Final Replat and Plan Review – 1st Submittal Review
Angleton, Texas
HDR Job No. 20-007

Dear Mr. Reeves:

HDR Engineering, Inc. (HDR) has reviewed the plat for the above referenced property and offers the following comments:

1. The proposed final replat and construction plans will be finalized once a utility easement location determination is confirmed for the subdivision electric service. Once the determination of the easement is made and prior to any filing and recordation of the final replat, a final copy of the plat and updated construction plans shall be submitted that provides the final utility easement determination.
2. The Angleton Drainage District provided a letter of approval, dated October 14, 2020, with stipulations noted and is provided as an attachment in this review. No additional action is required.
3. The proposed construction shall utilize bedding and backfill of utilities including cement stabilized sand per City Requirements.

HDR takes no objection to the Heritage Oaks Subdivision Sect. 7 Plat and Plans with the exceptions noted. Please note, this does not necessarily mean that the entire drawings, including all supporting data and calculations, has been completely checked and verified; however, the drawings and calculations are signed, dated, and sealed by a professional engineer licensed to practice in the State of Texas, which therefore conveys the engineer's responsibility and accountability.

If you have any questions, please feel free to contact us at our office (713)-622-9264.

Sincerely,

HDR Engineering, Inc.

Javier Vasquez, P.E., CFM
Project Engineer

cc: Files (20-007)

Attachments

hdrinc.com 4828 Loop Central Drive, Suite 800, Houston, TX 77081-2220
T (713) 622-9264 F (713) 622-9265
Texas Registered Engineering Firm F-754(713) 622-9264

ANGLETON DRAINAGE DISTRICT

Political Subdivision of the State of Texas
Box 2469, Angleton, Texas 77516-2469
Phone: (979) 849-2414 Fax: (979) 848-8160

October 14, 2020

Chris Peltier
P. O. Box 288
Angleton, TX 77516-0288

Re: Plat, Drainage and Detention Plan
Heritage Oaks, Section 7
Angleton, TX 77515

Dear Mr. Chris Peltier:

During the regular public meeting of the Angleton Drainage District held October 13, 2020, the Board of Supervisors unanimously approved the plat, drainage and detention plan for Heritage Oaks Section 7as presented

As presented, Section 7 is a 43-lot development on 27.122 acres. The site borders the south line of Lakeside Park (Old Anchor Road Pit) and has Angleton Drainage District's 10 Ditch as its east boundary. The developed area of Section 7 is 19.84 acres with the remaining platted area of 7.282 acres in the existing lake/detention pond. The site is in the Oyster Creed Drainage Area which has an allowable 100-year storm runoff rate of 0.45 cfs/acre. 0.45 cfs/acre827.122 acres = 12.20 cfs. The design drawings indicate that all drainage will be directed into the existing lake/detention pond. The existing lake outfalls into a drainage channel which flows along the south side of the Lakeside Park and has an existing outfall into 10 Ditch. The detention requirements for the design analysis computed 9.04 acre-feet of detention. This computes to a rate of 0.46 acre-foot/acre. The exiting lake/detention pond serves Heritage Oaks Section 3 (10.98 acre-feet), Section 6 (8.70 acre-feet) and Section 7 (9.04acre-feet). This is a total of 28.72 acre-feet. The detention volume provided for 30.03 acre-feet of detention volume is provided in four areas.

Pond 1 - This is the existing lake/detention pond. The outlet from this pond will be lowered at its outfall to produce a total detention volume of 24.88 acre-feet.

Pond 2 - This is a depressed area to the southwest of Section 7 and west of Section 6. The design proposed that an outfall ditch from Pond 2 to Pone 1 be excavated. Pond 2 provides an addition of 2.09 acre-feet of detention volume.

Ditch 1 - This is the 950 linear-foot outfall channel along the south line of Lakeside Park.

Ditch 2 - is the connecting ditch between Lake 2 and Lake 1. This ditch provides 0.28 acre-feet of detention volume.

If any structures are added to this site in the future, a subsequent review by the Angleton Drainage District will be required to ensure there are no adverse impacts to adjacent landowners.

Approval of this grading, drainage and detention plan in no way represents that Chris Peltier, Developer of Heritage Oaks, Section 7 has complied with any federal, state, county or other law, statute, procedure or requirement of any type beyond the approval of the grading, drainage and detention plan approved, with the stipulations listed in this letter, if any, by the District.

Sincerely,

David B. Spoor, Chairman
Angleton Drainage District

LEGEND

B.C.C.F.	=	BRAZORIA COUNTY CLERK'S FILE
B.C.D.R.	=	BRAZORIA COUNTY DEED RECORDS
B.C.P.R.	=	BRAZORIA COUNTY PLAT RECORDS
B.L.	=	BUILDING LINE
BM	=	BENCHMARK
C.I.R.	=	CAPPED IRON ROD
D.E.	=	DRAINAGE EASEMENT
D.&D.E.	=	DRAINAGE AND DETENTION EASEMENT
D.M.E.	=	DRAINAGE/MAINTENANCE EASEMENT
FND	=	FOUND
I.R.	=	IRON ROD
P.O.B.	=	POINT OF BEGINNING
R.O.W.	=	RIGHT-OF-WAY
S.S.E.	=	SANITARY SEWER EASEMENT
U.E.	=	UTILITY EASEMENT
VOL., Pg.	=	VOLUME, PAGE
W.L.E.	=	WATER LINE EASEMENT

SYMBOLS

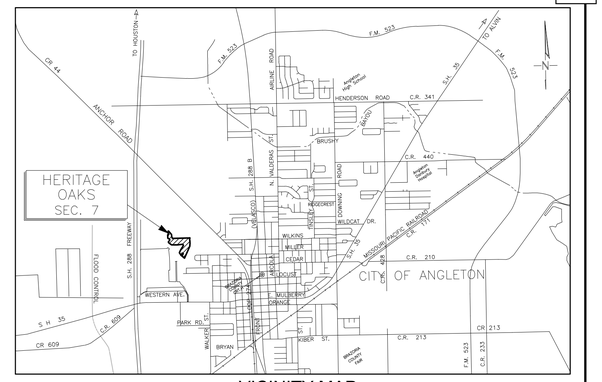
- ○ = SET 5/8" I.R. W/CAP "BAKER & LAWSON"
- ○ = FOUND MONUMENT (AS NOTED)
- ✥ = (TBM) TEMPORARY BENCHMARK

Line Table		
Line No.	Length	Direction
L1	24.71'	N85°43'21"E
L2	147.75'	S05°33'23"E
L3	106.95'	S28°07'20"E
L4	20.73'	S85°31'12"W
L5	60.00'	N74°27'38"W
L6	204.32'	N35°28'53"W
L7	77.09'	S85°53'18"W
L8	15.01'	N04°45'45"W
L9	42.58'	S85°22'28"W
L10	42.60'	N09°05'17"W
L11	16.99'	S80°59'41"W
L12	31.87'	S74°32'43"E
L13	112.93'	N04°29'54"W
L14	95.63'	N89°29'54"W
L15	114.74'	N28°08'15"W
L16	108.55'	N74°33'52"W
L17	106.90'	N21°24'40"E
L18	100.61'	N25°59'16"E
L19	45.69'	N15°47'52"W
L20	52.35'	N56°46'59"W

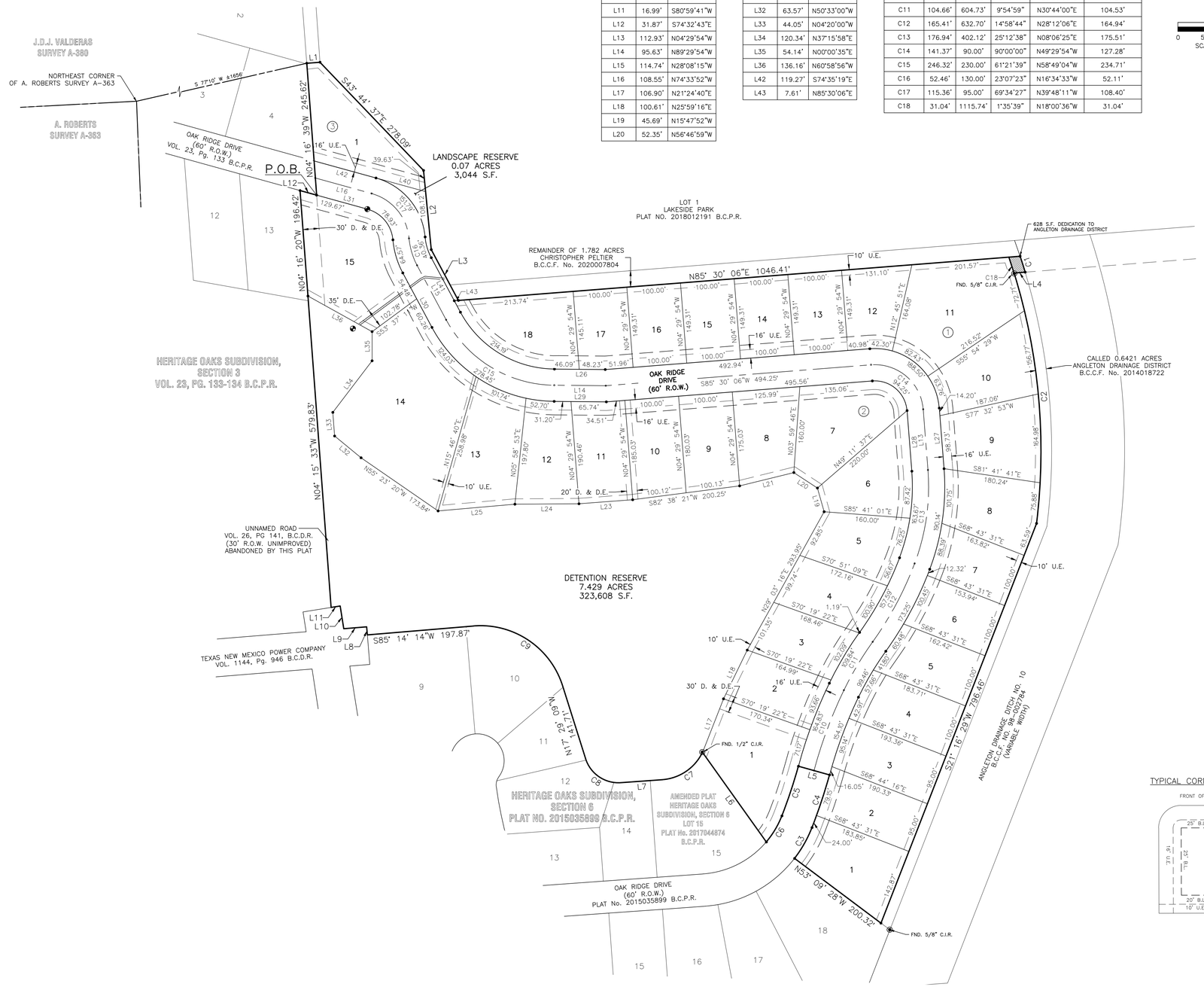
Line Table		
Line No.	Length	Direction
L21	103.72'	S76°11'19"W
L23	100.00'	S85°40'34"W
L24	119.03'	S89°36'59"W
L25	143.19'	S85°00'05"W
L26	94.32'	S89°29'54"E
L27	112.93'	S04°29'54"E
L28	112.98'	S04°29'54"E
L29	96.94'	S89°29'54"E
L30	114.74'	S28°08'15"E
L31	97.80'	S74°35'19"E
L32	63.57'	N50°33'00"W
L33	44.05'	N04°20'00"W
L34	120.34'	N37°15'58"E
L35	54.14'	N00°00'35"E
L36	136.16'	N60°58'56"W
L42	119.27'	S74°35'19"E
L43	7.61'	N85°30'06"E

Curve Table					
Curve No.	Length	Radius	Delta	Chord Bearing	Chord Distance
C1	31.01'	1313.07'	1°21'11"	S17°42'59"E	31.01'
C2	470.34'	1115.74'	24°09'10"	S05°08'12"E	466.86'
C3	66.01'	230.00'	16°26'37"	N29°29'24"E	65.78'
C4	103.16'	1032.50'	5°43'28"	N18°24'06"E	103.12'
C5	97.16'	972.50'	5°43'28"	S18°24'06"W	97.12'
C6	56.73'	170.00'	19°07'16"	S30°49'49"W	56.47'
C7	94.59'	90.00'	60°13'14"	S55°47'36"W	90.30'
C8	85.56'	63.99'	76°36'31"	N55°47'24"W	79.33'
C9	215.41'	159.71'	77°16'37"	N56°07'27"W	199.45'
C10	159.44'	849.62'	10°45'09"	N20°23'59"E	159.21'
C11	104.66'	604.73'	9°54'59"	N30°44'00"E	104.53'
C12	165.41'	632.70'	14°58'44"	N28°12'06"E	164.94'
C13	176.94'	402.12'	25°12'38"	N08°06'25"E	175.51'
C14	141.37'	90.00'	90°00'00"	N49°29'54"W	127.28'
C15	246.32'	230.00'	61°21'39"	N58°49'04"W	234.71'
C16	52.46'	130.00'	23°07'23"	N16°34'33"W	52.11'
C17	115.36'	95.00'	69°34'27"	N39°48'11"W	108.40'
C18	31.04'	1115.74'	1°35'39"	N18°00'36"W	31.04'

0 50' 100' 200'
SCALE : 1" = 100'



VICINITY MAP
N.T.S.



ELEVATIONS ARE BASED ON HERITAGE OAKS BM #1 NGVD1973

BM #1. CUT SQUARE ON TOP OF CURB AT NE CORNER OF BRIDGE, NORTHBOUND LANE, SH 288 FREEWAY AT ANGLETON DRAINAGE DISTRICT DITCH 10. ELEV. = 29.96.

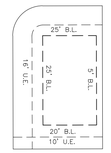
SITE BENCHMARK

TBM 1: A BOX CUT ON A CONCRETE HEADWALL IN THE WEST CORNER OF THE SUBDIVISION ELEVATION = 27.27 FEET, NGVD1973

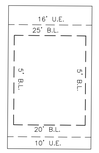
NOTES:

1. ALL BEARINGS AND DISTANCES ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD-83, U.S. SURVEY FEET.
2. FLOOD ZONE STATEMENT: ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR BRAZORIA COUNTY, MAP NUMBER 48039C0440H, REVISED DATE OF JUNE 5, 1989, THE SURVEYED PROPERTY LIES WITHIN ZONE "X" (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. WARNING: THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES WILL BE FREE FROM FLOODING OR FLOOD DAMAGE, AND WILL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.
3. THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES OR SUBSURFACE CONDITIONS OTHER THAN THOSE SHOWN MAY AFFECT THE USE AND DEVELOPMENT OF THE SUBJECT PROPERTY SHOWN HEREON.
4. NOTICE: SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF THE UNIFIED DEVELOPMENT CODE OF THE CITY OF ANGLETON AND STATE PLATTING STATUTES AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.
5. NOTICE: PLAT APPROVAL SHALL NOT BE DEEMED TO OR PRESUMED TO GIVE AUTHORITY TO VIOLATE, NULLIFY, VOID, OR CANCEL ANY PROVISIONS OF LOCAL, STATE, OR FEDERAL LAWS, ORDINANCES, OR CODES.
6. NOTICE: THE APPLICANT IS RESPONSIBLE FOR SECURING ANY FEDERAL PERMITS THAT MAY BE NECESSARY AS THE RESULT OF PROPOSED DEVELOPMENT ACTIVITY. THE CITY OF ANGLETON IS NOT RESPONSIBLE FOR DETERMINING THE NEED FOR, OR ENSURING COMPLIANCE WITH ANY FEDERAL PERMIT.
7. NOTICE: APPROVAL OF THIS PLAT DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD OR REGISTERED PUBLIC LAND SURVEYOR IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY THE CITY ENGINEER.
8. NOTICE: ALL RESPONSIBILITY FOR THE ADEQUACY OF THIS PLAT REMAINS WITH THE ENGINEER OR SURVEYOR WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF ANGLETON MUST RELY ON THE ADEQUACY OF THE WORK OF THE ENGINEER AND/OR SURVEYOR OF RECORD.
9. SIDEWALKS SHALL BE REQUIRED PER ANGLETON LDC SEC. 23.14 – SIDEWALKS AND ACCESSIBILITY.
10. IT SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER ASSOCIATION TO MAINTAIN DRAINAGE AND DETENTION RESERVES.
11. IT SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER ASSOCIATION TO MAINTAIN LANDSCAPE RESERVES.

TYPICAL CORNER LOT



TYPICAL LOT



OWNER:
CHRISTOPHER PELTIER
P.O. BOX 288
ANGLETON TX 77516

SHEET 1 OF 2

REVISED:

FINAL REPLAT

HERITAGE OAKS SEC 7 SUBDIVISION
A 27.122 ACRE, 34-LOT, 3-BLOCK 2-RESERVE SUBDIVISION

PORTION OF LOTS 47, 48, 49, 50 AND 51 OF
THE NEW YORK AND TEXAS LAND COMPANY SUBDIVISION
VOL. 26, Pg. 140 B.C.D.R.
LOCATED IN THE J.D.J. VALDERAS SURVEY,
ABSTRACT No. 380
BRAZORIA COUNTY, TEXAS

B&L BAKER & LAWSON, INC. ENGINEERS • PLANNERS • SURVEYORS
300 EAST CEDAR ST.
ANGLETON, TEXAS 77515
OFFICE: (979) 849-6681
TBPLS No. 10052500
REG. NO. F-825

PROJECT NO.: 13446	SCALE: 1" = 100'	DRAWN BY: BT
DRAWING NO.: 13446 PLAT.DWG	DATE: 06/11/2020	CHECKED BY:

DEDICATION STATEMENT:

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: THAT CHRISTOPHER PELTIER, acting herein by and through its duly authorized officers, does hereby adopt this plat designating the hereinabove described property as HERITAGE OAKS SEC 7, a subdivision in the jurisdiction of the City of Angleton, Texas, and does hereby dedicate, in fee simple, to the public use forever, the streets, alleys and public parkland shown thereon. The streets, alleys and parkland are dedicated for street purposes. The easements and public use areas, as shown, are dedicated for the public use forever, for the purposes indicated on this plat. No buildings, fences, trees, shrubs, or other improvements or growths shall be constructed or placed upon, over, or across the easements as shown, except that landscape improvements may be placed in landscape easements, if approved by the City of Angleton. In addition, utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easement limits the use to particular utilities, said use by public utilities being subordinate to the public's and City of Angleton's use thereof. The City of Angleton and public utility entities shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs, or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of their respective systems in said easements. The City of Angleton and public utility entities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, reading meters, and adding to or removing all or parts of their respective systems without the necessity at any time of procuring permission from anyone.

DRAINAGE AND DETENTION EASEMENT

This plat is hereby adopted by the Owners and approved by the City of Angleton (called "City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees and successors: The portion of Block 1, as shown on the plat is called "Drainage and Detention Easement."
The Drainage and Detention Easement within the limits of this addition, will remain open at all times and will be maintained in a safe and sanitary condition by the owners of the lot or lots that are traversed by or adjacent to the Drainage and Detention Easement. The City will not be responsible for the maintenance and operation of said Easement or for any damage to private property or person that results from conditions in the Easement, or for the control of erosion. No obstruction to the natural flow of stormwater run-off shall be permitted by construction of any type of building, fence, or any other structure within the Drainage and Detention Easement as herein above defined, unless approved by the City Engineer. Provided, however, it is understood that in the event it becomes necessary for the City to erect or consider erecting any type of drainage structure in order to improve the storm drainage that may be occasioned by the City shall have the right to enter upon the Drainage and Detention Easement at any point, or points, to investigate, survey or to erect, construct and maintain any drainage facility deemed necessary for drainage purposes. Each property owner shall keep the Drainage and Detention Easement clean and free of debris, silt, and any substance which would result in unsanitary conditions or obstruct the flow of water, and the City shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the property owner to alleviate any undesirable conditions which may occur. The natural drainage through the Drainage and Detention Easement is subject to storm water overflow and natural bank erosion to an extent which cannot be definitely defined. The City shall not be held liable for any damages of any nature resulting from the occurrence of these natural phenomena, or resulting from the failure of any structure, or structures, within the Easement.

OWNER'S ACKNOWLEDGEMENT:

STATE OF TEXAS §
COUNTY OF BRAZORIA §

The owner of land shown on this plat, in person or through a duly authorized agent, dedicates to the use of the public forever all streets, alleys, parks, watercourses, drains, easements and public places thereon shown for the purpose and consideration therein expressed.

_____

CHRISTOPHER PELTIER

STATE OF TEXAS §
COUNTY OF BRAZORIA §

Before me, the undersigned, personally appeared CHRISTOPHER PELTIER, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same for the purposes and considerations therein expressed and, in the capacity, therein stated.
Given under my hand and seal of office this ___ day of _____, _____.

_____
Notary Public
State of Texas

PLANNING AND ZONING COMMISSION AND CITY COUNCIL:

APPROVED this _____ day of _____, 20_____, by the Planning and Zoning Commission, City of Angleton, Texas.

_____
BILL GARWOOD, Chairman, Planning and Zoning Commission

_____
FRANCES AGUILAR, City Secretary

APPROVED this _____ day of _____, 20____, by the City Council, City of Angleton, Texas.

_____
JASON PEREZ, Mayor

_____
FRANCES AGUILAR, City Secretary

STATE OF TEXAS §
COUNTY OF BRAZORIA §

This instrument was acknowledged before me on the _____ day of _____, 20____, by

FRANCES AGUILAR, City Secretary, City of Angleton, on behalf of the City.

_____
Notary Public
State of Texas

ANGLETON DRAINAGE DISTRICT

ANGLETON DRAINAGE DISTRICT ACCEPTED, THIS THE _____ DAY OF _____, 20____.
THE BOARD OF SUPERVISORS OF THE ANGLETON DRAINAGE DISTRICT DOES NOT WARRANT, REPRESENT OR GUARANTEE:

1. THAT DRAINAGE FACILITIES OUTSIDE THE BOUNDARIES OF THE SUBDIVISION PLAT ARE AVAILABLE TO RECEIVE RUNOFF FROM THE FACILITIES DESCRIBED IN THIS PLAT.

2. THAT DRAINAGE FACILITIES DESCRIBED IN THIS PLAT ARE ADEQUATE FOR RAINFALL IN EXCESS OF ANGLETON DRAINAGE DISTRICT MINIMUM REQUIREMENTS.

3. THAT BUILDING ELEVATION REQUIREMENTS HAVE BEEN DETERMINED BY THE ANGLETON DRAINAGE DISTRICT.

4. THAT THE DISTRICT ASSUMES ANY RESPONSIBILITY FOR CONSTRUCTION, OPERATION OR MAINTENANCE OF SUBDIVISION DRAINAGE FACILITIES.

THE DISTRICT'S REVIEW IS BASED SOLELY ON THE DOCUMENTATION SUBMITTED FOR REVIEW, AND ON THE RELIANCE ON THE REPORT SUBMITTED BY THE TEXAS REGISTERED PROFESSIONAL ENGINEER.

THE DISTRICT'S REVIEW IS NOT INTENDED NOR WILL SERVE AS A SUBSTITUTION OF THE OVERALL RESPONSIBILITY AND/OR DECISION MAKING POWER OF THE PARTY SUBMITTING THE PLAT OR PLAN HEREIN, THEIR OR ITS PRINCIPALS OR AGENTS.

_____ _____
CHAIRMAN, BOARD OF SUPERVISORS BOARD MEMBER

_____
BOARD MEMBER

KNOW ALL MEN BY THESE PRESENTS:
That I, MIGUELANGEL A. SAUCEDA, do hereby certify that proper engineering consideration has been provided in this plat. To the best of my knowledge, this plat conforms to all requirements of the Angleton LDC, except for any variances that were expressly granted by the City Council this plat from an actual and accurate survey of the land and that the corner monuments shown thereon were properly placed under my supervision.

SIGNED: _____
MIGUELANGEL A. SAUCEDA DATE
PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 121992

FIELD NOTES FOR 27.122 ACRE

Being a tract of land containing 27.122 acre (1,181,446 square feet), located within J.D.J. Valderas Survey, Abstract Number (No.) 380, in Brazoria County, Texas; Said 27.122 acre being a portion of Lots 47, 48, 49, 50 and 51 of the New York and Texas Land Company Subdivision recorded under Volume (Vol.) 26, Page 140 of the Brazoria County Deed Records (B.C.D.R.), being a portion of Lot 2 of Lakeside Park recorded under Plat No. 2018012191 of the Brazoria County Plat Records (B.C.P.R.), a portion of a called 1.782 acre tract recorded in the name of Chris Peltier under Brazoria County Clerk's File (B.C.C.F.) No. 2020007804 and a portion of a called 35.06 acre tract recorded in the name of Christopher Peltier under B.C.C.F. No. 2011029156, being all of a called 1.723 acre tract recorded in the name of Chris Peltier under B.C.C.F. No. 2018061649; Said 27.122 acres being more particularly described by metes and bounds as follows (bearings are based on the Texas Coordinate System of 1983, (NAD83) South Central Zone, per GPS observations):

BEGINNING at a 5/8-inch iron rod with cap stamped "BAKER & LAWSON" found on the west line of said Lot 2 of Lakeside Park, at the south end of the terminus line of the right-of-way (R.O.W.) of Oak Ridge Drive (sixty feet wide per Plat No. 2002057784 of the B.C.P.R.);

THENCE, with the west line of said Lot 2 of Lakeside Park and the east line of Heritage Oaks Section 3, a subdivision recorded under Volume 23, Page 133 of the B.C.P.R., North 04 degrees 16 minutes 39 seconds West, a distance of 245.62 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" found for the northwest corner of said 1.782 acre tract and the herein described tract;

THENCE, with the north line of said 1.782 acre tract, North 85 degrees 43 minutes 21 seconds East, a distance of 24.71 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" found on the common line of Lots 1 and 2 of said Lakeside Park, for the north northeast corner of said 1.782 acre tract and the herein described tract;

THENCE, with the common line of said Lots 1 and 2 of Lakeside Park, the following two (2) courses:

1. South 43 degrees 44 minutes 37 seconds East, a distance of 278.09 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" found for an angle point;
2. South 05 degrees 33 minutes 23 seconds East, a distance of 147.75 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" found for an angle point;

THENCE, continue with the common line of said Lots 1 and 2 of Lakeside Park, and through and across said 1.782 acre tract, South 28 degrees 07 minutes 20 seconds East, a distance of 106.95 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for an interior corner of the herein described tract;

THENCE, through and across said 1.782 acre tract, North 85 degrees 30 minutes 06 seconds East, a distance of 1,046.41 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set on the west line of a Angleton Drainage District Ditch 10 (width varies per B.C.C.F. No. 1998002784);

THENCE, with the east line of said Ditch 10 the following four (4) courses:

1. 31.01 feet along the arc of a curve to the right, having a radius of 1,313.07 feet, a central angle of 01 degrees 21 minutes 11 seconds, a chord that bears South 17 degrees 42 minutes 59 seconds East, a distance of 31.01 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set at an angle point;
2. South 85 degrees 31 minutes 12 seconds West, a distance of 20.73 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" found for an angle point, at the beginning of a non-tangent curve to the right;
3. 470.34 feet along the arc of said curve to the right, having a radius of 1,115.74 feet, a central angle of 24 degrees 09 minutes 10 seconds, a chord that bears South 05 degrees 08 minutes 12 seconds East, a distance of 466.86 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" found for an angle point;
4. South 21 degrees 16 minutes 29 seconds West, a distance of 796.46 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set on the northeast line of Lot 18, Block 2 of Heritage Oaks Subdivision Section Six recorded under Plat No. 2015035899 of the B.C.P.R., for the southeast corner of the herein described tract;

THENCE, with the north line of said Lot 18, North 53 degrees 09 minutes 28 seconds West, a distance of 200.32 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set on the east R.O.W. line of Oak Ridge Drive (sixty feet wide per Plat No. 2015035899 B.C.P.R.) for an angle point, at the beginning of a non-tangent curve to the left;

THENCE, with the east R.O.W. line of said Oak Ridge Drive, the following two (2) courses:

1. 66.01 feet along the arc of said curve to the left, having a radius of 230.00 feet, a central angle of 16 degrees 26 minutes 37 seconds, a chord that bears North 29 degrees 29 minutes 24 seconds East, a distance of 65.78 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for the beginning of a curve to the left;
2. 103.16 feet along the arc of said curve to the left, having a radius of 1032.50 feet, a central angle of 05 degrees 43 minutes 28 seconds, a chord that bears North 18 degrees 24 minutes 06 seconds East, a distance of 103.12 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for the east end of the north terminus line of said Oak Ridge Drive;

THENCE, with the north terminus line of said Oak Ridge Drive, North 74 degrees 27 minutes 38 seconds West, a distance of 60.00 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for the west end of said terminus line, at the beginning of a non-tangent curve to the right;

THENCE, with the west R.O.W. line of said Oak Ridge Drive, the following two (2) courses:

1. 97.16 feet along the arc of said curve to the right, having a radius of 972.50 feet, a central angle of 05 degrees 43 minutes 28 seconds, a chord that bears South 18 degrees 24 minutes 06 seconds West, a distance of 97.12 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for the beginning of a curve to the right;
2. 56.73 feet along the arc of said curve to the right, having a radius of 170.00 feet, a central angle of 19 degrees 07 minutes 16 seconds, a chord that bears South 30 degrees 49 minutes 49 seconds West, a distance of 56.47 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set at the southeast corner of the Amended Plat of Heritage Oaks Subdivision, Section 6, Lot 15 recorded under Plat No. 2017044874 of the B.C.P.R., for an angle point;

THENCE, with the east line of said Lot 15, North 35 degrees 28 minutes 53 seconds West, a distance of 204.32 feet to a 1/2-inch iron rod with cap found at the north corner of said Lot 15, for an angle point;

THENCE, with the north line of said Lot 15, 94.59 feet along the arc of a curve to the right, having a radius of 90.00 feet, a central angle of 60 degrees 13 minutes 14 seconds, a chord that bears South 55 degrees 47 minutes 36 seconds West, a distance of 90.30 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for a point of tangency;

THENCE, with the north lines of said Lot 15 and Lot 14 of said Heritage Oaks Subdivision Section Six, South 85 degrees 53 minutes 18 seconds West, a distance of 77.09 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for the beginning of a curve to the right;

THENCE, with the north line of said Heritage Oaks Subdivision Section Six, the following four (4) courses:

1. 85.56 feet along the arc of said curve to the right, having a radius of 63.99 feet, a central angle of 76 degrees 36 minutes 31 seconds, a chord that bears North 55 degrees 47 minutes 24 seconds West, a distance of 79.33 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for a point of tangency;
2. North 17 degrees 29 minutes 09 seconds West, a distance of 141.71 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for the beginning of a curve to the left;
3. 215.41 feet along the arc of said curve to the left, having a radius of 159.71 feet, a central angle of 77 degrees 16 minutes 37 seconds, a chord that bears North 56 degrees 07 minutes 27 seconds West, a distance of 199.45 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for a point of tangency;
4. South 85 degrees 14 minutes 14 seconds West, a distance of 197.87 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set on the east line of a tract recorded in the name of Texas New Mexico Power Company under Vol. 1144, Page 946 of the Brazoria County Deed Records, at the northwest corner of Lot 9 of said Heritage Oaks Subdivision, Section 6, for the southwest corner of the herein described tract;

THENCE, with the easterly line of said Texas New Mexico Power Company tract the following four (4) courses:

1. North 04 degrees 45 minutes 45 seconds West, a distance of 15.01 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for an angle point;
2. South 85 degrees 22 minutes 28 seconds West, a distance of 42.58 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for an angle point;
3. North 09 degrees 05 minutes 17 seconds West, a distance of 42.60 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for an angle point;
4. South 80 degrees 59 minutes 41 seconds West, a distance of 16.99 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set on the west line of an unnamed road (thirty foot R.O.W., Vol. 26, Page 141 B.C.D.R.), on the east line of said Heritage Oaks Subdivision, Section 3, for the west southwest corner of the herein described tract;

THENCE, with the east line of said Heritage Oaks Subdivision, Section 3, being the west line of said unnamed road, North 04 degrees 15 minutes 53 seconds West, a distance of 579.83 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set for an angle point, at the southwest corner of said Lot 2;

THENCE, with the common line of said Heritage Oaks Section 3 and said Lot 2, North 04 degrees 16 minutes 39 seconds West, a distance of 196.44 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set on the south R.O.W. line of Oak Ridge Drive, for an angle point;

THENCE, with the south R.O.W. line of said Oak Ridge Drive, South 74 degrees 32 minutes 43 seconds East, a distance of 31.87 feet to the POINT OF BEGINNING and containing 27.122 acres of land.

KNOW ALL MEN BY THESE PRESENTS:
That I, Devin R. Royal, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown thereon were properly placed under my supervision.

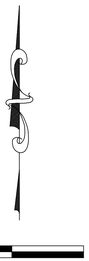
SIGNED: _____
DEVIN R. ROYAL DATE
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6667

LEGEND

B.C.C.F.	=	BRAZORIA COUNTY CLERK'S FILE
B.C.D.R.	=	BRAZORIA COUNTY DEED RECORDS
B.C.P.R.	=	BRAZORIA COUNTY PLAT RECORDS
B.L.	=	BUILDING LINE
BM	=	BENCHMARK
C.I.R.	=	CAPPED IRON ROD
D.E.	=	DRAINAGE EASEMENT
D.&D.E.	=	DRAINAGE AND DETENTION EASEMENT
D.M.E.	=	DRAINAGE/MAINTENANCE EASEMENT
FND	=	FOUND
I.R.	=	IRON ROD
P.O.B.	=	POINT OF BEGINNING
R.O.W.	=	RIGHT-OF-WAY
S.S.E.	=	SANITARY SEWER EASEMENT
U.E.	=	UTILITY EASEMENT
VOL., Pg.	=	VOLUME, PAGE
W.L.E.	=	WATER LINE EASEMENT

SYMBOLS

○	= SET 5/8" I.R. W/CAP "BAKER & LAWSON"
○	= FOUND MONUMENT (AS NOTED)
⊕	= (BM) TEMPORARY BENCHMARK



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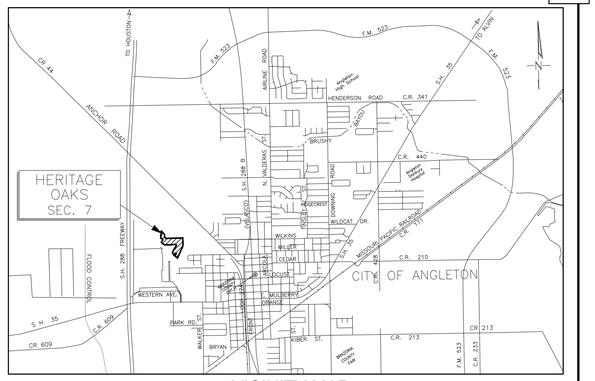
SCALE : 1" = 100'



VICINITY MAP
N.T.S.

OWNER:
CHRISTOPHER PELTIER
P.O. BOX 288
ANGLETON TX 77516

SHEET 2 OF 2

REVISED:

FINAL REPLAT
HERITAGE OAKS SEC 7 SUBDIVISION
A 27.122 ACRE, 34-LOT, 3 BLOCK 2-RESERVE SUBDIVISION

PORTION OF LOTS 47, 48, 49, 50 AND 51 OF
THE NEW YORK AND TEXAS LAND COMPANY SUBDIVISION
VOL. 26, Pg. 140 B.C.D.R.
LOCATED IN THE J.D.J. VALDERAS SURVEY,
ABSTRACT No. 380
BRAZORIA COUNTY, TEXAS

B&L BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 EAST CEDAR ST.
ANGLETON, TEXAS 77515
OFFICE: (979) 849-6681
TBPLS No. 10052500
REG. NO. F-825

PROJECT NO.: 13446	SCALE: 1" = 100'	DRAWN BY: BT
DRAWING NO.: 13446 PLAT.DWG	DATE: 06/11/2020	CHECKED BY:

X:\2020\13446\ENGINEERING\PLAT\13446 PLAT.DWG, 11/25/20, Bryan Brooks

PLANS FOR CONSTRUCTION OF

PAVING, DRAINAGE AND UTILITIES ON

HERITAGE OAKS SEC. 7 SUBDIVISION

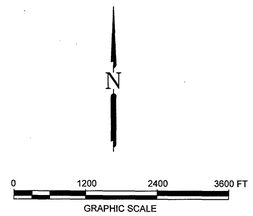
3 BLOCKS, 34 LOTS

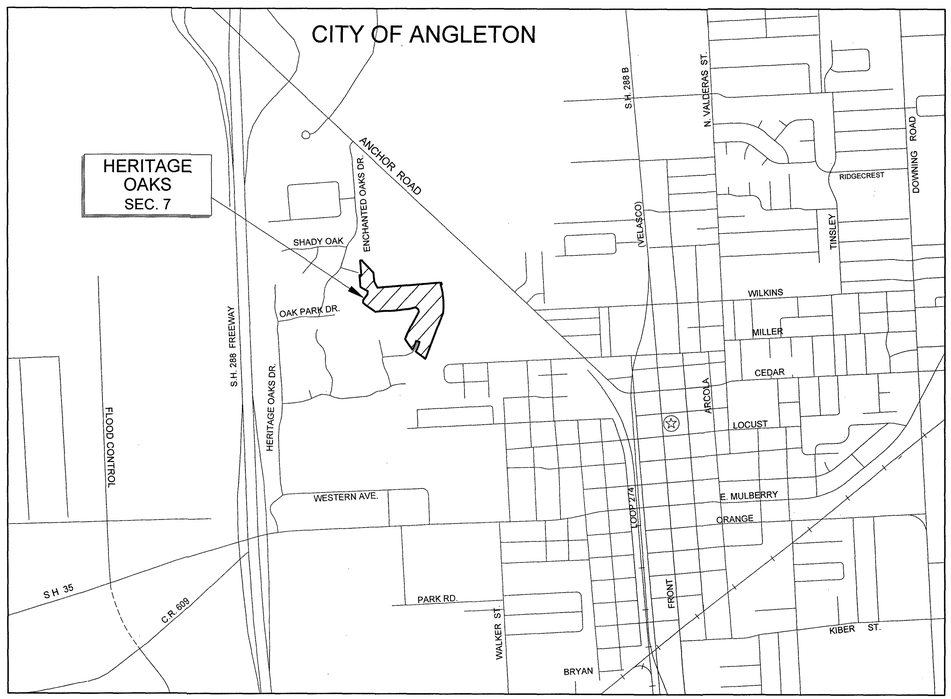
FOR THE

CITY OF ANGLETON

BRAZORIA COUNTY

B&L JOB No. 13446





CITY OF ANGLETON

MAYOR	CITY COUNCIL
JASON PEREZ	MIKEY SVOBODA
	CECIL BOOTH
	JOHN WRIGHT
CITY MANAGER	TRAVIS TOWNSEND
CHRIS WHITTAKER	MARK GONGORA

This subdivision lies within the Oyster Creek Watershed.

"Release of this application does not constitute a verification of all data, information and calculations supplied by the applicant. The engineer of record is solely responsible for the completeness, accuracy and adequacy of their submittal, whether or not the application is reviewed for Code compliance by the City Engineer."

"All responsibility for the adequacy of these plans remains with the Engineer who prepared them. In approving these plans, the City of Angleton must rely on the adequacy of the work of the Design Engineer."

INDEX OF DRAWINGS

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1B	FINAL PLAT
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3	EXISTING CONDITIONS
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5	PLAN & PROFILE - OAK RIDGE DR. 5+00 TO 10+50
6	PLAN & PROFILE - OAK RIDGE DR. STA 10+50 TO 16+00
7	PLAN & PROFILE - OAK RIDGE DR. STA 16+00 TO 21+60
7A	PLAN & PROFILE - OAK RIDGE DR. STA 21+60 TO 22+62
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9	DETENTION POND DESIGN, OUTFALL 1 AND SWALE S1
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20	SANITARY SEWER DETAILS
21	STORM SEWER DETAILS
22	WEIR DRAINAGE STRUCTURE

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR

DRAWN BT

CHECKED

DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/25/20

OWNER:

CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

PLAN:

PROFILE:

HORIZONTAL:

VERTICAL:

HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

TITLE SHEET

PROJECT NO. 13446

T:\13446\Engineering\Plat\13446 SHEET SET.DWG

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL NOTIFY THE "UNDERGROUND UTILITY COORDINATING COMMITTEE" (TELEPHONE NO. (979) 849-4364 AND THE CITY OF ANGLETON (TELEPHONE NO. (979) 849-4364) 48 HOURS BEFORE STARTING WORK IN STREET RIGHT-OF-WAYS OR EASEMENTS.
2. ALL EXISTING UNDERGROUND UTILITIES ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM INFORMATION AVAILABLE, CONTRACTOR HAS SOLE RESPONSIBILITY FOR FIELD VERIFICATION OF ALL EXISTING FACILITIES SHOWN ON DRAWINGS. CONTRACTOR SHALL COORDINATE ALL CONFLICTS WITH THE APPROPRIATE GOVERNING AGENCY. NO SEPARATE PAY.
3. CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET, AS A MINIMUM, THE REQUIREMENTS OF OSHA SAFETY AND HEALTH REGULATION, PART 1926, SUBPART P AS PUBLISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 209, DATED OCTOBER 31, 1989.
4. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS MUTCD MOST RECENT EDITION AS REVISED) DURING CONSTRUCTION.
5. CONTRACTOR SHALL COVER OPEN EXCAVATIONS IN PUBLIC STREETS WITH ANCHORED STEEL PLATES DURING NON-WORKING HOURS.
6. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS.
7. EXISTING PAVEMENTS, CURBS, SIDEWALKS, CULVERTS AND DRIVEWAYS (ADJACENT TO THE WORK) DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO EQUAL OR BETTER THAN THEIR ORIGINAL CONDITION AT CONTRACTOR EXPENSE.
8. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB, SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK. CONTRACTOR SHALL TAKE NECESSARY ACTIONS TO PROTECT THE EXISTING SURFACES OUTSIDE THE WORK AREA FROM THE EQUIPMENT USED. ALL TRACKED MACHINERY (STREET PADS INCLUDED) SHALL NOT BE OPERATED DIRECTLY ATOP THE PAVEMENT WITHOUT APPROPRIATE PADDING AND PROTECTION OF THE SURFACES. ANY MARRED OR DISTRESSED AREAS SHALL BE REMOVED AND RESTORED WITH NEW MATERIALS TO THE SATISFACTION OF THE ENGINEER. ANY EXISTING DISTRESSED AREAS SHALL BE MADE KNOWN TO THE ENGINEER PRIOR TO OPERATIONS IN THE WORK AREA.
9. ALIGNMENT, CENTERLINE CURVE DATA AND STATIONING TO BE VERIFIED BY ON-THE-GROUND SURVEY FROM APPROVED SUBDIVISION PLAT (OR APPROVED PLOT FOR OFF SITE EASEMENTS), AND ELEVATIONS OF ALL CONNECTIONS TO EXISTING FACILITIES TO BE CONFIRMED PRIOR TO WORK START. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
10. CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK.
11. CONTRACTOR SHALL ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK.
12. ALL UTILITY TRENCHES TO BE BACK FILLED TO 90 PERCENT (90%) STANDARD PROCTOR DENSITY UNLESS OTHERWISE NOTED.
13. ALL SURVEY, LAYOUT, MEASUREMENT, AND GRADE STAKE WORK SHALL BE PERFORMED BY BAKER & LAWSON, INC. AS PART OF THE WORK UNDER THIS CONTACT.
14. BAKER & LAWSON, INC. WILL PROVIDE EXPERIENCED INSTRUMENT MEN, COMPETENT ASSISTANTS, AND SUCH INSTRUMENTS, TOOLS, STAKES, AND OTHER MATERIALS REQUIRED TO COMPLETE THE SURVEY, LAYOUT AND MEASUREMENT WORK.
15. CONSTRUCTION DEBRIS AND OTHER UNCLASSIFIED UNSUITABLE EXCESS MATERIAL SHALL BE HAULED TO A STATE APPROVED DISPOSAL SITE OR AS DIRECTED BY THE ENGINEER. AN EXISTING LANDFILL APPROXIMATELY 10 MILES FROM THE PROJECT SITE IS THE NEAREST STATE APPROVED FEE FACILITY. ALL REFUSE MATERIALS (BROKEN CONCRETE, TREES, ASPHALT, ETC.) SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.
16. PLAN QUANTITIES WILL BE USED FOR FINAL PAYMENT UNLESS DESIGN CHANGES ARE MADE DURING CONSTRUCTION.

CONSTRUCTION NOTES FOR PAVING & DRAINAGE

1. GUIDELINES SET FORTH IN THE MANUAL ON UNIFORM CONTROL DEVICES SHALL BE OBSERVED.
2. FILL SHALL BE PLACED IN MAXIMUM 8" LOOSE LIFTS AND COMPACTED TO 95% OF OPTIMUM DENSITY AS DETERMINED USING TESTING METHOD ASTM D698.
3. CONTRACTOR RESPONSIBLE FOR MAINTAINING BARRICADES TO PREVENT TRAFFIC FROM USING NEW PAVEMENT UNTIL PROJECT IS COMPLETED AND ACCEPTED BY PROPER AUTHORITY OR AS AUTHORIZED BY ENGINEER.
4. B-B INDICATES ROAD WIDTH TO BACK OF CURB. CURB RADII ARE TO FACE OF CURB. T.C. INDICATES TOP OF CURB ELEVATIONS (BASED ON 4" CURB UNLESS OTHERWISE NOTED) T.P. INDICATES TOP OF PAVEMENT ELEVATION.
5. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT MAXIMUM SPACING OF 40-FOOT INTERVALS (SAWCUTS @ 20'(2 1/2"DEEP), LONGITUDINAL JOINTS SHALL BE AT MAXIMUM OF 14-FOOT SPACING. WOOD JOINT SHALL BE SOUND HEART REDWOOD.
6. 6-INCH CONCRETE PAVEMENT TO BE 5.5 SACK MIX MIN. (3,500 PSI) REINFORCING STEEL TO CONFORM TO ASTM A-615, GRADE 60. PROVIDE MINIMUM 18-INCH LAPS. (36 BAR DIA)
7. SAW CUT TO EXPOSE EXISTING LONGITUDINAL STEEL REQUIRED TO CREATE A MINIMUM TWELVE-INCH (12") OVERLAP OF PROPOSED AND EXISTING LONGITUDINAL REINFORCING STEEL WHEN MAKING A CONNECTION TO EXISTING CONCRETE PAVEMENT. WHERE SPACING OF EXISTING LONGITUDINAL STEEL DIFFERS FROM PROPOSED STEEL SPACING, NOTIFY THE ENGINEER.
8. USE PLASTIC CHAIRS TO SUPPORT REINFORCEMENT AT 24-INCH SPACING EACH WAY.
9. SUBGRADE TO BE STABILIZED 1-FOOT BACK OF PROPOSED CURB OR EDGE OF PAVEMENT. EXCESS LIME STABILIZED SOIL SHALL BE UTILIZED IN THE PREPARATION OF SUBGRADE FOR DRIVEWAYS. THERE WILL BE NO PAYMENT FOR PREPARING SUBGRADE FOR DRIVEWAYS AND SIDEWALKS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE ASSOCIATED CONCRETE PAY ITEMS. SUBGRADE PREPARATION FOR DRIVEWAYS AND PAVING SHALL INCLUDE PROOF ROLLING. SOFT AREAS TO BE EXCAVATED AND RECOMPACTED TO ADJACENT SOIL DENSITY.
10. USE CONTINUOUS LONGITUDINAL REINFORCING BAR IN CURB.
11. BACK FILL AND BEDDING FOR HEADWALL STRUCTURES, TYPE "C" INLETS, R.C.P. LEADS AND STORM SEWERS SHALL BE WITH 1.5 SACK CEMENT. STABILIZED SAND SHALL BE COMPACTED TO A DENSITY OF AT LEAST 90% OF DENSITY DETERMINED BY STANDARD MOISTURE-DENSITY RELATION (ASTM D-698) AT OPTIMUM MOISTURE AND SHALL BE PLACED AND FINISHED WITHIN 3 HRS. OF MIXING. TEMPORARY TRAVEL WAY SURFACE SHALL BE WITH CEMENT STABILIZED LIMESTONE. PAYMENT FOR THESE ITEMS SHALL BE SUBSIDIARY TO THE VARIOUS STRUCTURAL BID ITEMS. VERIFICATION OF CEMENT STABILIZED SAND MIXTURE SHALL BE FURNISHED UPON REQUEST OF ENGINEER.
12. THE SUBGRADE SHALL BE BROUGHT TO THE REQUIRED GRADE BY THE USE OF GRADE STAKES (BLUE TOPS) AND APPROVED BY THE ENGINEER BEFORE LIME IS APPLIED.
13. RATE OF APPLICATION FOR LIME SHALL BE SEVEN PERCENT (7%) OF THE DRY WEIGHT OF SOIL (QUALITY BASE ON 100 #/ C.F.) OR THIRTY ONE AND ONE HALF (31.5) POUNDS PER SQUARE YARD FOR SIX (6) INCH STABILIZED SUBGRADE. LIME STABILIZED SUBGRADE SHALL NOT BE MIXED MORE THAN ONE INCH IN EXCESS OF THE REQUIRED DEPTH. LIME STABILIZED SUBGRADE SHALL BE BROUGHT TO THE OPTIMUM MOISTURE CONTENT DURING THE FIRST MIXING OPERATIONS THEN LEFT TO CURE FOR TWO CURING DAYS BEFORE FINAL MIXING CAN BEGIN. AFTER FINAL MIXING IS COMPLETED AND BEFORE SOIL DENSITY TESTS ARE TAKEN. LIME STABILIZED SUBGRADE SHALL BE BROUGHT TO THE REQUIRED GRADE BY THE USE OF GRADE STAKES (BLUE TOPS) AND APPROVED BY THE ENGINEER. DENSITY SHALL BE NINETY-FIVE PERCENT (95%) OF THE STANDARD PROCTOR DENSITY AT OPTIMUM MOISTURE. TESTED AND COMPLETED SECTIONS SHALL BE KEPT MOIST CURED ON A DAILY BASIS WITH WATER TRUCKS OR SUBSTANTIAL SUPPLY HOSES FOR THE ENTIRE PERIOD THE SURFACE REMAINS UNCOVERED WITH ADDITIONAL COURSES. AFTER FINAL TESTING AND APPROVAL IS COMPLETE, TRACK EQUIPMENT, SCRAPERS AND OTHER HEAVY EQUIPMENT WILL NOT BE PERMITTED ON THE COMPLETED LIME STABILIZED AREA. LIGHT MOTOR GRADERS, RUBBER TIRED TRACTORS, WATER TRUCKS AND ROLLERS USED IN THE FINISHING OPERATIONS WILL BE PERMITTED WITH THE APPROVAL OF THE ENGINEER. CONCRETE AND LOADED HAUL TRUCKS ARE STRICTLY PROHIBITED ON COMPLETED AREAS UNLESS THE TRAVELED AREA REGARDLESS OF CONDITION IS REMIXED COMPACTED AND TESTED FOR APPROVAL A SECOND TIME.
14. FORMS SHALL BE EITHER WOOD OR STEEL, OF GOOD QUALITY, FREE OF WARP AND SUFFICIENTLY STAKED TO AVOID SHIFTING WHEN LOAD IS APPLIED. ALL REDWOOD EXPANSION BOARDS SHALL BE STAKED WITH 1X2 REDWOOD STAKES AND ALLOWED TO REMAIN WITHIN THE POUR. METAL STAKES ARE APPROVED FOR USE TO STAKE METAL KEYWAYS.
15. REINFORCING SHALL BE SECURELY TIED AT ALL INTERSECTIONS AND SPLICES. ALL DOWELS SHALL BE SECURELY TIED. REINFORCEMENT SHALL BE CLEAN AND FREE OF RUST AT TIME OF USE. PLASTIC CHAIR OF THE CORRECT HEIGHT SHALL BE USED. SPACING SHALL BE SUFFICIENT TO SUPPORT REINFORCEMENT.
16. PRIOR TO CONCRETE PLACEMENT, CONTRACTOR SHALL PRESENT A CERTIFIED COPY OF TOP OF FORM GRADES TO THE ENGINEER FOR REVIEW AND APPROVAL. ELEVATIONS OF FORMS SHALL BE RECORDED AT 10' INTERVALS. ADJUSTMENTS TO FORMS SHALL BE COMPLETE 4 HRS. PRIOR TO CONCRETE PLACEMENT.
17. CONCRETE FOR STREET PAVEMENTS SHALL BE "CLASS A" CONCRETE, SHALL NOT HAVE LESS THAN FIVE AND ONE HALF (5 1/2) SACKS OF CEMENT PER CUBIC YARD, AND SHALL NOT HAVE MORE THAN SIX AND ONE HALF (6 1/2) GALLONS OF WATER PER SACK OF CEMENT. SLUMP SHALL NOT EXCEED FIVE (5) INCHES AND SHALL DEVELOP A MODULUS OF RUPTURE STRENGTH OF THREE THOUSAND FIVE HUNDRED (3500) P.S.I. AT TWENTY EIGHT (28) DAYS. CONCRETE SHALL BE PLACED IN SUCH A MANNER AS TO REQUIRE AS LITTLE HANDLING POSSIBLE. USE OF AN APPROVED VIBRATING SCREED WILL BE REQUIRED. AT INTERSECTIONS AND SMALL AREAS WHERE A VIBRATORY SCREED CAN NOT BE USED, A HAND VIBRATOR OR "JITTERBUG" SHALL BE USED. USE OF A TEN FOOT (10') CONCRETE PAVEMENT STRAIGHT EDGE WILL ALSO BE REQUIRED. ALL EXPOSED JOINTS SHALL BE EDGED AS NOTED ON DETAILS. SURFACE SHALL BE TYPICALLY A BELT FINISH OR BROOM FINISH (COARSE, MEDIUM OR LIGHT) AS REQUIRED BY THE APPLICATION AND DIRECTED BY THE ENGINEER.
18. FLY ASH SHALL MAKE UP FROM 20-25% BY VOLUME OF THE SPECIFIED CEMENT VOLUME AND SHALL CONFORM TO ASTM C 618, CLASS F.
19. CURING COMPOUND SHALL BE TYPE II WITH WHITE PIGMENT. APPLIED AT THE UNDILUTED RATE OF ONE GALLON PER TWO HUNDRED (200) SQUARE FEET.
20. EXPANSION JOINTS SHALL BE CLEANED, WIRE BRUSHED, BLOWN OR FLAME DRIED SEALED WITH AN APPROVED LIST RUBBERIZED HOT LAID ASPHALT JOINT AND CRACK SEALANT OR A TWO (2) COMPONENT POLYMERIC SELF LEVELING COLD APPLIED SEALANT.
21. CONTRACTOR WILL NOT PERMIT TRAFFIC ON NEW CONCRETE PAVEMENT UNTIL BOTH A MINIMUM OF SEVEN (7) CURING DAYS AND MODULUS OF RUPTURE STRENGTH OF THIRTY THOUSAND FIVE HUNDRED (3500) P.S.I. TAKES PLACE OR AS APPROVED BY THE ENGINEER/PUBLIC WORKS DEPARTMENT.
22. CONCRETE FOR CURB SHALL BE A 3000 P.S.I. PERFORMANCE STRENGTH CONCRETE WITH A MINIMUM FIVE (5) SACK CEMENT PER CUBIC YARD CONTENT. CURB CONCRETE MIX MAY BE A SMALL AGGREGATE BATCH DESIGN.
23. A CONCRETE MIX DESIGN OF CONCRETE PLUS FLY ASH MAY BE SUBSTITUTED IN LIEU OF THE STANDARD CONCRETE BATCH DESIGN. THE FLY ASH SHALL CONFORM TO THE REQUIREMENTS OF TXDOT MATERIAL SPECIFICATION D-9-8900, AND SHALL NOT EXCEED 25% BY ABSOLUTE VOLUME OF THE SPECIFIED CEMENT CONTENT. THE MODULUS OF RUPTURE STRENGTHS MINIMUMS AND DEVELOPMENT PERIOD OF THE STANDARD CONCRETE MIX DESIGN SHALL REMAIN IN EFFECT AND SHALL BE VERIFIED BY A CONCRETE BATCH MIX DESIGN PREPARED AND TESTED BY A GEOTECHNICAL LAB AND SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY ENGINEERING/PUBLIC WORKS DEPARTMENT PRIOR TO PAVING OPERATIONS.
24. ALL PAVEMENT SAW CUT REQUIRED IN THE PLANS SHALL BE CONSIDERED SUBSIDIARY TO THE PAVING REMOVAL PAY ITEM REQUIRING IT.
25. BLOCK SOD SHALL BE PLACED 16" (ONE BLOCK WIDTH) WIDE ALONG THE EDGE OF ALL NEWLY CONSTRUCTED CURBS AND TO DRIVEWAY REPLACEMENT LIMITS.
26. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANALYZING WEATHER CONDITIONS AND TO SUSPEND OPERATIONS DURING PERIODS WHEN ADVERSE WEATHER CONDITIONS APPEAR LIKELY. NO CONCRETE SHALL BE PLACED WHEN THE TEMPERATURE IS 35°F AND RISING. HOWEVER, NO CONCRETE SHALL BE PLACED WHEN THE CONCRETE TEMPERATURE IS ABOVE 100°F. THE CONTRACTOR SHALL KEEP SUFFICIENT LENGTH OF COVERING MATERIAL ON THE JOB SITE TO PLACE OVER AND PROTECT THE SURFACE OF "FRESH" CONCRETE DURING PERIODS OF UNPREDICTED RAINS.

WASTEWATER CONSTRUCTION NOTES

1. CONTRACTOR SHALL PROVIDE RECORD OF LOCATION OF ALL STACKS, STUBS, LEADS, ETC. TO CITY OF ANGLETON.
2. SEPARATION DISTANCES FOR ALL SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL BE GOVERNED BY THE "TEXAS NATURAL RESOURCE CONSERVATION COMMISSION RULES AND REGULATIONS FOR DESIGN CONSERVATION COMMISSION RULES AND REGULATIONS FOR DESIGN CRITERIA FOR SEWAGE SYSTEMS "SECTION 317.20," LATEST PRINTING.
3. MAINTAIN 12-INCH MINIMUM VERTICAL CLEARANCE AT CROSSINGS BETWEEN SANITARY SEWERS AND CULVERTS, UNLESS OTHERWISE NOTED.
4. WHERE SANITARY SEWER LINE CROSSES A WATER LINE WITH LESS THAN 9-FEET BUT MORE THAN 6-INCHES VERTICAL SEPARATION, PROVIDE ONE MINIMUM 18-FOOT JOINT OF PRESSURE RATED P.V.C. SANITARY SEWER (ASTM D2241, CLASS 150, SDR 26) CENTERED ON WATER LINE. INCLUDE COST OF WATER LINE CROSSING IN UNIT PRICE BID PER LINEAR FOOT FOR SANITARY SEWER IN APPROPRIATE SIZES.
5. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY UNSUITABLE TRENCH CONDITIONS.
6. SANITARY SEWER LEADS UNDER OR WITHIN 1' OF EXISTING OR FUTURE PAVEMENT SHALL BE BACK FILLED WITH CEMENT STABILIZED SAND UP TO WITHIN 1' OF TOP OF PAVING SUBGRADE. CEMENT STABILIZED SAND BACK FILL FOR LEADS SHALL BE INCLUDED IN THE BID UNIT PRICE FOR LEADS.
7. LOW PRESSURE AIR TEST SHALL BE CONDUCTED PER TNRCC TAC 317.2. HOLDING TIMES SHALL BE AS ESTABLISHED BY TNRCC. CONTRACTOR TO PROVIDE TEST PLUGS AND RISERS. NO SEPARATE PAY.
8. CONTRACTOR TO OPEN CUT ALL SANITARY SEWER CONSTRUCTION UNLESS NOTE OTHER WISE, SEWER SERVICES TO BE INSTALLED FULL WIDTH OF ROADWAY.-NO HALF STREET INSTALLATIONS.
9. CONTRACTOR SHALL AT ALL TIMES PROVIDE MAXIMUM UNINTERRUPTED SERVICE AND SHALL AVAIL OF ANY ROUTING METHOD AND EQUIPMENT TO ACCOMPLISH THIS.
10. ALL SINGLE AND DOUBLE SERVICE LEAD SHALL BE A MINIMUM SIX INCH (6") UNLESS OTHERWISE DIRECTED BY THE ENGINEER/PUBLIC WORKS AND/OR FIELD ADJUSTED BY THE UTILITY DEPARTMENT IN THE FUTURE.

WATER CONSTRUCTION NOTES

1. CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND TEST PRESSURE AS SPECIFIED IN CONTRACT DOCUMENTS. THRUST BLOCKING SHALL BE CLASS "B" CONCRETE 2500 P.S.I. AND SHALL BE SUBSIDIARY TO THE BID ITEM PERTINENT TO ITS USE. ALL CEMENT STABILIZED SAND BACKFILL SHALL BE 1.5 SK/CY CEMENT CONTENT. ALL M.J. D.I. FITTINGS WILL HAVE M.J. RESTRAINTS (STARGRIP OR EQUAL) WRAP FITTINGS & RESTRAINTS WITH 10 MIL POLY.
2. SEPARATION DISTANCES OF ALL WATER MAIN AND SANITARY SEWER MAIN CONSTRUCTION SHALL BE GOVERNED BY THE "TEXAS NATURAL RESOURCE CONSERVATION COMMISSION RULES AND REGULATIONS FOR DESIGN CRITERIA FOR SEWAGE SYSTEMS," SECTION 317.20, LATEST PRINTING.
3. ALL 4" THROUGH 12" WATER MAINS TO BE P.V.C. PIPE, AWWA C-900, CLASS 150, SDR 18, MEETING THE REQUIREMENTS OF ANSI/NSF 61 UNLESS OTHERWISE NOTED.
4. WATER LINES UNDER OR WITHIN 1 FEET OF NEW OR EXISTING PAVEMENTS (STREETS AND DRIVEWAYS) SHALL BE BACK FILLED WITH CEMENT STABILIZED SAND AS SPECIFIED IN THE CONSTRUCTION DETAIL.
5. PROVIDE A MINIMUM SIX-INCHES (6") OF CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.
6. 4-INCH THROUGH 12-INCH LINES TO HAVE A MINIMUM OF 4'-0" COVER BELOW TOP OF CURB. UNLESS OTHERWISE NOTED, VARY FLOW LINE UNIFORMLY FROM DEPTH SHOWN ON PLANS.
7. CENTERLINE OF FIRE HYDRANT TO BE LOCATED AT 3' FROM BACK OF CURB WITH CENTERLINE OF STEAMER NOZZLE 22 INCHES ABOVE FINISHED GRADE. TURN STEAMER OUTLET TO FACE STREET.
8. WHERE WATER LINE CROSSES SANITARY SEWER LINE OR LEAD WITH LESS THAN NINE FEET (9') VERTICAL SEPARATION, PROVIDE ONE MINIMUM 18-FOOT JOINT OF WATER LINE CENTERED ON LEAD. INCLUDE COST OF LEAD CROSSING IN UNIT PRICE BID PER LINEAR FOOT FOR WATER LINE IN APPROPRIATE SIZES.
9. THE CONTRACTOR AT ALL TIMES PROVIDE MAXIMUM UNINTERRUPTED FLOW TO ALL SERVICES AND MAINS AND SHALL AVAIL OF ANY ROUTING METHOD AND EQUIPMENT TO ACCOMPLISH THIS.

CENTERPOINT ENERGY / ENTEX NOTES

CAUTION: UNDERGROUND GAS FACILITIES

LOCATIONS OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY, INTRASTATE PIPELINE, LLC. WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE NOT USUALLY SHOWN. OUR SIGNATURE ON THESE PLANS ONLY INDICATES THAT OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT (979) 849-4364 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

* WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (800) 752-8036 OR (713) 659-2111 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
* WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
* WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
* FOR EMERGENCIES REGARDING GAS LINES CALL (800) 659-2111 OR (713) 659-2111.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

ACTIVITIES ON OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY
NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713) 207-5769.

WARNING: OVERHEAD ELECTRICAL FACILITIES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY AT 713-207-2222.

SBC NOTES

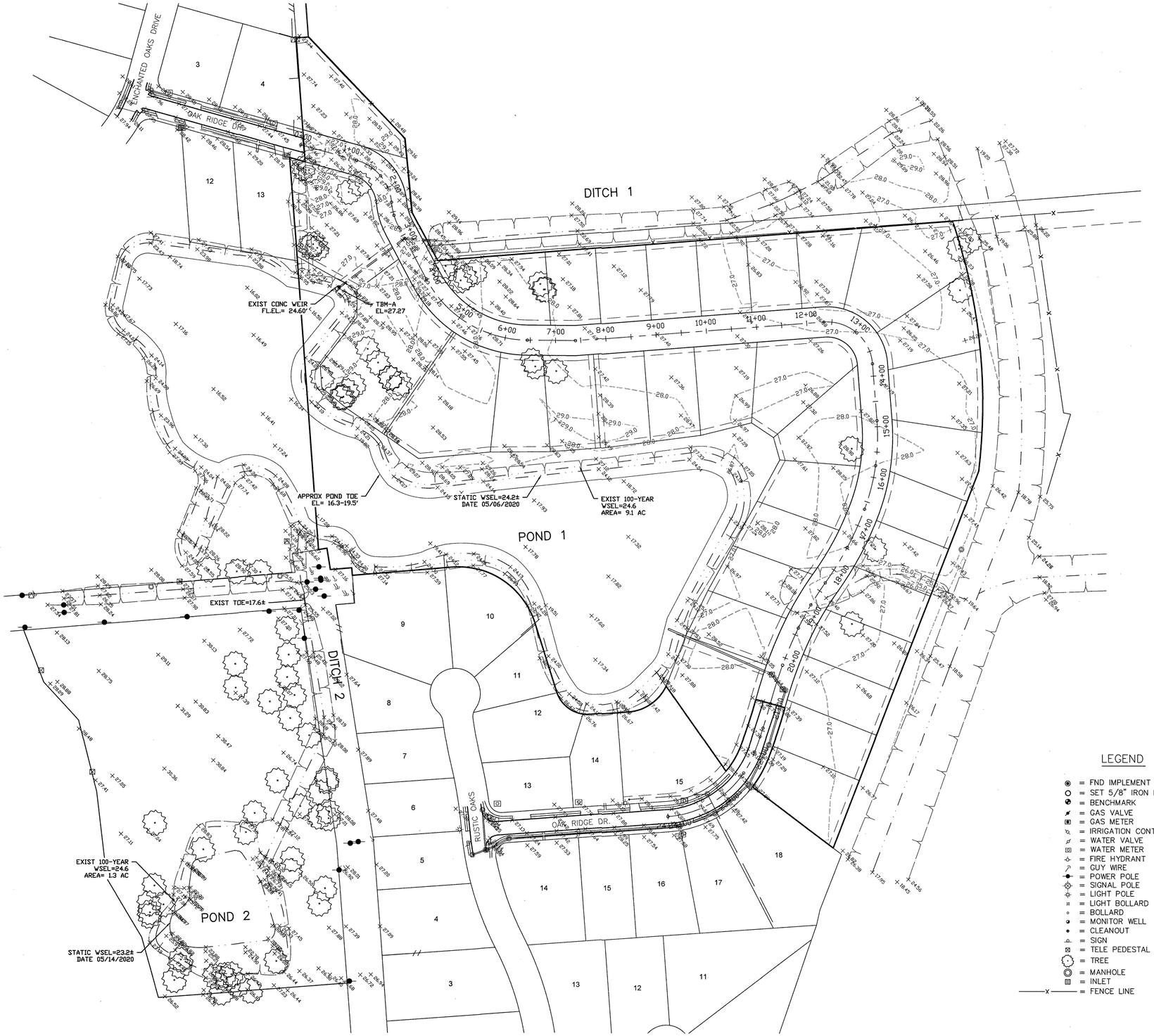
THE LOCATIONS OF SOUTHWESTERN BELL TELEPHONE CO. UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.

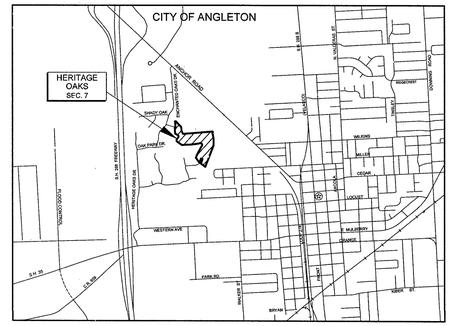
TEXAS NEW MEXICO POWER NOTES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTMPETD TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH AND SAFETY CODE FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL TEXAS NEW MEXICO POWER AT (979) 829-5776.

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ANGLETON CONSTRUCTION MANUAL (ACM) AND LAND DEVELOPMENT CODE, HEREAFTER REFERRED TO THE ACM AND THE LDC.
2. APPROVAL OF THESE CONSTRUCTION PLANS DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY, ADEQUACY, AND COMPLIANCE OF THE SUBMITTED PLANS.
3. ALL RESPONSIBILITY FOR RESTS ON DESIGN ENGINEER WHO PREPARED THEM, IN APPROVING THESE PLANS, THE CITY MUST RELY ON THE ADEQUACY AND ACCURACY OF THE DESIGN ENGINEER.
4. DESIGNS SHALL BE IN COMPLETE COMPLIANCE WITH THE LDC AND THE ACM. ANY WAIVER, DEVIATION, VARIANCE, OR EXCEPTION FROM ANY SPECIFIC REQUIREMENT(S) OF THE LDC OR ACM THAT WERE NOT EXPRESSLY REQUESTED WHEN PLANS ARE SUBMITTED, SHALL NOT BE CONSTRUED TO HAVE BEEN GRANTED IF PLANS ARE APPROVED. IT IS THE RESPONSIBILITY OF THE ENGINEER TO MAKE SUCH A WAIVER PROACTIVELY WHEN PLANS ARE SUBMITTED.
5. A MINIMUM OF TWO EXISTING BENCHMARKS SHOULD BE SHOWN ON THE PLANS. IN ADDITION, TWO PERMANENT BENCHMARKS PER SUBDIVISION SHALL BE INSTALLED IN EACH NEW SUBDIVISION TO INCLUDE DESCRIPTION, LOCATION, AND ELEVATION AND TIE TO CITY STANDARDS.
6. CAST BRONZE SURVEY MARKERS SHALL BE PLACED IN CONCRETE IN PERMANENT, ACCESSIBLE LOCATIONS AT THE TIME OF CONSTRUCTION. THE LOCATIONS OF THE MARKERS SHALL BE INDICATED ON THE CONSTRUCTION PLANS. A MINIMUM OF ONE MARKER SHALL BE PLACED FOR EACH 20 ACRES OF THE PROJECT.
7. PRIOR TO BEGINNING CONSTRUCTION, THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE WITH THE CITY, THE DEVELOPER'S CONSULTING ENGINEER, CONTRACTOR, AND ANY OTHER AFFECTED PARTIES. THE CITY SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE TIME OF THE CONFERENCE AND 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
8. THE CONTRACTOR SHALL PROVIDE THE CITY A MINIMUM OF 48 HOURS' NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
9. BARRICADES, BUILT TO CITY SPECIFICATIONS, SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB SAFETY.
10. IF BLASTING IS PLANNED, A BLASTING PERMIT MUST BE SECURED PRIOR TO COMMENCEMENT OF ANY BLASTING.
11. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE BEFORE ACCEPTANCE OF THE SUBDIVISION.
12. THE LOCATION OF ANY WATER OR WASTEWATER LINES SHOWN ON THE PLANS MUST BE VERIFIED BY THE PUBLIC WORKS DEPARTMENT.
13. USE ONE CALL UTILITY SYSTEM: DIAL 1-800-344-8377, 48 HOURS BEFORE YOU DIG.
14. ALL STORM SEWER PIPES TO BE CLASS III RCP UNLESS NOTED OTHERWISE. SPECIAL NOTES FOR PLANS, WHEN APPLICABLE.
15. CONSTRUCTED STREET SECTIONS SHALL SHOW THE FOLLOWING:
    a. PROVIDE STREET NAMES, WIDTH OF R.O.W., OR OTHER METHODS TO IDENTIFY PROPOSED DESIGN OF DIFFERENT PAVEMENT THICKNESS. IN WRITING OR GRAPHICALLY, DESCRIBE THE STREET SECTION(S) TO BE CONSTRUCTED.
    b. MANHOLE FRAMES, COVERS, AND WATER VALVE COVERS WILL BE RAISED TO FINISHED PAVEMENT GRADE AT THE OWNER'S EXPENSE BY A QUALIFIED CONTRACTOR WITH CITY INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION.
    c. CROWNS OF INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40 FEET FROM THE INTERSECTING CURB LINE UNLESS OTHERWISE NOTED. INLETS ON THE INTERSECTING STREET SHALL NOT BE CONSTRUCTED WITHIN 40 FEET OF THE VALLEY GUTTER, UNLESS OTHERWISE NOTED.
    d. PRIOR TO FINAL ACCEPTANCE OF A STREET OUTSIDE THE CITY LIMITS, STREET NAME SIGNS CONFORMING TO COUNTY STANDARDS SHALL BE INSTALLED BY DEVELOPER.
    e. SIDEWALK REQUIREMENTS (GIVE STREET NAME AND LOCATION OF REQUIRED SIDEWALK, I.E., NORTH, SOUTH, EAST, OR WEST SIDE).
    f. A CURB LAY DOWN WHERE REQUIRED WHEN ALL POINTS OF SIDEWALKS INTERSECTS CURBS.
    g. INSIDE THE CITY LIMITS, SIDEWALKS SHALL BE COMPLETED PRIOR TO ACCEPTANCE OF ANY DRIVEWAY APPROACHES AND/OR ISSUANCE OF A CERTIFICATE OF OCCUPANCY. WHEN OUTSIDE THE CITY LIMITS, A LETTER OF CREDIT MAY BE POSTED OR OTHER SUITABLE FINANCIAL ARRANGEMENTS MAY BE MADE TO ENSURE CONSTRUCTION OF THE SIDEWALKS. IN EITHER CASE, SIDEWALKS ADJACENT TO "COMMON AREAS", PARKWAYS, OR OTHER LOCATIONS ON WHICH NO BUILDING CONSTRUCTION WILL TAKE PLACE, MUST BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE OF THE SUBDIVISION.
    h. A LICENSE AGREEMENT FOR LANDSCAPING MAINTENANCE AND IRRIGATION IN STREET R.O.W, SHALL BE EXECUTED BY THE D





PRE-EXISTING DETENTION SUMMARY:
POND 1 AND NORTH DITCH SERVICES HERITAGE OAKS
SECTION 3 AND SECTIONS 6

REQUIRED DETENTION SECTION 3= 10.98 AC-FT
REQUIRED DETENTION SECTION 6= 8.70 AC-FT
REQUIRED TOTAL= 19.68 AC-FT

POND 1:
AREA OF 100-YEAR WSEL @ 26.6' = 9.6 AC
AREA OF STATIC WATER LEVEL @ 24.6' = 8.7 AC
AVERAGE AREA = 9.15 AC
DEPTH= 2.0 FT
VOLUME PROVIDED= 18.3 AC-FT

POND 2:
AREA OF 100-YEAR WSEL @ 26.6' = 1.3 AC
AREA OF STATIC WATER LEVEL = 0.65 AC
AVERAGE AREA = 0.98 AC
DEPTH= 2.0 FT
VOLUME PROVIDED= 1.95 AC-FT

DITCH 1:
LENGHT= 950 LF
AVERAGE CROSS-SECTIONAL AREA= 134 SF
VOLUME PROVIDED= 127,300 CF = 2.92 AC-FT

DITCH 2:
LENGTH= 500 LF
AVERAGE CROSS-SECTION AREA= 24 SF
VOLUME PROVIDED= 12,000 CF = 0.28

TOTAL EXISTING DETENTION = 23.45
TOTAL CREDIT FOR SECTION 7 DEVELOPMENT
23.45 -19.68 = 3.77 AC-FT

ELEVATIONS ARE BASED ON HERITAGE OAKS BM #1 NGVD1973

BM #1. CUT SQUARE ON TOP OF CURB AT NE CORNER OF BRIDGE, NORTHBOUND LANE, SH 288 FREEWAY AT ANGLETON DRAINAGE DISTRICT DITCH 10. ELEV. = 29.96.

SITE BENCHMARK

TBM 1: A BOX CUT ON A CONCRETE HEADWALL IN THE WEST CORNER OF THE SUBDIVISION
ELEVATION = 27.27 FEET, NGVD1973

LEGEND

- = FND IMPLEMENT AS NOTED
- = SET 5/8" IRON ROD
- = BENCHMARK
- = GAS VALVE
- = GAS METER
- = IRRIGATION CONTROL
- = WATER VALVE
- = WATER METER
- = FIRE HYDRANT
- = GUY WIRE
- = POWER POLE
- = SIGNAL POLE
- = LIGHT POLE
- = LIGHT BOLLARD
- = BOLLARD
- = MONITOR WELL
- = CLEANOUT
- = SIGN
- = TELE PEDESTAL
- = TREE
- = MANHOLE
- = INLET
- x = FENCE LINE

1. FLOOD ZONE STATEMENT: ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR BRAZORIA COUNTY, MAP NUMBER 48039C0440H, HAVING AN EFFECTIVE DATE OF JUNE 05, 1989, REVISED BY CASE NUMBER 03-06-2336P ON OCTOBER 06, 2004, THE PROPERTY SURVEYED LIES FULLY WITHIN ZONE "X" (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD-PLAIN. WARNING: THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES WILL BE FREE FROM FLOODING OR FLOOD DAMAGE, AND WILL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.
2. ACCORDING TO PROPOSED FEMA PANEL 48039C0440K, THE PROPERTY LIES FULLY WITHIN ZONE "X" (UNSHADED) AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD-PLAIN.
3. REMOVE VEGETATIVE MATTER. BACKFILL IN COMPACTED 8" LIFTS W/ MATERIAL HAVING LL< 65 AND PI>20.
4. REMOVE EXISTING TREES AND UNDERBRUSH. UPROOT TREE STUMPS. BACKFILL IN COMPACTED 8" LIFTS W MATERIAL HAVING LL< 65 AND PI>20.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/25/20

OWNER:
CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

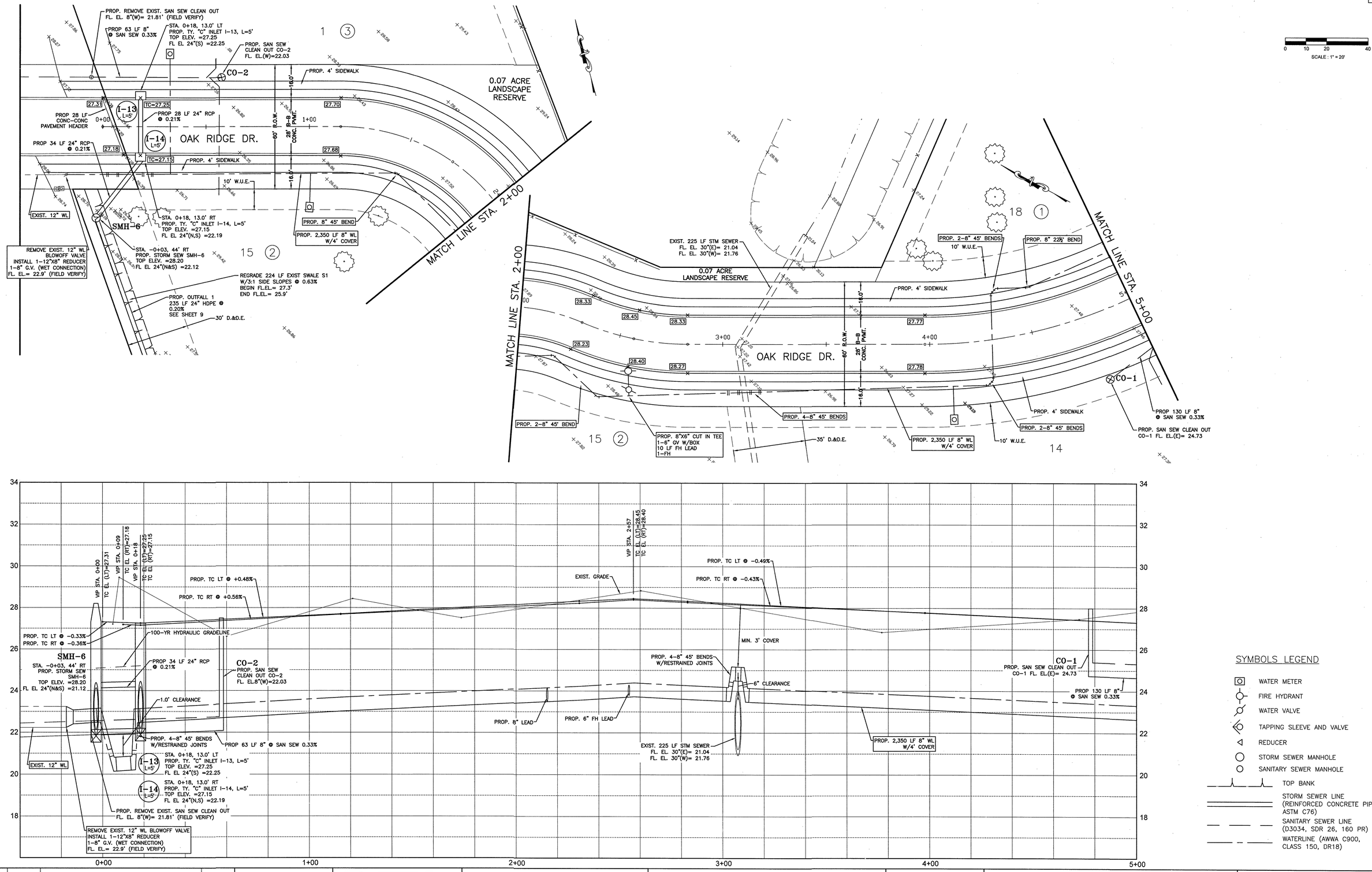
PLAN: 1" = 100'
PROFILE:
HORIZONTAL:
VERTICAL:

HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

EXISTING CONDITIONS
&
DEMOLITION

PROJECT NO. 13446

SHEET SET.DWG



SYMBOLS LEGEND

- WATER METER
- FIRE HYDRANT
- WATER VALVE
- TAPPING SLEEVE AND VALVE
- REDUCER
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- TOP BANK
- STORM SEWER LINE (REINFORCED CONCRETE PIPE, ASTM C76)
- SANITARY SEWER LINE (D3034, SDR 26, 160 PR)
- WATERLINE (AWWA C900, CLASS 150, DR18)

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
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STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/25/20

OWNER:
CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

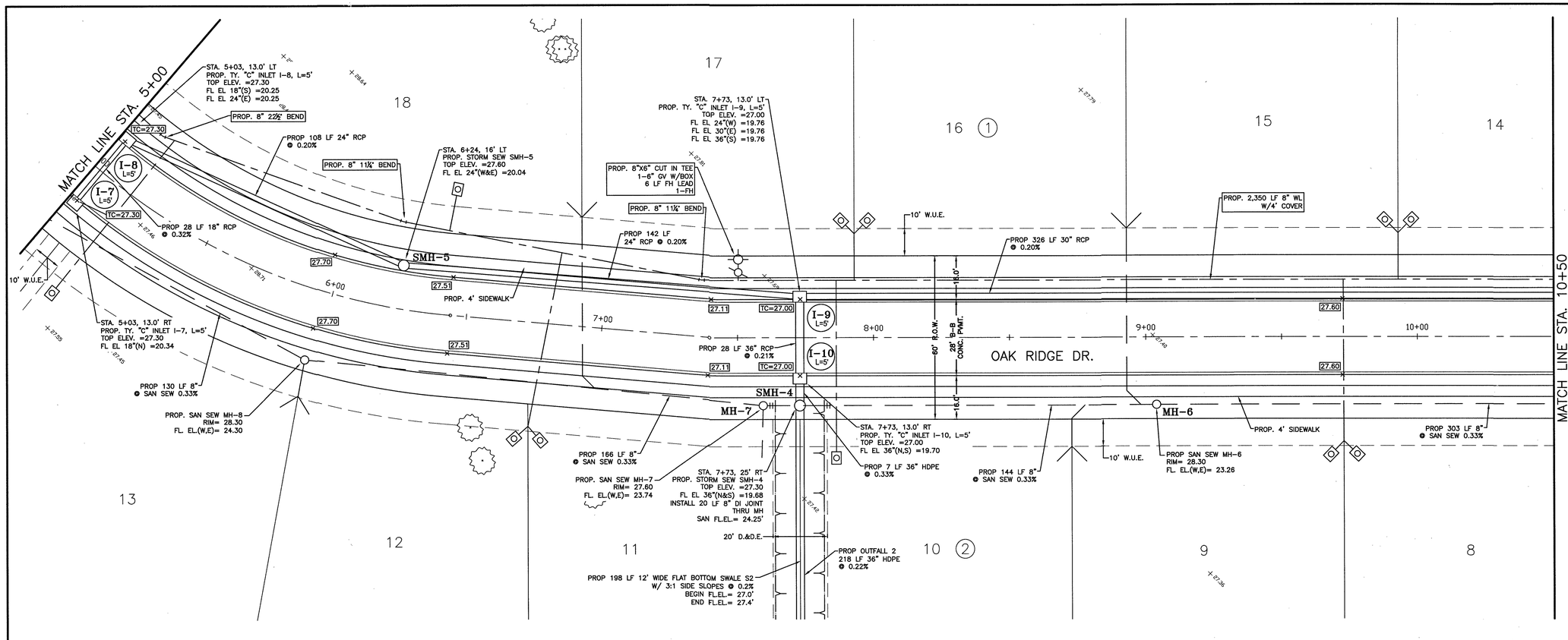
PLAN: 1" = 20'
PROFILE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 2'

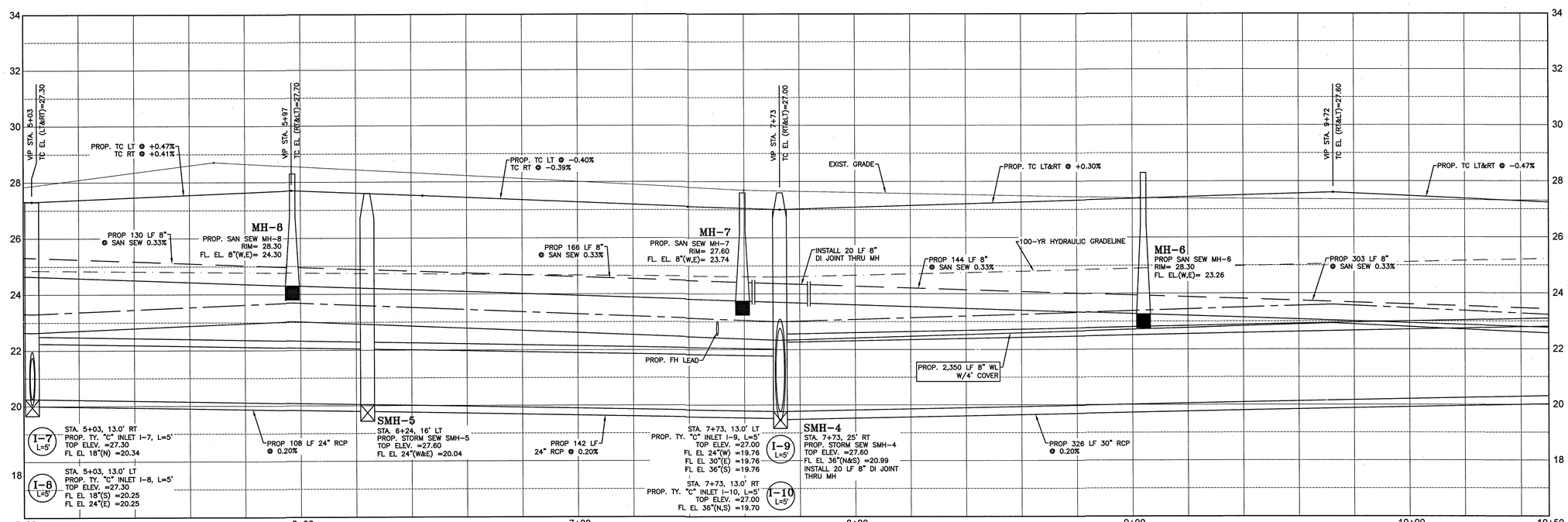
HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

PLAN & PROFILE
OAK RIDGE DR.
STA. 0+00 TO 5+00

PROJECT NO. 13446

SHEET NO. 8 OF 16 SHEET SET.DWG





SYMBOLS LEGEND

- WATER METER
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REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/25/20

OWNER:
CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

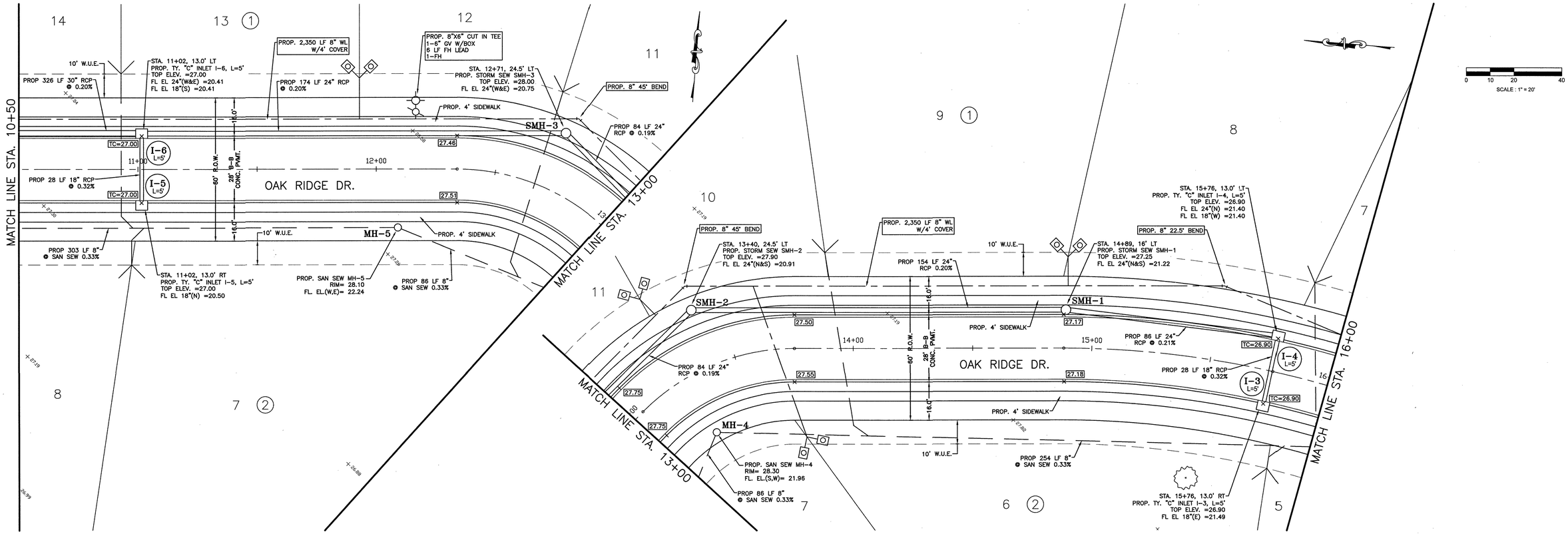
PLAN: 1" = 20'
PROFILE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 2'

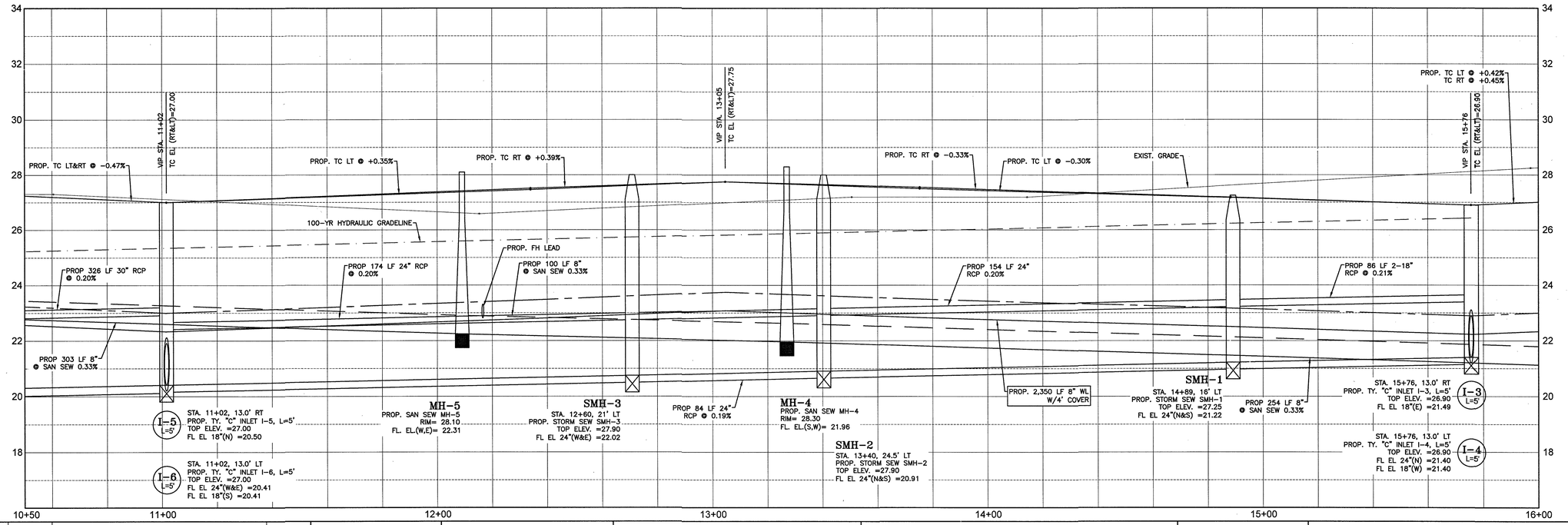
HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

PLAN & PROFILE
OAK RIDGE DR.
STA. 5+00 TO 10+50

PROJECT NO. 13446

13446 SHEET SET.DWG





SYMBOLS LEGEND

- WATER METER
- FIRE HYDRANT
- WATER VALVE
- TAPPING SLEEVE AND VALVE
- REDUCER
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- TOP BANK
- STORM SEWER LINE (REINFORCED CONCRETE PIPE, ASTM C76)
- SANITARY SEWER LINE (D3034, SDR 26, 160 PR)
- WATERLINE (AWWA C900, CLASS 150, DR18)

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

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DRAWN BT
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PLAN & PROFILE
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STA. 10+50 TO 16+00

PROJECT NO. 13446

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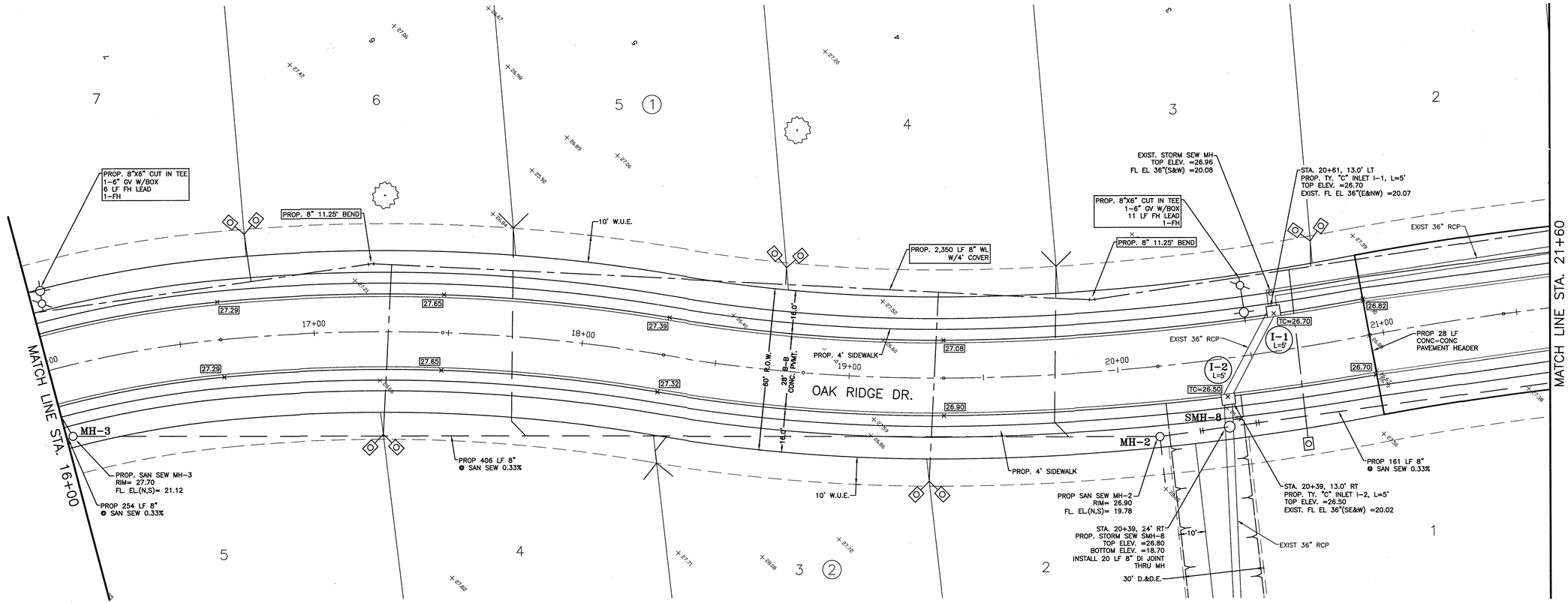

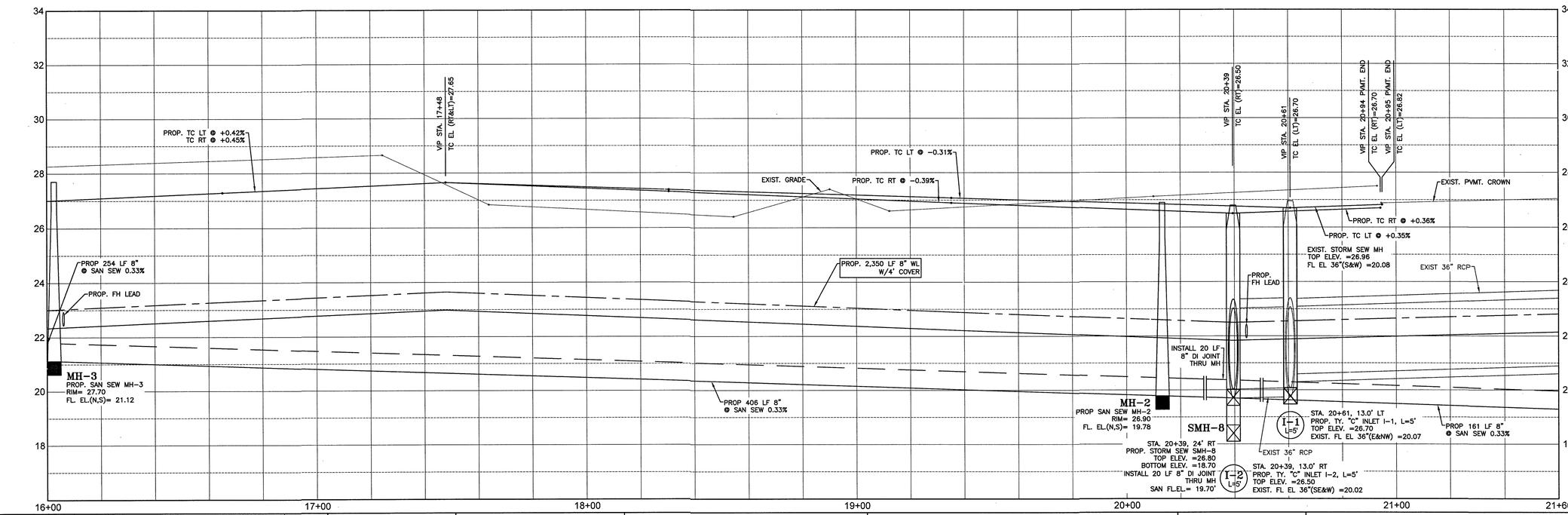

SCALE : 1" = 20'

0 10 20 40

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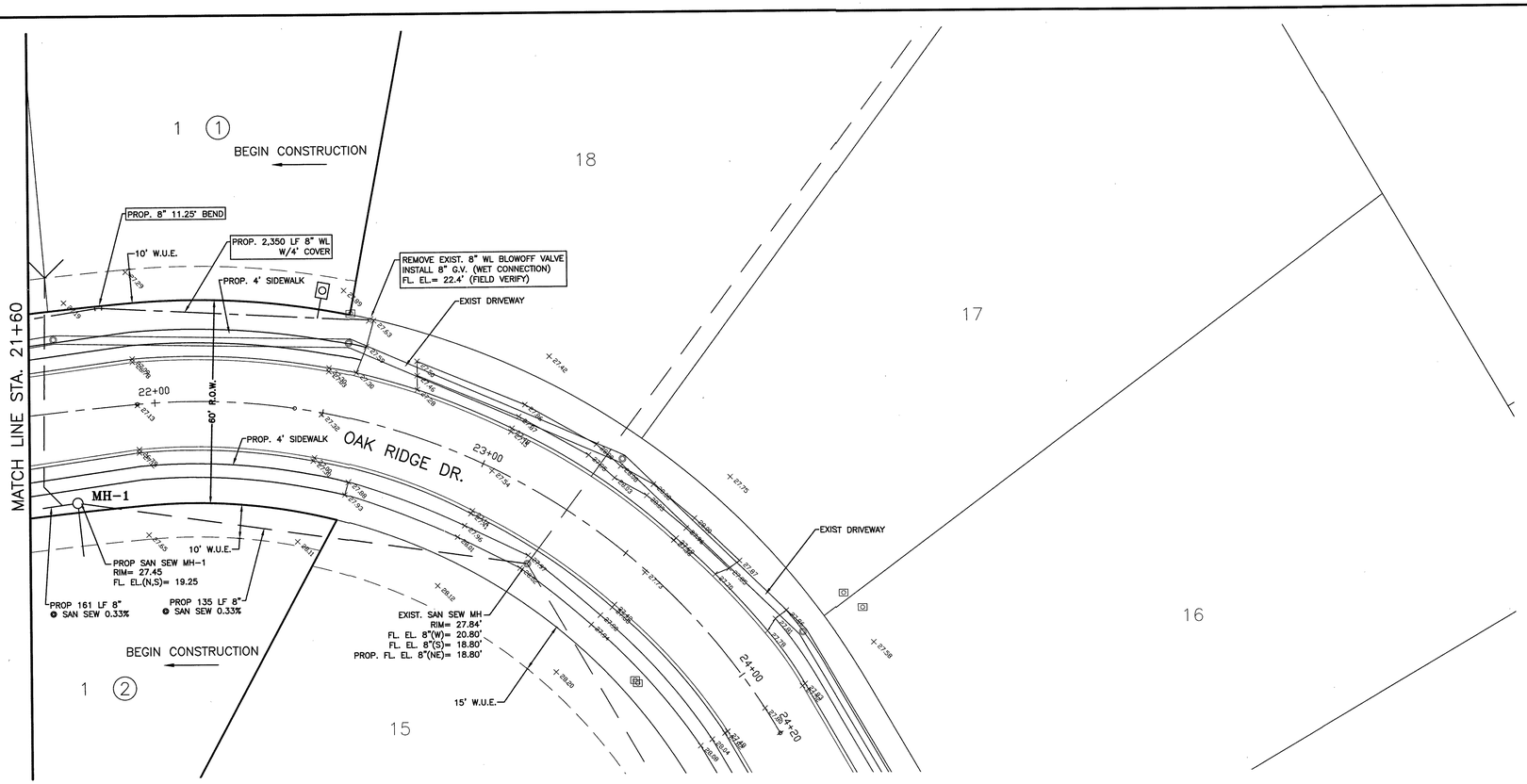
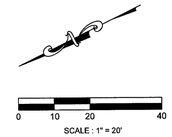
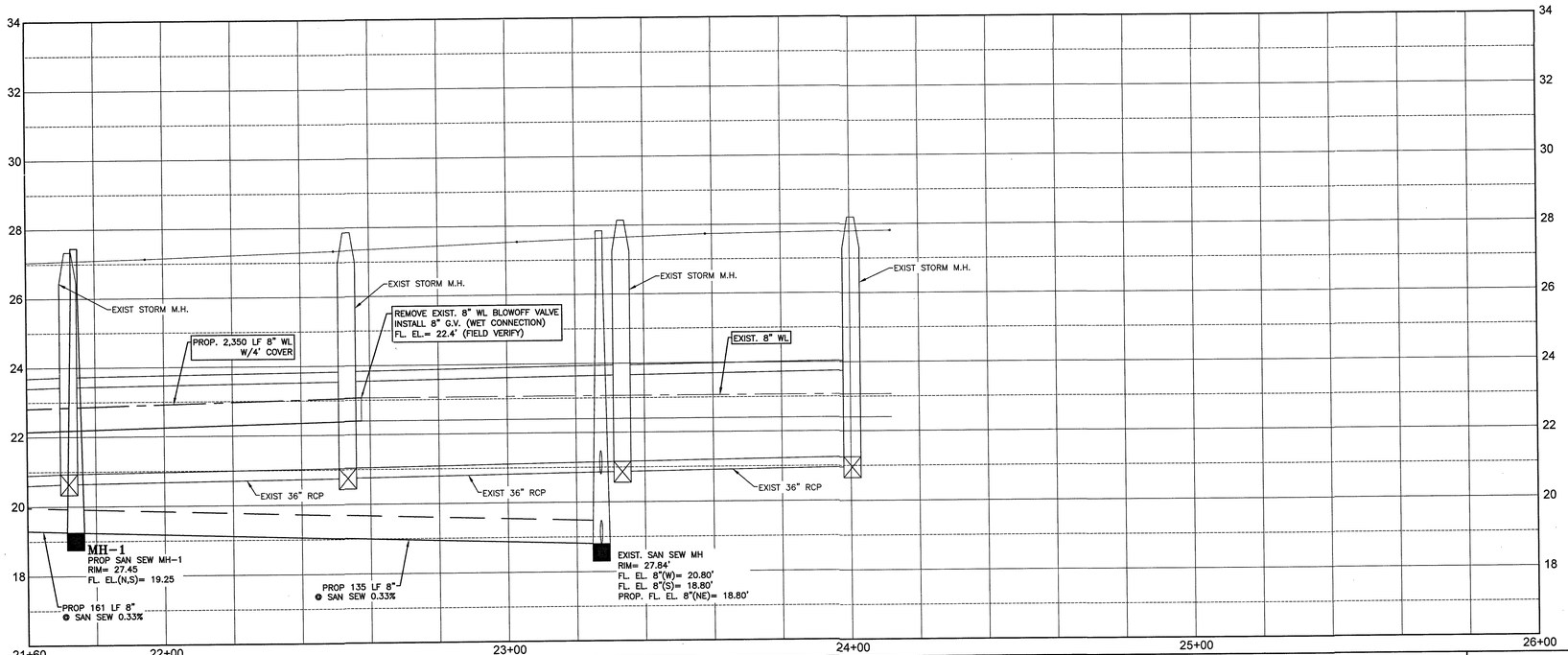
PLAN & PROFILE
OAK RIDGE DR.
STA. 16+00 TO 21+60

PROJECT NO. 13446

7
13446 SHEET SET.DWG







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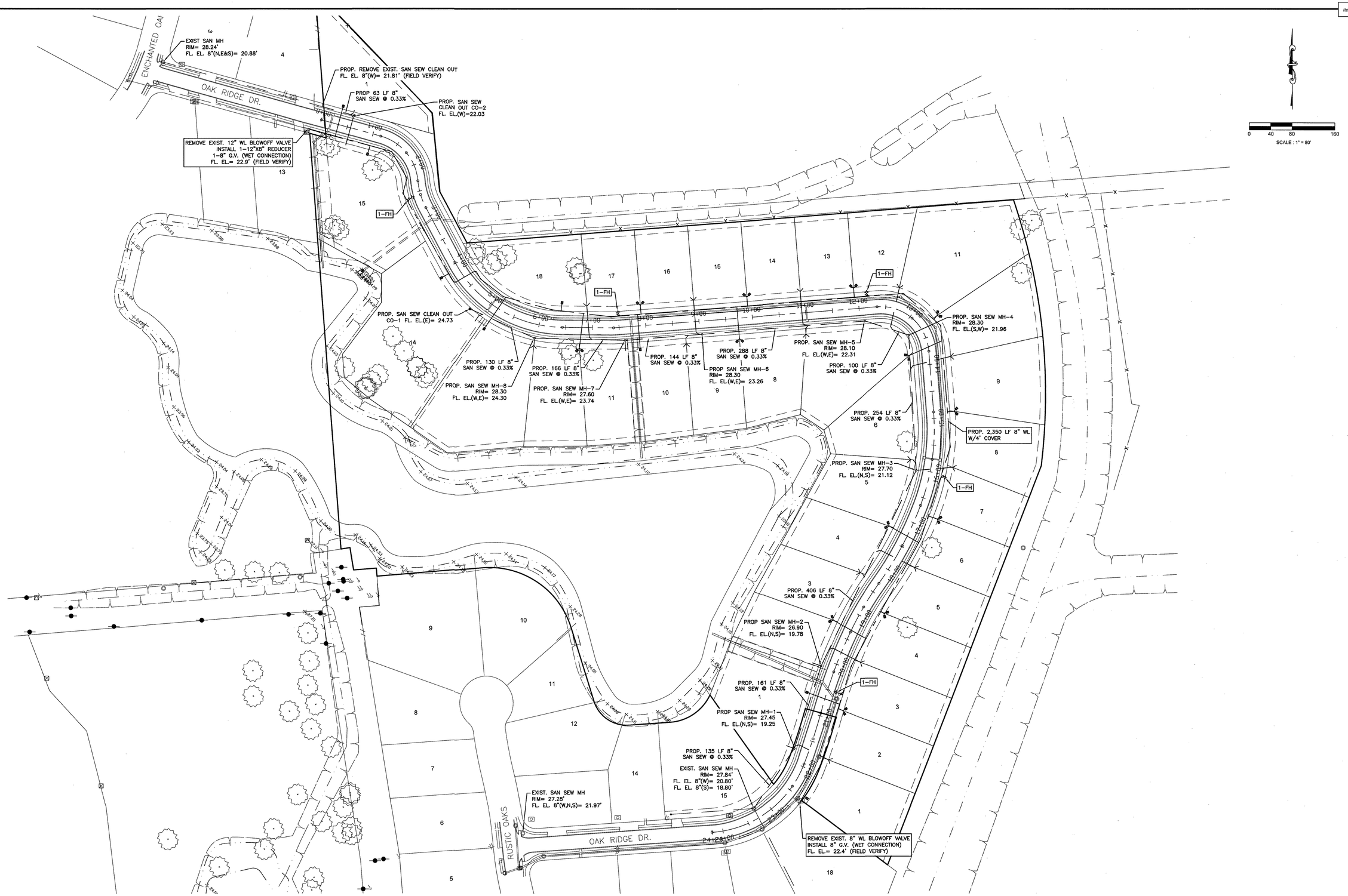
PLAN & PROFILE
OAK RIDGE DR.
STA. 21+60 TO 22+62

PROJECT NO. 13446

7A

13446 SHEET SET.DWG



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PROFILE:
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VERTICAL:

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ANGLETON, TEXAS 77515

UTILITY LAYOUT

PROJECT NO. 13446

SHEET SET.DWG

MODIFIED POND 1 SUMMARY

REQUIRED DETENTION SECTION 3= 10.98 AC-FT
REQUIRED DETENTION SECTION 6= 8.70 AC-FT
REQUIRED DETENTION SECTION 7= 9.04 AC-FT
REQUIRED TOTAL= 28.72 AC-FT

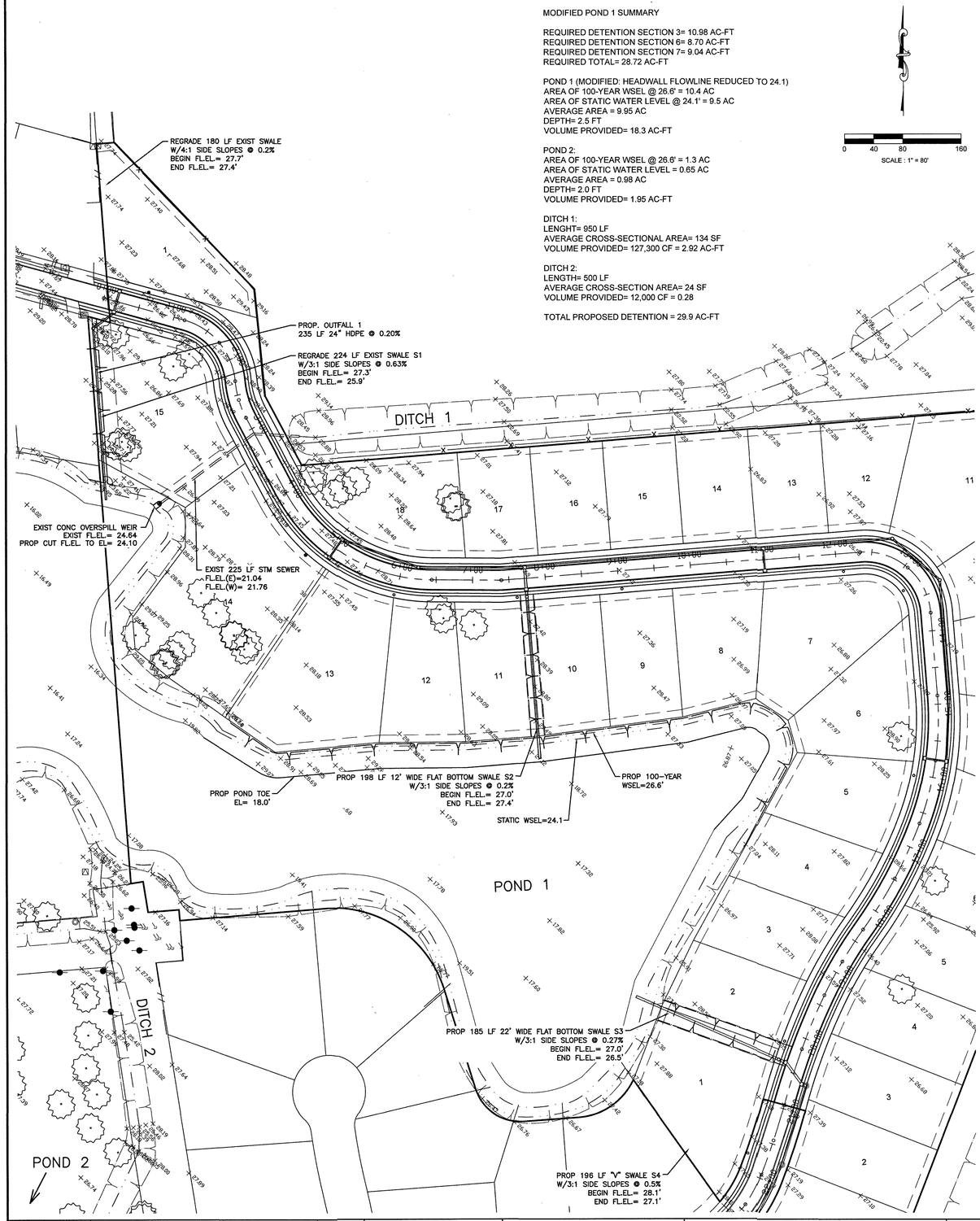
POND 1 (MODIFIED: HEADWALL FLOWLINE REDUCED TO 24.1)
AREA OF 100-YEAR WSEL @ 26.6' = 10.4 AC
AREA OF STATIC WATER LEVEL @ 24.1' = 9.5 AC
AVERAGE AREA = 9.95 AC
DEPTH= 2.5 FT
VOLUME PROVIDED= 18.3 AC-FT

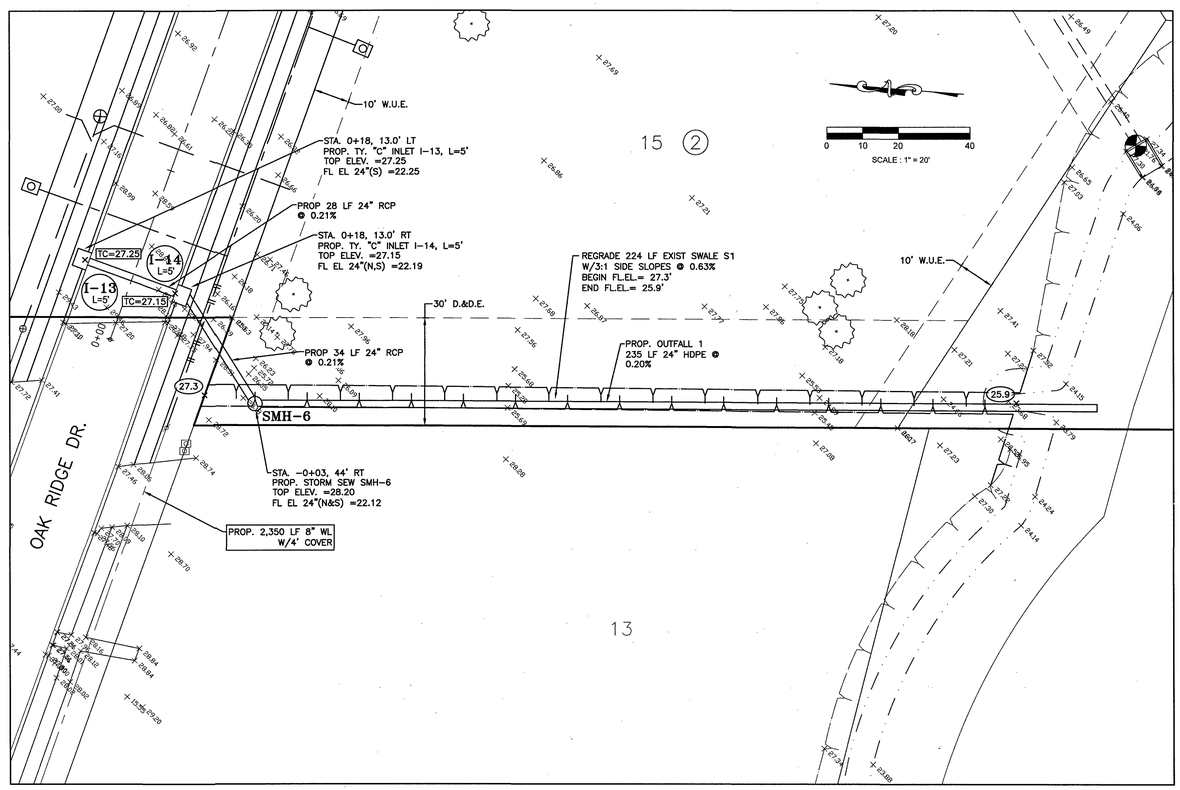
POND 2:
AREA OF 100-YEAR WSEL @ 26.6' = 1.3 AC
AREA OF STATIC WATER LEVEL = 0.65 AC
AVERAGE AREA = 0.98 AC
DEPTH= 2.0 FT
VOLUME PROVIDED= 1.95 AC-FT

DITCH 1:
LENGHT= 950 LF
AVERAGE CROSS-SECTIONAL AREA= 134 SF
VOLUME PROVIDED= 127,300 CF = 2.92 AC-FT

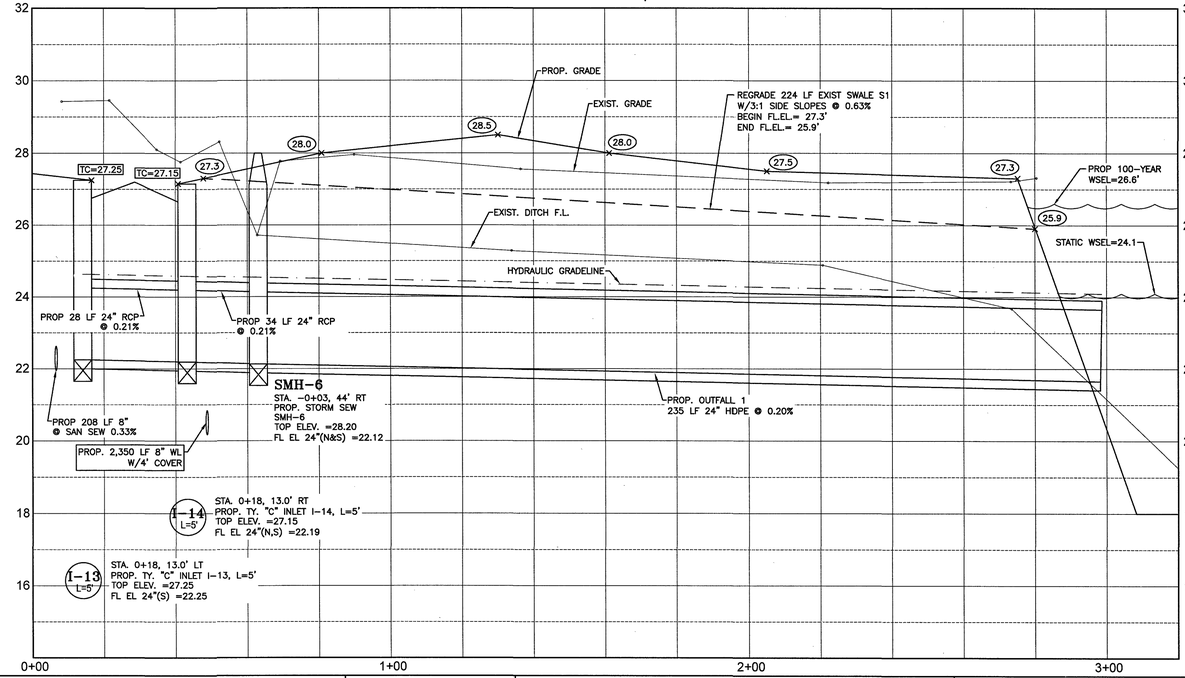
DITCH 2:
LENGTH= 500 LF
AVERAGE CROSS-SECTION AREA= 24 SF
VOLUME PROVIDED= 12,000 CF = 0.28

TOTAL PROPOSED DETENTION = 29.9 AC-FT





STORM SEWER OUTFALL 1 / SWALE S1



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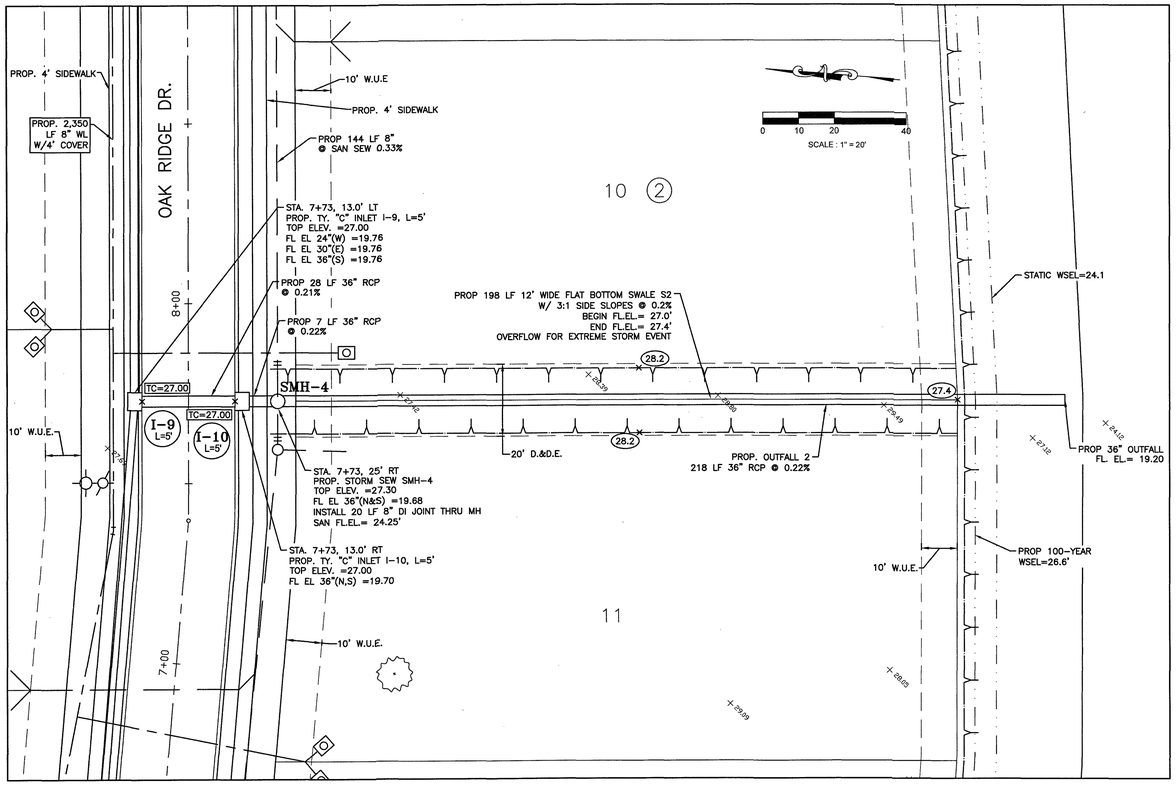
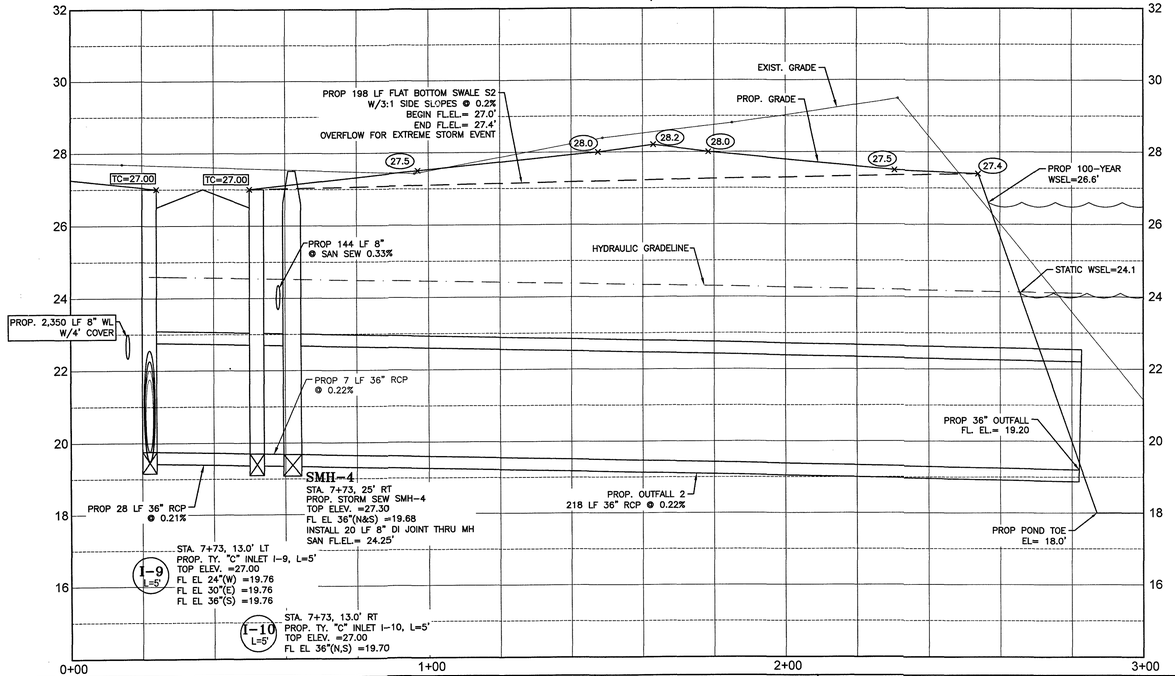
DETENTION POND DESIGN, OUTFALL 1 AND SWALE S1

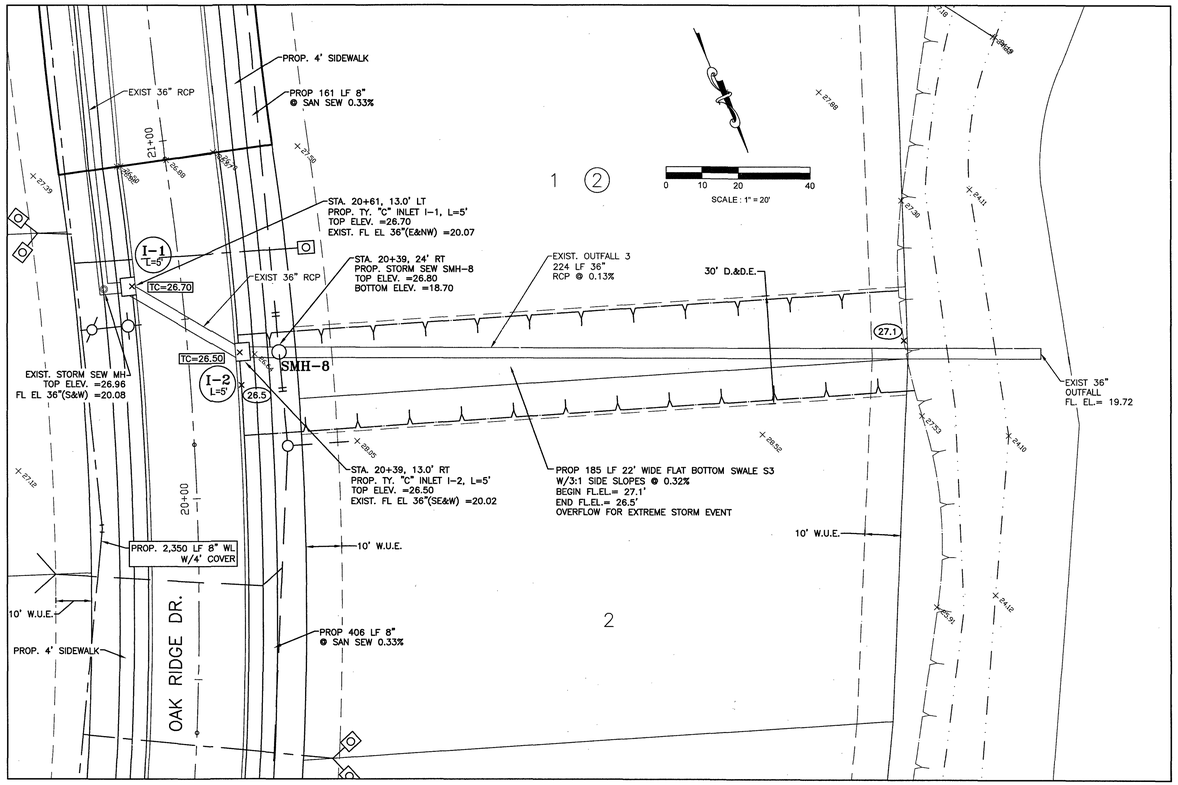
PROJECT NO. 13446

13446 SHEET SET.DWG

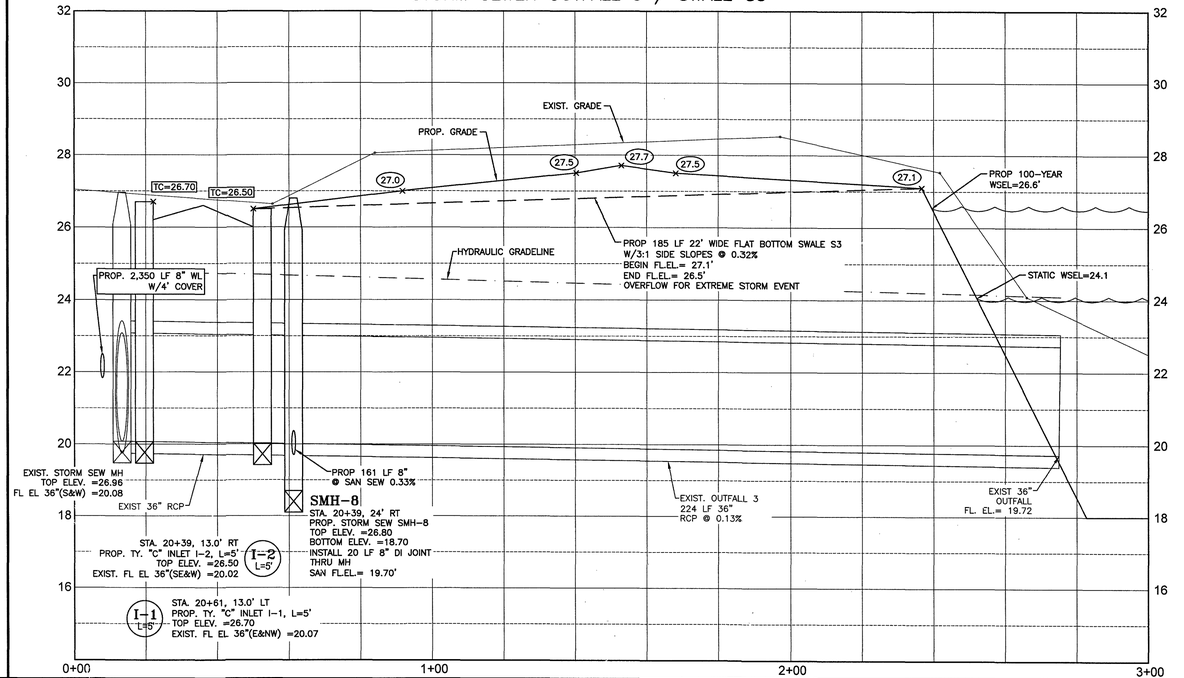


STORM SEWER OUTFALL 2 / SWALE S2





STORM SEWER OUTFALL 3 / SWALE S3



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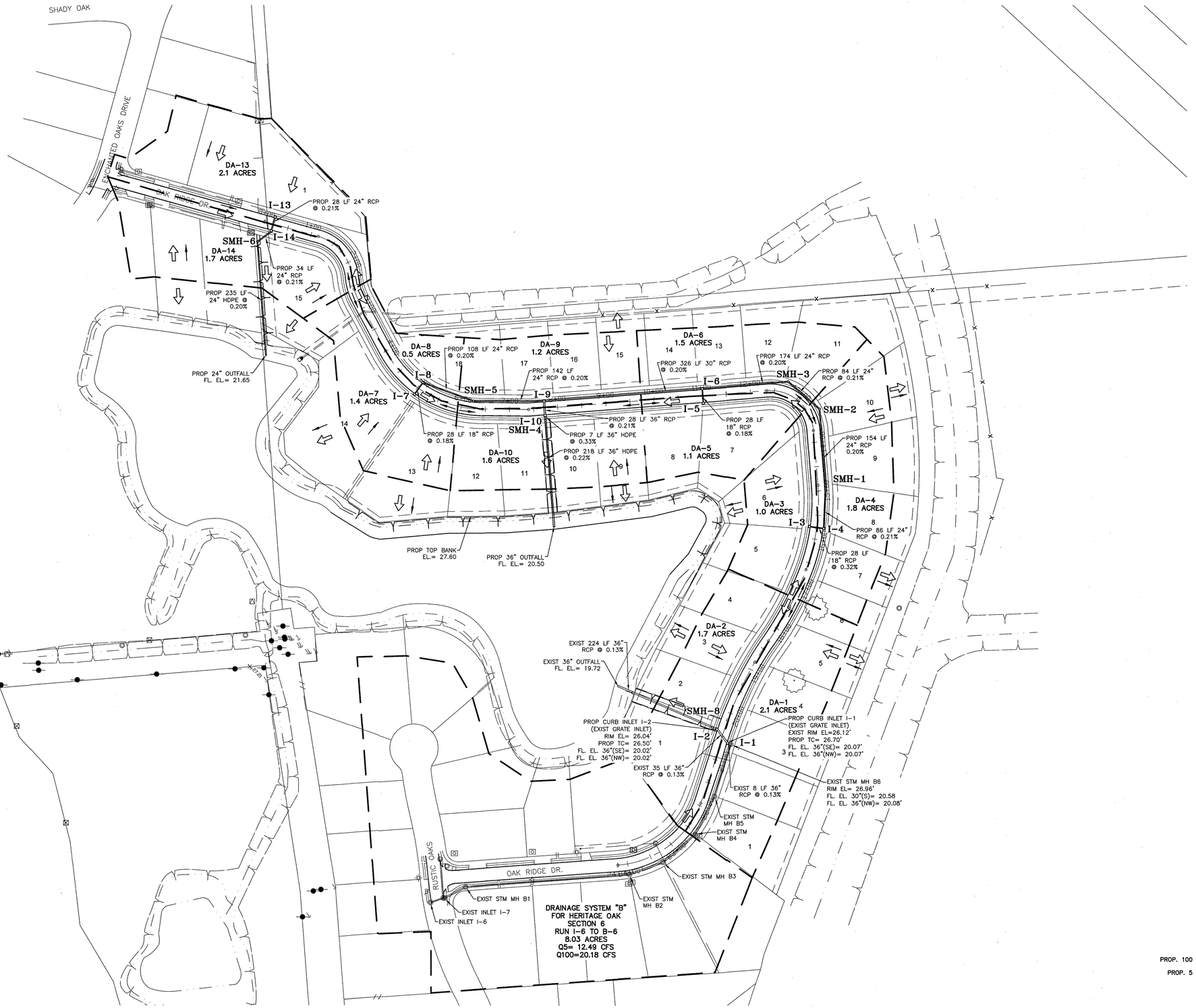
OUTFALLS 2,3 AND SWALES S2,S3

PROJECT NO. 13446

SHEET NO. 9 OF 30

SHEET SET.DWG



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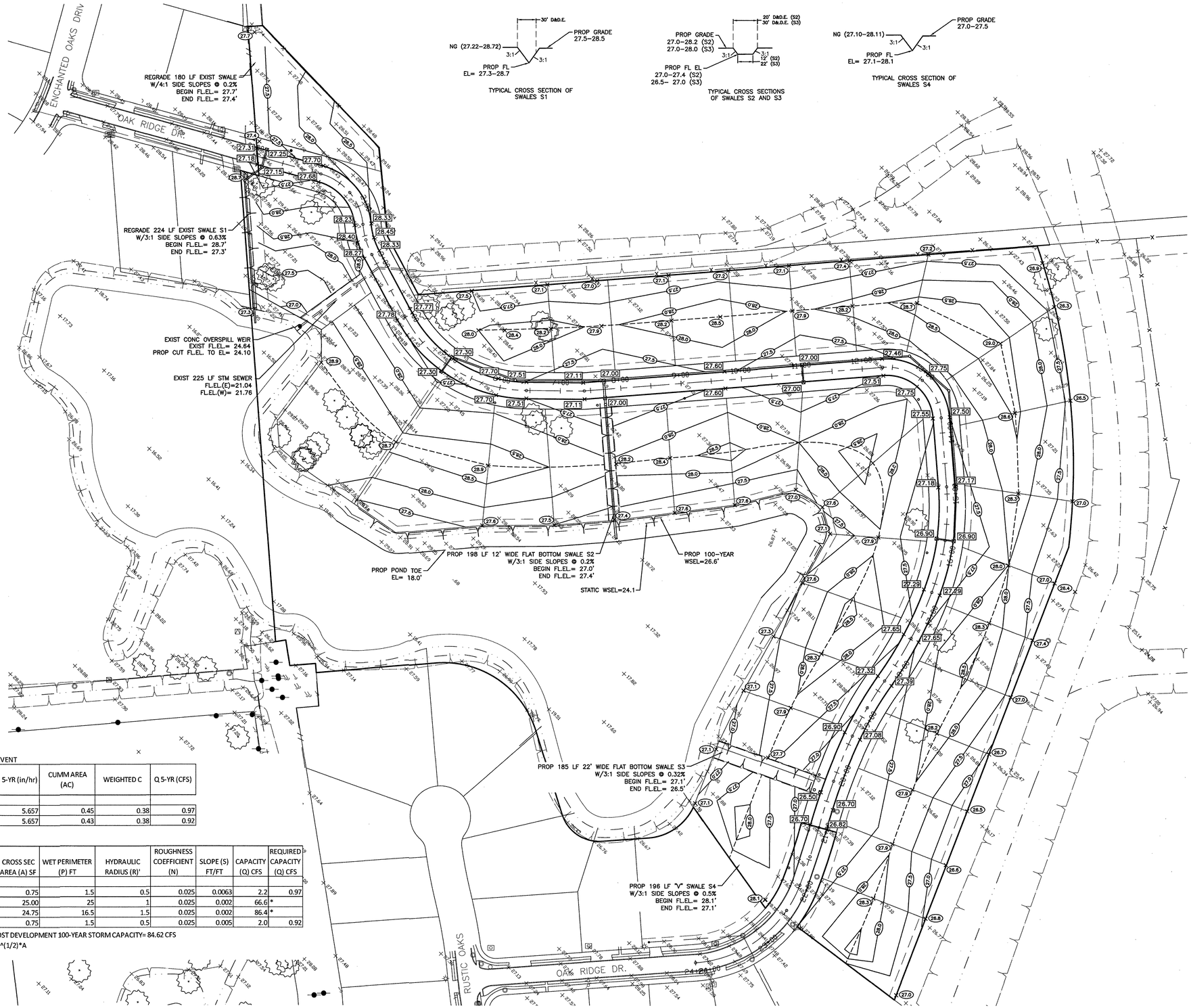
DRAINAGE AREA MAP

PROJECT NO. 13446

10

13446 SHEET SET.DWG



TYPICAL CROSS SECTION OF SWALES S1

TYPICAL CROSS SECTIONS OF SWALES S2 AND S3

TYPICAL CROSS SECTION OF SWALES S4

FINISHED FLOORS SHALL BE 2.0' HIGHER THAN PROP TOP CURB ELEVATIONS. LOT GRADING TO BE PROVIDED BY HOME BUILDER. SEE MISC DETAILS SHEET 18.

HYDRAULIC CAPACITY FOR SWALES

DRAINAGE HYDRAULIC CALCULATIONS FOR THE 5-YEAR STORM EVENT

D.A. NO.	RUN	AREA (AC)	C	Tc (MIN)	I 5-YR (in/hr)	CUMM AREA (AC)	WEIGHTED C	Q 5-YR (CFS)
DA-S1	S1 TO POND	0.45	0.38	15	5.657	0.45	0.38	0.97
DA-S4	S4 TO ORANGE	0.43	0.38	15	5.657	0.43	0.38	0.92

DITCH CAPACITY

ID	NG ELEV FT	PROP FL FT	DITCH DEPTH (D) FT	DITCH BOTTOM (B) FT	CROSS SEC AREA (A) SF	WET PERIMETER (P) FT	HYDRAULIC RADIUS (R)'	ROUGHNESS COEFFICIENT (N)	SLOPE (S) FT/FT	CAPACITY (Q) CFS	REQUIRED CAPACITY (Q) CFS
S1	28.5	28	0.5	0	0.75	1.5	0.5	0.025	0.0063	2.2	0.97
S2	28.2	27.2	1	22	25.00	25	1	0.025	0.002	66.6	*
S3	28	26.5	1.5	12	24.75	16.5	1.5	0.025	0.002	86.4	*
S4	28	27.5	0.5	0	0.75	1.5	0.5	0.025	0.005	2.0	0.92

*COMBINATION OF FLOW FROM SWALES S2 AND S3 EXCEEDS POST DEVELOPMENT 100-YEAR STORM CAPACITY= 84.62 CFS

AREA= 3xD^2+ (B x D) Q=1.49/N*R^(2/3)*S^(1/2)*A

P = 3*D + B (APPROXIMATE)

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SITE GRADING

PROJECT NO. 13446

11

32

SHEET SET.DWG

EARTHWORK QUANTITY:
CUT VOLUME: 17,726 CuYd
FILL VOLUME: 11,416 CuYd
NET CUT : 6,310 CuYd

CURRENT CUT/FILL PLAN IS FOR 1% MINIMUM SLOPE ON LOTS. THE CONTRACTOR MAY INCREASE SLOPE TO MINIMIZE HAULING OF FILL

NO FILL SHALL BE PLACED WITHIN 25' OF EXISTING OAKS TREES.

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CUT AND FILL PLAN

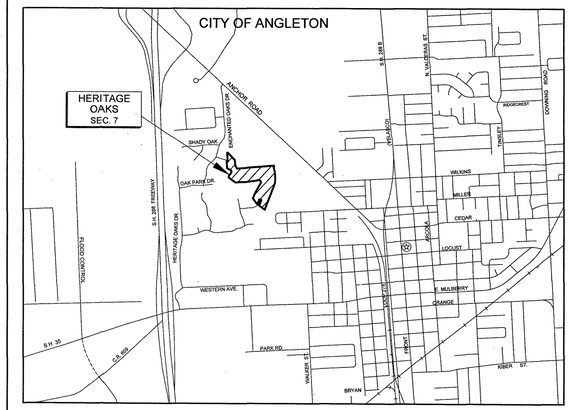
PROJECT NO. 13446

13446 SHEET SET.DWG

0 30 60 120

SCALE : 1" = 60'

GENERAL LOCATION MAP



VICINITY MAP
N.T.S.

PROJECT/SITE INFORMATION

PROJECT NAME: HERITAGE OAKS SECTION 7

PROJECT ADDRESS/LOCATION: OAK RIDGE DRIVE NEAR RUSTIC OAKS

CITY: ANGLETON STATE: TX. ZIP CODE: 77515

LATITUDE: 29°10'27" LONGITUDE: 95°26'39" COUNTY: BRAZORIA

NAME OF RECEIVING WATERS: OYSTER CREEK; GULF OF MEXICO

10/01/2020	03/01/2021
MONTH/DAY/YEAR	MONTH/DAY/YEAR
ESTIMATED CONSTRUCTION START DATE	ESTIMATED COMPLETION DATE

ESTIMATE OF AREA TO BE DISTURBED: 19.7 ACRES

ESTIMATE OF LIKELYHOOD OF DISCHARGE:

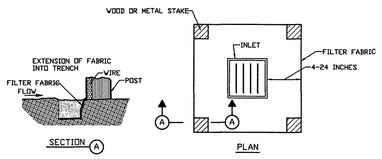
☐ UNLIKELY ☐ ONCE PER WEEK ☐ CONTINUAL
☒ ONCE PER MONTH ☐ ONCE PER DAY

ARE THERE ANY LISTED ENDANGERED OR THREATENED SPECIES, OR DESIGNATED CRITICAL HABITAT IN THE PROJECT AREA?

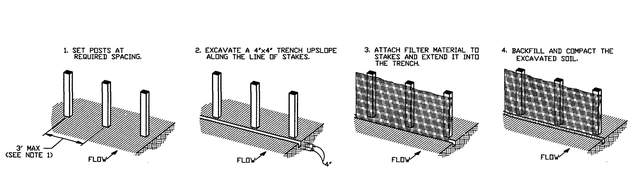
☐ YES ☒ NO

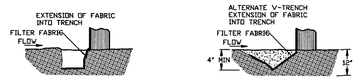
ELIGIBILITY WITH REGARD TO PROTECTION OF ENDANGERED SPECIES HAS BEEN SATISFIED THROUGH THE INDICATED SECTION OF PART 1.B.3.e.(2) OF THE PERMIT.

(a) ☒ (b) ☐ (c) ☐ (d) ☐



SILT FENCE PROTECTION BARRIER





CONSTRUCTION NOTES:

1. 1 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC FENCE SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.

FILTER FABRIC FENCE

LEGEND

- SILT FENCE AROUND STRUCTURE UNDER CONSTRUCTION
- SILT FENCE ACROSS EXISTING DITCH REINFORCED FILTER BARRIER
- HYDROMULCH SEED

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

B&L BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS · MIGUELANGEL A. SAUCEDA · 121992 · REGISTERED · PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/25/20

OWNER:
CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

PLAN: 1" = 60'
PROFILE:
HORIZONTAL:
VERTICAL:

HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

SWPPP LAYOUT

PROJECT NO. 13446

1 OF 1 SHEETS

S SHEET SET.DWG

1. SITE DESCRIPTION

A. NATURE OF THE CONSTRUCTION ACTIVITY:
HERITAGE OAKS SECTION 7 SUBDIVISION ANGLETON, BRAZORIA COUNTY, TEXAS. BEING 19.693 ACRE DEVELOPED AREA WHICH WILL BE A RESIDENTIAL SUBDIVISION OF 34 LOTS (100' WIDE USUALLY). CONSTRUCTION WILL INCLUDE UNDERGROUND UTILITIES, STORM SEWERS, CONCRETE ROADWAYS WITH CURBS AND DETENTION POND EXCAVATION WITH MATERIAL SPREAD FOR LOT GRADING.

B. INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:
STREET RIGHT OF WAY AND LOT AREAS WILL BE STRIPPED OF ALL VEGETATIVE MATTER. THIS MATERIAL WILL BE STOCKPILED ADJACENT TO THE WORK TO BE SPREAD ON DEVELOPED LOTS AFTER FINAL GRADING. UTILITY AND STORM SEWER CONSTRUCTION WILL REQUIRE TRENCHING. EXCAVATION FOR ROADWAY SUBGRADE AND DETENTION POND WILL INVOLVE SPREADING EXCAVATED MATERIAL ON ADJACENT LOTS. RAINFALL RUNOFF WILL BE DIRECTED TO THE STREET GUTTERS AND TO THE CONSTRUCTED STORM SEWER SYSTEM. TRUCKS WILL BE USED TO DELIVER MATERIAL TO THE PROJECT INCLUDING LIME, CONCRETE, UTILITY AND STORM SEWER MATERIALS AND OTHER CONSTRUCTION MATERIALS. TRUCKS WILL ALSO BE USED TO HAUL CONSTRUCTION DEBRIS AWAY FROM THE SITE. THESE TRUCKS WILL BE ROUTED ALONG ENCHANTED OAKS DRIVE, AND LIVE OAK STREET FOR INGRESS AND EGRESS. RUTTING DURING WET WEATHER WILL PROVIDE POTENTIAL FOR TRACKING MUD ALONG THE ROUTE.

C. TOTAL PROJECT AREA: 19.693 ACRES

D. TOTAL AREA TO BE DISTURBED: 19.693 ACRES

WEIGHTED RUNOFF COEFFICIENT
(BEFORE CONSTRUCTION): 0.30 (AFTER CONSTRUCTION): 0.38

E. REFER TO GENERAL LOCATION MAP AND SITE MAP FOR DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER MAJOR GRADING ACTIVITIES; AREAS OF SOIL DISTURBANCE; AREAS WHICH WILL NOT BE DISTURBED; LOCTIONS OF MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS; LOCATIONS WHERE STABILIZATION PRACTICES ARE EXPECTED TO OCCUR; LOCATION OF OFF-SITE MATERIAL, WASTE, BORROW OR EQUIPMENT STORAGE AREAS; SURFACE WATERS (INCLUDING WETLANDS); AND LOCATIONS WHERE STORM WATER DISCHARGES TO A SURFACE WATER.

F. LOCATION AND DESCRIPTION OF ANY DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION:

G. NAME OF RECEIVING WATERS:
RUNOFF WILL BE COLLECTED IN THE STORM SEWER SYSTEM AND ROUTED TO THE DETENTION POND. THE POND OUTFALLS INTO DITCH 10. DITCH 10 OUTFALLS TO OYSTER CREEK AND THEN TO THE GULF OF MEXICO.

AREAL EXTENT AND DESCRIPTION OF WETLAND OR SPECIAL AQUATIC SITE AT OR NEAR THE SITE WHICH WILL BE DISTURBED OR WHICH WILL RECEIVE DISCHARGES FROM DISTURBED AREAS OFTHE PROJECT.

NONE

H. REFER TO FEDERAL REGISTER, VOLUME 63, NO.128, MONDAY JULY 6, 1998, PAGES 36497 TO 36515 FOR REQUIREMENTS OF NPDES GENERAL PERMITS FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES IN REGION 6.

I. LISTED ENDANGERED OR THREATENED SPECIES OR CRITICAL HABITAT FOUND IN PROXIMITY TO THE CONSTRUCTION ACTIVITY:

NONE

J. PROPERTY LISTED OR ELIGIBLE FOR LISTING ON THE NATIONAL REGISTER OF HISTORIC PLACES:

NONE

2. CONTROLS

NARRATIVE - SEQUENCE OF CONSTRUCTION ACTIVITIES AND APPROPRIATE CONTROL MEASURES DURING CONSTRUCTION

THE ORDER OF CONSTRUCTION WILL BEGIN WITH STRIPPING OF ALL VEGETATION FROM THE WORK AREA.

1. INSTALL SILT FENCE AROUND THE PERIMETER OF THE AREA TO BE DISTURBED. THE ORDER OF ACTIVITIES WILL BEGIN WITH THE COMPLETE STRIPPING OF ALL AREAS TO RECEIVE FILL MATERIAL. REMOVED VEGETATION TO BE STOCKPILED ADJACENT TO THE WORK TO BE SPREAD AFTER LOT GRADING IS COMPLETE.
2. REGRADE THE EXISTING POND AND SPREAD MATERIALS ON SITE. INSTALL WATER LINES, SANITARY SEWER LINES AND MANHOLES AND STORM SEWER PIPES, INLETS AND MANHOLES. INSTALL INLET PROTECTION BARRIERS AROUND ALL INLETS. FULLY EXCAVATE THE DETENTION POND TO PROVIDE OUTFALL PATH FOR THE STORM SEWER SYSTEM. INSTALL THE RESTRICTIVE OUTLET.
3. ROADWAY EXCAVATION, LIME STABILIZATION AND CONCRETE PAVING WILL FOLLOW UNDERGROUND UTILITY AND STORM SEWER CONSTRUCTION. DURING ROADWAY WORK, THE REMAINDER OF THE DETENTION POND WILL BE EXCAVATED AND MATERIAL SPREAD ON LOTS. INSTALL SILT FENCE IN THE BOTTOM OF THE POND UPSTREAM OF THE RESTRICTIVE OUTFALL CULVERT.
4. AS SOON AS CONCRETE CURBS ARE INSTALLED, SOD 18" BEHIND ALL CURBS.
5. ALL SEEDED AND FERTILIZED AREA TO BE IRRIGATED TO ENSURE GROWTH.

A. EROSION AND SEDIMENT CONTROLS: EROSION AND SEDIMENT CONTROLS SHALL RETAIN SEDIMENT ON SITE TO THE EXTENT PRACTICABLE. CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS (WHERE APPLICABLE) AND GOOD ENGINEERING PRACTICES. OFFSITE SEDIMENT ACCUMULATIONS MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS WHEN CAPACITY HAS BEEN REDUCED BY 50%. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WALL SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.

SOIL STABILIZATION PRACTICES:	OWNER/ DEVELOPER	GENERAL CNTRTR.	BUILDER	OTHER
TEMPORARY SEEDING				
PERMANENT PLANTING, SODDING, OR SEEDING		X		
MULCHING- WHERE INDICATED		X		
SOIL RETENTION BLANKET				
VEGETATIVE BUFFER STRIPS				
PRESERVATION OF NATURAL RESOURCES				
OTHER:				

THE FOLLOWING RECORDS SHALL BE MAINTAINED AND ATTACHED TO THIS SWPPP:
DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED.

STRUCTURAL PRACTICES:	OWNER/ DEVELOPER	GENERAL CNTRTR.	BUILDER	OTHER
SILT FENCES		X		
HAY BALES				
ROCK BERMS				
DIVERSION, INTERCEPTOR, OR PERIMETER DIKES				
DIVERSION, INTERCEPTOR, OR PERIMETER SWALES				
DIVERSION DIKE AND SWALE COMBINATIONS				
PIPE SLOPE DRAINS				
ROCK BEDDING AT CONSTRUCTION EXIT		X		
TIMBER MATTING AT CONSTRUCTION EXIT				
SEDIMENT TRAPS				
SEDIMENT BASINS				
STORM INLET PROTECTION				
STONE OUTLET STRUCTURES				
OTHER:				

B. STORM WATER MANAGEMENT MEASURES INSTALLED DURING CONSTRUCTION TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION:
CURBS & GUTTERS STORM SEWERS

C. OTHER CONTROLS

NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO WATERS OF THE UNITED STATES, EXCEPT AS AUTHORIZED BY A PERMIT ISSUED UNDER SECTION 404 OF THE CLEAN WATER ACT.

WASTE MATERIALS: ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL CONTAINER. THE CONTAINER SHALL MEET ALL STATE AND CITY SOLID WASTE MANAGEMENT REGULATIONS. THE CONTAINER SHALL BE EMPTIED AS NECESSARY AND THE TRASH HAULED TO AN APPROPRIATE DUMP SITE. NO CONSTRUCTION MATERIALS WILL BE BURIED ON SITE.

HAZARDOUS WASTE (INCLUDING SPILL REPORTING): AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES ARE CONSIDERED TO BE HAZARDOUS: PAINT, CLEANING SOLVENTS, ASPHALT PRODUCTS, PETROLEUM PRODUCTS, CHEMICAL ADDITIVES FOR SOIL STABILIZATION, AND CONCRETE CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE SPILL COORDINATOR SHOULD BE CONTACTED IMMEDIATELY.

SANITARY WASTE: PORTABLE SANITARY FACILITIES WILL BE PROVIDED BY THE CONTRACTOR. ALL SANITARY WASTES WILL BE COLLECTED FROM PORTABLE UNITS AND SERVICED BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

OFFSITE VEHICLE TRACKING SHALL BE MINIMIZED BY:
___ HAUL ROADS DAMPENED FOR DUST CONTROL LOADED
_X_ HAUL TRUCKS TO BE COVERED WITH TARPAULIN
_X_ EXCESS DIRT ON ROAD REMOVED DAILY STABILIZED
___ CONSTRUCTION ENTRANCE

OTHER: TRUCKS HAULING VEGETATION AND DEBRIS WILL BE MONITORED AND SHALL BE COVERED WITH TARPAULINS IF REQUIRED TO PREVENT DUST OR OTHER PARTICLES FROM BLOWING OR FALLING FROM TRUCK.

REMARKS: ALL OPERATIONS WILL BE CONDUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNTS OF SEDIMENT THAT MAY ENTER THE RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY, OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS.

3. MAINTENANCE

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. IF A REPAIR IS NECESSARY IT SHALL BE DONE AT THE EARLIEST TIME POSSIBLE, BUT NO LATER THAN SEVEN CALENDAR DAYS AFTER THE GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT. THE AREAS ADJACENT TO DRAINAGE WAYS SHALL HAVE PRIORITY, FOLLOWED BY DEVICES PROTECTING STORM SEWER INLETS. MAINTENANCE SHALL BE PERFORMED BEFORE THE NEXT ANTICIPATED STORM EVENT OR AS SOON AS PRACTICABLE.

4. INSPECTION

AN INSPECTION WILL BE PERFORMED BY THE PERMITEE EVERY FOURTEEN DAYS AS WELL AS AFTER EVERY ONE-HALF INCH OR GREATER RAINFALL EVENT. AN INSPECTION AND RAINFALL REPORT WILL BE MADE AFTER EACH INSPECTION. ANY DEFICIENCIES WILL BE NOTED AND APPROPRIATE CHANGES SHALL BE MADE TO THE SYSTEM TO COMPLY WITH REQUIREMENTS.

5. NON-STORMWATER DISCHARGES

___ FIRE HYDRANT FLUSHING
_X_ BUILDING WASHDOWN WITHOUT DETERGENTS
_X_ PAVEMENT WASHDOWN WITHOUT DETERGENTS
_X_ CONDENSATE
___ UNCONTAMINATED GROUNDWATER
___ UNCONTAMINATED FOUNDATION DRAINS

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/25/20

OWNER:
CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

SWPPP NARRATIVE

PROJECT NO. 13446

SWPPP SHEET SET.DWG
35

(1)

Drainage Analysis

Job # 13499 - Heritage Oaks Sec 7 Subdivision

Rainfall intensity calculations for Brazoria County

I = intensity (in/hr)
b = coefficient
t = time of concentration
d = coefficient
e = coefficient

subscript

i=1 = 2year storm
i=2 = 5 year storm
i=3 = 10 year strom
i=4 = 25 year storm
i=5 = 50 year storm
i=6 = 100 year storm

$i := 1..6$

$b_i :=$ | $e_i :=$ | $d_i :=$

b_i	e_i	d_i
71.0	0.774	8.4
70.1	0.752	7.7
96.6	0.770	17.2
89.2	0.736	10.4
86.5	0.709	10.0
120.2	0.741	21.3

$T_{\phi} := 37.8$ ENTER PREDEVELOPMENT TIME OF CONCENTRATION

$I_i := \frac{b_i}{(d_i + T_0)^{e_i}}$ $I_6 = 5.85$ Predevelopment Intensity of interest

$C_f := 0.077$ ENTER PREDEVELOPMENT C VALUE

$A := 19.7$ ENTER AREA

(2)

$C_f := 1.00$

$Q := C \cdot C_f \cdot I_6 \cdot A$ Must Insert correct subscript for I to obtain the relevant Q

$Q = 8.874$

$V := (C) \cdot A \cdot 43560 \cdot 1.08$ For these calculations, total volume storage is assumed to equal (C)*A with A converted to square feet multiplied by 13" (1.08')

$V = 7.136 \times 10^4$

DEVELOPMENT OF RUNOFF HYDROGRAPH MALCOM'S METHOD AS DESCRIBED IN THE BRAZORIA COUNTY DRAINAGE CRITERIA MANUAL

$T := \frac{V}{1.39 \cdot Q}$ $T = 5.785 \times 10^3$ T = Time to peak, presented as a function of volume and peak flow and therefore indirectly related to time of concentration

$t := 0, 1000 .. 84000$

$f(t) := \left(\frac{Q}{2}\right) \cdot \left(1 - \cos\left(\frac{t \cdot \pi}{T}\right)\right)$ f(t) describes rising limb of hydrograph

$g(t) := 4.34 \cdot Q \cdot \exp\left[-1.30 \cdot \left(\frac{t}{T}\right)\right]$ g(t) describes descending limb of hydrograph

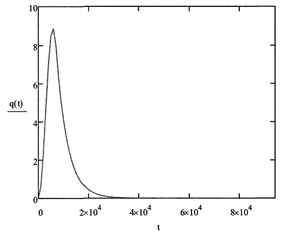
$q(t) := \text{if}(t \le 1.25 \cdot T, f(t), g(t))$

$\text{Volume}_{pre} := \int_0^{86400} q(t)\, dt$

$\text{Volume}_{pre} = 7.162 \times 10^4$

(3)

Predevelopment hydrograph



$T_{\phi} := 26.25$ ENTER POST DEVLOPMENT TIME OF CONCENTRATION

$I_i := \frac{b_i}{(d_i + T_0)^{e_i}}$ $I_6 = 6.873$ Post development I of interest

$C := 0.50$ ENTER POST DEVELOPMENT C FACTOR REVISE CI AND AREA IF NECESSARY

$C_f := 1.25$

$Q := C \cdot I_6 \cdot A \cdot C_f$

$Q = 84.622$

$V := (C) \cdot A \cdot 4356 0 \cdot 1.08$

$V = 4.634 \times 10^5$

$T := \frac{V}{1.39 \cdot Q}$ $T = 3.94 \times 10^3$

(4)

$t := 0, 1000 .. 25000$

$f(t) := \left(\frac{Q}{2}\right) \cdot \left(1 - \cos\left(\frac{t \cdot \pi}{T}\right)\right)$

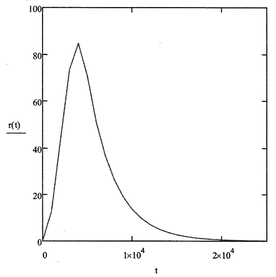
$g(t) := 4.34 \cdot Q \cdot \exp\left[-1.30 \cdot \left(\frac{t}{T}\right)\right]$

$r(t) := \text{if}(t \le 1.25 \cdot T, f(t), g(t))$

$\text{Volume}_{post} := \int_0^{86400} r(t)\, dt$

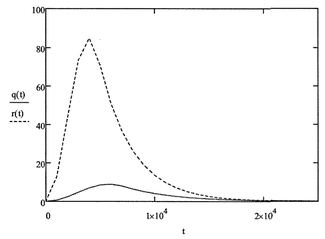
$\text{Volume}_{post} = 4.65 \times 10^5$

Post development hydrograph



(5)

Combined pre and post development hydrographs



$f(t) := ((r(t) - q(t))) \cdot 1$

$v(t) := \text{if}(f(t) > 0, f(t), 0)$

THE REQUIRED STORAGE COMPUTED AS THAT PART OF THE POST DEVELOPMENT HYDROGRAPH THAT FALLS ABOVE THE PREDEVELOPMENT HYDROGRAPH

ACRE -FEET

$$\frac{\int_0^{86400} v(t)\, dt}{43560} = 9.042$$

(6)

Hydrological and Hydraulic Impacts
Heritage Oaks Sec 7 Subdivision

Job # 13651

Brazoria County, Texas

A = 19.84 Acre Development

Pre Development:

C = 0.077
TC = 37.80 Minutes, I = 5.85
Q = 100 Year Storm = 8.87 cfs
Q-Allowable is 0.45 cfs / ac. = 8.87 cfs

Post Development

C = 0.50
T/C = 26.25 Minutes, I= 6.873
Q = 100 Year Storm = 84.62 cfs

Required Detention:

9.04 acre - feet (393,782 c.f.)

Miguel Sauceda, P.E. May 26, 2020

EXISITNG CONDITIONS

Bra. Co. Master Drg. Study allows only 0.45 cfs/acre in this area (Oyster Creek drainage area OC 25)

TC = 15 Minutes + 685 LF overland at 0.50 fps= 37.8 Minutes

PROPOSED CONDITIONS

TC = 15 Minutes + 190 LF overland @ 0.5 FPS + 250 LF gutter @ 2.0 FPS + 510 LF sewer @ 3.0 FPS
= 26.25

C = 0.50 per Brazoria Drainage Criteria Manual for lots between 1/4-1/2 acre

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

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ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
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STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992
Date: 9/25/20

OWNER:
CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

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HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

HYDROLOGIC CALCULATIONS

PROJECT NO. 13446

15 OF 36 SHEET SETDWG

WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 6/25/2020 3:26:17 PM

PROJECT NAME : HERITAGE OAKS7
JOB NUMBER : 13446
PROJECT DESCRIPTION : SEC7
DESIGN FREQUENCY : 5 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 5 Years

Runoff Computation for Design Frequency.

ID (acre)	C Value	Area (min)	Tc (min)	Tc Used (in/hr)	Intensity (cfs)	Supply Q (cfs)	Total Q
A-1	0.38	2.10	15.00	15.00	6.64	0.000	5.302
A-2	0.38	1.70	15.00	15.00	6.64	0.000	4.292

Sag Inlets Configuration Data.

Inlet ID (ft)	Inlet Type	Length/ Perim. (sf)	Grate Area (%)	Left-Slope Long Trans (%)	Right-Slope Long Trans (%)	Gutter n (ft)	Gutter DeprW (ft)	Depth Allowed (ft)	Critic Elev.
A-2	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-1	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00

Sag Inlets Computation Data.

Inlet ID (ft)	Inlet Type	Length (sf)	Grate Perim (cfs)	Area (cfs)	Total Q (ft)	Inlet Capacity (ft)	Total Head (ft)	Ponded Width Left	Right
A-2	Curb	5.00	n/a	n/a	4.292	6.261	0.389	10.40	10.40
A-1	Curb	5.00	n/a	n/a	5.302	6.261	0.448	11.25	11.25

Cumulative Junction Discharge Computations

Node I.D. (acres)	Node Type	Weighted C-Value (min)	Cumulat. Dr.Area (in/hr)	Cumulat. Tc (cfs)	Intens. (cfs)	User Supply Q (cfs)	Additional Q in Node	Total Disch.
A-B6	CircMh	0.000	0.00	0.00	0.00	0.000	12.49	12.490
A-2	Curb	0.380	3.80	15.15	6.61	0.000	12.49	22.037
A-1	Curb	0.380	2.10	15.00	6.64	0.000	12.49	17.792
OUT	Outlt	0.380	3.80	15.15	6.61	0.000	12.49	22.037

Conveyance Configuration Data

Run# (ft)	Node I.D. US (ft)	DS (ft)	Flowline Elev. US (ft)	DS (ft)	Shape # (ft)	Span (%)	Rise	Length	Slope	n_value
1	A-B6	A-1	20.08	20.07	Circ 1	0.00	3.00	8.00	0.13	0.013
2	A-1	A-2	20.07	20.02	Circ 1	0.00	3.00	35.00	0.14	0.013
3	A-2	OUT	20.02	19.72	Circ 1	0.00	3.00	224.00	0.13	0.013

Conveyance Hydraulic Computations. Tailwater = 24.100 (ft)

Run# (ft)	Hydraulic Gradeline US Elev (ft)	DS Elev (ft)	Depth Fr.Slope (%)	Unif. (ft)	Actual (ft)	Velocity Unif. (f/s)	Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1	24.37	24.37	0.035	1.55	3.00	3.40	1.77	12.49	23.58	0.000
2	24.37	24.34	0.071	1.88	3.00	3.83	2.52	17.79	25.21	0.000
3	24.34	24.10	0.109	2.25	3.00	3.88	3.12	22.04	24.41	0.000

NORMAL TERMINATION OF WINSTORM.

WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 6/26/2020 9:28:29 AM

PROJECT NAME : HERITAGE OAKS7
JOB NUMBER : 13446
PROJECT DESCRIPTION : SEC7
ANALYSYS FREQUENCY : 100 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR ANALYSYS FREQUENCY of: 100 Years

Runoff Computation for Design Frequency.

ID (acre)	C Value	Area (min)	Tc (min)	Tc Used (in/hr)	Intensity (cfs)	Supply Q (cfs)	Total Q
A-1	0.38	2.10	15.00	15.00	10.10	0.000	8.059
A-2	0.38	1.70	15.00	15.00	10.10	0.000	6.524

Sag Inlets Configuration Data.

Inlet ID (ft)	Inlet Type	Length/ Perim. (sf)	Grate Area (%)	Left-Slope Long Trans (%)	Right-Slope Long Trans (%)	Gutter n (ft)	Gutter DeprW (ft)	Depth Allowed (ft)	Critic Elev.
A-2	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-1	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00

Sag Inlets Computation Data.

Inlet ID (ft)	Inlet Type	Length (sf)	Grate Perim (cfs)	Area (cfs)	Total Q (ft)	Inlet Capacity (ft)	Total Head (ft)	Ponded Width Left	Right
A-2	Curb	5.00	n/a	n/a	6.524	6.718	0.486	12.15	12.15
A-1	Curb	5.00	n/a	n/a	8.059	6.718	0.610	13.15	13.15

Cumulative Junction Discharge Computations

Node I.D. (acres)	Node Type	Weighted C-Value (min)	Cumulat. Dr.Area (in/hr)	Cumulat. Tc (cfs)	Intens. (cfs)	User Supply Q (cfs)	Additional Q in Node	Total Disch.
A-B6	CircMh	0.000	0.00	0.00	0.00	0.000	20.18	20.180
A-2	Curb	0.380	3.80	15.15	10.05	0.000	20.18	34.698
A-1	Curb	0.380	2.10	15.00	10.10	0.000	20.18	28.239
OUT	Outlt	0.380	3.80	15.15	10.05	0.000	20.18	34.698

Conveyance Configuration Data

Run# (ft)	Node I.D. US (ft)	DS (ft)	Flowline Elev. US (ft)	DS (ft)	Shape # (ft)	Span (%)	Rise	Length	Slope	n_value
1	A-3	A-4	22.74	22.69	Circ 1	0.00	1.50	28.00	0.18	0.013
2	A-4	MH-1	22.69	22.51	Circ 2	0.00	1.50	86.00	0.21	0.013
3	MH-1	MH-2	22.51	22.22	Circ 1	0.00	2.00	146.00	0.20	0.013
4	MH-2	MH-3	22.22	22.13	Circ 1	0.00	2.00	44.00	0.20	0.013
5	MH-3	MH-4	22.13	22.02	Circ 1	0.00	2.00	53.00	0.21	0.013
6	MH-4	A-6	22.02	21.71	Circ 1	0.00	2.00	160.00	0.19	0.013
7	A-5	A-6	21.76	21.71	Circ 1	0.00	1.50	28.00	0.18	0.013
8	A-6	A-9	21.71	21.06	Circ 1	0.00	2.50	326.00	0.20	0.013
9	A-7	A-8	21.60	21.55	Circ 1	0.00	1.50	28.00	0.18	0.013
10	A-8	MH-5	21.55	21.32	Circ 1	0.00	2.00	114.00	0.20	0.013
11	MH-5	A-9	21.32	21.06	Circ 1	0.00	2.00	132.00	0.20	0.013
12	A-9	A-10	21.06	21.00	Circ 1	0.00	3.00	28.00	0.21	0.013
13	A-10	MH-7	21.00	20.99	Circ 1	0.00	3.00	7.00	0.33	0.013
14	MH-7	OUT	20.99	20.50	Circ 1	0.00	3.00	218.00	0.22	0.011

Conveyance Hydraulic Computations. Tailwater = 24.100 (ft)

Run# (ft)	Hydraulic Gradeline US Elev (ft)	DS Elev (ft)	Depth Fr.Slope (%)	Unif. (ft)	Actual (ft)	Velocity Unif. (f/s)	Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1	24.78	24.77	0.092	2.16	3.00	3.71	2.85	20.18	23.58	0.000
2	24.77	24.71	0.179	3.00	3.00	3.99	3.99	28.24	25.21	0.000
3	24.71	24.10	0.271	3.00	3.00	4.91	4.91	34.70	24.41	0.000

NORMAL TERMINATION OF WINSTORM.

WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 9/21/2020 9:40:27 AM

PROJECT NAME : HERITAGE OAKS7
JOB NUMBER : 13446
PROJECT DESCRIPTION : SEC7
DESIGN FREQUENCY : 5 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 5 Years

Runoff Computation for Design Frequency.

ID (acre)	C Value	Area (min)	Tc (min)	Tc Used (in/hr)	Intensity (cfs)	Supply Q (cfs)	Total Q
A-3	0.38	1.00	15.00	15.00	6.64	0.000	2.525
A-4	0.38	1.80	15.00	15.00	6.64	0.000	4.545
A-5	0.38	1.10	15.00	15.00	6.64	0.000	2.777
A-6	0.38	1.50	15.00	15.00	6.64	0.000	3.787
A-7	0.38	1.40	15.00	15.00	6.64	0.000	3.535
A-8	0.38	0.50	15.00	15.00	6.64	0.000	1.262
A-9	0.38	1.20	15.00	15.00	6.64	0.000	3.030
A-10	0.38	1.60	15.00	15.00	6.64	0.000	4.040

Sag Inlets Configuration Data.

Inlet ID (ft)	Inlet Type	Length/ Perim. (sf)	Grate Area (%)	Left-Slope Long Trans (%)	Right-Slope Long Trans (%)	Gutter n (ft)	Gutter DeprW (ft)	Depth Allowed (ft)	Critic Elev.
A-3	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-4	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-5	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-6	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-7	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-8	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-9	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-10	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00

Sag Inlets Computation Data.

Inlet ID (ft)	Inlet Type	Length (sf)	Grate Perim (cfs)	Area (cfs)	Total Q (ft)	Inlet Capacity (ft)	Total Head (ft)	Ponded Width Left	Right
A-3	Curb	5.00	n/a	n/a	2.525	6.261	0.273	8.50	8.50
A-4	Curb	5.00	n/a	n/a	4.545	6.261	0.404	10.60	10.60
A-5	Curb	5.00	n/a	n/a	2.777	6.261	0.291	8.85	8.85
A-6	Curb	5.00	n/a	n/a	3.787	6.261	0.358	9.90	9.90
A-7	Curb	5.00	n/a	n/a	3.535	6.261	0.342	9.65	9.65
A-8	Curb	5.00	n/a	n/a	1.262	6.261	0.172	6.55	6.55
A-9	Curb	5.00	n/a	n/a	3.030	6.261	0.308	9.10	9.10
A-10	Curb	5.00	n/a	n/a	4.040	6.261	0.373	10.15	10.15

Cumulative Junction Discharge Computations

Node I.D. (acres)	Node Type	Weighted C-Value (min)	Cumulat. Dr.Area (in/hr)	Cumulat. Tc (cfs)	Intens. (cfs)	User Supply Q (cfs)	Additional Q in Node	Total Disch.
A-3	Curb	0.380	1.00	15.00	6.64	0.000	0.00	2.525
A-4	Curb	0.380	2.80	15.18	6.60	0.000	0.00	7.027
MH-1	CircMh	0.380	2.80	15.18	6.60	0.000	0.00	7.027
MH-2	CircMh	0.380	2.80	15.18	6.60	0.000	0.00	7.027
MH-3	CircMh	0.380	2.80	15.18	6.60	0.000	0.00	7.027
MH-4	CircMh	0.380	2.80	15.18	6.60	0.000	0.00	7.027
A-5	Curb	0.380	1.10	15.00	6.64	0.000	0.00	2.777
A-6	Curb	0.380	5.40	17.62	6.13	0.000	0.00	12.574
A-7	Curb	0.380	1.40	15.00	6.64	0.000	0.00	3.535
A-8	Curb	0.380	1.90	15.17	6.61	0.000	0.00	4.770
MH-5	CircMh	0.380	1.90	15.17	6.61	0.000	0.00	4.770
A-9	Curb	0.380	8.50	18.97	5.90	0.000	0.00	19.042
A-10	Curb	0.380	10.10	19.07	5.88	0.000	0.00	22.563
MH-7	CircMh	0.380	10.10	19.07	5.88	0.000	0.00	22.563
OUT	Outlt	0.380	10.10	19.07	5.88	0.000	0.00	22.563

Conveyance Configuration Data

Run# (ft)	Node I.D. US (ft)	DS (ft)	Flowline Elev. US (ft)	DS (ft)	Shape # (ft)	Span (%)	Rise	Length	Slope	n_value
1	A-3	A-4	22.74	22.69	Circ 1	0.00	1.50	28.00	0.18	0.013
2	A-4	MH-1	22.69	22.51	Circ 2	0.00	1.50	86.00	0.21	0.013
3	MH-1	MH-2	22.51	22.22	Circ 1	0.00	2.00	146.00	0.20	0.013
4	MH-2	MH-3	22.22	22.13	Circ 1	0.00	2.00	44.00	0.20	0.013
5	MH-3	MH-4	22.13	22.02	Circ 1	0.00	2.00	53.00	0.21	0.013
6	MH-4	A-6	22.02	21.71	Circ 1	0.00	2.00	160.00	0.19	0.013
7	A-5	A-6	21.76	21.71	Circ 1	0.00	1.50	28.00	0.18	0.013
8	A-6	A-9	21.71	21.06	Circ 1	0.00	2.50	326.00	0.20	0.013
9	A-7	A-8	21.60	21.55	Circ 1	0.00	1.50	28.00	0.18	0.013
10	A-8	MH-5	21.55	21.32	Circ 1	0.00	2.00	114.00	0.20	0.013
11	MH-5	A-9	21.32	21.06	Circ 1	0.00	2.00	132.00	0.20	0.013
12	A-9	A-10	21.06	21.00	Circ 1	0.00	3.00	28.00	0.21	0.013
13	A-10	MH-7	21.00	20.99	Circ 1	0.00	3.00	7.00	0.33	0.013
14	MH-7	OUT	20.99	20.50	Circ 1	0.00	3.00	218.00	0.22	0.011

Conveyance Hydraulic Computations. Tailwater = 24.100 (ft)

Run# (ft)	Hydraulic Gradeline US Elev (ft)	DS Elev (ft)	Depth Fr.Slope (%)	Unif. (ft)	Actual (ft)	Velocity Unif. (f/s)	Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1	25.11	25.10	0.058	0.82	1.50	2.55	1.43	2.52	4.44	0.000
2	25.10	25.00	0.112	0.94	1.50	3.02	1.99	7.03	9.61	0.000
3	25.00	24.86	0.096	1.25	2.00	3.40	2.24	7.03	10.08	0.000
4	24.86	24.82	0.096	1.22	2.00	3.51	2.24	7.03	10.23	0.000
5	24.82	24.77	0.096	1.22	2.00	3.51	2.24	7.03	10.31	0.000
6	24.77	24.61	0.096	1.25	2.00	3.40	2.24	7.03	9.96	0.000
7	24.63	24.61	0.070	0.87	1.50	2.62	1.57	2.78	4.44	0.000
8	24.61	24.31	0.094	1.52	2.50	4.01	2.56	12.57	18.32	0.000
9	24.45	24.41	0.113	1.03	1.50	2.73	2.00	3.53	4.44	0.000
10	24.41	24.36	0.044	0.97	2.00	3.16	1.52	4.77	10.16	0.000
11	24.36	24.31	0.044	0.97	2.00	3.16	1.52	4.77	10.04	0.000
12	24.31	24.28	0.081	1.69	3.00	4.65	2.69	19.04	30.88	0.000
13	24.28	24.28	0.114	1.64	3.00	5.70	3.19	22.56	38.51	0.000
14	24.28	24.10	0.082	1.69	3.00	5.51	3.19	22.56	37.04	0.000

NORMAL TERMINATION OF WINSTORM.

WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 9/21/2020 9:41:39 AM

PROJECT NAME : HERITAGE OAKS7
JOB NUMBER : 13446
PROJECT DESCRIPTION : SEC7
ANALYSYS FREQUENCY : 100 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR ANALYSYS FREQUENCY of: 100 Years

Runoff Computation for Design Frequency.

ID (acre)	C Value	Area (min)	Tc (min)	Tc Used (in/hr)	Intensity (cfs)	Supply Q (cfs)	Total Q
A-3	0.38	1.00	15.00	15.00	10.10	0.000	3.838
A-4	0.38	1.80	15.00	15.00	10.10	0.000	6.908
A-5	0.38	1.10	15.00	15.00	10.10	0.000	4.221
A-6	0.38	1.50	15.00	15.00	10.10	0.000	5.756
A-7	0.38	1.40	15.00	15.00	10.10	0.000	5.373
A-8	0.38	0.50	15.00	15.00	10.10	0.000	1.919
A-9	0.38	1.20	15.00	15.00	10.10	0.000	4.605
A-10	0.38	1.60	15.00	15.00	10.10	0.000	6.140

Sag Inlets Configuration Data.

Inlet ID (ft)	Inlet Type	Length/ Perim. (sf)	Grate Area (%)	Left-Slope Long Trans (%)	Right-Slope Long Trans (%)	Gutter n (ft)	Gutter DeprW (ft)	Depth Allowed (ft)	Critic Elev.
A-3	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-4	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-5	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-6	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-7	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-8	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-9	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-10	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00

Sag Inlets Computation Data.

Inlet ID (ft)	Inlet Type	Length (sf)	Grate Perim (cfs)	Area (cfs)	Total Q (ft)	Inlet Capacity (ft)	Total Head (ft)	Ponded Width Left	Right
A-3	Curb	5.00	n/a	n/a	3.838	6.261	0.361	9.95	9.95
A-4	Curb	5.00	n/a	n/a	6.908	6.718	0.514	12.45	12.45
A-5	Curb	5.00	n/a	n/a	4.221	6.261	0.384	10.35	10.35
A-6	Curb	5.00	n/a	n/a	5.756	6.261	0.473	11.60	11.60
A-7	Curb	5.00	n/a	n/a	5.373	6.261	0.451	11.30	11.30
A-8	Curb	5.00	n/a	n/a	1.919	6.261	0.227	7.70	7.70
A-9	Curb	5.00	n/a	n/a	4.605	6.261	0.407	10.65	10.65
A-10	Curb	5.00	n/a	n/a	6.140	6.261	0.494	11.90	11.90

Cumulative Junction Discharge Computations

Node I.D. (acres)	Node Type	Weighted C-Value (min)	Cumulat. Dr.Area (in/hr)	Cumulat. Tc (cfs)	Intens. (cfs)	User Supply Q (cfs)	Additional Q in Node	Total Disch.
A-3	Curb	0.380	1.00	15.00	10.10	0.000	0.00	3.838
A-4	Curb	0.380	2.80	15.17	10.05	0.000	0.00	10.691
MH-1	CircMh	0.380	2.80	15.17	10.05	0.000	0.00	10.691
MH-2	CircMh	0.380	2.80	15.17	10.05	0.000	0.00	10.691
MH-3	CircMh	0.380	2.80	15.17	10.05	0.000	0.00	10.691
MH-4	CircMh	0.380	2.80	15.17	10.05	0.000	0.00	10.691
A-5	Curb	0.380	1.10	15.00	10.10	0.000	0.00	4.221
A-6	Curb	0.380	5.40	17.47	9.40	0.000	0.00	19.291
A-7	Curb	0.380	1.40	15.00	10.10	0.000	0.00	5.373
A-8	Curb	0.380	1.90	15.15	10.05	0.000	0.00	7.257
MH-5	CircMh	0.380	1.90	15.15	10.05	0.000	0.00	7.257
A-9	Curb	0.380	8.50	18.75	9.08	0.000	0.00	29.336
A-10	Curb	0.380	10.10	18.85	9.06	0.000	0.00	34.773
MH-7	CircMh	0.380	10.10	18.85	9.06	0.000	0.00	34.773
OUT	Outlt	0.380	10.10	18.85	9.06	0.000	0.00	34.773

Conveyance Configuration Data

Run# (ft)	Node I.D. US (ft)	DS (ft)	Flowline Elev. US (ft)	DS (ft)	Shape # (ft)	Span (%)	Rise	Length	Slope	n_value
1	A-3	A-4	22.74	22.69	Circ 1	0.00	1.50	28.00	0.18	0.013
2	A-4	MH-1	22.69	22.51	Circ 2	0.00	1.50	86.00	0.21	0.013
3	MH-1	MH-2	22.51	22.22	Circ 1	0.00	2.00	146.00	0.20	0.013
4	MH-2	MH-3	22.22	22.13	Circ 1	0.00	2.00	44.00	0.20	0.013
5	MH-3	MH-4	22.13	22.02	Circ 1	0.00	2.00	53.00	0.21	0.013
6	MH-4	A-6	22.02	21.71	Circ 1	0.00	2.00	160.00	0.19	0.013
7	A-5	A-6	21.76	21.71	Circ 1	0.00	1.50	28.00	0.18	0.013
8	A-6	A-9	21.71	21.06	Circ 1	0.00	2.50	326.00	0.20	0.013
9	A-7	A-8	21.60	21.55	Circ 1	0.00	1.50	28.00	0.18	0.013
10	A-8	MH-5	21.55	21.32	Circ 1	0.00	2.00	114.00	0.20	0.013
11	MH-5	A-9	21.32	21.06	Circ 1	0.00	2.00	132.00	0.20	0.013
12	A-9	A-10	21.06	21.00	Circ 1	0.00	3.00	28.00	0.21	0.013
13	A-10	MH-7	21.00	20.99	Circ 1	0.00	3.00	7.00	0.33	0.013
14	MH-7	OUT	20.99	20.50	Circ 1	0.00	3.00	218.00	0.22	0.011

Conveyance Hydraulic Computations. Tailwater = 24.100 (ft)

Run# (ft)	Hydraulic Gradeline US Elev (ft)	DS Elev (ft)	Depth Fr.Slope (%)	Unif. (ft)	Actual (ft)	Velocity Unif. (f/s)	Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1	26.47	26.44	0.133	1.08	1.50	2.82	2.17	3.84	4.44	0.000
2	26.44	26.21	0.259	1.50	1.50	3.02	3.02	10.69	9.61	0.000
3	26.21	25.89	0.223	1.75	2.00	3.67	3.40	10.69	10.08	0.000
4	25.89	25.79	0.223	1.75	2.00	3.67	3.40	10.69	10.23	0.000
5	25.79	25.67	0.223	1.75	2.00	3.67	3.40	10.69	10.31	0.000
6	25.67	25.31	0.223	1.75	2.00	3.67	3.40	10.69	9.96	0.000
7	25.36	25.31	0.161	1.17	1.50	2.85	2.39	4.22	4.44	0.000
8	25.31	24.59	0.221	2.19	2.50	4.24	3.93	19.29	18.32	0.000
9	24.92	24.85	0.262	1.50	1.50	3.04	3.04	5.37	4.44	0.000
10	24.85	24.73	0.103	1.25	2.00	3.51	2.31	7.26	10.16	0.000
11	24.73	24.59	0.103	1.25	2.00	3.51	2.31	7.26	10.04	0.000
12	24.59	24.54	0.193	2.34	3.00	4.95	4.15	29.34	30.88	0.000
13	24.54	24.53	0.272	2.25	3.00	6.11	4.92	34.77	38.51	0.000
14	24.53	24.10	0.195	2.34	3.00	5.87	4.92	34.77	37.04	0.000

NORMAL TERMINATION OF WINSTORM.

WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 7/23/2020 10:15:24 AM

PROJECT NAME : HERITAGE OAKS7
JOB NUMBER : 13446
PROJECT DESCRIPTION : SEC7
DESIGN FREQUENCY : 5 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 5 Years

Runoff Computation for Design Frequency.

ID (acre)	C Value	Area (min)	Tc (min)	Tc Used (in/hr)	Intensity (cfs)	Supply Q (cfs)	Total Q
A-13	0.38	2.10	15.00	15.00	6.64	0.000	5.302
A-14	0.38	1.70	15.00	15.00	6.64	0.000	4.292

Sag Inlets Configuration Data.

Inlet ID (ft)	Inlet Type	Length/ Perim. (sf)	Grate Area (%)	Left-Slope Long Trans (%)	Right-Slope Long Trans (%)	Gutter n (ft)	Gutter DeprW (ft)	Depth Allowed (ft)	Critic Elev.
A-13	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00
A-14	Curb	5.00	n/a	0.50	2.00 0.50	2.00 0.014	1.50	0.50	27.00

Sag Inlets Computation Data.

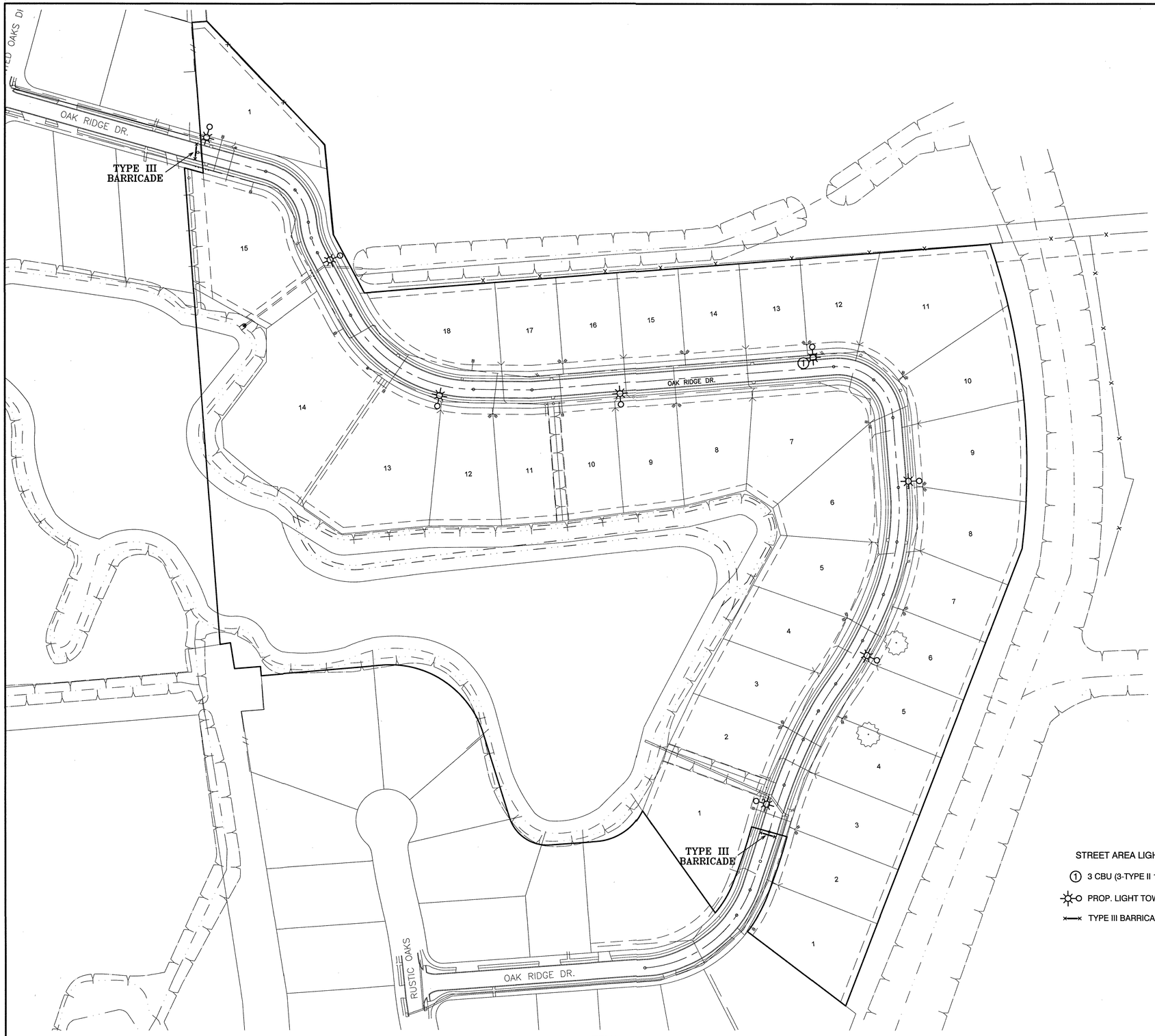
Inlet ID (ft)	Inlet Type	Length (sf)	Grate Perim (cfs)	Area (cfs)	Total Q (ft)	Inlet Capacity (ft)	Total Head (ft)	Ponded Width Left	Right
A-13	Curb	5.00	n/a	n/a	5.302	6.261	0.448	11.25	11.25
A-14	Curb	5.00	n/a	n/a	4.292	6.261	0.389	10.40	10.40

Cumulative Junction Discharge Computations

Node I.D. (acres)	Node Type	Weighted C-Value (min)	Cumulat. Dr.Area (in/hr)	Cumulat. Tc (cfs)	Intens. (cfs)	User Supply Q (cfs)	Additional Q in Node	Total Disch.
A-13	Curb	0.380	2.10	15.00	6.64	0.000	0.00	5.302
A-14	Curb	0.380	1.70	15.14	6.61	0.000	0.00	9.551
MH-6	CircMh	0.380	3.80	15.14	6.61	0.000	0.00	9.551
OUT	Outlt	0.380	3.80	15.14	6.61	0.000	0.00	9.551

Conveyance Configuration Data

| Run# (ft) | Node I.D. US (ft) | DS (ft) | Flowline Elev. US (ft) | DS (ft) |



STREET CLOSED R11-2

TYPE III BARRICADE

0 40 80 160

SCALE : 1" = 80'

STREET AREA LIGHTING (8 LOCATIONS)

① 3 CBU (3-TYPE II 12 SLOT) ON 10'X9'X8" SLAB

PROP. LIGHT TOWER

TYPE III BARRICADE

LIGHTING PLAN SHOWN AS RECOMMENDED. FINAL LIGHTING PLAN AND QUANTITIES ARE PROVIDED BY TEXAS NEW MEXICO POWER.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS

DRAWN

CHECKED

DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 4/25/20

OWNER:
CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

PLAN: 1" = 80'
PROFILE:
HORIZONTAL:
VERTICAL:

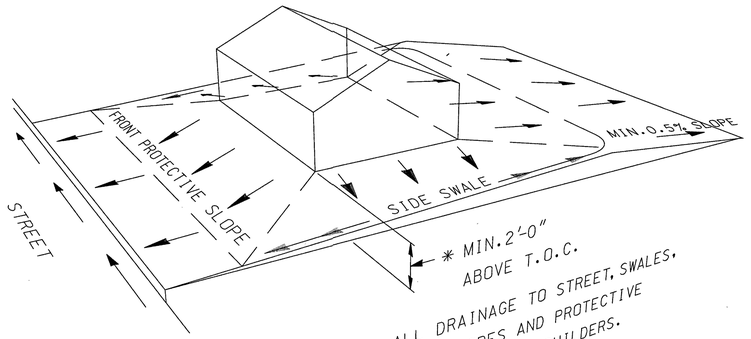
HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

MAILBOX AND STREET LIGHTING LAYOUT

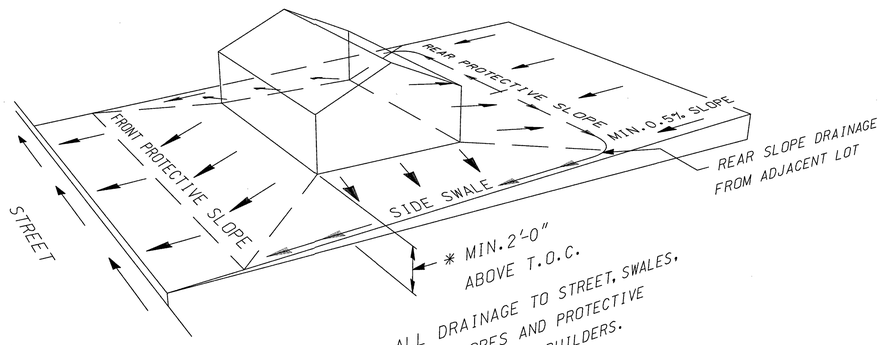
PROJECT NO. 13446

17

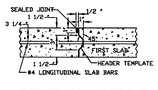
13446 SHEET SET.DWG



TYPICAL LOT GRADING
LOTS BACKING ON DITCH OR LAKE
N.T.S.

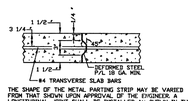


TYPICAL LOT GRADING
BACK TO BACK LOTS
N.T.S.



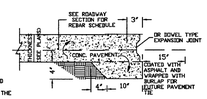
CONSTRUCTION JOINT
N.T.S.

CONSTRUCTION JOINT MAY BE USED IN LIEU OF EXPANSION JOINT WHEN WORK IS SUSPENDED PROVIDED THE JOINT IS AT LEAST 10' FROM NEAREST EXPANSION JOINT.

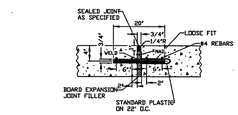


LONGITUDINAL JOINT
N.T.S.

THE SHAPE OF THE METAL PARTING STRIP MAY BE VARIED FROM THAT SHOWN UPON APPROVAL OF THE ENGINEER. A LONGITUDINAL JOINT SHALL BE INSTALLED AS SHOWN IN THE PLAN OR WHERE PAVEMENT WIDTH EXCEEDS 15'. WHEN BARS ARE PLACED IN HALF-L DEPTH, CUT TRANSVERSE BARS TO PROVIDE 1" CLEARANCE ON EACH WIDTH AND CONNECT SLABS WITH #4 DEF. BARS, 3'-0" LONG ON 2'-6" CENTERS.

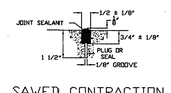


PAVEMENT HEADER
N.T.S.

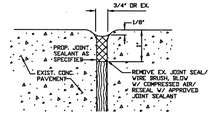


NOTES:
1. STEEL TO MEET A.S.T.M. STD. SPEC. FOR CONC. REINFORCING BARS. UNITS TO BE SPACED AS SHOWN ON PLANS.

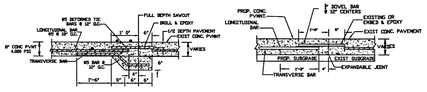
EXPANSION/CONTRACTION JOINT
N.T.S.



SAWED CONTRACTION JOINT DETAIL
N.T.S.

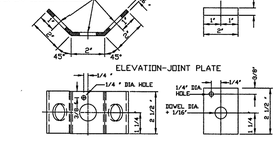


EXPANSION JOINT SEAL DETAIL
N.T.S.

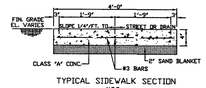


OPTION 1
PAVEMENT JUNCTURE
N.T.S.

OPTION 2
PAVEMENT JUNCTURE
N.T.S.

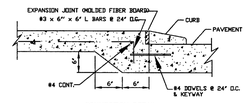


LOAD TRANSFER DEVICE
N.T.S.



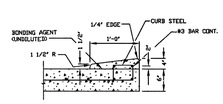
TYPICAL SIDEWALK SECTION
N.T.S.

NOTE:
1. CONCRETE SIDEWALK CONCRETE SHALL CONTAIN NOT LESS THAN FOUR AND ONE-HALF (4 1/2) SACKS OF CEMENT PER CUBIC YARD. SHALL CONTAIN NOT MORE THAN 6 1/2 GALLONS OF WATER PER SACK OF CEMENT, SHALL HAVE A MAXIMUM SLUMP OF 5" AND SHALL HAVE A MODULUS OF RUPTURE NOT LESS THAN 500 P.S.I. AT 28 DAYS. ALL CONCRETE SHALL BE READY MIXED AND PLACED BY MACHINE. REINFORCING SHALL BE A 615 GRADE 40 STEEL. #3 BARS SPACED AS INDICATED IN THE PLAN DETAILS, AND POSITIONED BY THE USE OF PLASTIC CHAIRS. CURING COMPOUND AS SPECIFIED WILL BE REQUIRED AND APPLIED AT THE RATE OF 200 SF./GAL. SUBGRADE PREPARATION WILL REQUIRE A LEVEL OF 9" SAND MAT OF 2" MAXIMUM THICKNESS WHICH SHALL BE COMPACTED BY A SAND PLATE OR AN APPROVED MECHANICAL COMPACTING EQUIPMENT. PUDDLING OR USING WATER TAMPING SHALL BE AN ALLOWABLE METHOD WHEN DETERMINED IN THE FIELD TO YIELD APPROVED RESULTS. THE SAND, EQUIPMENT AND LABOR SHALL BE CONSIDERED SUBSIDIARY TO THE MATERIALS REQUIRED FOR THE COMPLETED SIDEWALK.
2. DRAINAGE BRIDGING SHALL BE PROVIDED BY THE CONTRACTOR AT LOCATIONS SPECIFIED BY THE ENGINEER OR AS INDICATED ON THE PLANS. FORMWORK WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE UNIT BID PRICE FOR CONCRETE SIDEWALKS.

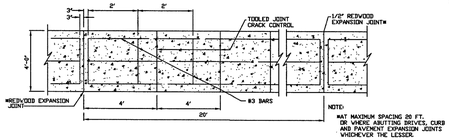


CONNECTION DETAIL

RESIDENTIAL DRIVEWAY & CONNECTION DETAIL
NEW & RECONSTRUCTION
N.T.S.



4" CONCRETE CURB
TYPE "D"
(RESIDENTIAL)



NOTE:
MAT MAXIMUM SPACING 20 FT. OR WHERE ABUTTING DRIVES, CURB AND PAVEMENT EXPANSION JOINTS WHICHEVER THE LESSER.

TYPICAL SIDEWALK JOINTING & REINFORCEMENT
N.T.S.

SIDEWALK PAVEMENT DETAILS
N.T.S.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

B&L
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ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/25/20

OWNER:
CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

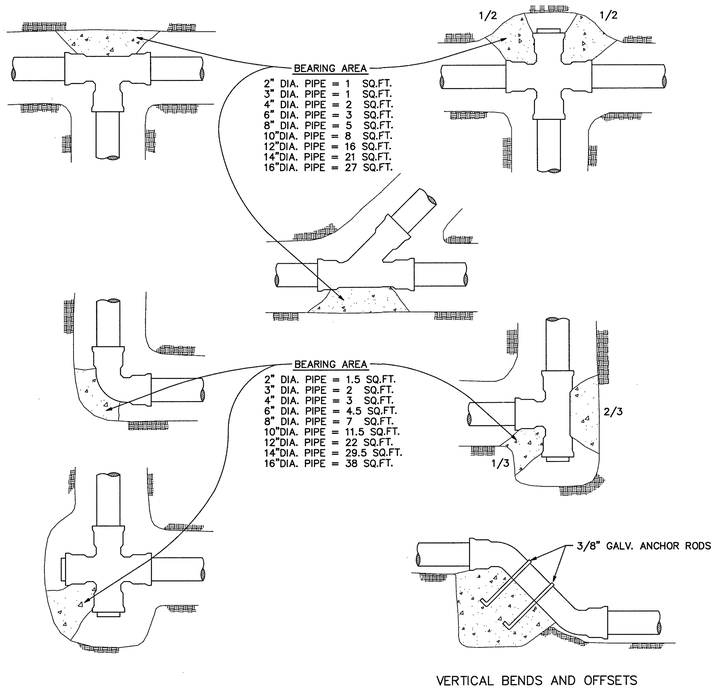
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

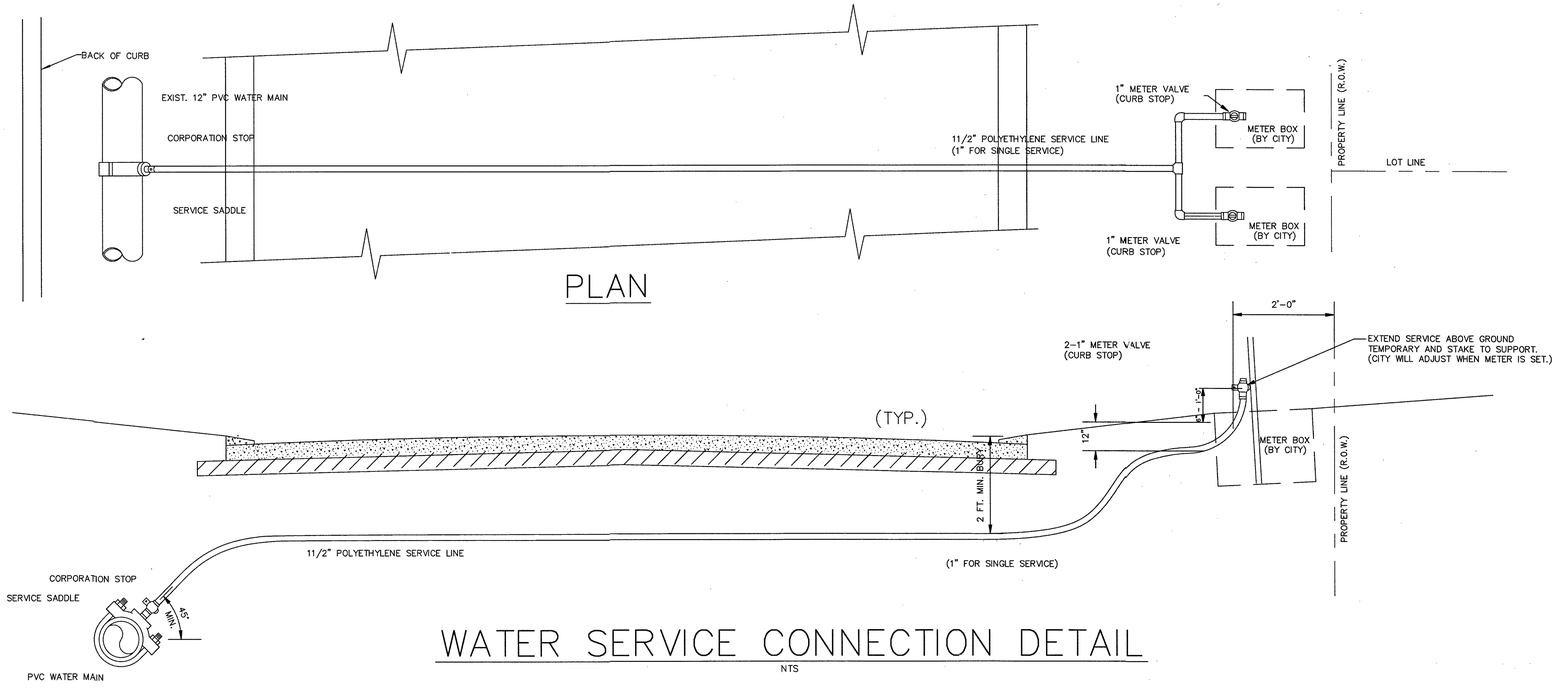
PAVEMENT AND LOT GRADING DETAILS

PROJECT NO. 13446

13446 SHEET SET.DWG



THRUST BLOCKING DIAGRAM

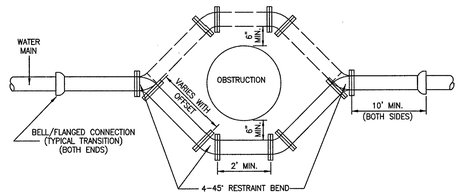


PLAN

WATER SERVICE CONNECTION DETAIL

NTS

III



FOR A LINE TO PASS OVER AN OBSTRUCTION RATHER THAN UNDER, IT MUST HAVE ADEQUATE COVER AND BE APPROVED BY THE ENGINEERING DEPARTMENT.

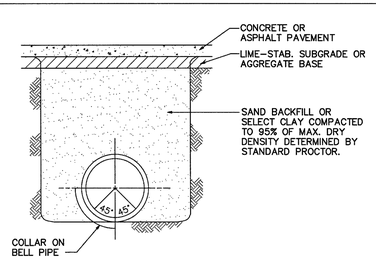
NOTES:

1. PIPE MATERIAL SHALL BE AWWA C900 PVC, DR-14, 200 PSI WITH INTEGRAL PVC RESTRAINED JOINTS.
2. OFFSET ASSEMBLY MUST PASS OVER THE OBSTRUCTION AS LONG AS THE MINIMUM CLEARANCE IS MAINTAINED. SPECIFIC APPROVAL FROM THE UTILITES DEPARTMENT MUST BE GRANTED FOR THE OFFSET TO PASS UNDER THE OBSTRUCTION.
3. MATERIAL AND COATINGS SHALL BE IN ACCCORDANCE WITH WATER MAIN STANDARD SPECIFICATIONS.
4. RESTRAIN EXISTING PIPING BEYOND OFFSET SECTION AS REQUIRED TO PREVENT MOVEMENT.
5. ALL PVC PRODUCTS MUST BE LISTED ON CITY OF SUGAR LAND'S APPROVED PRODUCTS LIST.

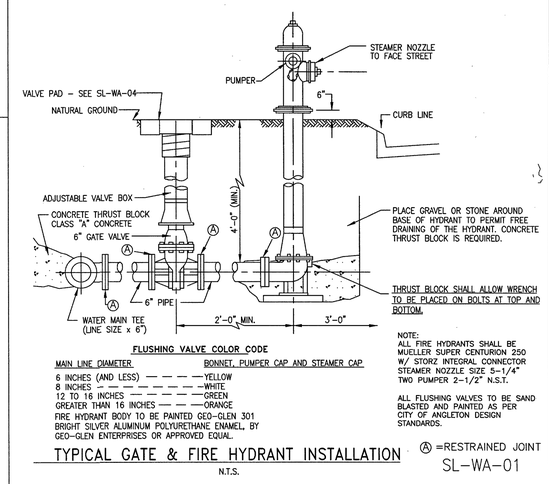
MIN. PIPE WALL THICKNESS		
4"	–	0.250"
6"	–	0.280"
8"	–	0.322"
12" AND LARGER	–	0.375"

PVC WATER PIPE OFFSET ASSEMBLY

SL-WA-11



BEDDING – UNDER ROADWAYS



FLUSHING VALVE COLOR CODE

MAIN LINE DIAMETER	BONNET, PUMPER CAP AND STEAMER CAP
6 INCHES (AND LESS)	YELLOW
8 INCHES	WHITE
12 TO 16 INCHES	GREEN
GREATER THAN 16 INCHES	ORANGE

FIRE HYDRANT BODY TO BE PAINTED GEO-GLEN 301 BRIGHT SILVER ALUMINUM POLYURETHANE ENAMEL, BY GEO-GLEN ENTERPRISES OR APPROVED EQUAL.

NOTE:
ALL FIRE HYDRANTS SHALL BE MUELLER SUPER CENTURION 250 W/ STORZ INTEGRAL CONNECTOR STEAMER NOZZLE SIZE 5-1/4" TWO PUMPER 2-1/2" N.S.T.

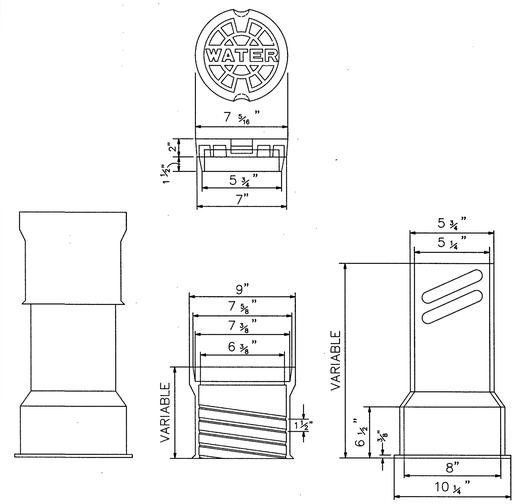
ALL FLUSHING VALVES TO BE SAND BLASTED AND PAINTED AS PER CITY OF ANGLETON DESIGN STANDARDS.

Ⓐ =RESTRAINED JOINT

TYPICAL GATE & FIRE HYDRANT INSTALLATION

N.T.S.

SL-WA-01



CAST IRON VALVE BOX– TWO PIECE SCREW TYPE TYLER 6850 SERIES OR EQUAL

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

BAKER & LAWSON, INC.
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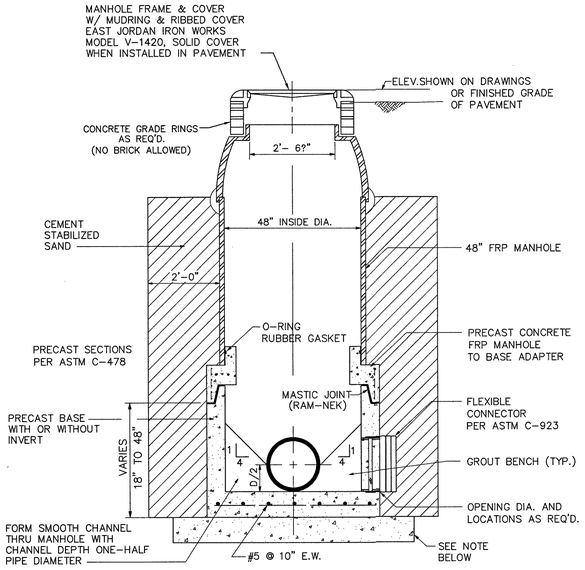
ANGLETON, TEXAS 77515

WATERLINE DETAILS

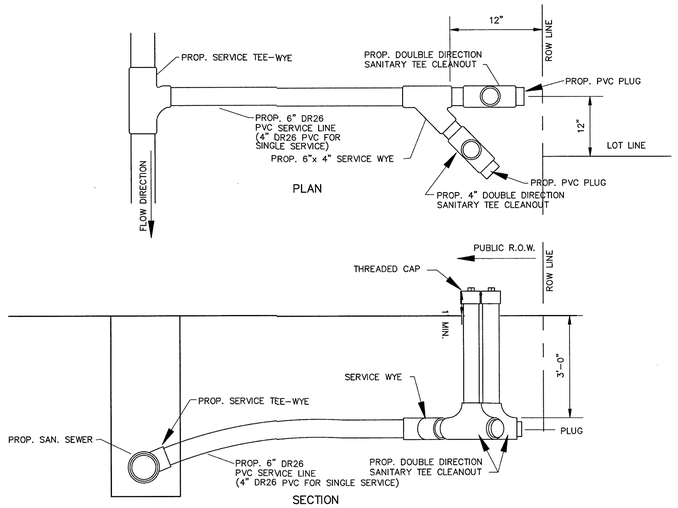
PROJECT NO. 13446

19

46 SHEET SET.DWG

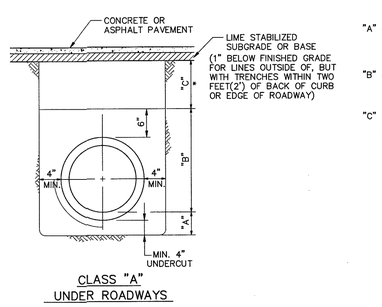


FRP MANHOLE WITH ADAPTER AND CONCRETE BASE



ALTERNATE SERVICE CONNECTION AND CLEANOUT DETAIL

N.T.S.



CLASS "A" UNDER ROADWAYS

CLASS "A" BEDDING

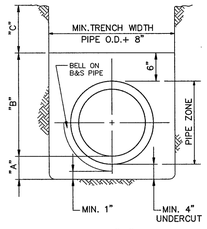
"A" – * WASHED GRAVEL SCREENINGS OR CEMENT STABILIZED SAND PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE OR ABOVE. (ASTM D2321, CLASS 1A)

"B" – * WASHED GRAVEL SCREENINGS OR CEMENT STABILIZED SAND THOROUGHLY RODDED AND COMPACTED, PLACED AFTER PIPE IS LAID.

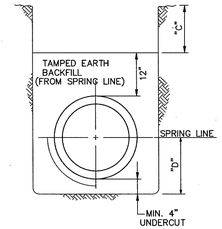
"C" – COMPACTED EARTH FILL TO BE PLACED SAME DAY AS PIPE IS LAID.
* (FOR PIPES LAID UNDER OR WITHIN 4 FEET OF ROADWAYS, USE CEMENT STAB. SAND)

CLASS "A" BEDDING SHALL BE USED IN CUTS IN EXCESS OF 10 FEET (10') OR WHEN SAND IS PRESENT. WHEN SAND IS ENCOUNTERED, THE TRENCH SHALL BE DEWATERED TO A STABLE CONDITION AND LINED WITH GEOTECHNICAL FABRIC PRIOR TO PLACING THE GRAVEL SCREENINGS FOR BEDDING AND BACKFILL ZONES A & B. FABRIC SHALL THEN BE LAPPED OVER THE TOP OF THE GRAVEL PRIOR TO COMPLETION OF BACKFILL.

* CEMENT STABILIZED SAND SHALL BE USED WHERE STABLE CLAY BOTTOM EXISTS.



CLASS "A"

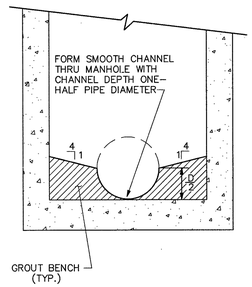


ORDINARY

"D" ZONE– BEDDING AND BACKFILL TO SPRING LINE WITH * CEMENT STABILIZED SAND

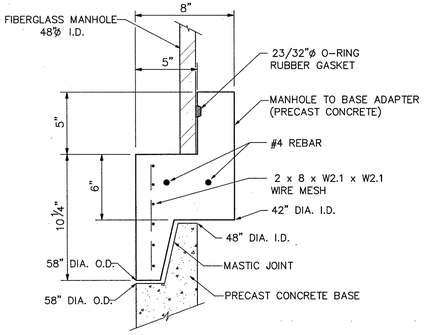
TYPICAL BEDDING FOR SANITARY SEWERS

N.T.S.



MANHOLE INVERT DETAIL FOR 8" – 12" SEWERS

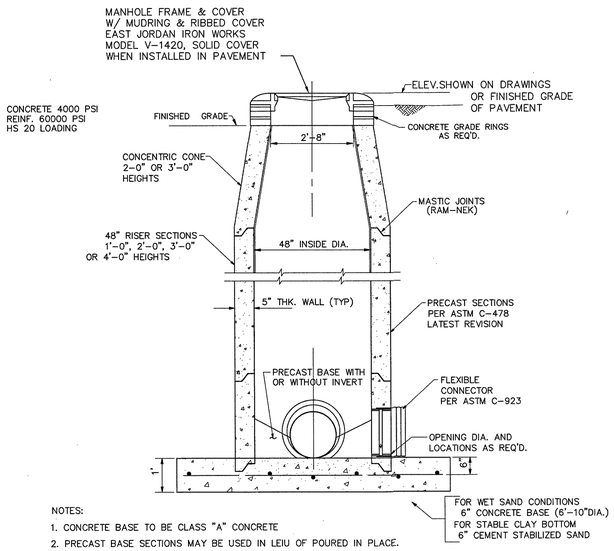
N.T.S.



FIBERGLASS MANHOLE TO CONCRETE ADAPTER

(BY MOOR-TEX Concrete Products, Inc.)

N.T.S.

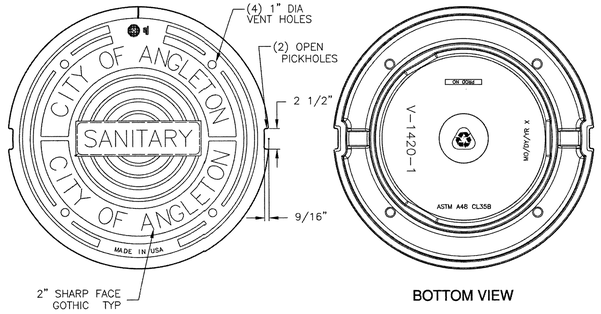


NOTES:
1. CONCRETE BASE TO BE CLASS "A" CONCRETE
2. PRECAST BASE SECTIONS MAY BE USED IN LEIU OF POURED IN PLACE.

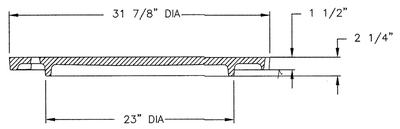
48" PRECAST CONCENTRIC MANHOLE WITH BASE POURED IN PLACE

TYPICAL SANITARY MANHOLES

V1420-1 Cover



BOTTOM VIEW



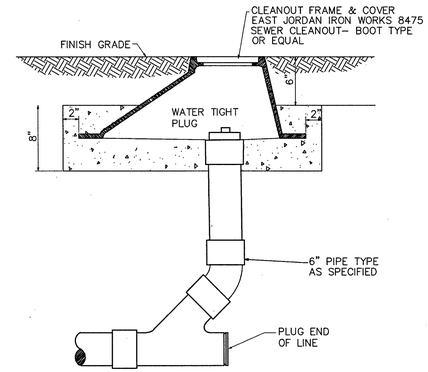
COVER SECTION

1 32" Manhole Cover and Frame

Scale: NTS

NOTES

1. MATERIAL SPECIFICATION SHALL BE ASTM A-48 CLASS 35B.
2. COVER TO BE SOLID, WITHOUT HOLES AND WITH NON-PENETRATION RIM ACCESS RECESSES ONLY.
3. HORIZONTAL BEARING SURFACES TO BE MACHINED AND SEALED AT INSTALLATION WITH WATERPROOF GREASE COATING.
4. LOAD RATING TO BE HEAVY-DUTY.
5. MANHOLE FRAMES AND COVERS SET IN FARM TO MARKET ROADS OR HIGHWAYS SHALL FOLLOW TXDOT SPECIFICATIONS. (UNLESS OTHERWISE NOTED BY ANGLETON)



SANITARY SEWER CLEANOUT DETAIL

N.T.S.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/25/20

OWNER:
CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

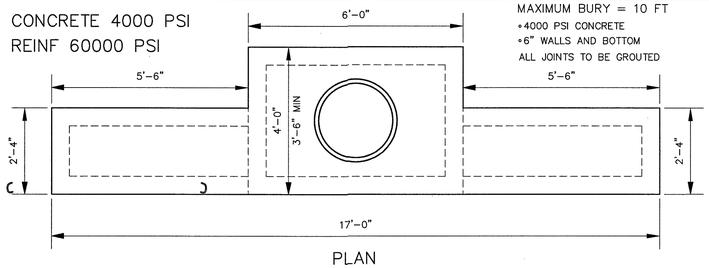
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

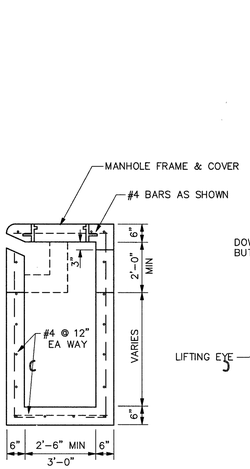
SANITARY SEWER DETAILS

PROJECT NO. 13446

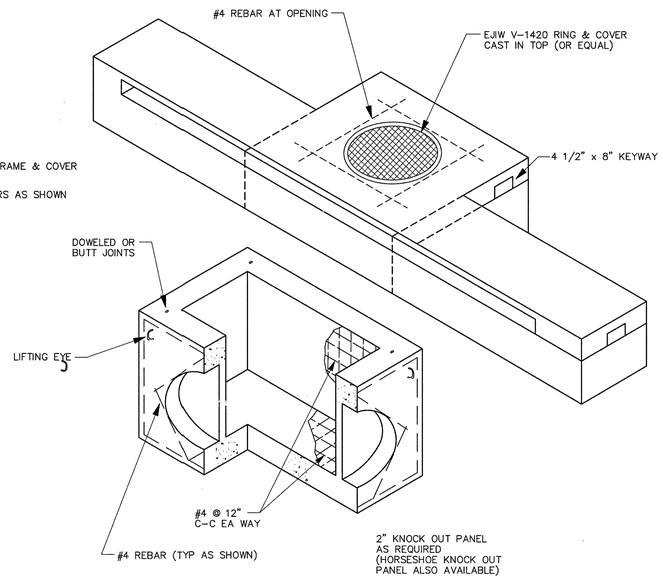
SHEET SETJWG



PLAN

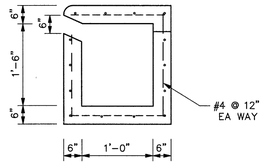


SECTION



ISOMETRIC

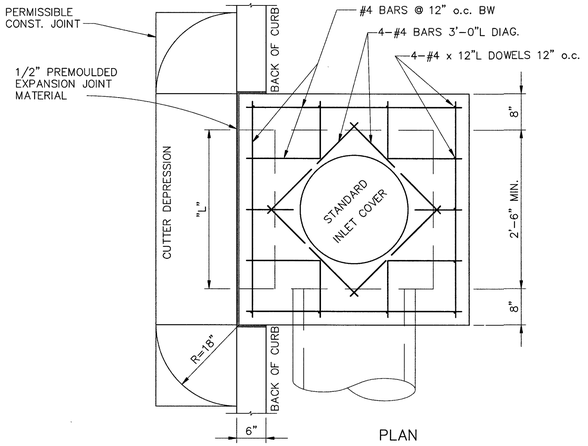
N.T.S.



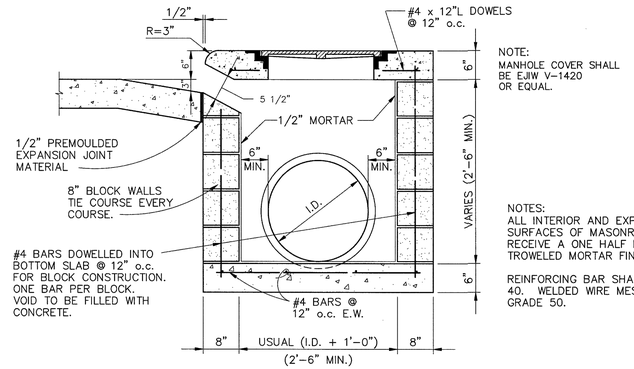
SECTION

PRECAST TYPE "C" INLET WITH OR WITHOUT EXTENSIONS

(BY MOOR-TEX)



PLAN



NOTE:
MANHOLE COVER SHALL BE EJIW V-1420 OR EQUAL.

NOTES:
ALL INTERIOR AND EXPOSED EXTERIOR SURFACES OF MASONRY WALLS SHALL RECEIVE A ONE HALF INCH (1/2") TROWELED MORTAR FINISH.

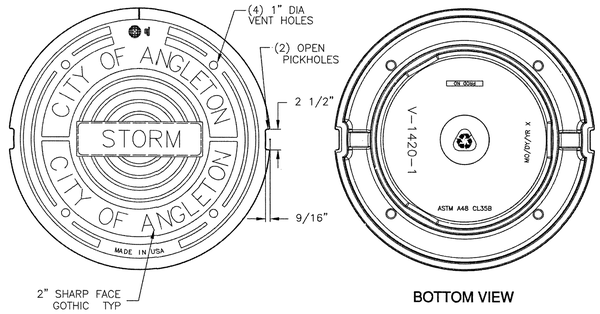
REINFORCING BAR SHALL BE GRADE 40. WELDED WIRE MESH SHALL BE GRADE 50.

SECTION

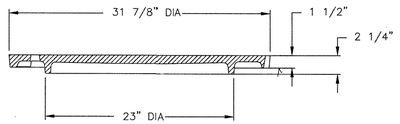
TYPICAL CURB INLET TYPE "C"

SCALE: 3/4" = 1'-0"

V1420-1 Cover



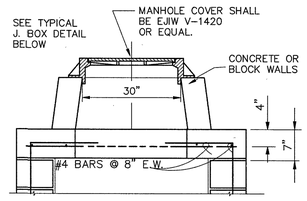
BOTTOM VIEW



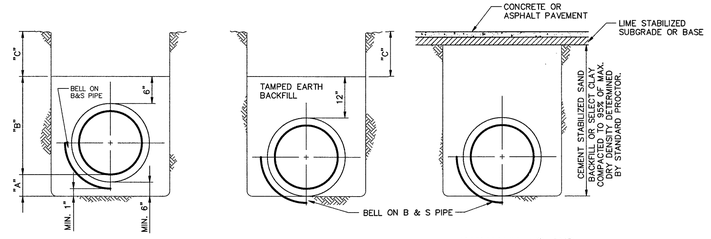
COVER SECTION

1 32" Manhole Cover and Frame

Scale: NTS



DETAIL OF ST. SEW MH. ON JUNCTION BOX



CLASS "A" | ORDINARY | PARALLELL TO AND UNDER ROADWAYS

NOTES: "A" – CEMENT STABILIZED SAND PLACED BEFORE PIPE IS LAID, UP TO FLOW LINE OF PIPE OR ABOVE THE MINIMUM DEPTH OF SIX INCHES (6").

"B" – CEMENT STABILIZED SAND, THOROUGHLY RODDED, PLACED AFTER PIPE IS LAID.

"C" – EARTH FILL TO BE PLACED SAME DAY AS PIPE IS LAID.

WHERE PIPE IS PLACED UNDER THE PROPOSED STREET, BACKFILL SHALL BE COMPACTED IN LAYERS WITH MECHANICAL COMPACTORS. MATERIAL THAT IS TOO WET OR THAT CONTAINS LUMPS WHICH WILL BREAK DOWN READILY UNDER COMPACTION SHALL NOT BE USED FOR BACKFILL.

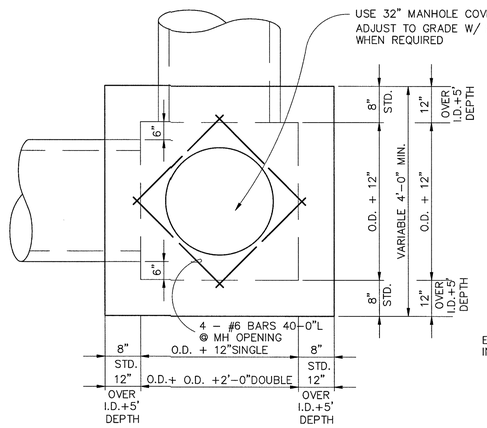
WHERE PIPE IS PLACED PARALLEL TO AND BEHIND THE CURB, THE SAME BACKFILL REQUIREMENTS APPLY.

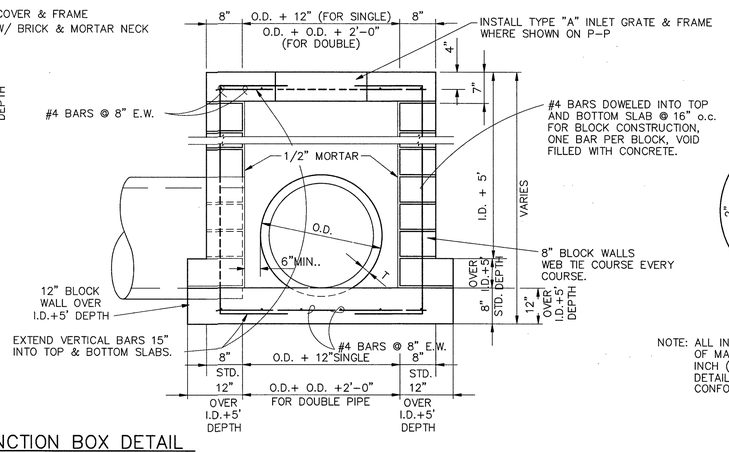
CLASS "A" BEDDING SHALL BE USED IN CUTS IN EXCESS OF 10 FEET (10') OR WHEN WET SAND IS PRESENT.

WHERE FIRE HYDRANT LEADS CROSS STORM SEWERS THAT PORTION OF THE STORM SEWER TEN FEET (10') ON BOTH SIDES OF THE PROPOSED LEAD SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND TO THE BOTTOM OF THE FIRE HYDRANT LEAD. THE SAME SHALL ALSO APPLY WHERE THRUST BLOCKING FOR WATER LINE TEES WILL FALL SO CLOSE TO STORM SEWERS THAT UNDISTURBED NATURAL GROUND WILL NOT EXIST TO SUPPORT THE THRUST BLOCKING.

TYPICAL BEDDING FOR STORM SEWERS

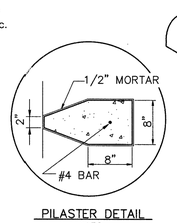
N.T.S.





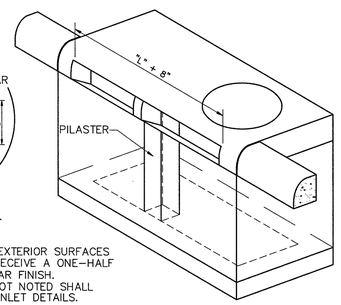
TYPICAL JUNCTION BOX DETAIL

N.T.S.



PILASTER DETAIL

N.T.S.



NOTE: ALL INTERIOR ANS EXPOSED EXTERIOR SURFACES OF MASONRY WALLS SHALL RECEIVE A ONE-HALF INCH (1/2") TROWELED MORTAR FINISH. DETAILS OF CONSTRUCTION NOT NOTED SHALL CONFORM TO TYPICAL CURB INLET DETAILS.

SPECIAL "TY" INLET WHEN "L" EXCEEDS 6'-0"

N.T.S.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS · MIGUELANGEL A. SAUCEDA · 121992 · REGISTERED · PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/25/20

OWNER:
CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

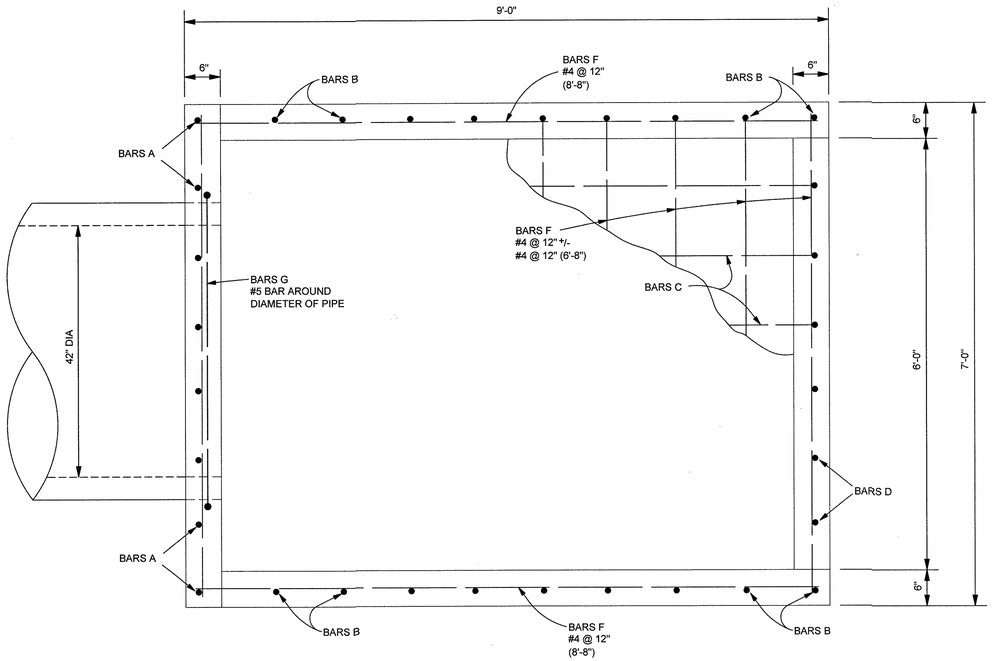
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

STORM SEWER DETAILS

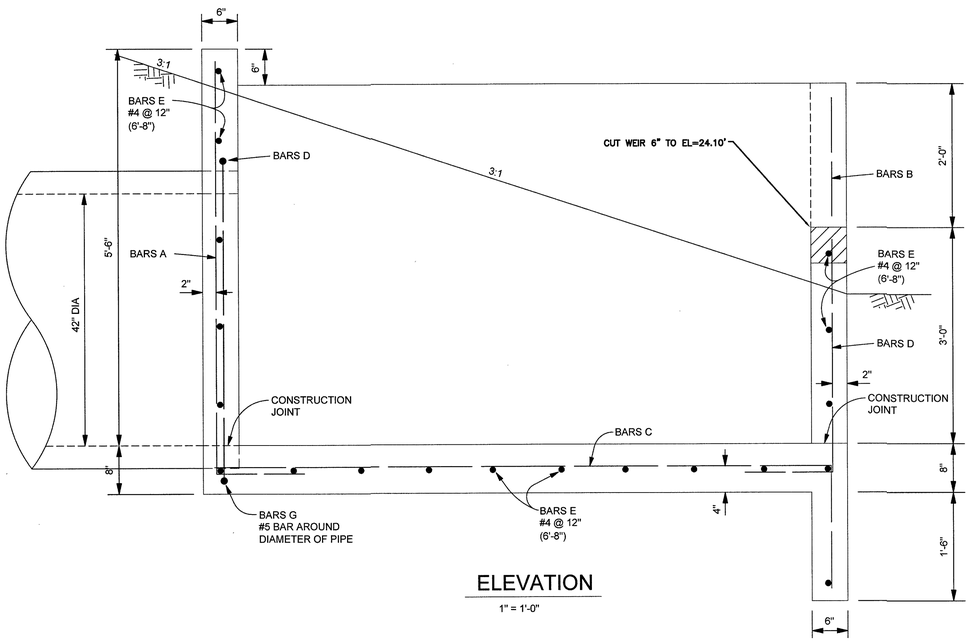
PROJECT NO. 13446

SHEET NO. 21 OF 46 SHEET SET.DWG



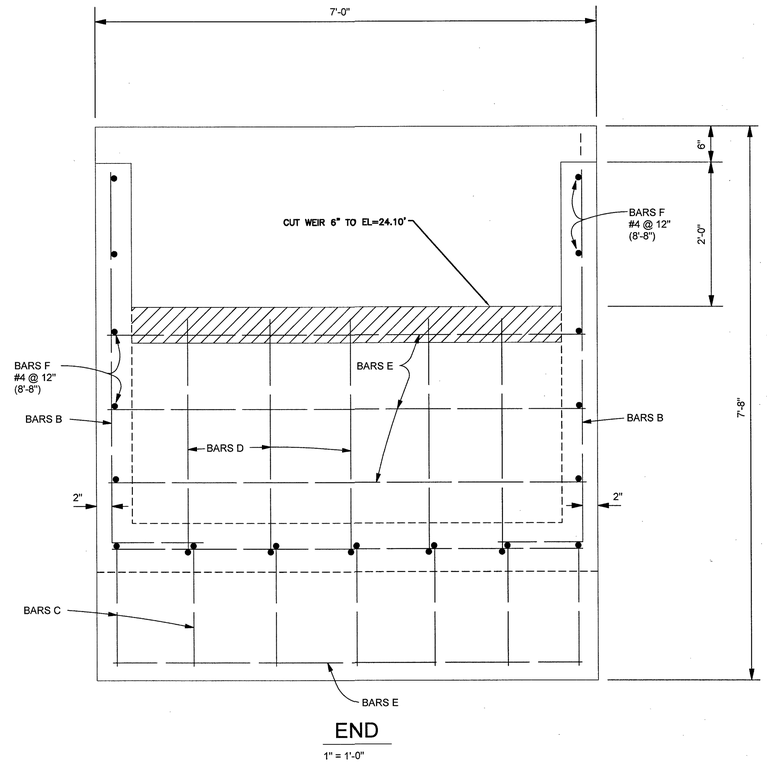
PLAN

1" = 1'-0"



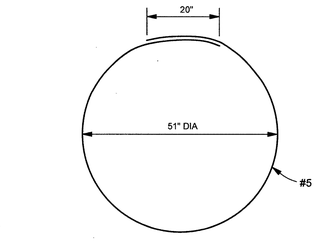
ELEVATION

1" = 1'-0"

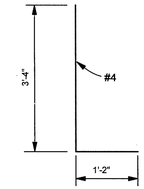


END

1" = 1'-0"



BARS G



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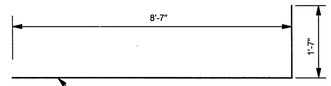

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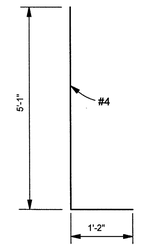

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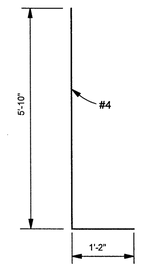


BARS A

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR

DRAWN

CHECKED

DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/25/20

OWNER:

CHRIS PELTIER
P.O. BOX 288
ANGLETON, TEXAS 77516
chris@chrispeltierhomes.com

PLAN:

PROFILE:

HORIZONTAL:

VERTICAL:

HERITAGE OAKS SEC 7 SUBDIVISION
A 19.693 AC, 34-LOT SUBDIVISION
ANGLETON, TEXAS 77515

WEIR DRAINAGE STRUCTURE

PROJECT NO. 13446

22

13446 SHEET SET.DWG

December 31, 2020

Mr. Walter Reeves
Development Services Director
City of Angleton
121 S. Velasco
Angleton, TX 77515

Re: On-Going Services
Gifford Meadows Final Replat and Plan Review – 3rd Submittal Review
Angleton, Texas
HDR Job No. 20-007

Dear Mr. Reeves:

HDR Engineering, Inc. (HDR) has reviewed the plat and plans for the above referenced property and offers the following comments:

1. The Angleton Drainage District provided a revised letter of approval, dated December 9, 2020, with stipulations noted and is provided as an attachment in this review. No additional action is required.
2. The proposed Subdivision has included revisions to provide additional right of way for installation of sidewalk along the fronting portion of the Development along Gifford Road. No additional action is required for this item.
3. An existing 50-ft drainage maintenance easement is to be abandoned per this plat and replaced with a 30-ft wide land dedication to the Angleton Drainage District. A copy of the Final Replat shall include this as a note in the Plat Notes and resubmitted accordingly prior to final recordation.

HDR takes no objection to the Gifford Meadows Final Replat and Plans with the exceptions noted. Please note, this does not necessarily mean that the entire drawings, including all supporting data and calculations, has been completely checked and verified; however, the drawings and calculations are signed, dated, and sealed by a professional engineer licensed to practice in the State of Texas, which therefore conveys the engineer's responsibility and accountability.

If you have any questions, please feel free to contact us at our office (713)-622-9264.

Sincerely,

HDR Engineering, Inc.

Javier Vasquez, P.E., CFM
Project Engineer

cc: Files (20-007)

Attachments

hdrinc.com 4828 Loop Central Drive, Suite 800, Houston, TX 77081-2220
T (713) 622-9264 F (713) 622-9265
Texas Registered Engineering Firm F-754(713) 622-9264

ANGLETON DRAINAGE DISTRICT

A Political Subdivision of the State of Texas
P.O. Box 2469, Angleton, Texas 77516-2469
Phone: (979) 849-2414 Fax: (979) 848-8160

December 9, 2020

Adobe Holdings, Inc.
David Rogers
1800 Augusta Drive, Suite 340
Houston, Texas 77057

Re: Drainage and Detention Plan
Gifford Meadows Subdivision
Angleton, Texas 77515

Dear Mr. Rogers:

During the regular public meeting of the Angleton Drainage District held October 13, 2020, the Board of Supervisors unanimously approved the drainage and detention plan for Gifford Meadows Subdivision as presented.

As presented, Gifford Meadows Subdivision is an 85-lot development on 17.31 acres. The site is located near the southwest corner of CR 543 (Downing Road) and Cemetery Road. The northeast side of the tract is CR 543 and the west side of the tract is Gifford Road. Access to the subdivision is from Gifford Road. This is a planned development zone for 45-feet wide lots. This site is in the Bastrop Bayou Drainage Area BB18 which has an allowable 100-Year Storm runoff rate of 0.74 cfs/acre. 0.74 cfs/acre*17.31 acres = 12.81 cfs. The design drawings include a 24-inch outfall pipe in the west roadside ditch of CR543 (A Ditch) with a 24-inch long 10-inch pipe grouted in the end to act as the restrictive outlet. Outfall erosion protection into A Ditch is accomplished by the proposed installation of slope paving to the toe of the ditch with cutoff boards installed to prevent undermining. There is a design onsite detention pond with a volume of 10.5 acre-feet of detention volume with 6-inches of freeboard. This development required detention is 10.342 acre-feet of detention volume. The designed detention pond is located in the north angle point of the development of the 17.31 acre site.

The 50' recorded in Plat No. 2018064548 B.C.P.R. will be abandoned with this development plat and replaced with a 30' Dedication of Property to the Angleton Drainage District. The 20' strip was previously used for a backslope swale. The swale is no longer needed with this development. The development has a 20' wide maintenance berm on their property that will be utilized by the HOA for maintenance of their detention pond.

If any structures are added to this site in the future, a subsequent review by the Angleton Drainage District will be required to ensure there are no adverse impacts to adjacent landowners.

Approval of this drainage and detention plan in no way represents that David Rogers of Gifford Meadows Subdivision has complied with any federal, state, county or other law, statute, procedure or requirement of any type beyond the approval of the drainage and detention plan approved, with the stipulations listed in this letter, if any, by the District.

Sincerely,

David B. Spoor

David B. Spoor, Chairman
Angleton Drainage District

DEDICATION STATEMENT:

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: THAT DAVID ROGERS, President And Managing Director of the ADOBE HOLDINGS INC., acting herein by and through its duly authorized officers, does hereby adopt this plat designating the hereinabove described property as GIFFORD MEADOWS SUBDIVISION, a subdivision in the jurisdiction of the City of Angleton, Texas, and does hereby dedicate, in fee simple, to the public use forever, the streets, alleys and public parkland shown thereon. The streets, alleys and parkland are dedicated for street purposes. The easements and public use areas, as shown, are dedicated for the public use forever, for the purposes indicated on this plat. No buildings, fences, trees, shrubs, or other improvements or growths shall be constructed or placed upon, over, or across the easements as shown, except that landscape improvements may be placed in landscape easements, if approved by the City of Angleton. In addition, utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easement limits the use to particular utilities, said use by public utilities being subordinate to the public's and City of Angleton's use thereof. The City of Angleton and public utility entities shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs, or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of their respective systems in said easements. The City of Angleton and public utility entities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, reading meters, and adding to or removing all or parts of their respective systems without the necessity at any time of procuring permission from anyone.

Drainage Easements Maintained by a Homeowners' Association.
STATE OF TEXAS §
COUNTY OF BRAZORIA §

This plat is hereby adopted by the owners (called "Owners") and approved by the City of Angleton, ("City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees, successor, and assigns:

"Drainage Easements" shown on the plat are reserved for drainage purposes forever, and the maintenance of the drainage easements shall be provided by all of the owners of lots in the subdivision by and through a lawfully created homeowners association to be created by the Owners. The Owners covenant and agree that such a homeowners' association (called "Association") shall be created prior to the final acceptance of the City. All Association documents shall be subject to the approval of the City and shall specifically contain covenants binding the Association to continuously maintain all Drainage Easements. Such covenants shall not relieve the individual lot owners of the responsibility to maintain the Drainage Easements should the Association default in the performance of its maintenance responsibility. The Association documents shall also contain provisions that they may not be amended with regard to the Drainage Easement maintenance responsibilities without the approval of the City. The fee simple title to all Drainage Easements shall always remain in the Association.

The City and Angleton Drainage District are not responsible for the maintenance and operation of said easements or for any damage or injury to private property or person that results from the flow of water along said easement or for the control of erosion, but reserves the right to use enforcement powers to ensure that drainage easements are properly functioning in the manner in which they were designed and approved.

The City and Angleton Drainage District reserves the right, but not the obligation, to enter upon any Drainage Easement at any point, or points, with all rights of ingress and egress, to investigate, survey, erect, construct, or maintain any drainage facility deemed necessary by the City for drainage and safety purposes.

The Owners shall keep all Drainage Easements clean and free of debris, silt, and any substance which would result in unsanitary conditions or obstruct the flow of water, and the City of Angleton or Angleton Drainage District shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the Owners to alleviate any public health or safety issues. The Association hereby agrees to indemnify and hold harmless the City from any such damages and injuries.

DRAINAGE AND DETENTION EASEMENT.

STATE OF TEXAS §
COUNTY OF BRAZORIA §

This plat is hereby adopted by the Owners and approved by the City of Angleton (called "City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees and successors: The portion of Block 1, as shown on the plat is called "Drainage and Detention Easement." The Drainage and Detention Easement within the limits of this addition, will remain open at all times and will be maintained in a safe and sanitary condition by the owners of the lot or lots that are traversed by or adjacent to the Drainage and Detention Easement. The City will not be responsible for the maintenance and operation of said Easement or for any damage to private property or person that results from conditions in the Easement, or for the control of erosion. No obstruction to the natural flow of stormwater run-off shall be permitted by construction of any type of building, fence, or any other structure within the Drainage and Detention Easement as hereinabove defined, unless approved by the City Engineer. Provided, however, it is understood that in the event it becomes necessary for the City to erect or consider erecting any type of drainage structure in order to improve the storm drainage that may be occasioned by the City shall have the right to enter upon the Drainage and Detention Easement at any point, or points, to investigate, survey or to erect, construct and maintain any drainage facility deemed necessary for drainage purposes. Each property owner shall keep the Drainage and Detention Easement clean and free of debris, silt, and any substance which would result in unsanitary conditions or obstruct the flow of water, and the City shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the property owner to alleviate any undesirable conditions which may occur. The natural drainage through the Drainage and Detention Easement is subject to storm water overflow and natural bank erosion to an extent which cannot be definitely defined. The City shall not be held liable for any damages of any nature resulting from the occurrence of these natural phenomena, or resulting from the failure of any structure, or structures, within the Easement.

OWNER'S ACKNOWLEDGEMENT:

STATE OF TEXAS §
COUNTY OF BRAZORIA §

The owner of land shown on this plat, in person or through a duly authorized agent, dedicates to the use of the public forever all streets, alleys, parks, watercourses, drains, easements and public places thereon shown for the purpose and consideration therein expressed.

_____
PRESIDENT AND MANAGING DIRECTOR

STATE OF TEXAS §
COUNTY OF BRAZORIA §

Before me, the undersigned, personally appeared DAVID ROGERS known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same for the purposes and considerations therein expressed and, in the capacity, therein stated. Given under my hand and seal of office this ____ day of _____, _____.

_____
Notary Public
State of Texas

PLANNING AND ZONING COMMISSION AND CITY COUNCIL:

APPROVED this _____ day of _____, 20_____, by the Planning and Zoning Commission, City of Angleton, Texas.

_____
BILL GARWOOD, Chairman, Planning and Zoning Commission

_____
FRANCES AGUILAR, City Secretary

APPROVED this _____ day of _____, 20____, by the City Council, City of Angleton, Texas.

_____
JASON PEREZ, Mayor

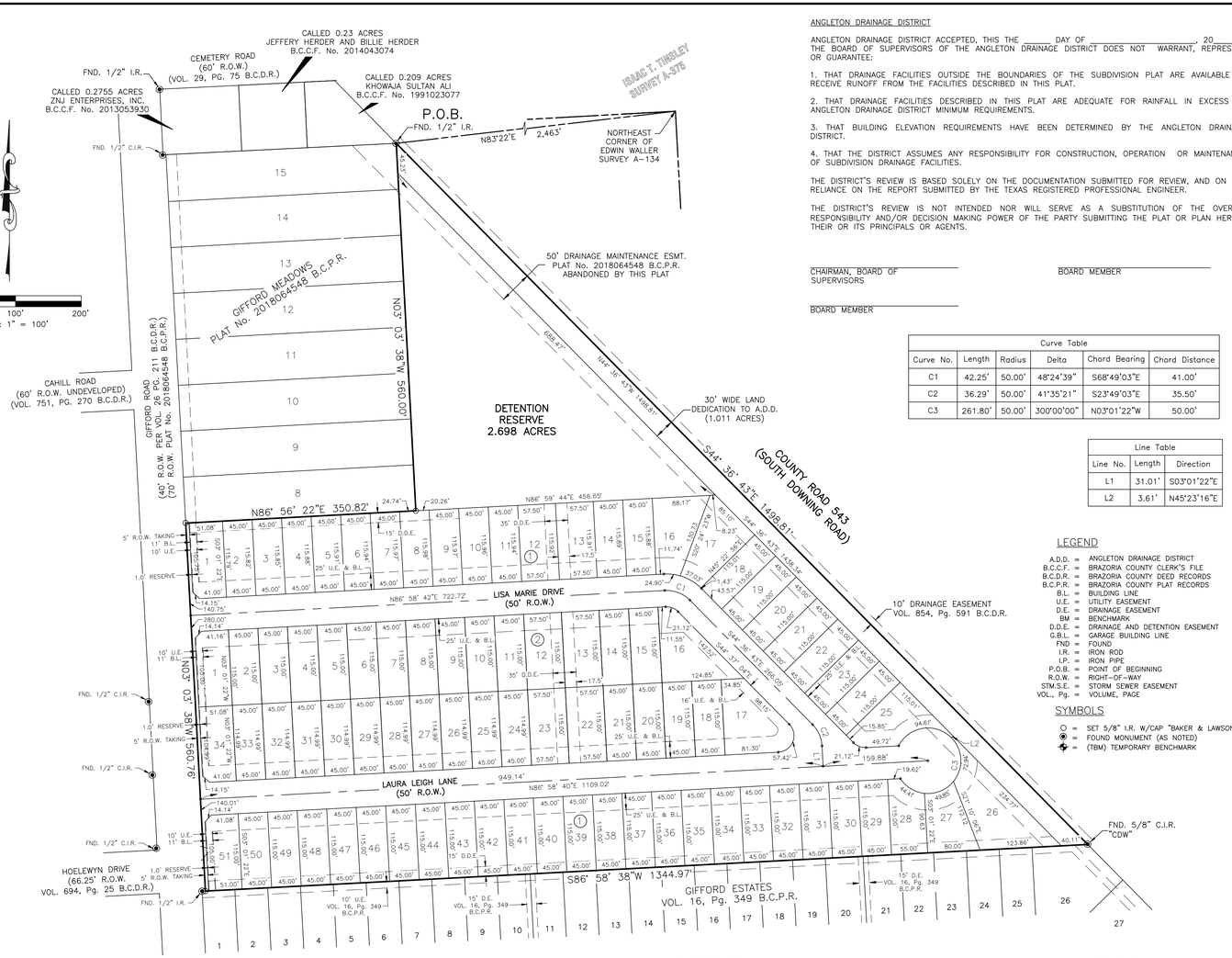
_____
FRANCES AGUILAR, City Secretary

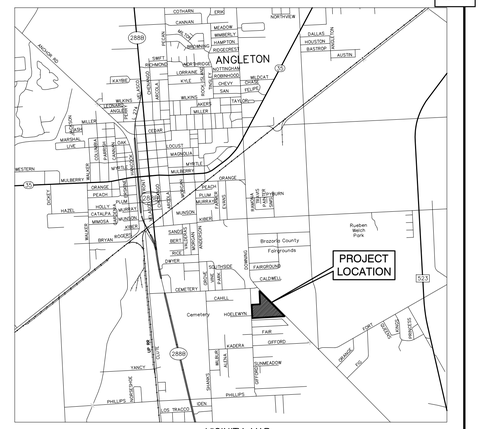
STATE OF TEXAS §
COUNTY OF BRAZORIA §

This instrument was acknowledged before me on the _____ day of _____, 20____, by

FRANCES AGUILAR, City Secretary, City of Angleton, on behalf of the City.

_____
Notary Public
State of Texas





VICINITY MAP

Curve Table					
Curve No.	Length	Radius	Delta	Chord Bearing	Chord Distance
C1	42.25'	50.00'	48°24'39"	S68°49'03"E	41.00'
C2	36.29'	50.00'	41°35'21"	S23°49'03"E	35.50'
C3	261.80'	50.00'	300°00'00"	N03°01'22"W	50.00'

Line Table		
Line No.	Length	Direction
L1	31.01'	S03°01'22"E
L2	3.61'	N45°23'16"E

LEGEND

A.D.D. = ANGLETON DRAINAGE DISTRICT
B.C.C.F. = BRAZORIA COUNTY CLERK'S FILE
B.C.D.R. = BRAZORIA COUNTY DEED RECORDS
B.C.P.R. = BRAZORIA COUNTY PLAT RECORDS
B.L. = BUILDING LINE
U.E. = UTILITY EASEMENT
D.E. = DRAINAGE EASEMENT
BM = BENCHMARK
D.D.E. = DRAINAGE AND DETENTION EASEMENT
G.B.L. = GARAGE BUILDING LINE
FND = FOUND
I.R. = IRON ROD
I.P. = IRON PIPE
P.O.B. = POINT OF BEGINNING
R.O.W. = RIGHT-OF-WAY
STM.S.E. = STORM SEWER EASEMENT
VOL., Pg. = VOLUME, PAGE

SYMBOLS

○ = SET 5/8" I.R. W/CAP "BAKER & LAWSON"
◉ = FOUND MONUMENT (AS NOTED)
◆ = (TBM) TEMPORARY BENCHMARK

ANGLETON DRAINAGE DISTRICT

ANGLETON DRAINAGE DISTRICT ACCEPTED, THIS THE _____ DAY OF _____, 20_____, THE BOARD OF SUPERVISORS OF THE ANGLETON DRAINAGE DISTRICT DOES NOT WARRANT, REPRESENT OR GUARANTEE:

1. THAT DRAINAGE FACILITIES OUTSIDE THE BOUNDARIES OF THE SUBDIVISION PLAT ARE AVAILABLE TO RECEIVE RUNOFF FROM THE FACILITIES DESCRIBED IN THIS PLAT.

2. THAT DRAINAGE FACILITIES DESCRIBED IN THIS PLAT ARE ADEQUATE FOR RAINFALL IN EXCESS OF ANGLETON DRAINAGE DISTRICT MINIMUM REQUIREMENTS.

3. THAT BUILDING ELEVATION REQUIREMENTS HAVE BEEN DETERMINED BY THE ANGLETON DRAINAGE DISTRICT.

4. THAT THE DISTRICT ASSUMES ANY RESPONSIBILITY FOR CONSTRUCTION, OPERATION OR MAINTENANCE OF SUBDIVISION DRAINAGE FACILITIES.

THE DISTRICT'S REVIEW IS NOT INTENDED NOR WILL SERVE AS A SUBSTITUTION OF THE OVERALL RESPONSIBILITY AND/OR DECISION MAKING POWER OF THE PARTY SUBMITTING THE PLAT OR PLAN HEREIN, THEIR OR ITS PRINCIPALS OR AGENTS.

_____ _____
CHAIRMAN, BOARD OF SUPERVISORS BOARD MEMBER

_____
BOARD MEMBER

NOTES:

1. ALL BEARINGS AND DISTANCES ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD-83, U.S. SURVEY FEET.

2. FLOOD ZONE STATEMENT: ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR BRAZORIA COUNTY, MAP NUMBER 48039C0445H, WITH EFFECTIVE DATE OF JUNE 05, 1989, THE PROPERTY SURVEYED LIES FULLY WITHIN ZONE "X" (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD-PLAIN. WARNING: THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES WILL BE FREE FROM FLOODING OR FLOOD DAMAGE, AND WILL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

3. REFERENCE BENCHMARK:
NGS MONUMENT R1182 (PID AW1171)
A BRASS DISK STAMPED R1182, ON THE NORTH LINE OF CR 171, ON THE CURB OF A BRIDGE, APPROXIMATELY 275 SOUTHWEST OF INTERSECTION WITH CR 428.
ELEVATION = 26.31 FEET NGVD29

4. THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES OR SUBSURFACE CONDITIONS OTHER THAN THOSE SHOWN MAY AFFECT THE USE AND DEVELOPMENT OF THE SUBJECT PROPERTY SHOWN HEREON.

5. NOTICE: SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF THE UNIFIED DEVELOPMENT CODE OF THE CITY OF ANGLETON AND STATE PLATTING STATUTES AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.

6. NOTICE: PLAT APPROVAL SHALL NOT BE DEEMED TO OR PRESUMED TO GIVE AUTHORITY TO VIOLATE, NULLIFY, VOID, OR CANCEL ANY PROVISIONS OF LOCAL, STATE, OR FEDERAL LAWS, ORDINANCES, OR CODES.

7. NOTICE: THE APPLICANT IS RESPONSIBLE FOR SECURING ANY FEDERAL PERMITS THAT MAY BE NECESSARY AS THE RESULT OF PROPOSED DEVELOPMENT ACTIVITY. THE CITY OF ANGLETON IS NOT RESPONSIBLE FOR DETERMINING THE NEED FOR, OR ENSURING COMPLIANCE WITH ANY FEDERAL PERMIT.

8. NOTICE: APPROVAL OF THIS PLAT DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD OR REGISTERED PUBLIC LAND SURVEYOR IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY THE CITY ENGINEER.

9. NOTICE: ALL RESPONSIBILITY FOR THE ADEQUACY OF THIS PLAT REMAINS WITH THE ENGINEER OR SURVEYOR WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF ANGLETON MUST RELY ON THE ADEQUACY OF THE WORK OF THE ENGINEER AND/OR SURVEYOR OF RECORD.

10. SIDEWALKS SHALL BE REQUIRED PER ANGLETON LDC SEC. 23.14 – SIDEWALKS AND ACCESSIBILITY.

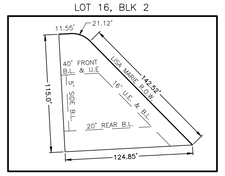
11. A MINIMUM OF TWO PARKING SPACES ON THE SAME LOT AS THE MAIN STRUCTURE AND ON A PAVED DRIVEWAY HAVING A MINIMUM LENGTH OF 20 FEET AS MEASURED FROM THE STREET RIGHT-OF-WAY LINE.

12. NOTICE: PRIVACY FENCING CROSSING PERPENDICULAR TO THE 15' DRAINAGE EASEMENT SHALL PROVIDE ADEQUATE OPENING (1 S.F. MINIMUM) FOR FLOW THROUGH FENCE OPENING.

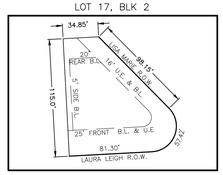
13. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR PROPERTY OWNER ASSOCIATION TO MAINTAIN, DETENTION, DRAINAGE, AND UTILITY RESERVE TRACT PER ANGLETON LDC REQUIREMENTS; SEC. 23-19 RESERVATIONS.

14. ALL REAR BUILDING LINES SHALL BE 20 FEET FROM PROPERTY LINE. THE SIDE BUILDING LINES SHALL BE 5 FEET FOR INTERIOR SIDE LOTS, AND 16 FEET FOR LOTS ADJACENT TO THE ROW. THE FRONT BUILDING LINE SHALL BE 25 FEET. THE FOLLOWING EXCEPTIONS WILL BE APPLIED.
14.1. LOT 16, BLOCK 2 SHALL HAVE A 40 FEET FRONT BUILDING LINE.
14.2. LOT 25, BLOCK 1 SHALL HAVE A 25 FEET SIDE SETBACK TO LAURA LEIGH LANE ROW.
14.3. LOTS 1 & 51, BLOCK 1 AND LOTS 1 & 34, BLOCK 2 SHALL HAVE A SIDE BUILDING LINE OF 11 FEET ADJACENT TO THE GIFFORD ROW. THE AFFECTED LOTS SHALL HAVE A 1 FOOT RESERVE TO PROHIBIT DRIVEWAY ACCESS TO GIFFORD ROAD.

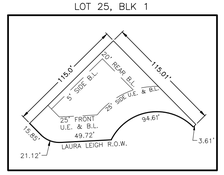
LOT 16, BLK 2



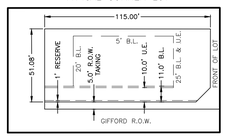
LOT 17, BLK 2



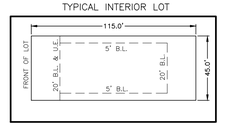
LOT 25, BLK 1



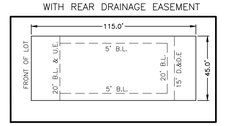
TYPICAL CORNER LOT



TYPICAL INTERIOR LOT



TYPICAL INTERIOR LOT
WITH REAR DRAINAGE EASEMENT



KNOW ALL MEN BY THESE PRESENTS:
That I, Miguelangel A. Sauceda, do hereby certify that proper engineering consideration has been provided in this plat. To the best of my knowledge, this plat conforms to all requirements of the Angleton LDC, except for any variances that were expressly granted by the City Council.

SIGNED: _____
Miguelangel A. Sauceda DATE
PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 121992

KNOW ALL MEN BY THESE PRESENTS:
That I, Devin R. Royal, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown thereon were properly placed under my supervision.

SIGNED: _____
DEVIN R. ROYAL DATE
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6667

FIELD NOTES FOR 17.31 ACRE

Being a tract of land containing 17.31 acre (753,984 square feet), located Edwin Waller Survey, Abstract Number (No.) 134, in Brazoria County, Texas; Said 17.31 acre being all Lots 1 through 7 and Lot 16 of the Gifford Meadows Subdivision, as recorded in Plat No. 2018064548 of the Brazoria County Plat Records (B.C.P.R.); Said 17.31 acres being more particularly described by metes and bounds as follows (bearings are based on the Texas Coordinate System of 1983, (NAD83) South Central Zone, per GPS observations):

BEGINNING at a 1/2-inch iron rod found on the southwest line of a called ten-foot drainage easement recorded in Volume (Vol.) 854, Pg. 591 of the Brazoria County Deed Records (B.C.D.R.), at the southeast corner of a called 0.29 acre tract recorded in the name of Khowaja Sultan Ali under B.C.C.F. No. 1991023077, at the northeast corner of Lot 15 of said Gifford Meadows, for the north corner of the herein described tract;

THENCE, with the southwest line of said drainage easement and the northeast line of said Gifford Meadows, South 44 degrees 36 minutes 43 seconds East, a distance of 1,498.81 feet to a 5/8-inch iron rod with cap stamped "CDW" for the northeast corner of Lot 26, Block 1 of said Gifford Estates, a subdivision recorded in Vol. 16, Page 349 of the B.C.P.R., for the southeast corner of said Gifford Meadows and the herein described tract;

THENCE, with the north line of said Gifford Estates and the south line of said Gifford Meadows, South 86 degrees 58 minutes 38 seconds West, a distance of 1,344.97 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set on the east right-of-way (R.O.W.) line of Gifford Road (seventy feet wide per Plat No. 2018064548 B.C.P.R.) at the southwest corner of said Gifford Meadows and the herein described tract;

THENCE, with the east R.O.W. line of said Gifford Road, being the west line of said Gifford Meadows, North 03 degrees 03 minutes 38 seconds West, a distance of 560.76 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set at the southwest corner of Lot 8 of said Gifford Meadows, for the northwest corner of the herein described tract;

THENCE, with the south line of said Lot 8, North 86 degrees 56 minutes 22 seconds East, a distance of 350.82 feet to a 5/8-inch iron rod with cap stamped "Baker & Lawson" set at the southeast corner of said Lot 8, for an interior corner of the herein described tract;

THENCE, with the east lines of Lots 8-15 of Gifford Meadows, North 03 degrees 03 minutes 38 seconds West, a distance of 560.00 feet to the POINT OF BEGINNING and containing 17.31 acres of land.

OWNER:
DAVID ROGERS
ADOBE HOLDINGS INC.

REVISED:

FINAL REPLAT
GIFFORD MEADOWS SUBDIVISION
A 17.31 ACRE, 85-LOT, 1 RESERVE, 2 BLOCK SUBDIVISION

BEING ALL OF LOTS 1 THROUGH 7, AND LOT 16 OF THE GIFFORD MEADOWS SUBDIVISION, PLAT No. 2018064548 B.C.P.R.
LOCATED IN THE EDWIN WALLER SURVEY, ABSTRACT No. 134
IN BRAZORIA COUNTY, TEXAS

B&L BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 EAST CEDAR ST.
ANGLETON, TEXAS 77515
OFFICE: (979) 849-6681
TBPLS No. 10052500
REG. NO. F-825

PROJECT NO.: 13743	SCALE: 1" = 100'	DRAWN BY: MAS
DRAWING NO.: 13743 PLAT	DATE: 12/28/2020	CHECKED BY: DRR

V:\2020\PROJECTS\13743\Engineering - Surveying\Survey\13743-PLAT.DWG 12/29/20 Brad Brooks

PLANS FOR CONSTRUCTION OF

PAVING, DRAINAGE AND UTILITIES ON

GIFFORD MEADOWS SUBDIVISION

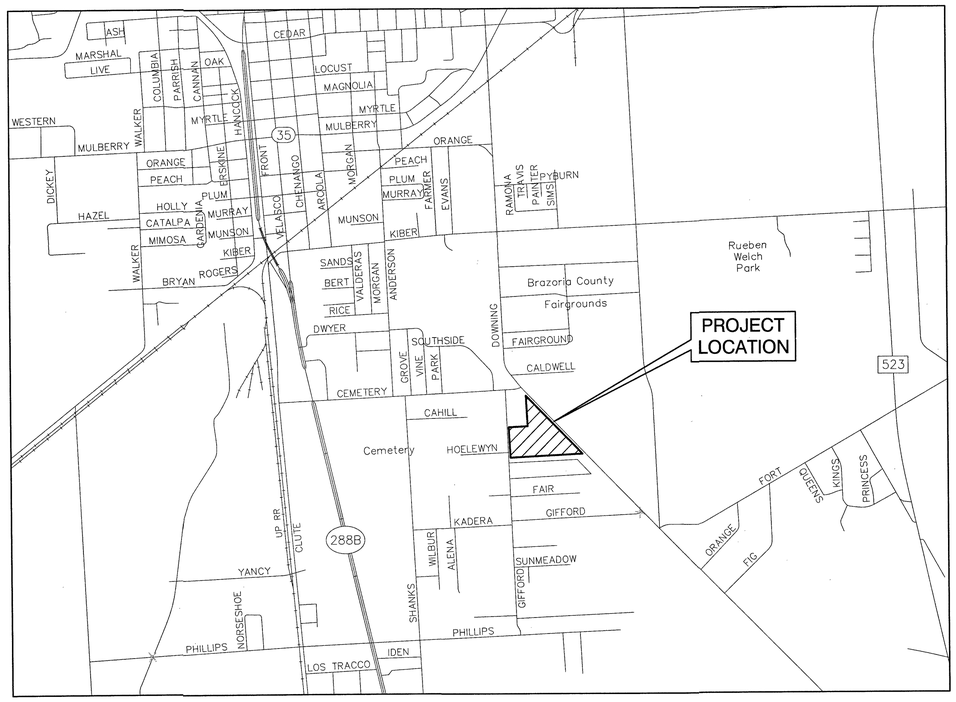
2 BLOCKS, 85 LOTS

FOR THE

CITY OF ANGLETON

BRAZORIA COUNTY

B&L JOB No. 13743



CITY OF ANGLETON

MAYOR	CITY COUNCIL
JASON PEREZ	MIKEY SVOBODA
	CECIL BOOTH
CITY MANAGER	JOHN WRIGHT
CHRIS WHITTAKER	TRAVIS TOWNSEND
	MARK GONGORA

"Release of this application does not constitute a verification of all data, information and calculations supplied by the applicant. The engineer of record is solely responsible for the completeness, accuracy and adequacy of their submittal, whether or not the application is reviewed for Code compliance by the City Engineer."

"All responsibility for the adequacy of these plans remains with the Engineer who prepared them. In approving these plans, the City of Angleton must rely on the adequacy of the work of the Design Engineer."

FLOOD ZONE STATEMENT:
ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR BRAZORIA COUNTY, MAP NUMBER 48039C0445H, WITH EFFECTIVE DATE OF JUNE 05, 1989, THE PROPERTY SURVEYED LIES FULLY WITHIN ZONE "X" (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 500–YEAR FLOOD–PLAIN. ON PROPOSED FEMA PANEL, 48039C0445K, THE SITE LIES FULLY WITHIN ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 500–YEAR FLOOD–PLAIN.

THE SITE LIES WITHIN THE BASTROP BAYOU WATERSHED (DRAINAGE AREA BB18 OF THE BRAZORIA COUNTY MASTER DRAINAGE STUDY). THE ALLOWABLE DISCHARGE RATE IS 0.74 CFS/ACRE.

N

0 1200 2400 3600 FT

GRAPHIC SCALE

INDEX OF DRAWINGS

SHEET NO.	SHEET NAME
1	TITLE SHEET
1A	PRELIMINARY PLAT
1B	FINAL PLAT
2	CONSTRUCTION NOTES
3	EXISTING CONDITIONS
4	PLAN & PROFILE - LAURA LEIGH LANE STA. 0+00 TO 5+00
5	PLAN & PROFILE - LAURA LEIGH LANE STA. 5+00 TO 10+60
6	PLAN & PROFILE - LAURA LEIGH LANE STA. 10+60 TO 11+40
7	PLAN & PROFILE - LISA MARIE DRIVE STA. 0+00 TO 5+20
8	PLAN & PROFILE - LISA MARIE DRIVE STA. 5+20 TO 8+50
9	PLAN & PROFILE - LISA MARIE DRIVE STA. 8+50 TO 11+28
10	UTILITY LAYOUT
11	DETENTION POND DESIGN AND CROSS SECTION
12	OUTFALL 1
13	DRAINAGE AREA MAP
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15	CUT AND FILL PLAN
16	SWPPP LAYOUT
17	SWPPP NARRATIVE
18	HYDRAULIC CALCULATIONS
19	WINDSTORM DATA
20	PAVEMENT MARKING, STREET SIGN AND ROADWAY LIGHTING LAYOUT

DETAIL SHEETS

21	MISCELLANEOUS DETAILS
21A	TRAFFIC CONTROL PLAN
22 (SL-03)	STORM SEWER MANHOLE CONSTRUCTION DETAILS
23 (SL-08)	STORM SEWER INLET CONSTRUCTION DETAILS II
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25 (SL-10)	STORM SEWER CONSTRUCTION DETAILS
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27 (SL-14)	SANITARY SEWER CONSTRUCTION DETAILS
28 (SL-15)	WATER LINE CONSTRUCTION DETAILS
29 (SL-16)	WATER LINE CROSSING DETAILS
30 (SL-19)	WATER LINE, SAN. SEW. F.M. BEDDING DETAILS
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34 (SL-23)	RESIDENTIAL CURB CONSTRUCTION DETAILS
35 (SL-25)	WHEEL CHAIR RAMP & SIDEWALK DETAILS I
36 (SL-26)	WHEEL CHAIR RAMP & SIDEWALK DETAILS II
37 (SL-27)	DRIVEWAY CONSTRUCTION DETAILS
38 (SL-33)	GENERAL EROSION CONTROL NOTES
39 (SL-34)	EROSION CONTROL DETAILS - 1
40 (SL-35)	EROSION CONTROL DETAILS - 2

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 12/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

TITLE SHEET

PROJECT NO. 13743

1
13743 SHEET SET.DWG

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL NOTIFY THE "UNDERGROUND UTILITY COORDINATING COMMITTEE" (TELEPHONE NO. (979) 849–4364 AND THE CITY OF ANGLETON (TELEPHONE NO. (979) 849–4364) 48 HOURS BEFORE STARTING WORK IN STREET RIGHT–OF–WAYS OR EASEMENTS.

2. ALL EXISTING UNDERGROUND UTILITIES ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM INFORMATION AVAILABLE, CONTRACTOR HAS SOLE RESPONSIBILITY FOR FIELD VERIFICATION OF ALL EXISTING FACILITIES SHOWN ON DRAWINGS. CONTRACTOR SHALL COORDINATE ALL CONFLICTS WITH THE APPROPRIATE GOVERNING AGENCY. NO SEPARATE PAY.

3. CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET, AS A MINIMUM, THE REQUIREMENTS OF OSHA SAFETY AND HEALTH REGULATION, PART 1926, SUBPART P AS PUBLISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 209, DATED OCTOBER 31, 1989.

4. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS MUTCD MOST RECENT EDITION AS REVISED) DURING CONSTRUCTION.

5. CONTRACTOR SHALL COVER OPEN EXCAVATIONS IN PUBLIC STREETS WITH ANCHORED STEEL PLATES DURING NON–WORKING HOURS.

6. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS.

7. EXISTING PAVEMENTS, CURBS, SIDEWALKS, CULVERTS AND DRIVEWAYS (ADJACENT TO THE WORK) DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO EQUAL OR BETTER THAN THEIR ORIGINAL CONDITION AT CONTRACTOR EXPENSE.

8. CONDITION OF THE ROAD AND/OR RIGHT–OF–WAY, UPON COMPLETION OF JOB, SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK. CONTRACTOR SHALL TAKE NECESSARY ACTIONS TO PROTECT THE EXISTING SURFACES OUTSIDE THE WORK AREA FROM THE EQUIPMENT USED. ALL TRACKED MACHINERY (STREET PADS INCLUDED) SHALL NOT BE OPERATED DIRECTLY ATOP THE PAVEMENT WITHOUT APPROPRIATE PADDING AND PROTECTION OF THE SURFACES. ANY MARRED OR DISTRESSED AREAS SHALL BE REMOVED AND RESTORED WITH NEW MATERIALS TO THE SATISFACTION OF THE ENGINEER. ANY EXISTING DISTRESSED AREAS SHALL BE MADE KNOWN TO THE ENGINEER PRIOR TO OPERATIONS IN THE WORK AREA.

9. ALIGNMENT, CENTERLINE CURVE DATA AND STATIONING TO BE VERIFIED BY ON–THE–GROUND SURVEY FROM APPROVED SUBDIVISION PLAT (OR APPROVED PLOT FOR OFF SITE EASEMENTS), AND ELEVATIONS OF ALL CONNECTIONS TO EXISTING FACILITIES TO BE CONFIRMED PRIOR TO WORK START. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

10. CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK.

11. CONTRACTOR SHALL ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK.

12. ALL UTILITY TRENCHES TO BE BACK FILLED TO 90 PERCENT (90%) STANDARD PROCTOR DENSITY UNLESS OTHERWISE NOTED.

13. ALL SURVEY, LAYOUT, MEASUREMENT, AND GRADE STAKE WORK SHALL BE PERFORMED BY BAKER & LAWSON, INC. AS PART OF THE WORK UNDER THIS CONTACT.

14. BAKER & LAWSON, INC. WILL PROVIDE EXPERIENCED INSTRUMENT MEN, COMPETENT ASSISTANTS, AND SUCH INSTRUMENTS, TOOLS, STAKES, AND OTHER MATERIALS REQUIRED TO COMPLETE THE SURVEY, LAYOUT AND MEASUREMENT WORK.

15. CONSTRUCTION DEBRIS AND OTHER UNCLASSIFIED UNSUITABLE EXCESS MATERIAL SHALL BE HAULED TO A STATE APPROVED DISPOSAL SITE OR AS DIRECTED BY THE ENGINEER. AN EXISTING LANDFILL APPROXIMATELY 10 MILES FROM THE PROJECT SITE IS THE NEAREST STATE APPROVED FEE FACILITY. ALL REFUSE MATERIALS (BROKEN CONCRETE, TREES, ASPHALT, ETC.) SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.

16. PLAN QUANTITIES WILL BE USED FOR FINAL PAYMENT UNLESS DESIGN CHANGES ARE MADE DURING CONSTRUCTION.

CONSTRUCTION NOTES FOR PAVING & DRAINAGE

1. GUIDELINES SET FORTH IN THE MANUAL ON UNIFORM CONTROL DEVICES SHALL BE OBSERVED.

2. FILL SHALL BE PLACED IN MAXIMUM 8" LOOSE LIFTS AND COMPACTED TO 95% OF OPTIMUM DENSITY AS DETERMINED USING TESTING METHOD ASTM D698.

3. CONTRACTOR RESPONSIBLE FOR MAINTAINING BARRICADES TO PREVENT TRAFFIC FROM USING NEW PAVEMENT UNTIL PROJECT IS COMPLETED AND ACCEPTED BY PROPER AUTHORITY OR AS AUTHORIZED BY ENGINEER.

4. B–B INDICATES ROAD WIDTH TO BACK OF CURB. CURB RADII ARE TO FACE OF CURB. T.C. INDICATES TOP OF CURB ELEVATIONS (BASED ON 4" CURB UNLESS OTHERWISE NOTED) T.P. INDICATES TOP OF PAVEMENT ELEVATION.

5. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT MAXIMUM SPACING OF 40–FOOT INTERVALS (SAWCUTS @ 20'(2 1/2"DEEP), LONGITUDINAL JOINTS SHALL BE AT MAXIMUM OF 14–FOOT SPACING. WOOD JOINT SHALL BE SOUND HEART REDWOOD.

6. 6–INCH CONCRETE PAVEMENT TO BE 5.5 SACK MIX MIN. (3,500 PSI) REINFORCING STEEL TO CONFORM TO ASTM A–615, GRADE 60. PROVIDE MINIMUM 18–INCH LAPS. (36 BAR DIA)

7. SAW CUT TO EXPOSE EXISTING LONGITUDINAL STEEL REQUIRED TO CREATE A MINIMUM TWELVE–INCH (12") OVERLAP OF PROPOSED AND EXISTING LONGITUDINAL REINFORCING STEEL WHEN MAKING A CONNECTION TO EXISTING CONCRETE PAVEMENT. WHERE SPACING OF EXISTING LONGITUDINAL STEEL DIFFERS FROM PROPOSED STEEL SPACING, NOTIFY THE ENGINEER.

8. USE PLASTIC CHAIRS TO SUPPORT REINFORCEMENT AT 24–INCH SPACING EACH WAY.

9. SUBGRADE TO BE STABILIZED 1–FOOT BACK OF PROPOSED CURB OR EDGE OF PAVEMENT. EXCESS LIME STABILIZED SOIL SHALL BE UTILIZED IN THE PREPARATION OF SUBGRADE FOR DRIVEWAYS. THERE WILL BE NO PAYMENT FOR PREPARING SUBGRADE FOR DRIVEWAYS AND SIDEWALKS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE ASSOCIATED CONCRETE PAY ITEMS. SUBGRADE PREPARATION FOR DRIVEWAYS AND PAVING SHALL INCLUDE PROOF ROLLING. SOFT AREAS TO BE EXCAVATED AND RECOMPACTED TO ADJACENT SOIL DENSITY.

10. USE CONTINUOUS LONGITUDINAL REINFORCING BAR IN CURB.

11. BACK FILL AND BEDDING FOR HEADWALL STRUCTURES, TYPE "C" INLETS, R.C.P. LEADS AND STORM SEWERS SHALL BE WITH 1.5 SACK CEMENT. STABILIZED SAND SHALL BE COMPACTED TO A DENSITY OF AT LEAST 90% OF DENSITY DETERMINED BY STANDARD MOISTURE–DENSITY RELATION (ASTM D–698) AT OPTIMUM MOISTURE AND SHALL BE PLACED AND FINISHED WITHIN 3 HRS. OF MIXING. TEMPORARY TRAVEL WAY SURFACE SHALL BE WITH CEMENT STABILIZED LIMESTONE. PAYMENT FOR THESE ITEMS SHALL BE SUBSIDIARY TO THE VARIOUS STRUCTURAL BID ITEMS. VERIFICATION OF CEMENT STABILIZED SAND MIXTURE SHALL BE FURNISHED UPON REQUEST OF ENGINEER.

12. THE SUBGRADE SHALL BE BROUGHT TO THE REQUIRED GRADE BY THE USE OF GRADE STAKES (BLUE TOPS) AND APPROVED BY THE ENGINEER BEFORE LIME IS APPLIED.

13. RATE OF APPLICATION FOR LIME SHALL BE SEVEN PERCENT (7%) OF THE DRY WEIGHT OF SOIL (QUALITY BASE ON 100 #/ C.F.) OR THIRTY ONE AND ONE HALF (31.5) POUNDS PER SQUARE YARD FOR SIX (6) INCH STABILIZED SUBGRADE. LIME STABILIZED SUBGRADE SHALL NOT BE MIXED MORE THAN ONE INCH IN EXCESS OF THE REQUIRED DEPTH. LIME STABILIZED SUBGRADE SHALL BE BROUGHT TO THE OPTIMUM MOISTURE CONTENT DURING THE FIRST MIXING OPERATIONS THEN LEFT TO CURE FOR TWO CURING DAYS BEFORE FINAL MIXING CAN BEGIN. AFTER FINAL MIXING IS COMPLETED AND BEFORE SOIL DENSITY TESTS ARE TAKEN. LIME STABILIZED SUBGRADE SHALL BE BROUGHT TO THE REQUIRED GRADE BY THE USE OF GRADE STAKES (BLUE TOPS) AND APPROVED BY THE ENGINEER. DENSITY SHALL BE NINETY–FIVE PERCENT (95%) OF THE STANDARD PROCTOR DENSITY AT OPTIMUM MOISTURE. TESTED AND COMPLETED SECTIONS SHALL BE KEPT MOIST CURED ON A DAILY BASIS WITH WATER TRUCKS OR SUBSTANTIAL SUPPLY HOSES FOR THE ENTIRE PERIOD THE SURFACE REMAINS UNCOVERED WITH ADDITIONAL COURSES. AFTER FINAL TESTING AND APPROVAL IS COMPLETE, TRACK EQUIPMENT, SCRAPERS AND OTHER HEAVY EQUIPMENT WILL NOT BE PERMITTED ON THE COMPLETED LIME STABILIZED AREA. LIGHT MOTOR GRADERS, RUBBER TIRED TRACTORS, WATER TRUCKS AND ROLLERS USED IN THE FINISHING OPERATIONS WILL BE PERMITTED WITH THE APPROVAL OF THE ENGINEER. CONCRETE AND LOADED HAUL TRUCKS ARE STRICTLY PROHIBITED ON COMPLETED AREAS UNLESS THE TRAVELED AREA REGARDLESS OF CONDITION IS REMIXED COMPACTED AND TESTED FOR APPROVAL A SECOND TIME.

14. FORMS SHALL BE EITHER WOOD OR STEEL, OF GOOD QUALITY, FREE OF WARP AND SUFFICIENTLY STAKED TO AVOID SHIFTING WHEN LOAD IS APPLIED. ALL REDWOOD EXPANSION BOARDS SHALL BE STAKED WITH 1X2 REDWOOD STAKES AND ALLOWED TO REMAIN WITHIN THE POUR. METAL STAKES ARE APPROVED FOR USE TO STAKE METAL KEYWAYS.

15. REINFORCING SHALL BE SECURELY TIED AT ALL INTERSECTIONS AND SPLICES. ALL DOWELS SHALL BE SECURELY TIED. REINFORCEMENT SHALL BE CLEAN AND FREE OF RUST AT TIME OF USE. PLASTIC CHAIR OF THE CORRECT HEIGHT SHALL BE USED. SPACING SHALL BE SUFFICIENT TO SUPPORT REINFORCEMENT.

16. PRIOR TO CONCRETE PLACEMENT, CONTRACTOR SHALL PRESENT A CERTIFIED COPY OF TOP OF FORM GRADES TO THE ENGINEER FOR REVIEW AND APPROVAL. ELEVATIONS OF FORMS SHALL BE RECORDED AT 10' INTERVALS. ADJUSTMENTS TO FORMS SHALL BE COMPLETE 4 HRS. PRIOR TO CONCRETE PLACEMENT.

17. CONCRETE FOR STREET PAVEMENTS SHALL BE "CLASS A" CONCRETE, SHALL NOT HAVE LESS THAN FIVE AND ONE HALF (5 1/2) SACKS OF CEMENT PER CUBIC YARD, AND SHALL NOT HAVE MORE THAN SIX AND ONE HALF (6 1/2) GALLONS OF WATER PER SACK OF CEMENT. SLUMP SHALL NOT EXCEED FIVE (5) INCHES AND SHALL DEVELOP A MODULUS OF RUPTURE STRENGTH OF THREE THOUSAND FIVE HUNDRED (3500) P.S.I. AT TWENTY EIGHT (28) DAYS. CONCRETE SHALL BE PLACED IN SUCH A MANNER AS TO REQUIRE AS LITTLE HANDLING POSSIBLE. USE OF AN APPROVED VIBRATING SCREED WILL BE REQUIRED. AT INTERSECTIONS AND SMALL AREAS WHERE A VIBRATORY SCREED CAN NOT BE USED, A HAND VIBRATOR OR "JITTERBUG" SHALL BE USED. USE OF A TEN FOOT (10') CONCRETE PAVEMENT STRAIGHT EDGE WILL ALSO BE REQUIRED. ALL EXPOSED JOINTS SHALL BE EDGED AS NOTED ON DETAILS. SURFACE SHALL BE TYPICALLY A BELT FINISH OR BROOM FINISH (COARSE, MEDIUM OR LIGHT) AS REQUIRED BY THE APPLICATION AND DIRECTED BY THE ENGINEER.

18. FLY ASH SHALL MAKE UP FROM 20–25% BY VOLUME OF THE SPECIFIED CEMENT VOLUME AND SHALL CONFORM TO ASTM C 618, CLASS C.

19. CURING COMPOUND SHALL BE TYPE II WITH WHITE PIGMENT. APPLIED AT THE UNDILUTED RATE OF ONE GALLON PER TWO HUNDRED (200) SQUARE FEET.

20. EXPANSION JOINTS SHALL BE CLEANED, WIRE BRUSHED, BLOWN OR FLAME DRIED SEALED WITH AN APPROVED LIST RUBBERIZED HOT LAID ASPHALT JOINT AND CRACK SEALANT OR A TWO (2) COMPONENT POLYMERIC SELF LEVELING COLD APPLIED SEALANT.

21. CONTRACTOR WILL NOT PERMIT TRAFFIC ON NEW CONCRETE PAVEMENT UNTIL BOTH A MINIMUM OF SEVEN (7) CURING DAYS AND MODULUS OF RUPTURE STRENGTH OF THREE THOUSAND FIVE HUNDRED (3500) P.S.I. TAKES PLACE OR AS APPROVED BY THE ENGINEER/PUBLIC WORKS DEPARTMENT.

22. CONCRETE FOR CURB SHALL BE A 3000 P.S.I. PERFORMANCE STRENGTH CONCRETE WITH A MINIMUM FIVE (5) SACK CEMENT PER CUBIC YARD CONTENT. CURB CONCRETE MIX MAY BE A SMALL AGGREGATE BATCH DESIGN.

23. A CONCRETE MIX DESIGN OF CONCRETE PLUS FLY ASH MAY BE SUBSTITUTED IN LIEU OF THE STANDARD CONCRETE BATCH DESIGN. THE FLY ASH SHALL CONFORM TO THE REQUIREMENTS OF TXDOT MATERIAL SPECIFICATION D–9–8900, AND SHALL NOT EXCEED 25% BY ABSOLUTE VOLUME OF THE SPECIFIED CEMENT CONTENT. THE MODULUS OF RUPTURE STRENGTHS MINIMUMS AND DEVELOPMENT PERIOD OF THE STANDARD CONCRETE MIX DESIGN SHALL REMAIN IN EFFECT AND SHALL BE VERIFIED BY A CONCRETE BATCH MIX DESIGN PREPARED AND TESTED BY A GEOTECHNICAL LAB AND SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY ENGINEERING/PUBLIC WORKS DEPARTMENT PRIOR TO PAVING OPERATIONS.

24. ALL PAVEMENT SAW CUT REQUIRED IN THE PLANS SHALL BE CONSIDERED SUBSIDIARY TO THE PAVING REMOVAL PAY ITEM REQUIRING IT.

25. BLOCK SOD SHALL BE PLACED 16" (ONE BLOCK WIDTH) WIDE ALONG THE EDGE OF ALL NEWLY CONSTRUCTED CURBS AND TO DRIVEWAY REPLACEMENT LIMITS.

26. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANALYZING WEATHER CONDITIONS AND TO SUSPEND OPERATIONS DURING PERIODS WHEN ADVERSE WEATHER CONDITIONS APPEAR LIKELY. NO CONCRETE SHALL BE PLACED WHEN THE TEMPERATURE IS 35°F AND RISING. HOWEVER, NO CONCRETE SHALL BE PLACED WHEN THE CONCRETE TEMPERATURE IS ABOVE 100°F. THE CONTRACTOR SHALL KEEP SUFFICIENT LENGTH OF COVERING MATERIAL ON THE JOB SITE TO PLACE OVER AND PROTECT THE SURFACE OF "FRESH" CONCRETE DURING PERIODS OF UNPREDICTED RAINS.

WASTEWATER CONSTRUCTION NOTES

1. CONTRACTOR SHALL PROVIDE RECORD OF LOCATION OF ALL STACKS, STUBS, LEADS, ETC. TO CITY OF ANGLETON.

2. SEPARATION DISTANCES FOR ALL SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL BE GOVERNED BY THE "TEXAS NATURAL RESOURCE CONSERVATION COMMISSION RULES AND REGULATIONS FOR DESIGN CONSERVATION COMMISSION RULES AND REGULATIONS FOR DESIGN CRITERIA FOR SEWAGE SYSTEMS "SECTION 317.20," LATEST PRINTING.

3. MAINTAIN 12–INCH MINIMUM VERTICAL CLEARANCE AT CROSSINGS BETWEEN SANITARY SEWERS AND CULVERTS, UNLESS OTHERWISE NOTED.

4. WHERE SANITARY SEWER LINE CROSSES A WATER LINE WITH LESS THAN 9–FEET BUT MORE THAN 6–INCHES VERTICAL SEPARATION, PROVIDE ONE MINIMUM 18–FOOT JOINT OF PRESSURE RATED P.V.C. SANITARY SEWER (ASTM D2241, CLASS 150, SDR 26) CENTERED ON WATER LINE. INCLUDE COST OF WATER LINE CROSSING IN UNIT PRICE BID PER LINEAR FOOT FOR SANITARY SEWER IN APPROPRIATE SIZES.

5. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY UNSUITABLE TRENCH CONDITIONS.

6. SANITARY SEWER LEADS UNDER OR WITHIN 1' OF EXISTING OR FUTURE PAVEMENT SHALL BE BACK FILLED WITH CEMENT STABILIZED SAND UP TO WITHIN 1' OF TOP OF PAVING SUBGRADE. CEMENT STABILIZED SAND BACK FILL FOR LEADS SHALL BE INCLUDED IN THE BID UNIT PRICE FOR LEADS.

7. LOW PRESSURE AIR TEST SHALL BE CONDUCTED PER TNRCC TAC 317.2. HOLDING TIMES SHALL BE AS ESTABLISHED BY TNRCC. CONTRACTOR TO PROVIDE TEST PLUGS AND RISERS. NO SEPARATE PAY.

8. CONTRACTOR TO OPEN CUT ALL SANITARY SEWER CONSTRUCTION UNLESS NOTE OTHER WISE, SEWER SERVICES TO BE INSTALLED FULL WIDTH OF ROADWAY.–NO HALF STREET INSTALLATIONS.

9. CONTRACTOR SHALL AT ALL TIMES PROVIDE MAXIMUM UNINTERRUPTED SERVICE AND SHALL AVAIL OF ANY ROUTING METHOD AND EQUIPMENT TO ACCOMPLISH THIS.

10. ALL SINGLE AND DOUBLE SERVICE LEAD SHALL BE A MINIMUM SIX INCH (6") UNLESS OTHERWISE DIRECTED BY THE ENGINEER/PUBLIC WORKS AND/OR FIELD ADJUSTED BY THE UTILITY DEPARTMENT IN THE FUTURE.

WATER CONSTRUCTION NOTES

1. CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND TEST PRESSURE AS SPECIFIED IN CONTRACT DOCUMENTS. THRUST BLOCKING SHALL BE CLASS "B" CONCRETE 2500 P.S.I. AND SHALL BE SUBSIDIARY TO THE BID ITEM PERTINENT TO ITS USE. ALL CEMENT STABILIZED SAND BACKFILL SHALL BE 1.5 SK/CY CEMENT CONTENT. ALL M.J. D.I. FITTINGS WILL HAVE M.J. RESTRAINTS (STARGRIP OR EQUAL) WRAP FITTINGS & RESTRAINTS WITH 10 MIL POLY.

2. SEPARATION DISTANCES OF ALL WATER MAIN AND SANITARY SEWER MAIN CONSTRUCTION SHALL BE GOVERNED BY THE "TEXAS NATURAL RESOURCE CONSERVATION COMMISSION RULES AND REGULATIONS FOR DESIGN CRITERIA FOR SEWAGE SYSTEMS," SECTION 317.20, LATEST PRINTING.

3. ALL 4" THROUGH 12" WATER MAINS TO BE P.V.C. PIPE, AWWA C–900, CLASS 150, SDR 18, MEETING THE REQUIREMENTS OF ANSI/NSF 61 UNLESS OTHERWISE NOTED.

4. WATER LINES UNDER OR WITHIN 1 FEET OF NEW OR EXISTING PAVEMENTS (STREETS AND DRIVEWAYS) SHALL BE BACK FILLED WITH CEMENT STABILIZED SAND AS SPECIFIED IN THE CONSTRUCTION DETAIL.

5. PROVIDE A MINIMUM SIX–INCHES (6") OF CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.

6. 4–INCH THROUGH 12–INCH LINES TO HAVE A MINIMUM OF 4'–0" COVER BELOW TOP OF CURB. UNLESS OTHERWISE NOTED, VARY FLOW LINE UNIFORMLY FROM DEPTH SHOWN ON PLANS.

7. CENTERLINE OF FIRE HYDRANT TO BE LOCATED AT 3' FROM BACK OF CURB WITH CENTERLINE OF STEAMER NOZZLE 22 INCHES ABOVE FINISHED GRADE. TURN STEAMER OUTLET TO FACE STREET.

8. WHERE WATER LINE CROSSES SANITARY SEWER LINE OR LEAD WITH LESS THAN NINE FEET (9') VERTICAL SEPARATION, PROVIDE ONE MINIMUM 18–FOOT JOINT OF WATER LINE CENTERED ON LEAD. INCLUDE COST OF LEAD CROSSING IN UNIT PRICE BID PER LINEAR FOOT FOR WATER LINE IN APPROPRIATE SIZES.

9. THE CONTRACTOR AT ALL TIMES PROVIDE MAXIMUM UNINTERRUPTED FLOW TO ALL SERVICES AND MAINS AND SHALL AVAIL OF ANY ROUTING METHOD AND EQUIPMENT TO ACCOMPLISH THIS.

CENTERPOINT ENERGY / ENTEX NOTES

CAUTION: UNDERGROUND GAS FACILITIES

LOCATIONS OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY, INTRASTATE PIPELINE, LLC. WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE NOT USUALLY SHOWN. OUR SIGNATURE ON THESE PLANS ONLY INDICATES THAT OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT (979) 849–4364 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

* WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (800) 752–8036 OR (713) 659–2111 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.

* WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON–MECHANIZED EXCAVATION PROCEDURES.

* WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.

* FOR EMERGENCIES REGARDING GAS LINES CALL (800) 659–2111 OR (713) 659–2111.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

ACTIVITIES ON OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713) 207–5769.

WARNING: OVERHEAD ELECTRICAL FACILITIES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY AT 713–207–2222.

SBC NOTES

THE LOCATIONS OF SOUTHWESTERN BELL TELEPHONE CO. UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.

TEXAS NEW MEXICO POWER NOTES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH AND SAFETY CODE FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL TEXAS NEW MEXICO POWER AT (979) 345–5667.

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ANGLETON CONSTRUCTION MANUAL (ACM) AND LAND DEVELOPMENT CODE, HEREAFTER REFERRED TO THE ACM AND THE LDC.

2. APPROVAL OF THESE CONSTRUCTION PLANS DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY, ADEQUACY, AND COMPLIANCE OF THE SUBMITTED PLANS.

3. ALL RESPONSIBILITY FOR DESIGN RESTS ON ENGINEER WHO PREPARED THEM, IN APPROVING THESE PLANS, THE CITY MUST RELY ON THE ADEQUACY AND ACCURACY OF THE DESIGN ENGINEER.

4. DESIGNS SHALL BE IN COMPLETE COMPLIANCE WITH THE LDC AND THE ACM. ANY WAIVER, DEVIATION, VARIANCE, OR EXCEPTION FROM ANY SPECIFIC REQUIREMENT(S) OF THE LDC OR ACM THAT WERE NOT EXPRESSLY REQUESTED WHEN PLANS ARE SUBMITTED, SHALL NOT BE CONSTRUED TO HAVE BEEN GRANTED IF PLANS ARE APPROVED. IT IS THE RESPONSIBILITY OF THE ENGINEER TO MAKE SUCH A WAIVER PROACTIVELY WHEN PLANS ARE SUBMITTED.

5. A MINIMUM OF TWO EXISTING BENCHMARKS SHOULD BE SHOWN ON THE PLANS. IN ADDITION, TWO PERMANENT BENCHMARKS PER SUBDIVISION SHALL BE INSTALLED IN EACH NEW SUBDIVISION TO INCLUDE DESCRIPTION, LOCATION, AND ELEVATION AND TIE TO CITY STANDARDS.

6. CAST BRONZE SURVEY MARKERS SHALL BE PLACED IN CONCRETE IN PERMANENT, ACCESSIBLE LOCATIONS AT THE TIME OF CONSTRUCTION. THE LOCATIONS OF THE MARKERS SHALL BE INDICATED ON THE CONSTRUCTION PLANS. A MINIMUM OF ONE MARKER SHALL BE PLACED FOR EACH 20 ACRES OF THE PROJECT.

7. PRIOR TO BEGINNING CONSTRUCTION, THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONVENE A PRE–CONSTRUCTION CONFERENCE WITH THE CITY, THE DEVELOPER'S CONSULTING ENGINEER, CONTRACTOR, AND ANY OTHER AFFECTED PARTIES. THE CITY SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE TIME OF THE CONFERENCE AND 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.

8. THE CONTRACTOR SHALL PROVIDE THE CITY A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.

9. BARRICADES, BUILT TO CITY SPECIFICATIONS, SHALL BE CONSTRUCTED ON ALL DEAD–END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB SAFETY.

10. IF BLASTING IS PLANNED, A BLASTING PERMIT MUST BE SECURED PRIOR TO COMMENCEMENT OF ANY BLASTING.

11. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE BEFORE ACCEPTANCE OF THE SUBDIVISION.

12. THE LOCATION OF ANY WATER OR WASTEWATER LINES SHOWN ON THE PLANS MUST BE VERIFIED BY THE PUBLIC WORKS DEPARTMENT.

13. USE ONE CALL UTILITY SYSTEM: DIAL 1–800–344–8377, 48 HOURS BEFORE YOU DIG.

14. ALL STORM SEWER PIPES TO BE CLASS III RCP UNLESS NOTED OTHERWISE. SPECIAL NOTES FOR PLANS, WHEN APPLICABLE.

15. CONSTRUCTED STREET SECTIONS SHALL SHOW THE FOLLOWING:

a. PROVIDE STREET NAMES, WIDTH OF R.O.W., OR OTHER METHODS TO IDENTIFY PROPOSED DESIGN OF DIFFERENT PAVEMENT THICKNESS. IN WRITING OR GRAPHICALLY, DESCRIBE THE STREET SECTION(S) TO BE CONSTRUCTED.
b. MANHOLE FRAMES, COVERS, AND WATER VALVE COVERS WILL BE RAISED TO FINISHED PAVEMENT GRADE AT THE OWNER'S EXPENSE BY A QUALIFIED CONTRACTOR WITH CITY INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION.
c. GROWNS OF INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40 FEET FROM THE INTERSECTING CURB LINE UNLESS OTHERWISE NOTED. INLETS ON THE INTERSECTING STREET SHALL NOT BE CONSTRUCTED WITHIN 40 FEET OF THE VALLEY GUTTER, UNLESS OTHERWISE NOTED.
d. PRIOR TO FINAL ACCEPTANCE OF A STREET OUTSIDE THE CITY LIMITS, STREET NAME SIGNS CONFORMING TO COUNTY STANDARDS SHALL BE INSTALLED BY DEVELOPER.
e. SIDEWALK REQUIREMENTS (GIVE STREET NAME AND LOCATION OF REQUIRED SIDEWALK, I.E., NORTH, SOUTH, EAST, OR WEST SIDE).
f. A CURB LAY DOWN WHERE REQUIRED WHEN ALL POINTS OF SIDEWALKS INTERSECTS CURBS.
g. INSIDE THE CITY LIMITS, SIDEWALKS SHALL BE COMPLETED PRIOR TO ACCEPTANCE OF ANY DRIVEWAY APPROACHES AND/OR ISSUANCE OF A CERTIFICATE OF OCCUPANCY. WHEN OUTSIDE THE CITY LIMITS, A LETTER OF CREDIT MAY BE POSTED OR OTHER SUITABLE FINANCIAL ARRANGEMENTS MAY BE MADE TO ENSURE CONSTRUCTION OF THE SIDEWALKS. IN EITHER CASE, SIDEWALKS ADJACENT TO "COMMON AREAS", PARKWAYS, OR OTHER LOCATIONS ON WHICH NO BUILDING CONSTRUCTION WILL TAKE PLACE, MUST BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE OF THE SUBDIVISION.
h. A LICENSE AGREEMENT FOR LANDSCAPING MAINTENANCE AND IRRIGATION IN STREET R.O.W, SHALL BE EXECUTED BY THE DEVELOPER IN PARTY

CALLED 0.2755 ACRES
ZNJ ENTERPRISES, INC.
B.C.C.F. No. 2013053930

CALLED 0.23 ACRES
JEFFERY HERDER AND
BILLIE HERDER
B.C.C.F. No. 2014043074
2001005714

CALLED 0.209 ACRES
KHOWAJA SULTAN ALI
B.C.C.F. No. 1991023077

50' DRAINAGE MAINTENANCE ESMT.
PLAT No. 2018064548 B.C.P.R.
ABANDONED

REMOVE 70 LF 30" HDPE OUTFALL

COUNTY ROAD 343
(S. DOWNING ROAD)

DITCH "A"

DEMO 845 LF WOOD FENCE

10' DRAINAGE EASEMENT
VOL. 854, Pg. 591 B.C.D.R.

OWNER TO COORDINATED
REMOVAL OF TNMP BOXES
AND ASSOCIATED ACCESSORIES

16' U.E. & B.L.

COUNTY ROAD 407
(GIFFORD ROAD)

HOELEWYN DRIVE

GIFFORD ESTATES
VOL. 16, Pg. 349 B.C.P.R.

15' D.E.
VOL. 16, Pg. 349
B.C.P.R.

10' U.E.
VOL. 16, Pg. 349
B.C.P.R.

PROJECT BENCHMARK:

NGS MONUMENT R1182 (PID AW1171):
A BRASS DISK STAMPED R1182 SET ON CONCRETE CURB OF BRIDGE ON THE NORTH SIDE OF COUNTY ROAD 171.
EELVATION = 26.31 FEET NGVD29

SITE BENCHMARKS:

TBM "A":
A 60D NAIL SET IN A POWERPOLE IN THE NORTHWEST CORNER OF THE INTERSECTION OF GIFFORD ROAD AND HOELEWYN DR.
ELEVATION = 22.10 FEET NGVD29

TBM "B":
A "BOX" CUT IN CONCRETE HEADWALL IN THE SOUTHWEST CORNER OF THE INTERSECTION OF CEMETARY ROAD AND S. DOWNING STREET.
ELEVATION = 23.19 FEET NGVD29

0 30 60 120
SCALE : 1" = 60'

DEMO 845 LF WOOD FENCE

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6581 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 12/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

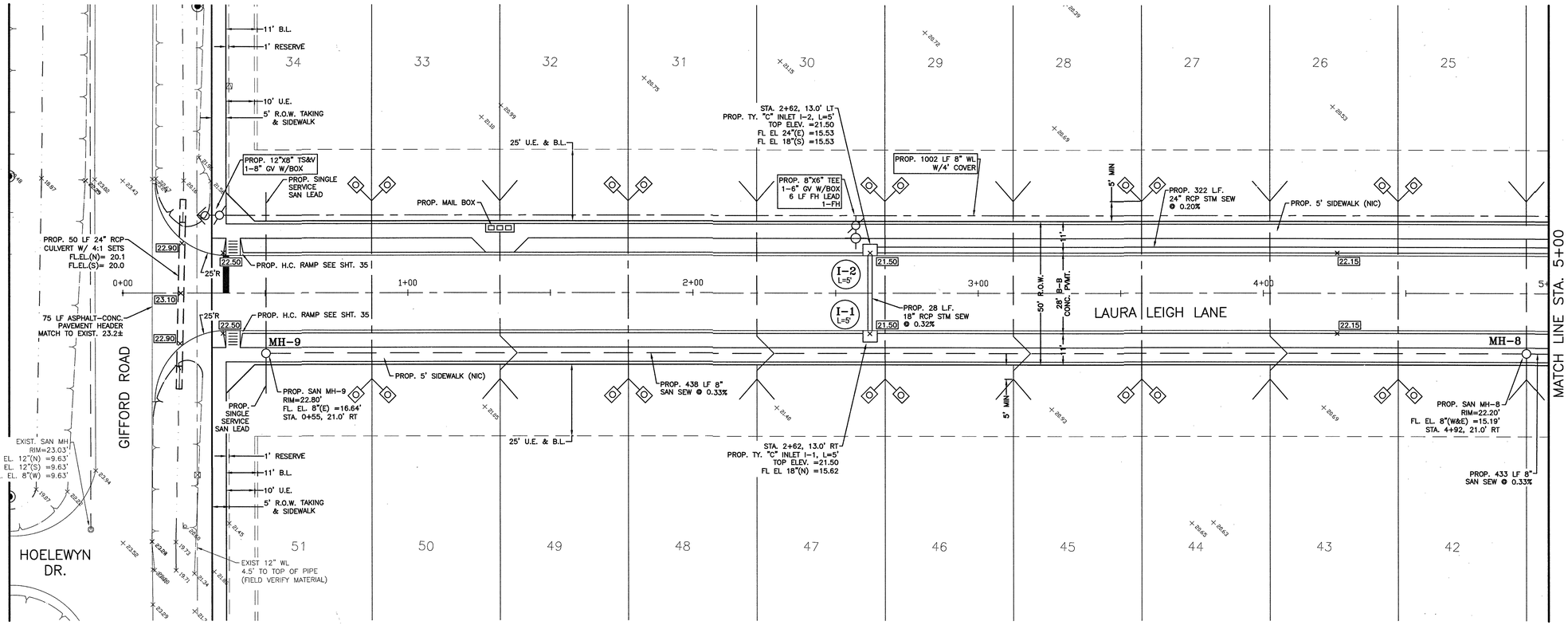
PLAN: 1" = 60'
PROFILE:
HORIZONTAL:
VERTICAL:

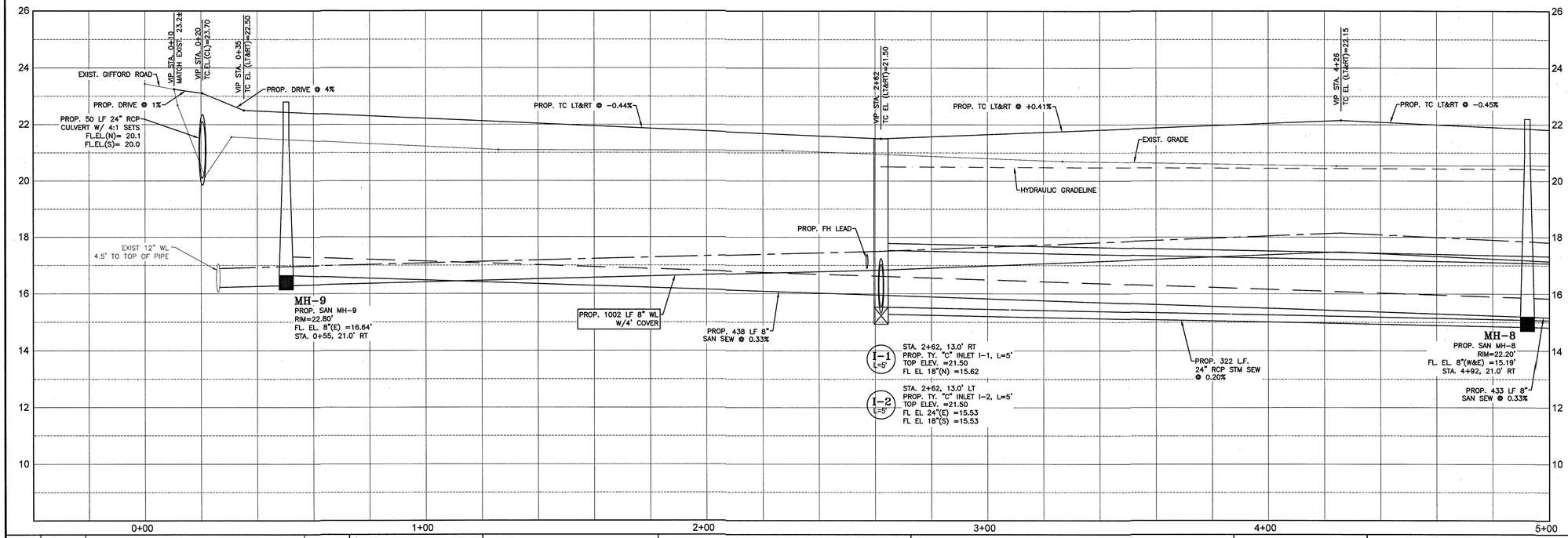
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

EXISTING CONDITIONS

PROJECT NO. 13743

13743 SHEET SET.DWG





SYMBOLS LEGEND

- WATER METER
- FIRE HYDRANT
- WATER VALVE
- TAPPING SLEEVE AND VALVE
- REDUCER
- STORM SEWER MANHOLE (SMH-1)
- SANITARY SEWER MANHOLE (MH-1)
- TOP BANK
- STORM SEWER LINE (REINFORCED CONCRETE PIPE, ASTM C76)
- SANITARY SEWER LINE (D3034, SDR 26, 160 PR)
- WATERLINE (AWWA C900, CLASS 150, DR18)

NO.	DATE	DESCRIPTION	APPROVED

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DATE

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Date: 12/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

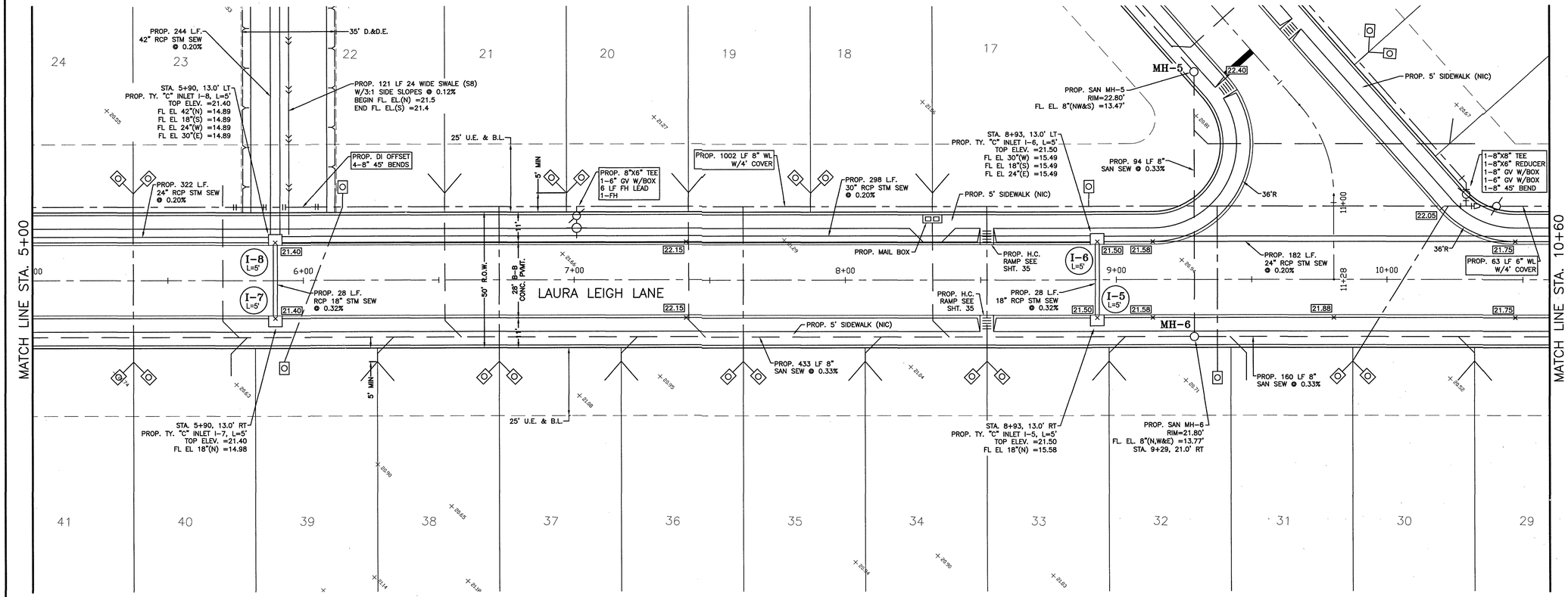
PLAN: 1" = 20'
PROFILE:
HORIZONTAL: 1" = 2'
VERTICAL: 1" = 20'

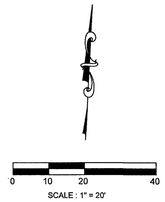
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

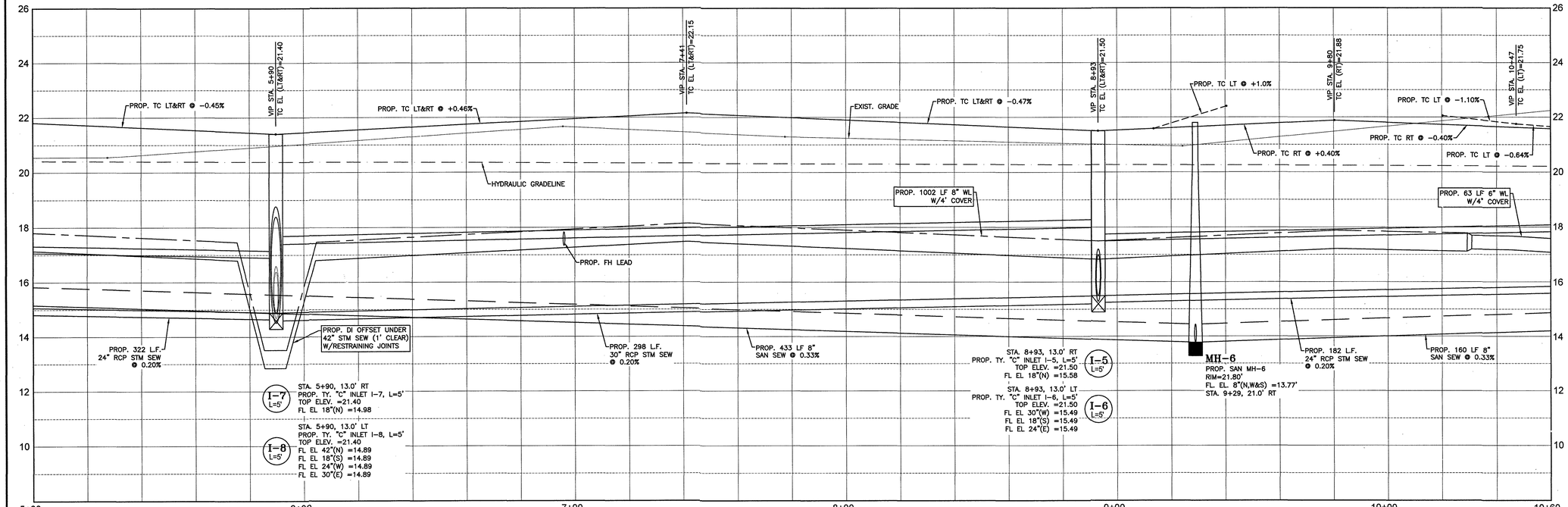
PLAN & PROFILE
LAURA LEIGH LANE
STA. 0+00 TO 5+00

PROJECT NO. 13743

13743 SHEET SET.DWG







SYMBOLS LEGEND

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ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

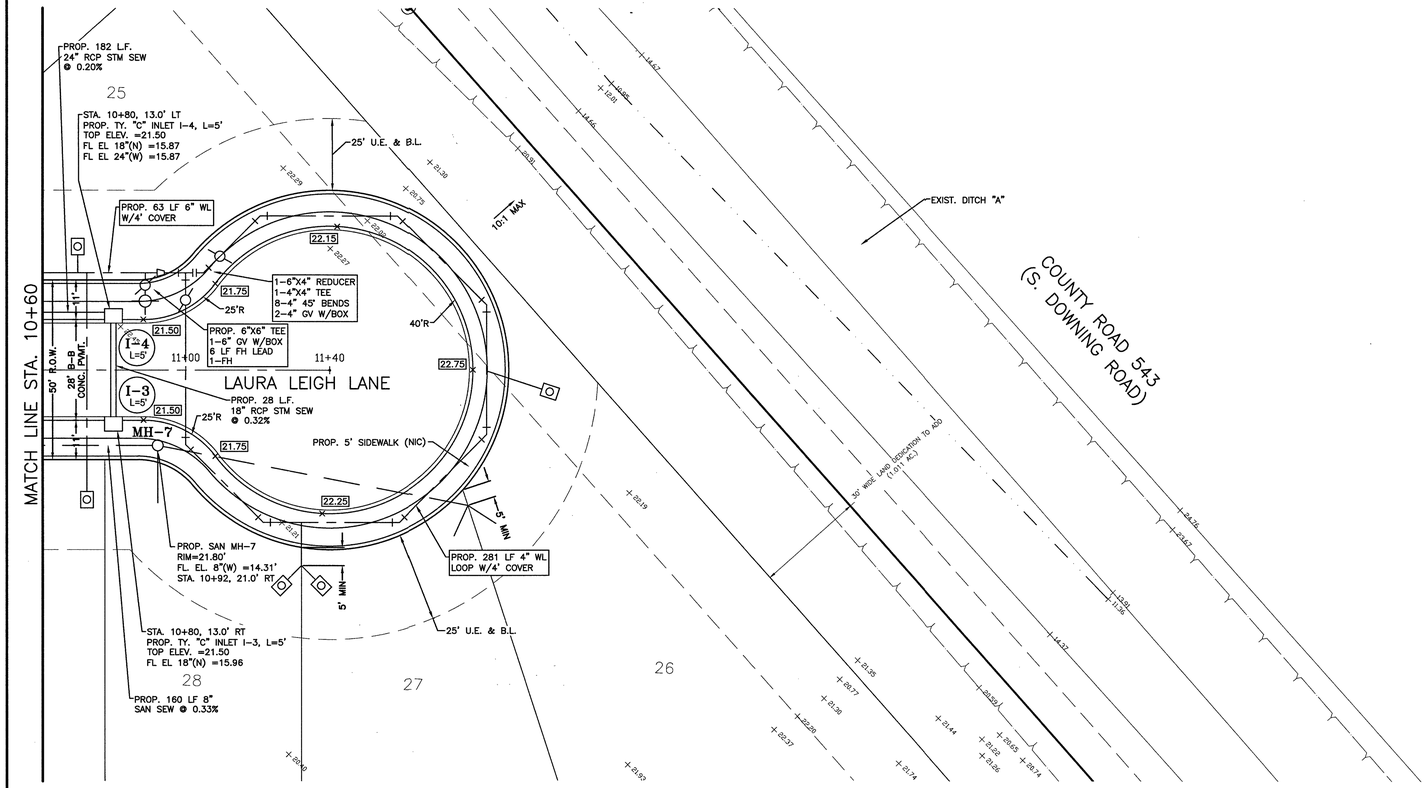
PLAN: 1" = 20'
PROFILE:
HORIZONTAL: 1" = 2'
VERTICAL: 1" = 20'

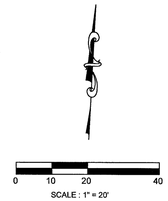
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

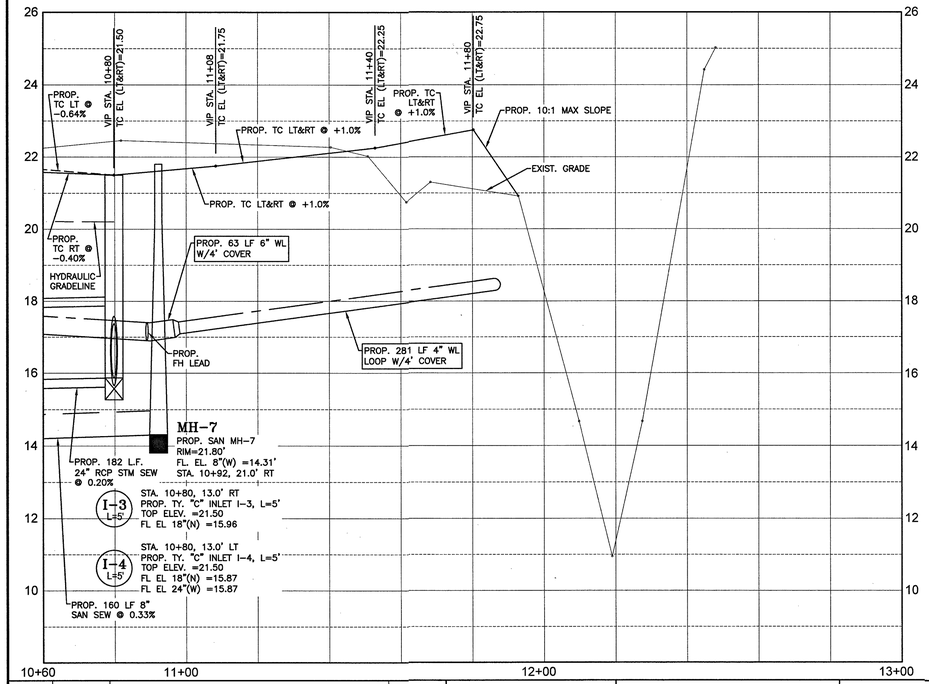
PLAN & PROFILE
LAURA LEIGH LANE
STA. 5+00 TO 10+60

PROJECT NO. 13743

13743 SHEET SET.DWG







SYMBOLS LEGEND

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HOUSTON TX. 77057

PLAN: 1" = 20'
PROFILE:
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VERTICAL: 1" = 20'

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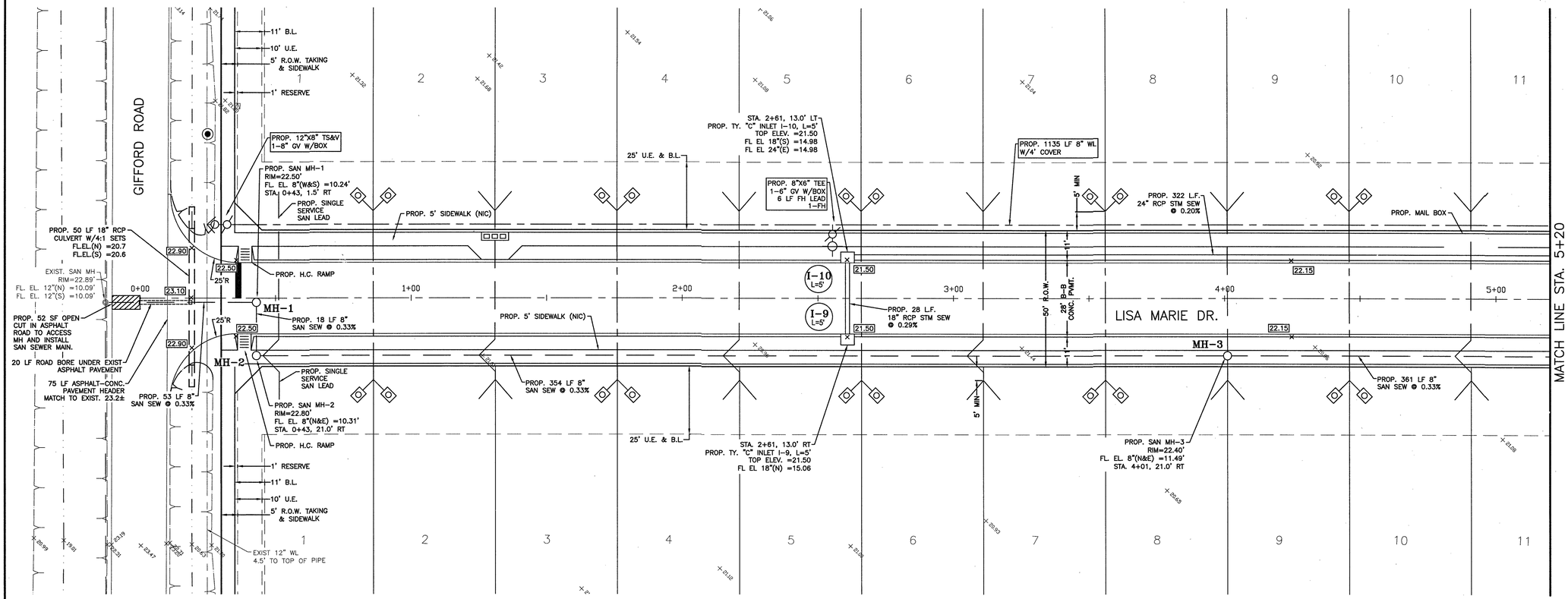
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

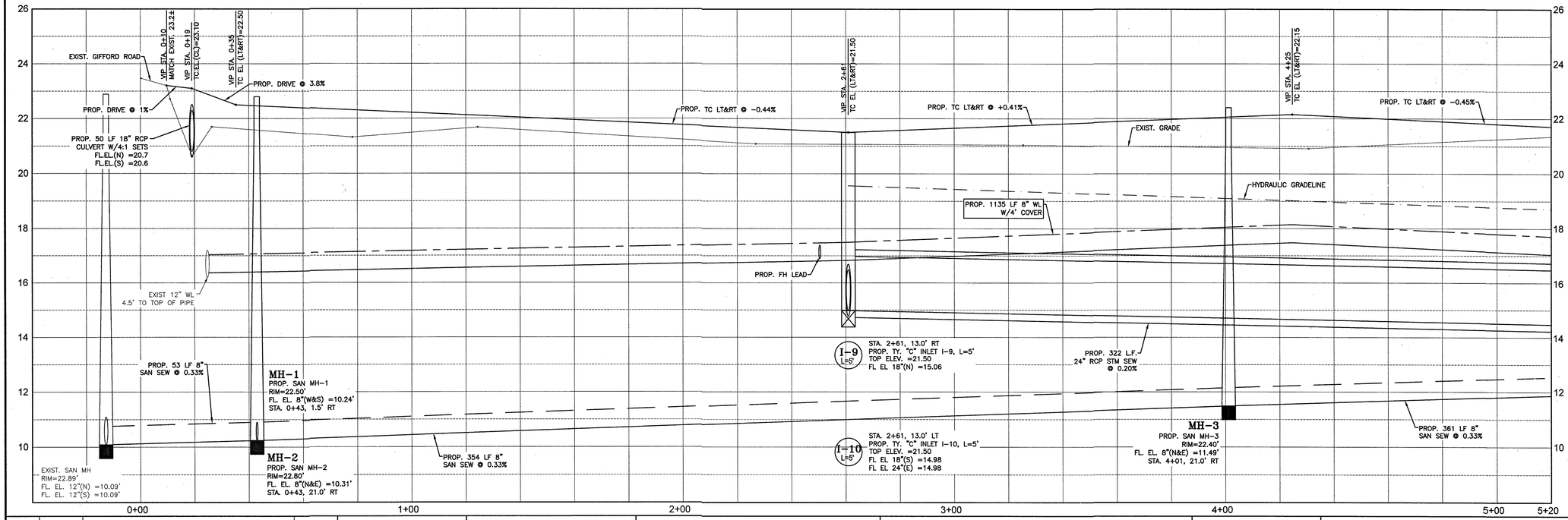
PLAN & PROFILE
LAURA LEIGH LANE
STA. 10+60 TO 11+40

PROJECT NO. 13743

6

13743 SHEET SET.DWG





SCALE : 1" = 20'

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PROFILE:
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VERTICAL: 1" = 20'

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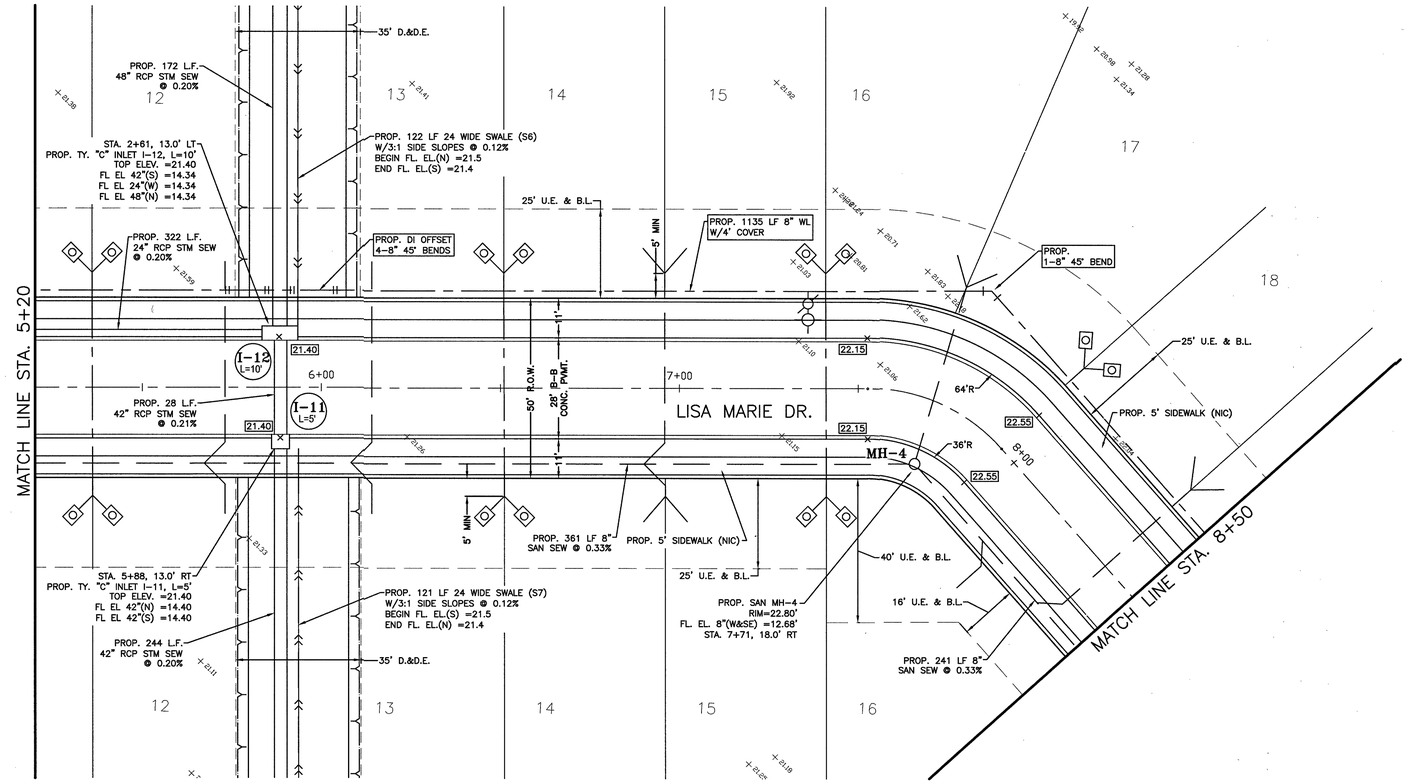
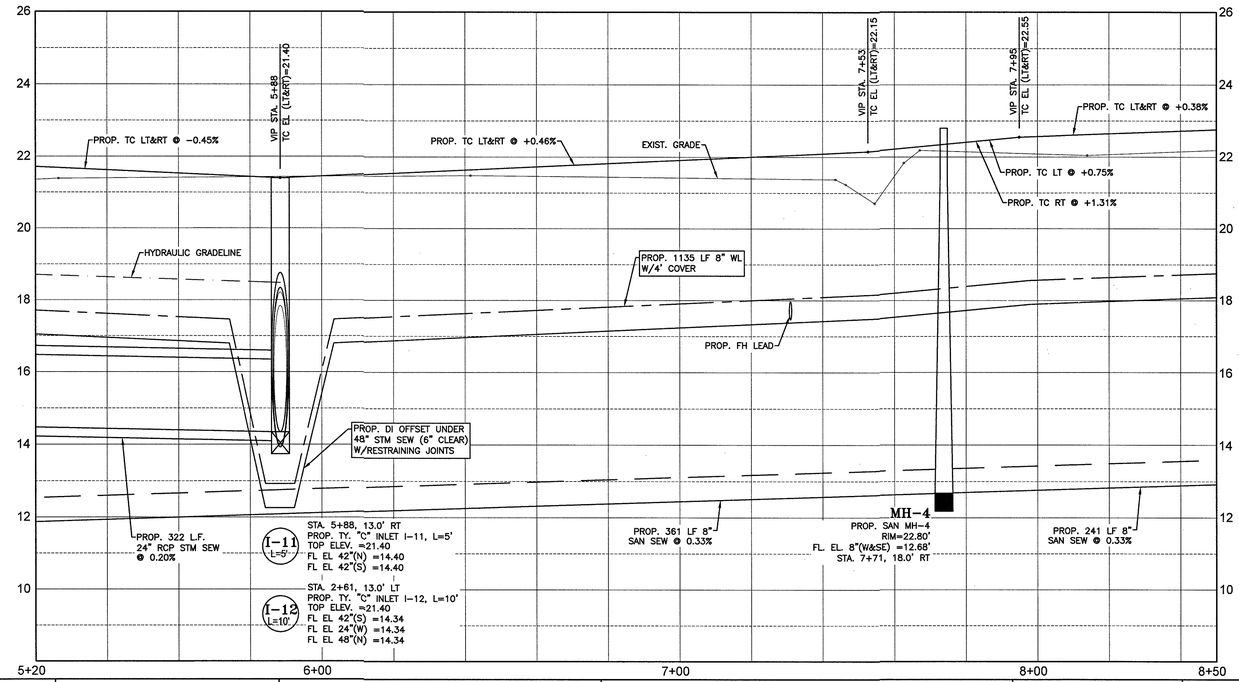
ANGLETON, TEXAS 77515

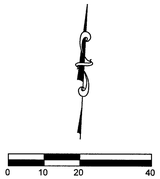
PLAN & PROFILE
LISA MARIE DRIVE
STA. 0+00 TO 5+20

PROJECT NO. 13743

7 OF 43 SHEET SET.DWG







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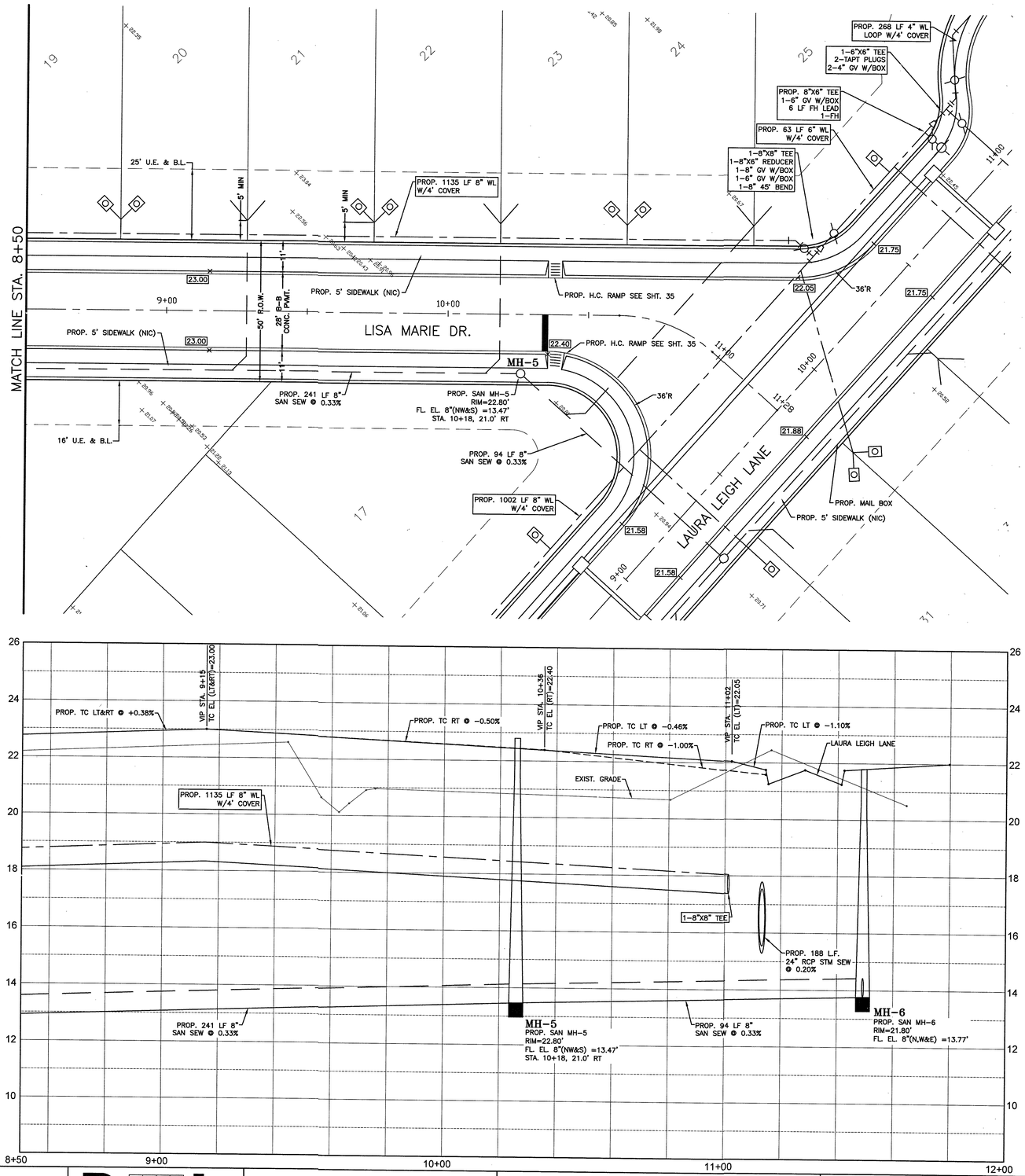
VERTICAL: 1" = 20'

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

PLAN & PROFILE
LISA MARIE DRIVE
STA. 5+20 TO 8+50

PROJECT NO. 13743

13743 SHEET SET.DWG



SCALE : 1" = 20'

SYMBOLS LEGEND

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HOUSTON TX. 77057

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PROFILE:
HORIZONTAL: 1" = 2'
VERTICAL: 1" = 20'

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

PLAN & PROFILE
LISA MARIE DRIVE
STA. 8+50 TO 11+28

PROJECT NO. 13743

SHEET SET.DWG

DETENTION

COUNTY ROAD 542 (S. DOWNING ROAD)

DITCH "A"

SCALE : 1" = 40'

SYMBOLS LEGEND

- WATER METER
- FIRE HYDRANT
- WATER VALVE
- TAPPING SLEEVE AND VALVE
- REDUCER
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
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EXIST. SAN MH
RIM=22.89'
FL. EL. 12"(N) =10.09'
FL. EL. 12"(S) =10.09'

PROP. 52 SF OPEN CUT IN ASPHALT ROAD TO ACCESS MH AND INSTALL SAN SEWER

PROP. 53 LF 8" SAN SEW @ 0.33%

MH-1

MH-2

PROP. 18 LF 8" SAN SEW @ 0.33%

PROP. SAN MH-2
RIM=22.80'
FL. EL. 8"(N&E) =10.31'
STA. 0+43, 21.0' RT

EXIST 12" WL
4.5' TO TOP OF PIPE

PROP. 12"X8" TS&V
1-8" GV W/BOX

PROP. SAN MH-1
RIM=22.50'
FL. EL. 8"(W&S) =10.24'
STA. 0+43, 1.5' RT

PROP. 1135 LF 8" WL W/4' COVER

PROP. 354 LF 8" SAN SEW @ 0.33%

PROP. SAN MH-3
RIM=22.40'
FL. EL. 8"(N&E) =11.49'
STA. 4+01, 21.0' RT

MH-3

PROP. 361 LF 8" SAN SEW @ 0.33%

LISA MARIE DR.

PROP. SAN MH-4
RIM=22.80'
FL. EL. 8"(W&SE) =12.68'
STA. 7+71, 18.0' RT

MH-4

PROP. 241 LF 8" SAN SEW @ 0.33%

MH-5

PROP. SAN MH-5
RIM=22.80'
FL. EL. 8"(NW&S) =13.47'
STA. 10+18, 21.0' RT

1-8"X8" TEE
1-8"X6" REDUCER
1-8" GV W/BOX
1-8" GV W/BOX
1-8" 45° BEND

PROP. 63 LF 6" WL W/4' COVER

1-6"X4" REDUCER
1-4"X4" TEE
8-4" 45° BENDS
2-4" GV W/BOX

PROP. SAN MH-7
RIM=21.80'
FL. EL. 6"(W) =14.59'

MH-7

PROP. 281 LF 4" WL LOOP W/4' COVER

MH-6

PROP. SAN MH-6
RIM=21.80'
FL. EL. 8"(N,W&E) =13.77'
STA. 9+24, 21.0' RT

PROP. 160 LF 6" SAN SEW @ 0.5%

PROP. 94 LF 8" SAN SEW @ 0.33%

PROP. 433 LF 8" SAN SEW @ 0.33%

PROP. 1002 LF 8" WL W/4' COVER

PROP. 12"X8" TS&V
1-8" GV W/BOX

PROP. SAN MH-8
RIM=22.20'
FL. EL. 8"(W&E) =15.19'
STA. 4+92, 21.0' RT

MH-8

MH-9

PROP. SAN MH-9
RIM=22.80'
FL. EL. 8"(E) =16.64'
STA. 0+55, 21.0' RT

PROP. 438 LF 8" SAN SEW @ 0.33%

EXIST. SAN MH
RIM=23.03'
FL. EL. 12"(N) =9.63'
FL. EL. 12"(S) =9.63'
FL. EL. 8"(W) =9.63'

COUNTY ROAD 407 (GIFFORD ROAD)

HOELEWYN DRIVE

LAURA LEIGH LANE

GIFFORD ESTATES
VOL. 16, Pg. 349 B.C.P.R.

NO.	DATE	DESCRIPTION	APPROVED

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MIGUELANGEL A. SAUCEDA
121992
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Date: 12/16/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN: 1" = 40'
PROFILE:
HORIZONTAL:
VERTICAL:

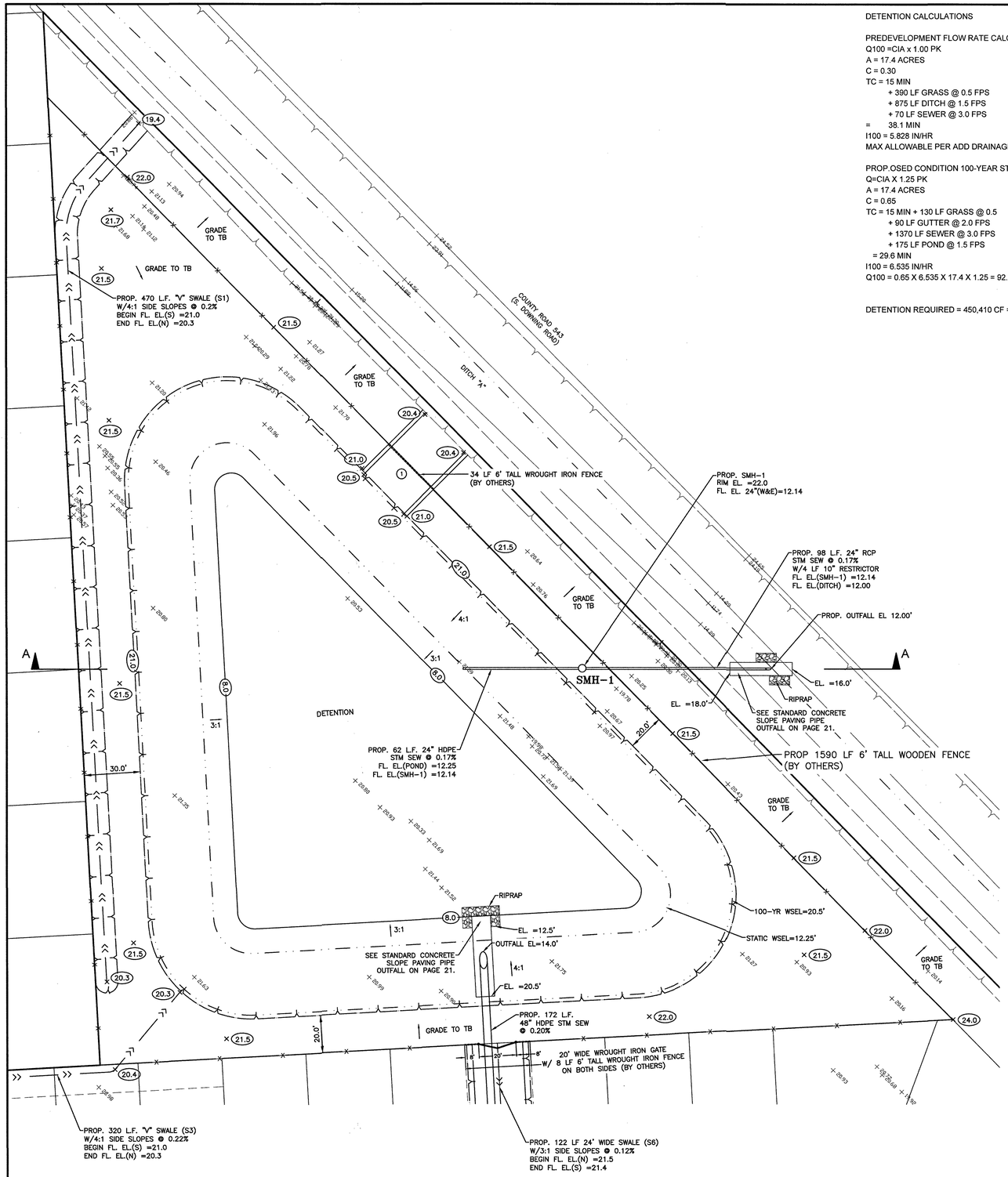
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

UTILITY LAYOUT

PROJECT NO. 13743

10

13743 SHEET SET.DWG



DETENTION CALCULATIONS

PREDEVELOPMENT FLOW RATE CALCULATION (100-YEAR STORM)
Q100 =CIA x 1.00 PK
A = 17.4 ACRES
C = 0.30
TC = 15 MIN
+ 390 LF GRASS @ 0.5 FPS
+ 875 LF DITCH @ 1.5 FPS
+ 70 LF SEWER @ 3.0 FPS
= 38.1 MIN
I100 = 5.828 IN/HR
MAX ALLOWABLE PER ADD DRAINAGE STUDY 0.74 X 17.4 = 12.88 CFS

PROP.OSED CONDITION 100-YEAR STORM
Q=CIA X 1.25 PK
A = 17.4 ACRES
C = 0.65
TC = 15 MIN + 130 LF GRASS @ 0.5
+ 90 LF GUTTER @ 2.0 FPS
+ 1370 LF SEWER @ 3.0 FPS
+ 175 LF POND @ 1.5 FPS
= 29.6 MIN
I100 = 6.535 IN/HR
Q100 = 0.65 X 6.535 X 17.4 X 1.25 = 92.385 CFS

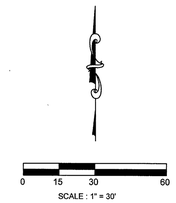
DETENTION REQUIRED = 450,410 CF = 10.34 AC-FT

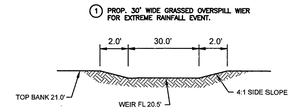
POND INFORMATION

TOP BANK ELEVATION= 21.0'
AREA TOPBANK= 74,000 SF
BOTTOM ELEVATION= 5.0'
AREA BOTTOM= 22,100 SF

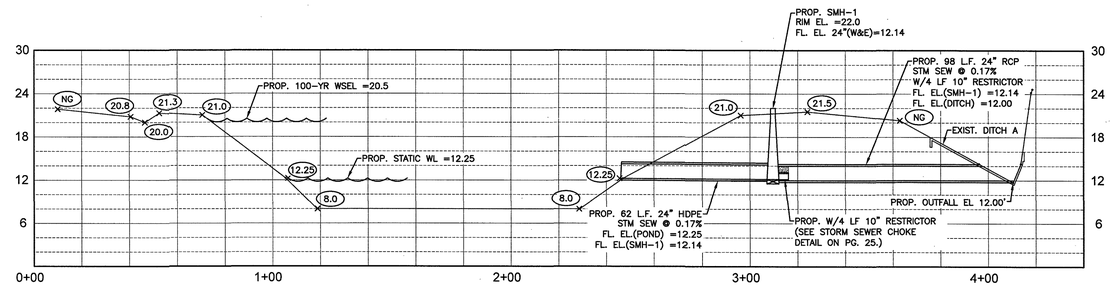
AREA @ 100-YEAR WSEL= 20.5' = 71,900 SF
AREA @ STATIC WATER LEVEL (EL=12.25')= 38,900 SF
AVERAGE DETENTION AREA= 55,400
DETENTION DEPTH= 8.25'

DETENTION PROVIDED= 457,050 CF = 10.5 AC-FT





GRASS WIER DETAIL
(SECTION VIEW)
N.T.S.



SECTION "A"
SCALE: HORZ. 1" =30'
VERT. 1" =10'

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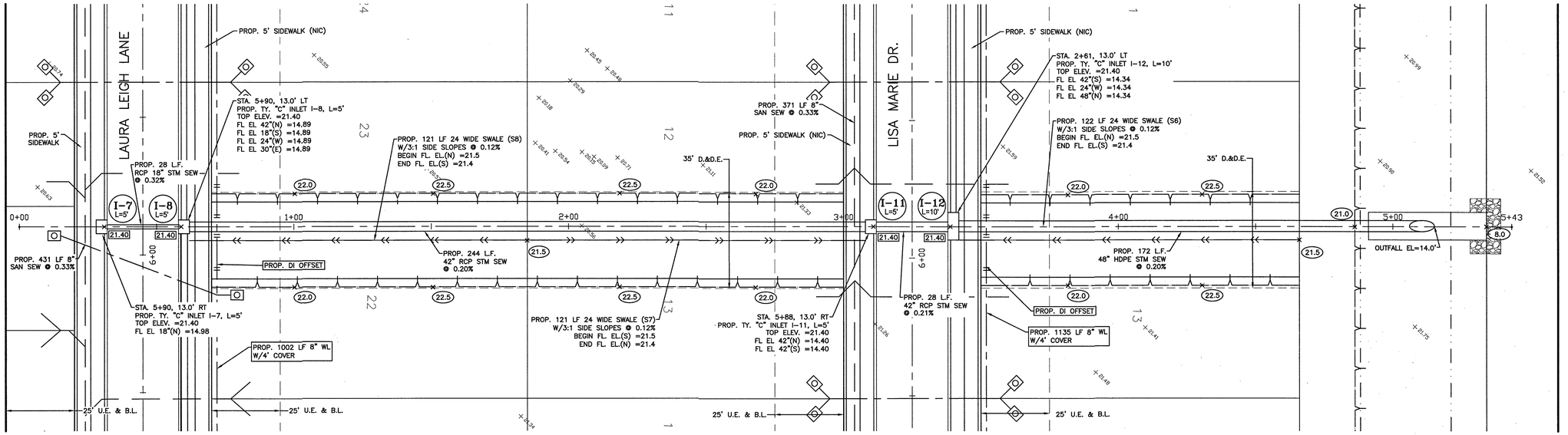
PLAN: 1" = 30'
PROFILE:
HORIZONTAL:
VERTICAL:

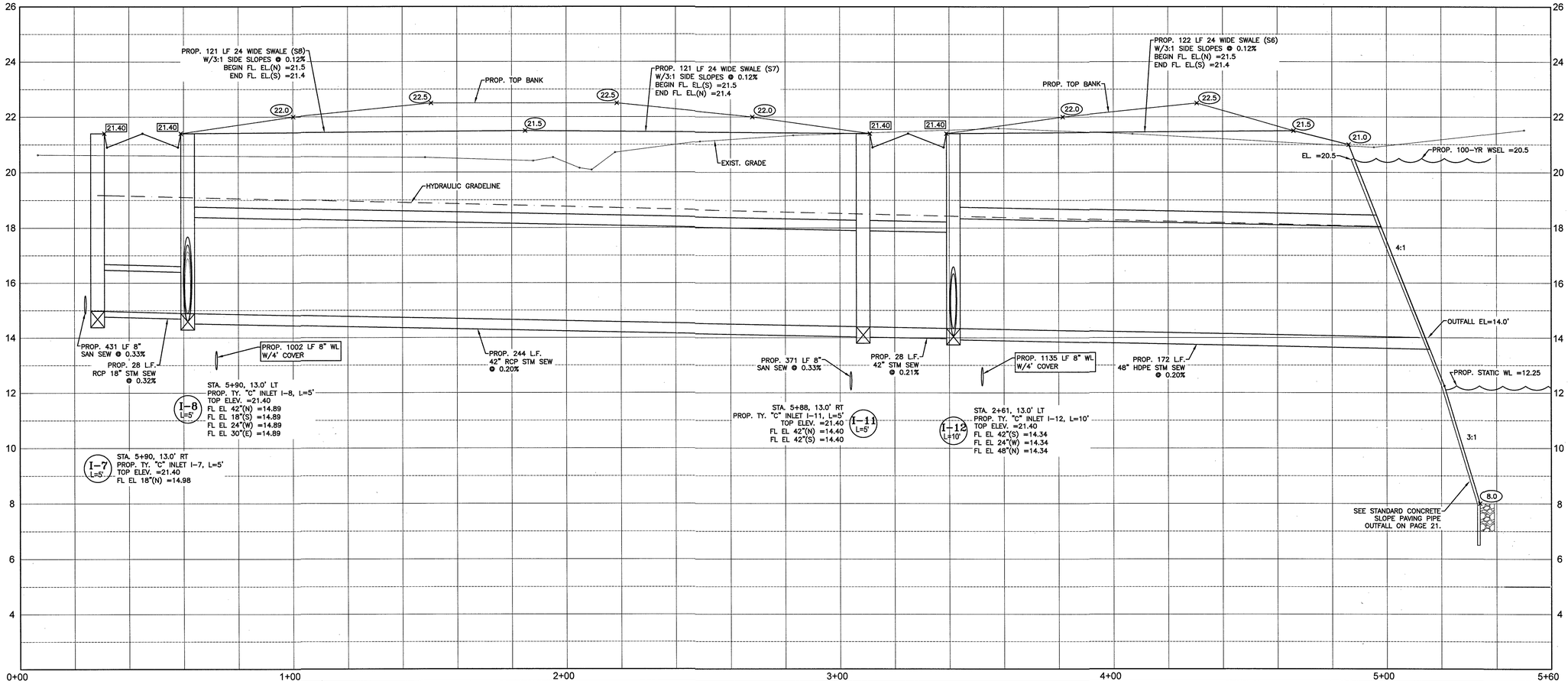
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

DETENTION POND DESIGN
AND CROSS SECTION

PROJECT NO. 13743

11
13743 SHEET SET.DWG





0 10 20 40
SCALE : 1" = 20'

SYMBOLS LEGEND

- WATER METER
- FIRE HYDRANT
- WATER VALVE
- TAPPING SLEEVE AND VALVE
- REDUCER
- STORM SEWER MANHOLE (SMH-1)
- SANITARY SEWER MANHOLE (MH-1)
- TOP BANK
- STORM SEWER LINE (REINFORCED CONCRETE PIPE, ASTM C76)
- SANITARY SEWER LINE (D3034, SDR 26, 160 PR)
- WATERLINE (AWWA C900, CLASS 150, DR18)

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6881 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 12/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN: 1" = 20'
PROFILE:
HORIZONTAL: 1" = 2'
VERTICAL: 1" = 20'

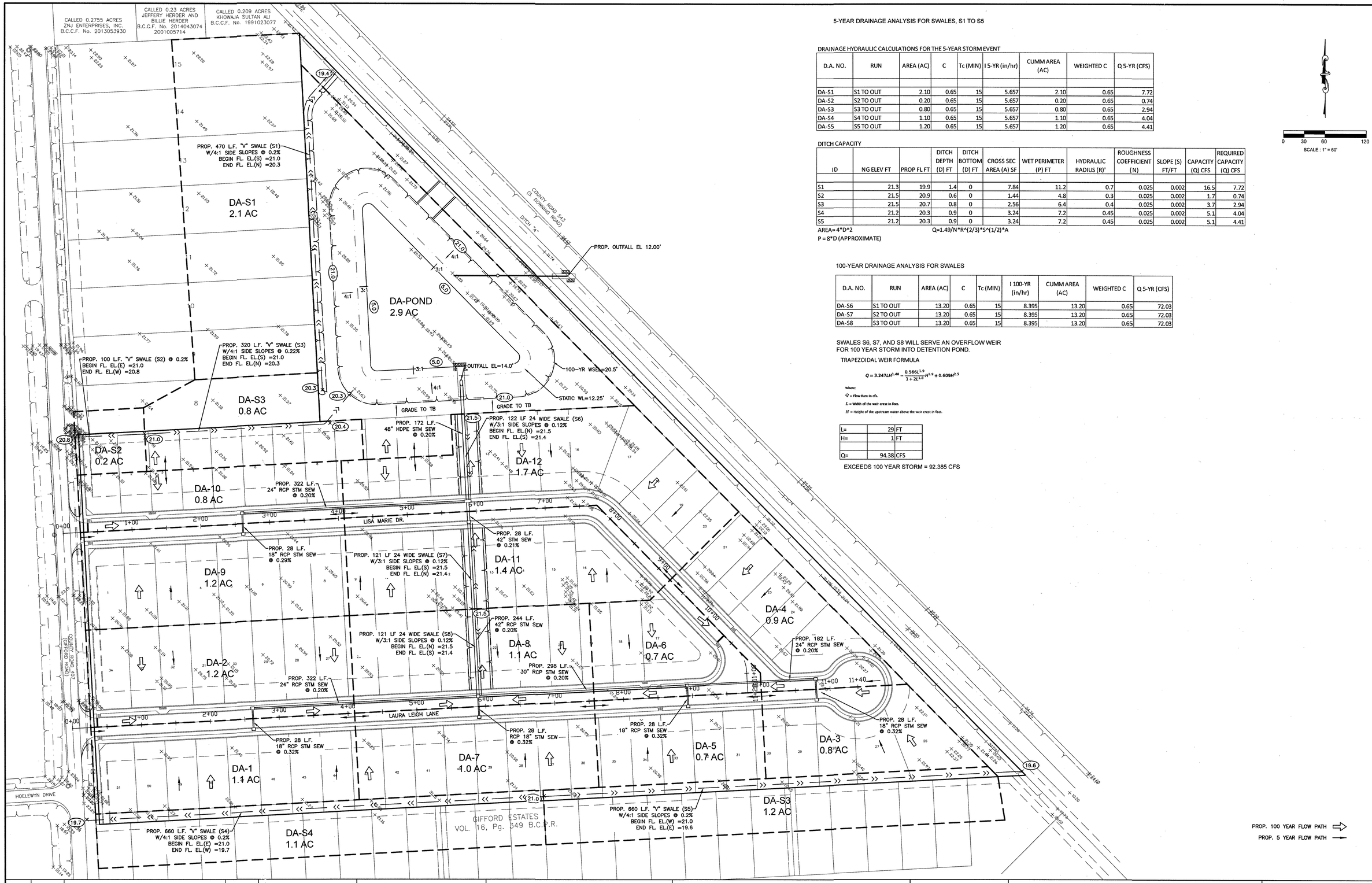
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

PLAN & PROFILE
OUTFALL 1

PROJECT NO. 13743

12

13743 SHEET SET.DWG



5-YEAR DRAINAGE ANALYSIS FOR SWALES, S1 TO S5

DRAINAGE HYDRAULIC CALCULATIONS FOR THE 5-YEAR STORM EVENT

D.A. NO.	RUN	AREA (AC)	C	Tc (MIN)	I 5-YR (in/hr)	CUMM AREA (AC)	WEIGHTED C	Q 5-YR (CFS)
DA-S1	S1 TO OUT	2.10	0.65	15	5.657	2.10	0.65	7.72
DA-S2	S2 TO OUT	0.20	0.65	15	5.657	0.20	0.65	0.74
DA-S3	S3 TO OUT	0.80	0.65	15	5.657	0.80	0.65	2.94
DA-S4	S4 TO OUT	1.10	0.65	15	5.657	1.10	0.65	4.04
DA-S5	S5 TO OUT	1.20	0.65	15	5.657	1.20	0.65	4.41

DITCH CAPACITY

ID	NG ELEV FT	PROP FL FT	DITCH DEPTH (D) FT	DITCH BOTTOM (D) FT	CROSS SEC AREA (A) SF	WET PERIMETER (P) FT	HYDRAULIC RADIUS (R)'	ROUGHNESS COEFFICIENT (N)	SLOPE (S) FT/FT	CAPACITY (Q) CFS	REQUIRED CAPACITY (Q) CFS
S1	21.3	19.9	1.4	0	7.84	11.2	0.7	0.025	0.002	16.5	7.72
S2	21.5	20.9	0.6	0	1.44	4.8	0.3	0.025	0.002	1.7	0.74
S3	21.5	20.7	0.8	0	2.56	6.4	0.4	0.025	0.002	3.7	2.94
S4	21.2	20.3	0.9	0	3.24	7.2	0.45	0.025	0.002	5.1	4.04
S5	21.2	20.3	0.9	0	3.24	7.2	0.45	0.025	0.002	5.1	4.41

AREA= 4*D^2 Q=1.49/N*R^(2/3)*S^(1/2)*A

P = 8*D (APPROXIMATE)

100-YEAR DRAINAGE ANALYSIS FOR SWALES

D.A. NO.	RUN	AREA (AC)	C	Tc (MIN)	I 100-YR (in/hr)	CUMM AREA (AC)	WEIGHTED C	Q 5-YR (CFS)
DA-S6	S1 TO OUT	13.20	0.65	15	8.395	13.20	0.65	72.03
DA-S7	S2 TO OUT	13.20	0.65	15	8.395	13.20	0.65	72.03
DA-S8	S3 TO OUT	13.20	0.65	15	8.395	13.20	0.65	72.03

SWALES S6, S7, AND S8 WILL SERVE AN OVERFLOW WEIR FOR 100 YEAR STORM INTO DETENTION POND.

TRAPEZOIDAL WEIR FORMULA

$$Q = 3.247LH^{1.48} - \frac{0.566L^{1.9}}{1 + 2L^{1.8}}H^{1.9} + 0.609H^{2.5}$$

Where:

Q = Flow Rate in cfs.

L = Width of the weir crest in feet.

H = Height of the upstream water above the weir crest in feet.

L=	29	FT
H=	1	FT
Q=	94.38	CFS

EXCEEDS 100 YEAR STORM = 92.385 CFS

0 30 60 120

SCALE : 1" = 60'

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HOUSTON TX. 77057

PLAN: 1" = 60'

PROFILE:

HORIZONTAL:

VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

DRAINAGE ANALYSIS

PROJECT NO. 13743

17

13743 SHEET SET.DWG

CALLED 0.2755 ACRES
ZNJ ENTERPRISES, INC.
B.C.C.F. No. 2013053930

CALLED 0.23 ACRES
JEFFERY HERDER AND
BILLIE HERDER
B.C.C.F. No. 2014043074
2001005714

CALLED 0.209 ACRES
KHOWAJA SULTAN ALI
B.C.C.F. No. 1991023077

ALL FINISHED FLOORS SHALL BE ELEVATION 23.00'
OR 18" ABOVE PROPOSED TOP OF CURB, WHICHEVER IS HIGHER

PROP. 470 L.F. "V" SWALE (S1)
W/4:1 SIDE SLOPES @ 0.2%
BEGIN FL. EL.(S) =21.0
END FL. EL.(N) =20.3

PROP. SMH-1
RIM EL. =22.0
FL. EL. 24"(W&E)=12.14

PROP. 98 L.F. 24" RCP
STM SEW @ 0.17%
W/4 LF 10" RESTRICTOR
FL. EL.(SMH-1) =12.14
FL. EL.(DITCH) =12.00

PROP. OUTFALL EL. =12.00'

DETENTION

PROP. 62 L.F. 24" HDPE
STM SEW @ 0.17%
FL. EL.(POND) =12.25
FL. EL.(SMH-1) =12.14

100-YR WSEL=20.5'

STATIC WL=12.25'

PROP. 320 L.F. "V" SWALE (S3)
W/4:1 SIDE SLOPES @ 0.22%
BEGIN FL. EL.(S) =21.0
END FL. EL.(N) =20.3

PROP. 100 L.F. "V" SWALE (S2) @ 0.2%
BEGIN FL. EL.(E) =21.0
END FL. EL.(W) =20.8

PROP. 122 LF 24 WIDE SWALE (S6)
W/3:1 SIDE SLOPES @ 0.12%
BEGIN FL. EL.(N) =21.5
END FL. EL.(S) =21.4

PROP. 121 LF 24 WIDE SWALE (S7)
W/3:1 SIDE SLOPES @ 0.12%
BEGIN FL. EL.(S) =21.5
END FL. EL.(N) =21.4

PROP. 121 LF 24 WIDE SWALE (S8)
W/3:1 SIDE SLOPES @ 0.12%
BEGIN FL. EL.(N) =21.5
END FL. EL.(S) =21.4

PROP. 50 LF 18" RCP
CULVERT W/4:1 SETS
FL.EL.(N) =20.7
FL.EL.(S) =20.6
MATCH TO EXIST
EL.=23.2±

PROP. 50 LF 24" RCP
CULVERT W/ 4:1 SETS
FL.EL.(N)= 20.1
FL.EL.(S)= 20.0
MATCH TO EXIST
EL.=23.2±

PROP. 660 L.F. "V" SWALE (S4)
W/4:1 SIDE SLOPES @ 0.2%
BEGIN FL. EL.(E) =21.0
END FL. EL.(W) =19.7

PROP. 660 L.F. "V" SWALE (S5)
W/4:1 SIDE SLOPES @ 0.2%
BEGIN FL. EL.(W) =21.0
END FL. EL.(E) =19.6

COUNTY ROAD 143
(S. DOMINGO ROAD)

DITCH "A"

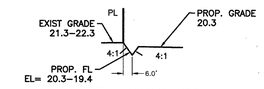
LISA MARIE DR.

LAURA LEIGH LANE

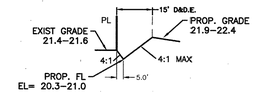
COUNTY ROAD 407
(GIFFORD ROAD)

HOELEWYN DRIVE

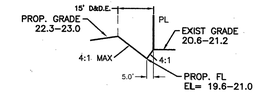
GIFFORD ESTATES
VOL. 16, Pg. 349 B.C.P.R.



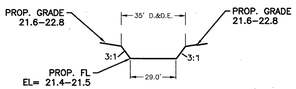
TYPICAL CROSS SECTIONS
FOR SWALE S1



TYPICAL CROSS SECTIONS
FOR SWALE S2 & S3



TYPICAL CROSS SECTIONS
FOR SWALE S4 & S5



TYPICAL CROSS SECTIONS
FOR SWALE S6, S7, AND S8

0 30 60 120
SCALE : 1" = 60'

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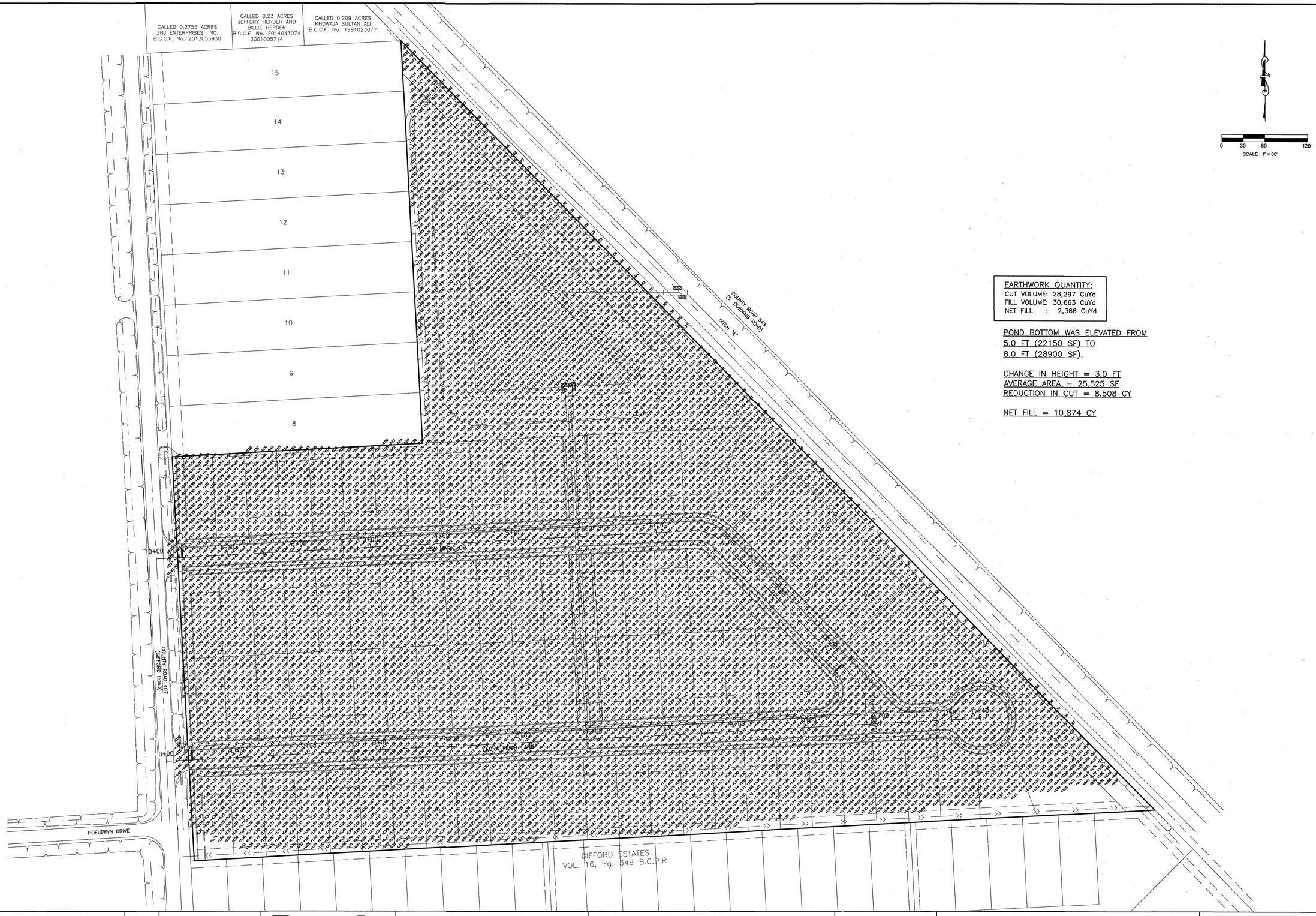
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

GRADING PLAN

PROJECT NO. 13743

24X36 SHEET SET.DWG



0 30 60 120
SCALE : 1" = 60'

EARTHWORK QUANTITY:
CUT VOLUME: 28,297 CuYd
FILL VOLUME: 30,663 CuYd
NET FILL : 2,366 CuYd

POND BOTTOM WAS ELEVATED FROM
5.0 FT (22150 SF) TO
8.0 FT (28900 SF).

CHANGE IN HEIGHT = 3.0 FT
AVERAGE AREA = 25,525 SF
REDUCTION IN CUT = 8,508 CY

NET FILL = 10,874 CY

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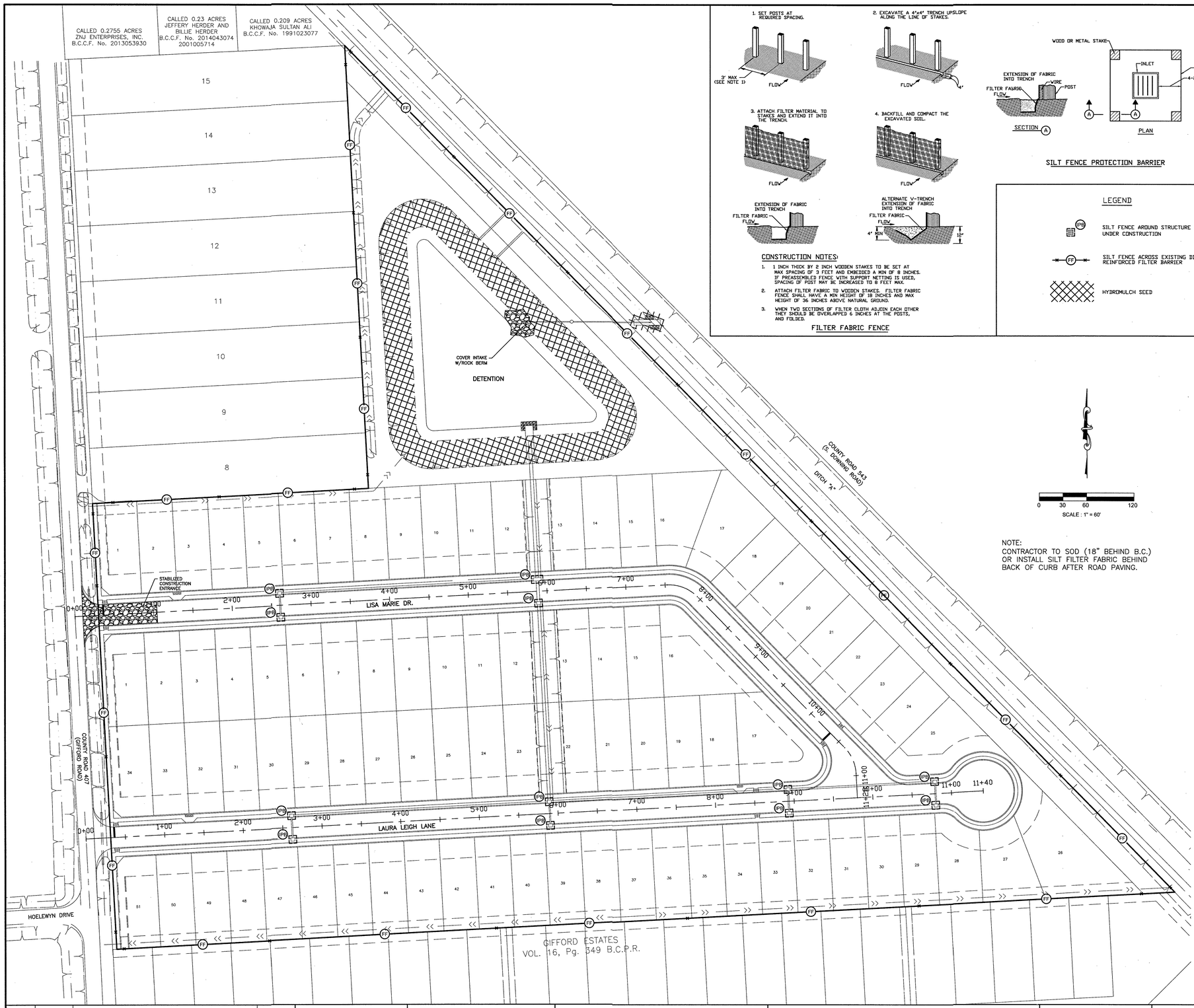
CUT AND FILL PLAN

PROJECT NO. 13743

15

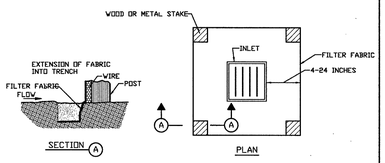
13743 SHEET SET.DWG



CONSTRUCTION NOTES:

1. 1 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC FENCE SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.

FILTER FABRIC FENCE



SILT FENCE PROTECTION BARRIER

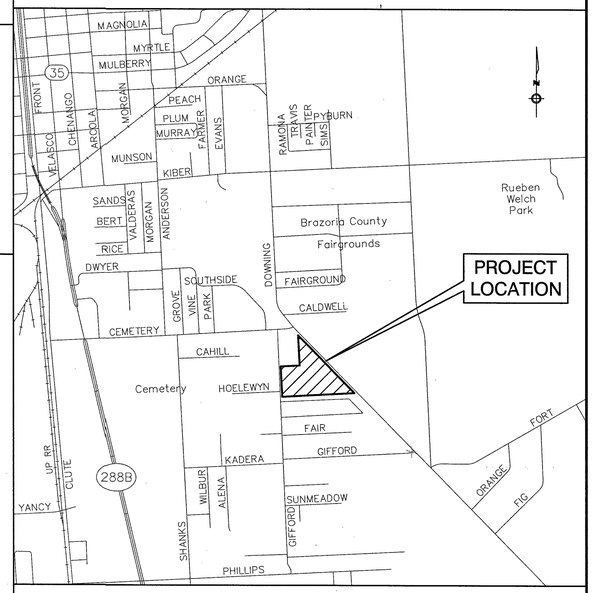
LEGEND

- SILT FENCE AROUND STRUCTURE UNDER CONSTRUCTION
- SILT FENCE ACROSS EXISTING DITCH REINFORCED FILTER BARRIER
- HYDROMULCH SEED

0 30 60 120
SCALE : 1" = 60'

NOTE:
CONTRACTOR TO SOD (18" BEHIND B.C.) OR INSTALL SILT FILTER FABRIC BEHIND BACK OF CURB AFTER ROAD PAVING.

GENERAL LOCATION MAP



PROJECT/SITE INFORMATION

PROJECT NAME: GIFFORD MEADOWS SUBDIVISION

PROJECT ADDRESS/LOCATION: GIFFORD ROAD NEAR HOELEWYN DRIVE

CITY: ANGLETON STATE: TX. ZIP CODE: X

LATITUDE: 29°08'54" LONGITUDE: 95°24'58" COUNTY: BRAZORIA

NAME OF RECEIVING WATERS: GULF OF MEXICO

02/01/2021 — MONTH/DAY/YEAR — ESTIMATED CONSTRUCTION START DATE

07/01/2021 — MONTH/DAY/YEAR — ESTIMATED COMPLETION DATE

ESTIMATE OF AREA TO BE DISTURBED: 17.37 ACRES

ESTIMATE OF LIKELYHOOD OF DISCHARGE:

☐ UNLIKELY ☐ ONCE PER WEEK ☐ CONTINUAL
☒ ONCE PER MONTH ☐ ONCE PER DAY

ARE THERE ANY LISTED ENDANGERED OR THREATENED SPECIES, OR DESIGNATED CRITICAL HABITAT IN THE PROJECT AREA?

☐ YES ☒ NO

ELIGIBILITY WITH REGARD TO PROTECTION OF ENDANGERED SPECIES HAS BEEN SATISFIED THROUGH THE INDICATED SECTION OF PART 1.B.3.e.(2) OF THE PERMIT.

(a) ☒ (b) ☐ (c) ☐ (d) ☐

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A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

SWPPP LAYOUT

PROJECT NO. 13743

13743 SHEET SET.DWG

1. SITE DESCRIPTION

A. NATURE OF THE CONSTRUCTION ACTIVITY:
GIFFORD MEADOWS SUBDIVISION ANGLETON, BRAZORIA COUNTY, TEXAS. BEING 17.37 ACRE DEVELOPED AREA WHICH WILL BE A RESIDENTIAL SUBDIVISION OF 85 LOTS (45' WIDE USUALLY). CONSTRUCTION WILL INCLUDE UNDERGROUND UTILITIES, STORM SEWERS, CONCRETE ROADWAYS WITH CURBS, AND DETENTION POND.

B. INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:
STREET RIGHT OF WAY AND LOT AREAS WILL BE STRIPPED OF ALL VEGETATIVE MATTER. THIS MATERIAL WILL BE STOCKPILED ADJACENT TO THE WORK AND WILL BE SPREAD ON DEVELOPED LOTS AFTER FINAL GRADING. UTILITY AND STORM SEWER CONSTRUCTION WILL REQUIRE TRENCHING. EXCAVATION FOR ROADWAY SUBGRADE AND DETENTION POND WILL INVOLVE SPREADING EXCAVATED MATERIAL ON ADJACENT LOTS. RAINFALL RUNOFF WILL BE DIRECTED TO THE STREET GUTTERS AND TO THE CONSTRUCTED STORM SEWER SYSTEM. TRUCKS WILL BE USED TO DELIVER MATERIAL TO THE PROJECT INCLUDING LIME, CONCRETE, UTILITY AND STORM SEWER MATERIALS AND OTHER CONSTRUCTION MATERIALS. TRUCKS WILL ALSO BE USED TO HAUL CONSTRUCTION DEBRIS AWAY FROM THE SITE. THESE TRUCKS WILL BE ROUTED ALONG GIFFORD ROAD FOR INGRESS AND EGRESS. RUTTING DURING WET WEATHER WILL PROVIDE POTENTIAL FOR TRACKING MUD ALONG THE ROUTE.

C. TOTAL PROJECT AREA: 17.37 ACRES

D. TOTAL AREA TO BE DISTURBED: 17.37 ACRES

WEIGHTED RUNOFF COEFFICIENT
(BEFORE CONSTRUCTION): 0.30 (AFTER CONSTRUCTION): 0.65

E. REFER TO GENERAL LOCATION MAP AND SITE MAP FOR DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER MAJOR GRADING ACTIVITIES; AREAS OF SOIL DISTURBANCE; AREAS WHICH WILL NOT BE DISTURBED; LOCTIONS OF MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS; LOCATIONS WHERE STABILIZATION PRACTICES ARE EXPECTED TO OCCUR; LOCATION OF OFF-SITE MATERIAL, WASTE, BORROW OR EQUIPMENT STORAGE AREAS; SURFACE WATERS (INCLUDING WETLANDS); AND LOCATIONS WHERE STORM WATER DISCHARGES TO A SURFACE WATER.

F. LOCATION AND DESCRIPTION OF ANY DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION:

G. NAME OF RECEIVING WATERS:
DRAINAGE WILL BE COLLECTED IN THE PROPOSED DETENTION POND WHICH WILL DRAIN THRU A RCP RESTRICTIVE OUTLET INTO DITCH A OF THE ANGLETON DRAINAGE DISTRICT. DITCH A OUTFALLS INTO THE BASTROP BAYOU WHICH WILL OUTFALL INTO THE GULF OF MEXICO.

AREAL EXTENT AND DESCRIPTION OF WETLAND OR SPECIAL AQUATIC SITE AT OR NEAR THE SITE WHICH WILL BE DISTURBED OR WHICH WILL RECEIVE DISCHARGES FROM DISTURBED AREAS OFTHE PROJECT.

NONE

H. REFER TO FEDERAL REGISTER, VOLUME 63, NO.128, MONDAY JULY 6, 1998, PAGES 36497 TO 36515 FOR REQUIREMENTS OF NPDES GENERAL PERMITS FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES IN REGION 6.

I. LISTED ENDANGERED OR THREATENED SPECIES OR CRITICAL HABITAT FOUND IN PROXIMITY TO THE CONSTRUCTION ACTIVITY:

NONE

J. PROPERTY LISTED OR ELIGIBLE FOR LISTING ON THE NATIONAL REGISTER OF HISTORIC PLACES:

NONE

2. CONTROLS

NARRATIVE - SEQUENCE OF CONSTRUCTION ACTIVITIES AND APPROPRIATE CONTROL MEASURES DURING CONSTRUCTION

THE ORDER OF CONSTRUCTION WILL BEGIN WITH STRIPPING OF ALL VEGETATION FROM THE WORK AREA.

1. INSTALL SILT FENCE AROUND THE PERIMETER OF THE AREA TO BE DISTURBED. THE ORDER OF ACTIVITIES WILL BEGIN WITH THE COMPLETE STRIPPING OF ALL AREAS TO RECEIVE FILL MATERIAL. REMOVED VEGETATION TO BE STOCKPILED ADJACENT TO THE WORK TO BE SPREAD AFTER LOT GRADING IS COMPLETE.
2. INSTALL WATER LINES, SANITARY SEWER LINES AND MANHOLES AND STORM SEWER PIPES, INLETS AND MANHOLES. INSTALL INLET PROTECTION BARRIERS AROUND ALL INLETS. FULLY EXCAVATE THE DETENTION POND TO PROVIDE OUTFALL PATH FOR THE STORM SEWER SYSTEM. INSTALL THE RESTRICTIVE OUTLET WITH ROCK SEDIMENT BERM.
3. ROADWAY EXCAVATION, LIME STABILIZATION AND CONCRETE PAVING WILL FOLLOW UNDERGROUND UTILITY AND STORM SEWER CONSTRUCTION. DURING ROADWAY WORK, THE REMAINDER OF THE DETENTION POND WILL BE EXCAVATED AND MATERIAL SPREAD ON LOTS. INSTALL SILT FENCE IN THE BOTTOM OF THE POND UPSTREAM OF THE RESTRICTIVE OUTFALL CULVERT.
4. AS SOON AS CONCRETE CURBS ARE INSTALLED, PLACE 18" WIDE SOLID SOD OR REINFORCED FILTER FABRIC BEHIND ALL CURBS.
5. THE SWALES AND THE DETENTION POND SHALL BE SEEDED AND FERTILIZED UPON COMPLETION OF THE EXCAVATION. ALL SEEDED AND FERTILIZED AREA TO BE IRRIGATED TO ENSURE GROWTH.

A. EROSION AND SEDIMENT CONTROLS: EROSION AND SEDIMENT CONTROLS SHALL RETAIN SEDIMENT ON SITE TO THE EXTENT PRACTICABLE. CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS (WHERE APPLICABLE) AND GOOD ENGINEERING PRACTICES. OFFSITE SEDIMENT ACCUMULATIONS MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS WHEN CAPACITY HAS BEEN REDUCED BY 50%. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WALL SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.

SOIL STABILIZATION PRACTICES:	OWNER/ DEVELOPER	GENERAL CNTRTR.	BUILDER	OTHER
TEMPORARY SEEDING				
PERMANENT PLANTING, SODDING, OR SEEDING		X		
MULCHING- WHERE INDICATED		X		
SOIL RETENTION BLANKET				
VEGETATIVE BUFFER STRIPS				
PRESERVATION OF NATURAL RESOURCES				
OTHER:				

THE FOLLOWING RECORDS SHALL BE MAINTAINED AND ATTACHED TO THIS SWPPP:
DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED.

STRUCTURAL PRACTICES:	OWNER/ DEVELOPER	GENERAL CNTRTR.	BUILDER	OTHER
SILT FENCES (REINFORCED)		X		
HAY BALES				
ROCK BERMS		X		
DIVERSION, INTERCEPTOR, OR PERIMETER DIKES				
DIVERSION, INTERCEPTOR, OR PERIMETER SWALES		X		
DIVERSION DIKE AND SWALE COMBINATIONS				
PIPE SLOPE DRAINS				
ROCK BEDDING AT CONSTRUCTION EXIT		X		
TIMBER MATTING AT CONSTRUCTION EXIT				
SEDIMENT TRAPS				
SEDIMENT BASINS				
STORM INLET PROTECTION		X		
STONE OUTLET STRUCTURES				
OTHER:				

B. STORM WATER MANAGEMENT MEASURES INSTALLED DURING CONSTRUCTION TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION:
CURBS & GUTTERS STORM SEWERS

C. OTHER CONTROLS

NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO WATERS OF THE UNITED STATES, EXCEPT AS AUTHORIZED BY A PERMIT ISSUED UNDER SECTION 404 OF THE CLEAN WATER ACT.

WASTE MATERIALS: ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL CONTAINER. THE CONTAINER SHALL MEET ALL STATE AND CITY SOLID WASTE MANAGEMENT REGULATIONS. THE CONTAINER SHALL BE EMPTIED AS NECESSARY AND THE TRASH HAULED TO AN APPROPRIATE DUMP SITE. NO CONSTRUCTION MATERIALS WILL BE BURIED ON SITE.

HAZARDOUS WASTE (INCLUDING SPILL REPORTING): AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES ARE CONSIDERED TO BE HAZARDOUS: PAINT, CLEANING SOLVENTS, ASPHALT PRODUCTS, PETROLEUM PRODUCTS, CHEMICAL ADDITIVES FOR SOIL STABILIZATION, AND CONCRETE CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE SPILL COORDINATOR SHOULD BE CONTACTED IMMEDIATELY.

SANITARY WASTE: PORTABLE SANITARY FACILITIES WILL BE PROVIDED BY THE CONTRACTOR. ALL SANITARY WASTES WILL BE COLLECTED FROM PORTABLE UNITS AND SERVICED BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

OFFSITE VEHICLE TRACKING SHALL BE MINIMIZED BY:

___ HAUL ROADS DAMPENED FOR DUST CONTROL LOADED
_X_ HAUL TRUCKS TO BE COVERED WITH TARPAULIN
_X_ EXCESS DIRT ON ROAD REMOVED DAILY STABILIZED
___ CONSTRUCTION ENTRANCE

OTHER: TRUCKS HAULING VEGETATION AND DEBRIS WILL BE MONITORED AND SHALL BE COVERED WITH TARPAULINS IF REQUIRED TO PREVENT DUST OR OTHER PARTICLES FROM BLOWING OR FALLING FROM TRUCK.

REMARKS: ALL OPERATIONS WILL BE CONDUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNTS OF SEDIMENT THAT MAY ENTER THE RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY, OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS.

3. MAINTENANCE

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. IF A REPAIR IS NECESSARY IT SHALL BE DONE AT THE EARLIEST TIME POSSIBLE, BUT NO LATER THAN SEVEN CALENDAR DAYS AFTER THE GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT. THE AREAS ADJACENT TO DRAINAGE WAYS SHALL HAVE PRIORITY, FOLLOWED BY DEVICES PROTECTING STORM SEWER INLETS. MAINTENANCE SHALL BE PERFORMED BEFORE THE NEXT ANTICIPATED STORM EVENT OR AS SOON AS PRACTICABLE.

4. INSPECTION

AN INSPECTION WILL BE PERFORMED BY THE PERMITEE EVERY FOURTEEN DAYS AS WELL AS AFTER EVERY ONE-HALF INCH OR GREATER RAINFALL EVENT. AN INSPECTION AND RAINFALL REPORT WILL BE MADE AFTER EACH INSPECTION. ANY DEFICIENCIES WILL BE NOTED AND APPROPRIATE CHANGES SHALL BE MADE TO THE SYSTEM TO COMPLY WITH REQUIREMENTS.

5. NON-STORMWATER DISCHARGES

___ FIRE HYDRANT FLUSHING
_X_ BUILDING WASHDOWN WITHOUT DETERGENTS
_X_ PAVEMENT WASHDOWN WITHOUT DETERGENTS
_X_ CONDENSATE
___ UNCONTAMINATED GROUNDWATER
___ UNCONTAMINATED FOUNDATION DRAINS

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6581 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 12/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

SWPPP NARRATIVE

PROJECT NO. 13743

13743 SHEET SET.DWG

(1)

Drainage Analysis

Job # 13743 - Gilford Meadows Subdivision

Rainfall intensity calculations for Brazoria County

I = intensity (in/hr)
b = coefficient
t = time of concentration
d = coefficient
e = coefficient

subscript

i =1 = 2year storm
i =2 = 5 year storm
i =3 = 10 year strom
i =4 = 25 year storm
i =5 = 50 year storm
i =6 = 100 year storm

$i := 1..6$

$b_i :=$	$e_i :=$	$d_i :=$
71.0	0.774	8.4
70.1	0.752	7.7
96.6	0.770	17.2
89.2	0.736	10.4
86.5	0.709	10.0
120.2	0.741	21.3

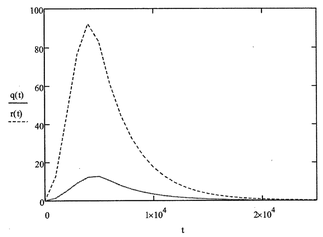
$T_0 := 38.1$ ENTER PREDEVELOPMENT TIME OF CONCENTRATION

$I_i := \frac{b_i}{(d_i + T_0)^{e_i}}$ $I_6 = 5.828$ Predevelopment Intensity of interest

$C := .1016$ ENTER PREDEVELOPMENT C VALUE

$A := 17.4$ ENTER AREA

Combined pre and post development hydrographs



$f(t) := ((r(t) - q(t)) \cdot 1$

$v(t) := if(f(t) > 0, f(t), 0)$

THE REQUIRED STORAGE COMPUTED AS THAT PART OF THE POST DEVELOPMENT HYDROGRAPH THAT FALLS ABOVE THE PREDEVELOPMENT HYDROGRAPH

ACRE -FEET

$$\frac{\int_0^{86400} v(t)\,dt}{43560} = 10.342$$

(2)

$C_f := 1.25$

$Q := C \cdot C_f \cdot I_6 \cdot A$ Must Insert correct subscript for I to obtain the relevant Q

$Q = 12.879$

$V := (C) \cdot A \cdot 43560 \cdot 1.08$ For these calculations, total volume storage is assumed to equal (C)*A with A converted to square feet multiplied by 13" (1.08')

$V = 8.317 \times 10^4$

DEVELOPMENT OF RUNOFF HYDROGRAPH MALCOM'S METHOD AS DESCRIBED IN THE BRAZORIA COUNTY DRAINAGE CRITERIA MANUAL

$T := \frac{V}{1.39 \cdot Q}$ $T = 4.646 \times 10^3$ T = Time to peak, presented as a function of volume and peak flow and therefore indirectly related to time of concentration

$t := 0, 1000 .. 84000$

$f(t) := \left(\frac{Q}{2}\right) \cdot \left(1 - \cos\left(\frac{t \cdot \pi}{T}\right)\right)$ f(t) describes rising limb of hydrograph

$g(t) := 4.34 \cdot Q \cdot \exp\left[-1.30 \cdot \left(\frac{t}{T}\right)\right]$ g(t) describes descending limb of hydrograph

$q(t) := if(t \le 1.25 \cdot T, f(t), g(t))$

$Volume_{pre} := \int_0^{86400} q(t)\,dt$

$Volume_{pre} = 8.346 \times 10^4$

Hydrological and Hydraulic Impacts
Gilford Meadows Subdivision

Job # 13651

Brazoria County, Texas

A = 17.4 Acre Development

Pre Development:

C = 0.1016
TC = 38.1 Minutes, I = 5.828
Q = 100 Year Storm = 12.88 cfs
Q-Allowable is 0.74 cfs / ac. = 12.88 cfs

Post Development

C = 0.65
T/C = 29.6 Minutes, I= 6.535
Q = 100 Year Storm = 92.385 cfs

Required Detention:

10.34 acre - feet (450,410 c.f.)

Miguel Sauceda, P.E. August 4, 2020

EXISITNG CONDITIONS
Bra. Co. Master Drg. Study allows only 0.74 cfs/acre in this area (Bastrop Bayou drainage area BB 18)

TC = 15 Minutes + 390 LF overland @ 0.50 FPS + 875 LF ditch @ 1.5 FPS + 70 LF sewer @ 3.0 FPS = 38.1 Minutes

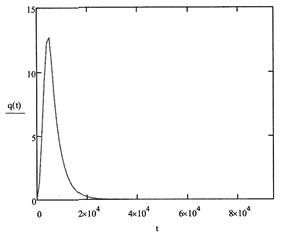
PROPOSED CONDITIONS

TC = 15 Minutes + 130 LF overland @ 0.5 FPS + 90 LF gutter @ 2.0 FPS + 1370 LF sewer @ 3.0 FPS + 175 pond @ 1.5 FPS = 29.6 Minutes

C = 0.65 per Brazoria Drainage Criteria Manual for lots under 1/8 acre

(3)

Predevelopment hydrograph



$T_0 := 29.6$ ENTER POST DEVLOPMENT TIME OF CONCENTRATION

$I_i := \frac{b_i}{(d_i + T_0)^{e_i}}$ $I_6 = 6.535$ Post development I of interest

$C := 0.65$ ENTER POST DEVELOPMENT C FACTOR REVISE CfAND AREA IF NECESSARY

$C_f := 1.25$

$Q := C \cdot I_6 \cdot A \cdot C_f$

$Q = 92.385$

$V := (C) \cdot A \cdot 43560 \cdot 1.08$

$V = 5.321 \times 10^5$

$T := \frac{V}{1.39 \cdot Q}$ $T = 4.143 \times 10^3$

(4)

$t := 0, 1000 .. 25000$

$f(t) := \left(\frac{Q}{2}\right) \cdot \left(1 - \cos\left(\frac{t \cdot \pi}{T}\right)\right)$

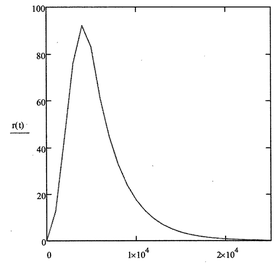
$g(t) := 4.34 \cdot Q \cdot \exp\left[-1.30 \cdot \left(\frac{t}{T}\right)\right]$

$r(t) := if(t \le 1.25 \cdot T, f(t), g(t))$

$Volume_{post} := \int_0^{86400} r(t)\,dt$

$Volume_{post} = 5.34 \times 10^5$

Post development hydrograph



(5)

(6)

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 12/15/20

OWNER:

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ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

HYDROLOGIC CALCULATIONS

PROJECT NO. 13743

13743 SHEET SET.DWG

WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 8/18/2020 4:10:56 PM

PROJECT NAME : 13743 GIFFORD
JOB NUMBER : 13743
PROJECT DESCRIPTION :
DESIGN FREQUENCY : 5 Years
ANALYSYS FREQUENCY : 100 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 5 Years

Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
A-1	0.65	1.10	15.00	15.00	6.64	0.000	4.751
A-2	0.65	1.20	15.00	15.00	6.64	0.000	5.182
A-3	0.65	0.80	15.00	15.00	6.64	0.000	3.455
A-4	0.65	0.90	15.00	15.00	6.64	0.000	3.887
A-5	0.65	0.70	15.00	15.00	6.64	0.000	3.023
A-6	0.65	0.70	15.00	15.00	6.64	0.000	3.023
A-7	0.65	1.00	15.00	15.00	6.64	0.000	4.319
A-8	0.65	1.10	15.00	15.00	6.64	0.000	4.751
A-9	0.65	1.20	15.00	15.00	6.64	0.000	5.182
A-10	0.65	0.80	15.00	15.00	6.64	0.000	3.455
A-11	0.65	1.40	15.00	15.00	6.64	0.000	6.046
A-12	0.65	1.70	15.00	15.00	6.64	0.000	7.342

Sag Inlets Configuration Data.

Inlet ID	Inlet Type	Length/ Perim. (ft)	Grate Area (sf)	Left-Slope Long (%)	Left-Slope Trans (%)	Right-Slope Long (%)	Right-Slope Trans (%)	Gutter n	Gutter DeprW (ft)	Depth Allowed (ft)	Critic Elev. (ft)
A-1	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-2	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-3	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-4	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-5	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-6	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-7	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-8	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-9	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-10	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-11	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-12	Curb	10.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50

Sag Inlets Computation Data.

Inlet ID	Inlet Type	Length (ft)	Grate Perim (ft)	Grate Area (sf)	Total Q (cfs)	Inlet Capacity (cfs)	Total Head (ft)	Ponded Width Left (ft)	Ponded Width Right (ft)
A-1	Curb	5.00	n/a	n/a	4.751	6.261	0.416	10.80	10.80
A-2	Curb	5.00	n/a	n/a	5.182	6.261	0.441	11.15	11.15
A-3	Curb	5.00	n/a	n/a	3.455	6.261	0.336	9.60	9.60
A-4	Curb	5.00	n/a	n/a	3.887	6.261	0.364	10.00	10.00
A-5	Curb	5.00	n/a	n/a	3.023	6.261	0.308	9.10	9.10
A-6	Curb	5.00	n/a	n/a	3.023	6.261	0.308	9.10	9.10
A-7	Curb	5.00	n/a	n/a	4.319	6.261	0.390	10.40	10.40
A-8	Curb	5.00	n/a	n/a	4.751	6.261	0.416	10.80	10.80
A-9	Curb	5.00	n/a	n/a	5.182	6.261	0.441	11.15	11.15
A-10	Curb	5.00	n/a	n/a	3.455	6.261	0.336	9.60	9.60
A-11	Curb	5.00	n/a	n/a	6.046	6.261	0.488	11.80	11.80
A-12	Curb	10.00	n/a	n/a	7.342	10.327	0.398	12.70	12.70

Cumulative Junction Discharge Computations

Node I.D.	Node Type	Weighted C-Value	Cumulat. Dr.Area (acres)	Cumulat. Tc (min)	Intens. (in/hr)	User Supply Q cfs)	Additional Q in Node (cfs)	Total Disch. (cfs)
A-1	Curb	0.650	1.10	15.00	6.64	0.000	0.00	4.751
A-2	Curb	0.650	2.30	15.12	6.62	0.000	0.00	9.893
A-3	Curb	0.650	0.80	15.00	6.64	0.000	0.00	3.455
A-4	Curb	0.650	1.70	15.13	6.62	0.000	0.00	7.310
A-5	Curb	0.650	0.70	15.00	6.64	0.000	0.00	3.023
A-6	Curb	0.650	3.10	16.02	6.43	0.000	0.00	12.959
A-7	Curb	0.650	1.00	15.00	6.64	0.000	0.00	4.319
A-8	Curb	0.650	7.50	17.26	6.19	0.000	0.00	30.192
A-9	Curb	0.650	1.20	15.00	6.64	0.000	0.00	5.182
A-10	Curb	0.650	2.00	15.13	6.62	0.000	0.00	8.601
A-11	Curb	0.650	8.90	18.06	6.05	0.000	0.00	34.997
A-12	Curb	0.650	12.60	18.15	6.03	0.000	0.00	49.420
OUT	Outlt	0.650	12.60	18.15	6.03	0.000	0.00	49.420

Conveyance Configuration Data

Run#	Node I.D. US	Node I.D. DS	Flowline Elev. US (ft)	Flowline Elev. DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
1	A-1	A-2	15.62	15.53	Circ 1	0.00	1.50	28.00	0.32	0.013
2	A-2	A-8	15.53	14.89	Circ 1	0.00	2.00	322.00	0.20	0.013
3	A-3	A-4	15.96	15.87	Circ 1	0.00	1.50	28.00	0.32	0.013
4	A-4	A-6	15.87	15.49	Circ 1	0.00	2.00	188.00	0.20	0.013
5	A-5	A-6	15.58	15.49	Circ 1	0.00	1.50	28.00	0.32	0.013
6	A-6	A-8	15.49	14.89	Circ 1	0.00	2.50	298.00	0.20	0.013
7	A-7	A-8	14.98	14.89	Circ 1	0.00	1.50	28.00	0.32	0.013
8	A-8	A-11	14.89	14.40	Circ 1	0.00	3.50	244.00	0.20	0.013
9	A-9	A-10	15.06	14.98	Circ 1	0.00	1.50	28.00	0.29	0.013
10	A-10	A-12	14.98	14.34	Circ 1	0.00	2.00	322.00	0.20	0.013
11	A-11	A-12	14.40	14.34	Circ 1	0.00	3.50	28.00	0.21	0.013
12	A-12	OUT	14.34	14.00	Circ 1	0.00	4.00	172.00	0.20	0.013

Conveyance Hydraulic Computations. Tailwater = 12.250 (ft)

Run#	Hydraulic Gradeline US Elev (ft)	Hydraulic Gradeline DS Elev (ft)	Fr.Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (f/s)	Velocity Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1	17.92	17.87	0.204	1.01	1.50	3.76	2.69	4.75	5.96	0.000
2	17.87	17.25	0.191	1.63	2.00	3.62	3.15	9.89	10.09	0.000
3	17.68	17.65	0.108	0.82	1.50	3.49	1.96	3.45	5.96	0.000
4	17.65	17.49	0.104	1.25	2.00	3.54	2.33	7.31	10.17	0.000
5	17.51	17.49	0.083	0.75	1.50	3.42	1.71	3.02	5.96	0.000
6	17.49	17.25	0.100	1.56	2.36	4.02	2.70	12.96	18.41	0.000
7	17.30	17.25	0.169	0.94	1.50	3.72	2.44	4.32	5.96	0.000
8	17.25	17.00	0.090	2.08	2.60	5.07	3.94	30.19	45.09	0.000
9	17.50	17.43	0.243	1.13	1.50	3.65	2.93	5.18	5.62	0.000
10	17.43	16.97	0.145	1.44	2.00	3.56	2.74	8.60	10.09	0.000
11	17.00	16.97	0.121	2.30	2.63	5.23	4.52	35.00	46.58	0.000
12	16.97	16.63	0.118	2.63	2.63	5.65	5.65	49.42	63.87	0.000

OUTPUT FOR ANALYSYS FREQUENCY of: 100 Years

Runoff Computation for Analysis Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
A-1	0.65	1.10	15.00	15.00	10.10	0.000	7.221
A-2	0.65	1.20	15.00	15.00	10.10	0.000	7.877
A-3	0.65	0.80	15.00	15.00	10.10	0.000	5.251
A-4	0.65	0.90	15.00	15.00	10.10	0.000	5.908
A-5	0.65	0.70	15.00	15.00	10.10	0.000	4.595
A-6	0.65	0.70	15.00	15.00	10.10	0.000	4.595
A-7	0.65	1.00	15.00	15.00	10.10	0.000	6.564
A-8	0.65	1.10	15.00	15.00	10.10	0.000	7.221
A-9	0.65	1.20	15.00	15.00	10.10	0.000	7.877
A-10	0.65	0.80	15.00	15.00	10.10	0.000	5.251
A-11	0.65	1.40	15.00	15.00	10.10	0.000	9.190
A-12	0.65	1.70	15.00	15.00	10.10	0.000	11.159

Sag Inlets Configuration Data.

Inlet ID	Inlet Type	Length/ Perim. (ft)	Grate Area (sf)	Left-Slope Long (%)	Left-Slope Trans (%)	Right-Slope Long (%)	Right-Slope Trans (%)	Gutter n	Gutter DeprW (ft)	Depth Allowed (ft)	Critic Elev. (ft)
A-1	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-2	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-3	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-4	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-5	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-6	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-7	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-8	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-9	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-10	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-11	Curb	5.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50
A-12	Curb	10.00	n/a	0.50	2.00	0.50	2.00	0.014	1.50	0.50	22.50

Sag Inlets Computation Data.

Inlet ID	Inlet Type	Length (ft)	Grate Perim (ft)	Grate Area (sf)	Total Q (cfs)	Inlet Capacity (cfs)	Total Head (ft)	Ponded Width Left (ft)	Ponded Width Right (ft)
A-1	Curb	5.00	n/a	n/a	7.221	6.718	0.539	12.65	12.65
A-2	Curb	5.00	n/a	n/a	7.877	6.718	0.594	13.05	13.05
A-3	Curb	5.00	n/a	n/a	5.251	6.261	0.445	11.20	11.20
A-4	Curb	5.00	n/a	n/a	5.908	6.261	0.481	11.70	11.70
A-5	Curb	5.00	n/a	n/a	4.595	6.261	0.407	10.65	10.65
A-6	Curb	5.00	n/a	n/a	4.595	6.261	0.407	10.65	10.65
A-7	Curb	5.00	n/a	n/a	6.564	6.718	0.489	12.20	12.20
A-8	Curb	5.00	n/a	n/a	7.221	6.718	0.539	12.65	12.65
A-9	Curb	5.00	n/a	n/a	7.877	6.718	0.594	13.05	13.05
A-10	Curb	5.00	n/a	n/a	5.251	6.261	0.445	11.20	11.20
A-11	Curb	5.00	n/a	n/a	9.190	6.718	0.718	13.85	13.85
A-12	Curb	10.00	n/a	n/a	11.159	13.436	0.422	14.90	14.90

Cumulative Junction Discharge Computations

Node I.D.	Node Type	Weighted C-Value	Cumulat. Dr.Area (acres)	Cumulat. Tc (min)	Intens. (in/hr)	User Supply Q cfs)	Additional Q in Node (cfs)	Total Disch. (cfs)
A-1	Curb	0.650	1.10	15.00	10.10	0.000	0.00	7.221
A-2	Curb	0.650	2.30	15.11	10.06	0.000	0.00	15.045
A-3	Curb	0.650	0.80	15.00	10.10	0.000	0.00	5.251
A-4	Curb	0.650	1.70	15.12	10.06	0.000	0.00	11.117
A-5	Curb	0.650	0.70	15.00	10.10	0.000	0.00	4.595
A-6	Curb	0.650	3.10	15.99	9.81	0.000	0.00	19.758
A-7	Curb	0.650	1.00	15.00	10.10	0.000	0.00	6.564
A-8	Curb	0.650	7.50	17.13	9.49	0.000	0.00	46.263
A-9	Curb	0.650	1.20	15.00	10.10	0.000	0.00	7.877
A-10	Curb	0.650	2.00	15.10	10.07	0.000	0.00	13.087
A-11	Curb	0.650	8.90	17.92	9.29	0.000	0.00	53.727
A-12	Curb	0.650	12.60	18.00	9.27	0.000	0.00	75.892
OUT	Outlt	0.650	12.60	18.00	9.27	0.000	0.00	75.892

Conveyance Configuration Data

Run#	Node I.D. US	Node I.D. DS	Flowline Elev. US (ft)	Flowline Elev. DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
1	A-1	A-2	15.62	15.53	Circ 1	0.00	1.50	28.00	0.32	0.013
2	A-2	A-8	15.53	14.89	Circ 1	0.00	2.00	322.00	0.20	0.013
3	A-3	A-4	15.96	15.87	Circ 1	0.00	1.50	28.00	0.32	0.013
4	A-4	A-6	15.87	15.49	Circ 1	0.00	2.00	182.00	0.20	0.013
5	A-5	A-6	15.58	15.49	Circ 1	0.00	1.50	28.00	0.32	0.013
6	A-6	A-8	15.49	14.89	Circ 1	0.00	2.50	298.00	0.20	0.013
7	A-7	A-8	14.98	14.89	Circ 1	0.00	1.50	28.00	0.32	0.013
8	A-8	A-11	14.89	14.40	Circ 1	0.00	3.50	244.00	0.20	0.013
9	A-9	A-10	15.06	14.98	Circ 1	0.00	1.50	28.00	0.29	0.013
10	A-10	A-12	14.98	14.34	Circ 1	0.00	2.00	322.00	0.20	0.013
11	A-11	A-12	14.40	14.34	Circ 1	0.00	3.50	28.00	0.21	0.013
12	A-12	OUT	14.34	14.00	Circ 1	0.00	4.00	172.00	0.20	0.013

Conveyance Hydraulic Computations. Tailwater = 0.000 (ft)

Run#	Hydraulic Gradeline US Elev (ft)	Hydraulic Gradeline DS Elev (ft)	Fr.Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (f/s)	Velocity Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1	20.63	20.50	0.472	1.50	1.50	4.09	4.09	7.22	5.96	0.000
2	20.50	19.08	0.442	2.00	2.00	4.79	4.79	15.05	10.09	0.000
3	20.29	20.22	0.250	1.10	1.50	3.78	2.97	5.25	5.96	0.000
4	20.22	19.77	0.241	1.88	2.00	3.63	3.54	11.12	10.17	0.000
5	19.82	19.77	0.191	0.98	1.50	3.74	2.60	4.59	5.96	0.000
6	19.77	19.08	0.232	2.19	2.50	4.34	4.03	19.76	18.41	0.000
7	19.18	19.08	0.390	1.50	1.50	3.71	3.71	6.56	5.96	0.000
8	19.08	18.56	0.211	3.06	3.50	5.18	4.81	46.26	45.09	0.000
9	19.71	19.56	0.562	1.50	1.50	4.46	4.46	7.88	5.62	0.000
10	19.56	18.48	0.335	2.00	2.00	4.17	4.17	13.09	10.09	0.000
11	18.56	18.48	0.285	3.50	3.50	5.58	5.58	53.73	46.58	0.000
12	18.48	18.00	0.279	4.00	4.00	6.04	6.04	75.89	63.87	0.000

END

NORMAL TERMINATION OF WINSTORM.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6881 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 12/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

WINDSTORM DATA

PROJECT NO. 13743

10

CAD\3 SHEET SET.DWG

CALLED 0.2755 ACRES
ZNJ ENTERPRISES, INC.
B.C.C.F. No. 2013053930

CALLED 0.23 ACRES
JEFFERY HERDER AND
BILLIE HERDER
B.C.C.F. No. 2014043074
2001005714

CALLED 0.209 ACRES
KHOWAJA SULTAN ALI
B.C.C.F. No. 1991023077

DETENTION

COUNTY ROAD 443
(E. DANNING ROAD)

DITCH "A"

LISA MARIE DR.

LAURA LEIGH LANE

TYPE III BARRICADE

TYPE III BARRICADE

COUNTY ROAD 407
(HACKBERRY ROAD)

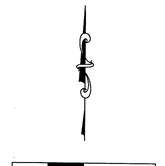
HOELEWYN DRIVE

GIFFORD ESTATES
VOL. 16, Pg. 349 B.C.P.R.

STREET AREA LIGHTING (9 LOCATIONS)

STREET SIGNS

1. STREET NAMES W/ STOP SIGN FACING GIFFORD ROAD
2. STREET NAMES W/ STOP SIGN FACING LAURA LEIGH LANE
3. SPEED LIMIT 30 MPH
4. 3 CBU POST OFFICE MAIL BOXES
5. 2 CBU POST OFFICE MAIL BOXES



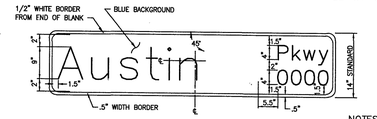
0 30 60 120

SCALE : 1" = 60'

GENERAL CONSTRUCTION NOTES:

1. SECURELY ATTACH STREET NAME SIGN TO TRAFFIC SIGNAL SUPPORT WIRES WITH MULTI-LEVELING, WIND DUMPING BRACKETS.
2. SUPPORT WIRES SHOULD NOT BE PROHIBITED FROM INDEPENDENT MOVEMENT.
3. INSTALL ONE STREET NAME SIGN APPROXIMATE 2' FROM POLE ABOVE ON-COMING TRAFFIC ON EACH TRAFFIC SIGNAL SPAN.
4. THE FIRST LETTER OF EACH WORD SHALL BE UPPER CASE, SUBSEQUENT LETTERS SHALL BE LOWER CASE, ALL INDIVIDUAL LETTERS FOR EXAMPLE "I.H." SHALL BE UPPER CASE. STREET SUFFIXES & "NO OUTLET" SHALL BE UPPER CASE.
5. ALL SHEETING SHALL BE "DIAMOND GRADE" OR APPROVED EQUAL.
6. USE ANODIZED BLANKS ONLY.
7. STREET SIGN FONTS SHALL BE HELVETICA BOLD, MEDIUM STYLE
8. MINIMUM SIGN THICKNESS: 9" SIGNS = .080", 14" SIGNS = .1875"

SL-ST-68



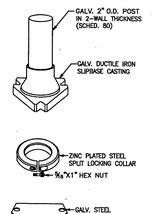
DETAIL OF SIGN FOR MAST ARM TRAFFIC SIGNAL POLES

NOTES:

1. HELVETICA BOLD, MEDIUM STYLE; WITH 9" UPPER CASE LETTERS AND 6" LOWER CASE LETTERS.
2. REFER TO C.O.S.L. DESIGN STANDARDS FOR MORE INFO.

SL-ST-67

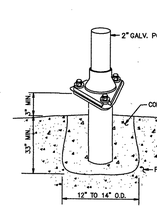
SL-ST-68



POZ-LOCK SLIPBASE SYSTEM

NTS

SL-ST-64



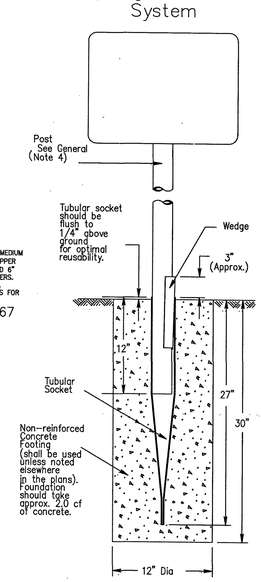
CONCRETE SIGN PEDESTAL SL-ST-65

NTS

NOTES:

1.) FILL HOLE TO GROUND LEVEL.
2.) PRESS BASE INTO CENTER OF CONCRETE.
3.) LEVEL BASE 3" ABOVE GROUND.
4.) TIGHTEN (TORQUE) NUTS BETWEEN 60 TO 80 FT/LB MAX.

Wedge Anchor System



SM RD SGN ASSM TY TWT(X)WA(P)

SL-ST-62

LIGHTING PLAN PROVIDED IS SHOWN AS RECOMMENDED. FINAL LOCATIONS AND QUANTITIES ARE DETERMINED BY TEXAS NEW MEXICO POWER (TNMP).

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 12/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN: 1" = 60'
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

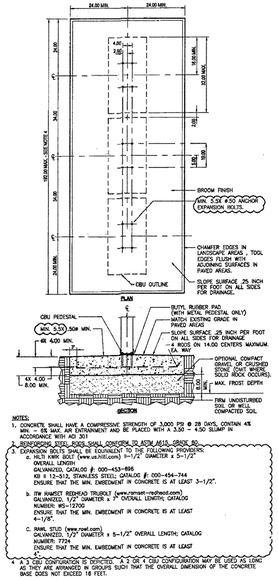
PAVEMENT MARKING, STREET SIGN AND ROADWAY LIGHTING LAYOUT

PROJECT NO. 13743

2

SHEET SET.DWG

NOTES TO A/E:



NOTES:
1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS, CONTAIN 4% MIN. – 6% MAX. AIR ENTRAINMENT AND BE PLACED WITH A 3.50 – 4.50 SLUMP IN ACCORDANCE WITH ACI 301
2. REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615, GRADE 60.
3. EXPANSION BOLTS SHALL BE EQUIVALENT TO THE FOLLOWING PROVISIONS:
   a. HILTI KWIK BOLT (www.us.hilti.com) 5–1/2" DIAMETER x 5–1/2" OVERALL LENGTH GALVANIZED, CATALOG #: 000–453–896 KB II 1/2–5.5, STAINLESS STEEL; CATALOG #: 000–454–744 ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 3–1/2".
   b. ITW RAMSET REDHEAD TRUBOLT (www.ramset-redhead.com) GALVANIZED, 1/2" DIAMETER x 7" OVERALL LENGTH; CATALOG NUMBER: WS–12700 ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4–1/8".
   c. RAWL STUD (www.rawl.com) GALVANIZED, 1/2" DIAMETER x 5–1/2" OVERALL LENGTH; CATALOG NUMBER: 7724 ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4–1/2".
4. A 2 CBU CONFIGURATION IS EFFECTIVE. A 2 OR 4 CBU CONFIGURATION MAY BE USED AS LONG AS THEY ARE ARRANGED IN GROUPS SUCH THAT THE OVERALL DIMENSION OF THE CONCRETE BASE DOES NOT EXCEED 16 FEET.

Detail	CLUSTER BOX UNIT (CBU) INSTALLATION - MULTIPLE UNIT	Fac.	Ch.	Sect.	Para.	Detail
					G1	2	0 e1
CAD File:	./usps/library/details/G1-2-0e1	Scale:	1/2" = 1'-0"	USPS SDL Issued:	10/1/2016
				Last Revised:	10/27/2016

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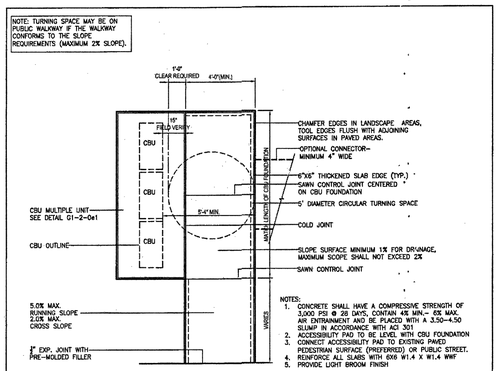
NOTES TO A/E:

1. IF THE ACCESSIBLE ROUTE FROM THE CBU(s) CONNECTS WITH A STREET OR OTHER PAVED SURFACE AT A VERTICAL CURB, A CURB RAMP SHOULD BE INSTALLED IN ACCORDANCE WITH RE–4 REQUIREMENTS.



NOTES:
1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS, CONTAIN 4% MIN. – 6% MAX. AIR ENTRAINMENT AND BE PLACED WITH A 3.50–4.50 SLUMP IN ACCORDANCE WITH ACI 301
2. ACCESSIBILITY PAD TO BE LEVEL WITH CBU FOUNDATION
3. CONNECT ACCESSIBILITY PAD TO EXISTING PAVED PEDESTRIAN SURFACE (PREFERRED) OR PUBLIC STREET.
4. REINFORCE ALL SLABS WITH 6X6 W1.4 X W1.4 WWF
5. PROVIDE LIGHT BROOM FINISH

Paved Pedestrian Surface (if available) or Public Street

Detail	CLUSTER BOX UNIT (CBU) ACCESS MANUVERING SPACE – MULTIPLE UNIT	Fac.	Ch.	Sect.	Para.	Detail
					G1	2	0 e3
CAD File:	.\usps\library\details\G1-2-0e3.dwg	Scale:	1/4"=1'-0"	USPS SDL Issued:	10/1/2016
				Last Revised:	7/14/2016

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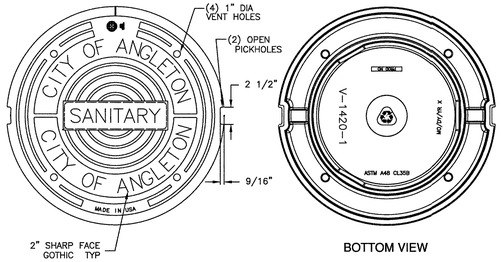
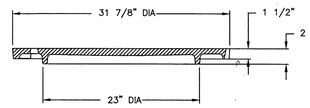
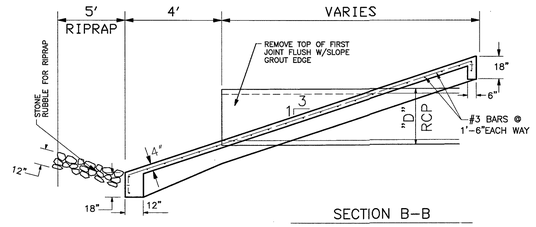
V1420-1 Cover





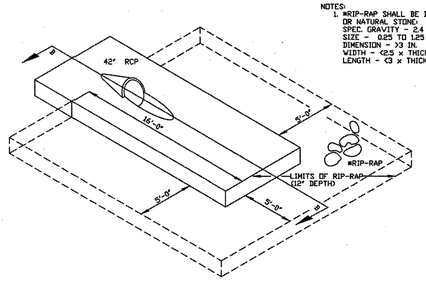
NOTES
1. MATERIAL SPECIFICATION SHALL BE ASTM A–48 CLASS 35B.
2. COVER TO BE SOLID, WITHOUT HOLES AND WITH NON–PENETRATION RIM ACCESS RECESSES ONLY.
3. HORIZONTAL BEARING SURFACES TO BE MACHINED AND SEALED AT INSTALLATION WITH WATERPROOF GREASE COATING.
4. LOAD RATING TO BE HEAVY–DUTY.
5. MANHOLE FRAMES AND COVERS SET IN FARM TO MARKET ROADS OR HIGHWAYS SHALL FOLLOW TXDOT SPECIFICATIONS. (UNLESS OTHERWISE NOTED BY ANGLETON)

1 — 32" Manhole Cover and Frame
Scale: NTS

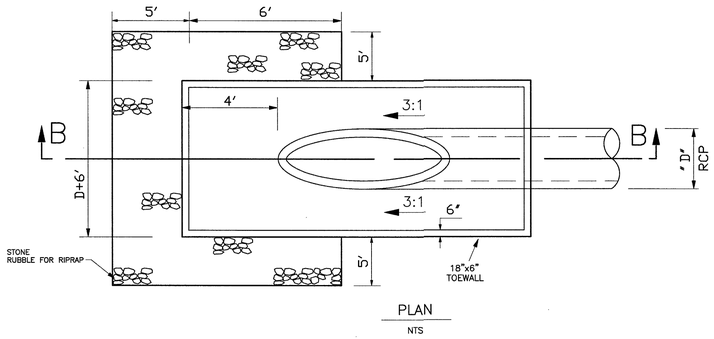


SECTION B–B

NOTES:
1. RIP–RAP SHALL BE BROKEN CONCRETE OR NATURAL STONE:
   SPEC. GRAVITY – 2.4
   SIZE – 0.25 TO 1.25 CF (40–190#)
   DIMENSION – ⅓ IN. WIDTH – <2.5 x THICKNESS
   LENGTH – <3 x THICKNESS

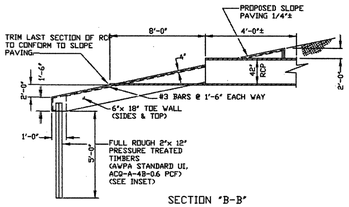


ISOMETRIC VIEW



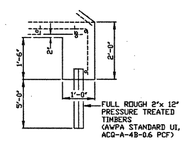
PLAN
NTS

VELASCO DRAINAGE OUTFALL CHANNEL



SECTION "B–B"

VELASCO DRAINAGE OUTFALL CHANNEL



INSET

STANDARD CONCRETE SLOPE PAVING PIPE OUTFALL
NTS

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849–6681 FAX: (979) 849–4689
REG. NO. F–825

STATE OF TEXAS — MIGUELANGEL A. SAUCEDA — 121992 — REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 12/15/20

OWNER:
DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

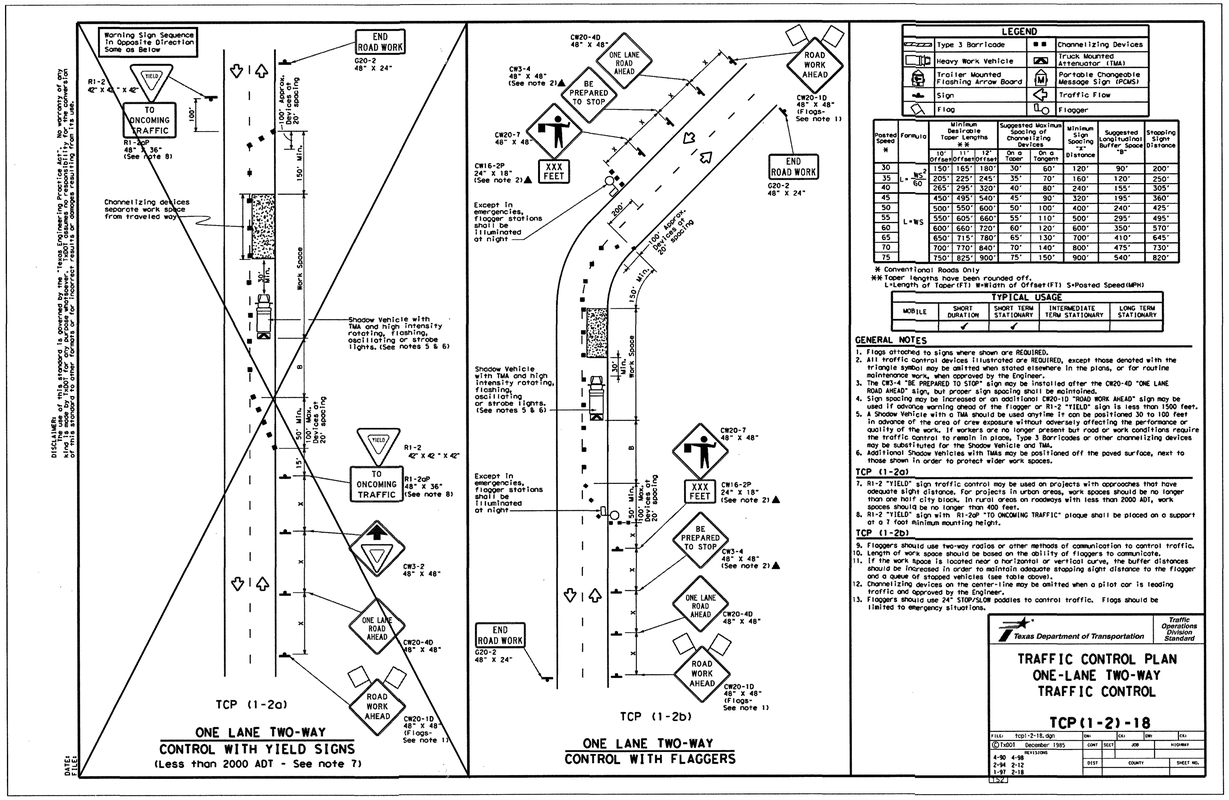
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

MISCELLANEOUS DETAILS

PROJECT NO. 13743

21

SHEET SETLDWG



WORK NARRATIVE / SEQUENCE
SANITARY SEWER INSTALLATION UNDER GIFFORD ROAD

1. Work to begin at 9:00 a.m. and end at 3:00 p.m.
2. Contractor to install approved Traffic Control Plan (TCP) devices prior to any work and remove TCP devices at the end of the day. The TCP applicable to site is TCP (1-2b) – 18: Traffic Control Plan One Lane Two Way Traffic Control.
3. Anticipated pavement section for Gifford Road:
   8" Aggregate Base with 2" HMAC Overlay (Field Verify)
4. Construction Sequence:

A. Saw cut Asphalt Pavement as needed to access manhole. Maintain vehicular access of one lane during work operation. Excavate HMAC, Base, and Subgrade to desire manhole depth. Install appropriate trench safety devices.

B. Core existing Sanitary MH wall for installation of the 8" sanitary sewer. Connection to MH will be made with a 4 ft joint. The connection will be grouted water tight.A road bore will be used to install the sanitary sewer under the existing road pavement.

C. Repair of the asphalt pavement shall follow.
1. Proof roll and compact the subgrade to 95% density within 2% of the optimum moisture content. Select fill may be placed back in the trench, and excavation spoils may be spread on site.
2. Verify existing thickness of asphalt pavement and road base. Place asphalt stabilized base and Type D Surface course ACP per TxDOT specifications. Item 345: Asphalt Stabilized Base. Item 340: Hot Mix Asphaltic Concrete Pavement.

D. Remove Traffic Control Devices

All shoulder work to be accomplished in accordance with TxDOT Standard Specifications for Item 351 – Flexible Pavement Structure Repair and in accordance with the Standard Specifications listed in Section 351.2 .

ITEM 351
FLEXIBLE PAVEMENT STRUCTURE REPAIR

351.1. Description. Repair localized sections of flexible pavement structure including subgrade, base, and surfacing as shown on the plans.

351.2. Materials. Furnish materials unless otherwise shown on the plans. Provide materials of the type and grade as shown on the plans and in accordance with:

- Item 132, "Embankment"
- Item 204, "Sprinkling"
- Item 247, "Flexible Base"
- Item 260, "Lime Treatment (Road Mixed)"
- Item 263, "Lime Treatment (Plant Mixed)"
- Item 275, "Cement Treatment (Road Mixed)"
- Item 276, "Cement Treatment (Plant Mixed)"
- Item 292, "Asphalt Treatment (Plant Mix)"
- Item 310, "Prime Coat"
- Item 316, "Surface Treatments"
- Item 330, "Limestone Rock Asphalt Pavement"
- Item 334, "Hot-Mix Cold-laid Asphalt Concrete Pavement"
- Item 340, "Hot Mix Asphalt."

For asphalt concrete materials, Contractor testing and bonus and penalty provisions will be waived unless otherwise shown on the plans.

351.3. Equipment. Furnish equipment in accordance with pertinent Items. Use of a motor grader will be permitted for asphalt concrete pavement unless otherwise shown on the plans.

351.4. Work Methods. Repair using one or more of the following operations as shown on the plans. For Contracts with callout work, begin physical repair within 24 hr. of notification, unless otherwise shown on the plans. Cut neat vertical faces around the perimeter of the work area when removing pavement structure layers. Removed materials are the property of the Contractor unless otherwise shown on the plans. Dispose of removed material in accordance with federal, state, and local regulations. Provide a smooth line and grade conforming to the adjacent pavement.

A. Removing Pavement Structure. If necessary, remove adjacent soil and vegetation to prevent contamination of the repair area, and place it in a windrow. Do not damage adjacent pavement structure during repair

operations. If subgrade work is required, remove flexible pavement structure layers from work area.

B. Preparing Subgrade. Fill holes, ruts, and depressions with approved material. If required, thoroughly wet, reshape, and compact the subgrade as directed.

Where subgrade has failed, remove unstable subgrade material to the depth directed and replace with an approved material.

C. Mixing and Placing Base Material. Place, spread, and compact material in accordance with the applicable Item to the required or directed depth. When bituminous material is to remain in pavement structure, pulverize to a maximum dimension of 2-1/2 in. and uniformly mix with existing base to the depth shown on the plans.

1. Flexible Base. Use existing base and add new flexible base as required in accordance with Item 247, "Flexible Base," and details shown on the plans to achieve required section.
2. Lime-Stabilized Base. Use existing base, add new flexible base, and stabilize with a minimum lime content of 3% by weight of the total mixture. Construct in accordance with Item 260, "Lime Treatment (Road Mixed)," and Item 263, "Lime Treatment (Plant Mixed)," and details shown on the plans to achieve required section.
3. Cement-Stabilized Base. Use existing base, add flexible base, and stabilize with a minimum cement content of 4% by weight of the total mixture. Construct in accordance with details shown on the plans and Item 275, "Cement Treatment (Road Mixed)," or Item 276, "Cement Treatment (Plant Mixed)," to achieve required section.
4. Asphalt-Stabilized Base. Place asphalt-stabilized base in accordance with details shown on the plans and Item 292, "Asphalt Treatment (Plant Mix)," or Item 340, "Hot Mix Asphalt," to achieve required section.
5. Limestone Rock Asphalt. Place in accordance with Item 330, "Limestone Rock Asphalt Pavement," and details shown on the plans to achieve required section.

D. Curing Base. Cure in accordance with the appropriate Item unless otherwise directed or approved. Maintain completed base sections until surfacing.

E. Surfacing. Apply surfacing with materials as shown on the plans to the completed base section.

1. Prime Coat. Protect the compacted, finished, and cured flexible, lime-stabilized, or cement-stabilized base mixtures with a prime coat of the type and grade shown on the plans. Apply the prime coat at the rate shown on the plans.
2. Surface Treatments. Apply surface treatment with the type and grade of asphalt and aggregate as shown on the plans in accordance with Item 316, "Surface Treatments."
3. Asphalt Concrete Pavement. Apply tack coat of the type and grade and at the rate shown on the plans unless otherwise directed. Construct in accordance with Item 330, "Limestone Rock Asphalt Pavement," Item 334, "Hot-Mix Cold-laid Asphalt Concrete Pavement," or Item 340, "Hot Mix Asphalt," to achieve required section.

F. Finishing. Regrade and compact disturbed topsoil. Clean roadway surface after repair operations.

351.5. Measurement. This Item will be measured by the square yard. In areas where material is excavated, as directed, to depths greater than those specified on the plans, measurement will be made by dividing the actual depth of such area by the plan depth and then multiplying this figure by the area in square yards of work performed. Calculations for each repaired area will be rounded up to the nearest 1/10 sq. yd. At each repair location, the minimum area for payment purposes will be 1 sq. yd.

For Contracts with callout work, the minimum quantity per callout is 5 sq. yd., unless otherwise shown on the plans.

351.6. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Flexible Pavement Structure Repair" of the specified depth. This price is full compensation for scarifying, removing, hauling, spreading, disposing of, and stockpiling existing pavement structure; removing objectionable or unstable material; furnishing and placing materials; maintaining completed section before surfacing; applying tack or prime coat; hauling, sprinkling, spreading, and compacting; and equipment, labor, tools, and incidentals.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
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CHECKED
DATE

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REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 12/15/20

OWNER:
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ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

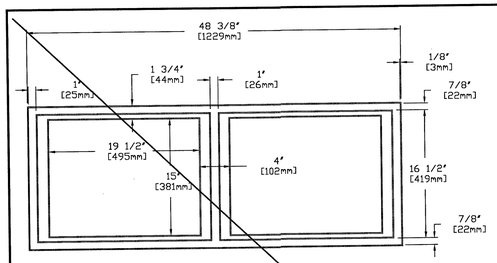
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

TRAFFIC CONTROL PLAN FOR GIFFORD ROAD

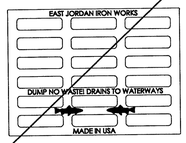
PROJECT NO. 13743

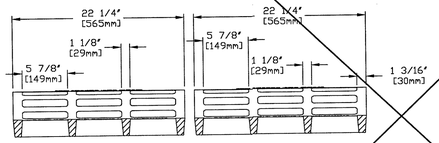
21A

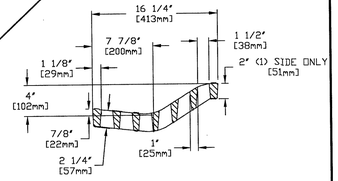
13743 SHEET SET.DWG

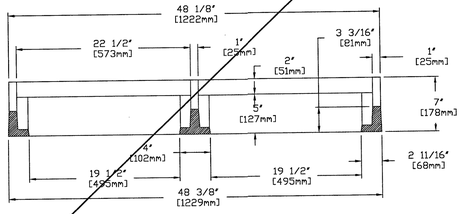


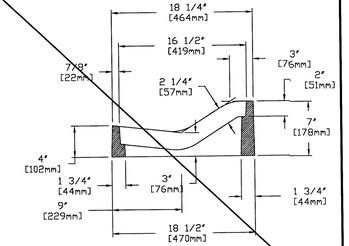
GRATE COVER IS EJIW OR APPROVED EQUAL.







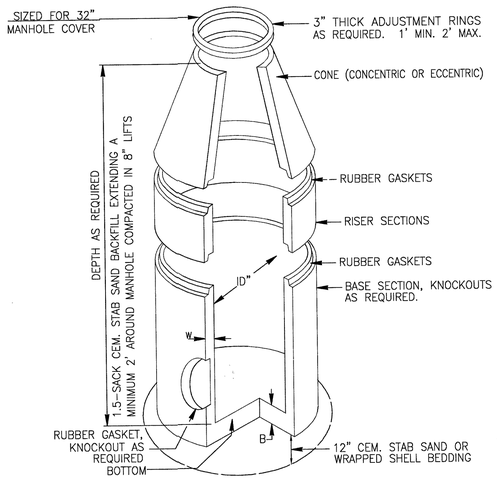




CATCH BASIN ASSEMBLY

N.T.S.

SL-DR-03



DIMENSIONS AND WEIGHTS			
I.D. SIZE (in)	W (in)	B (in)	RISER WT/LF (lb)
48	5	6	868
60	6	8	1300
72	7	8	1811
96	9	8	3090

NOTES

1. LIFTING INSERTS AS REQUIRED.
2. ALL JOINTS SHALL BE SEALED WITH APPROVED RUBBER GASKET
3. STRUCTURE TO BE PLACED ON 12" STABILIZED BASE.
4. C.S.S. SHALL BE BROUGHT TO WITHIN 2-FT OF TOP OF MANHOLE.

SPECIFICATIONS:

CONCRETE: CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. RATES FOR H-20 LOADING.

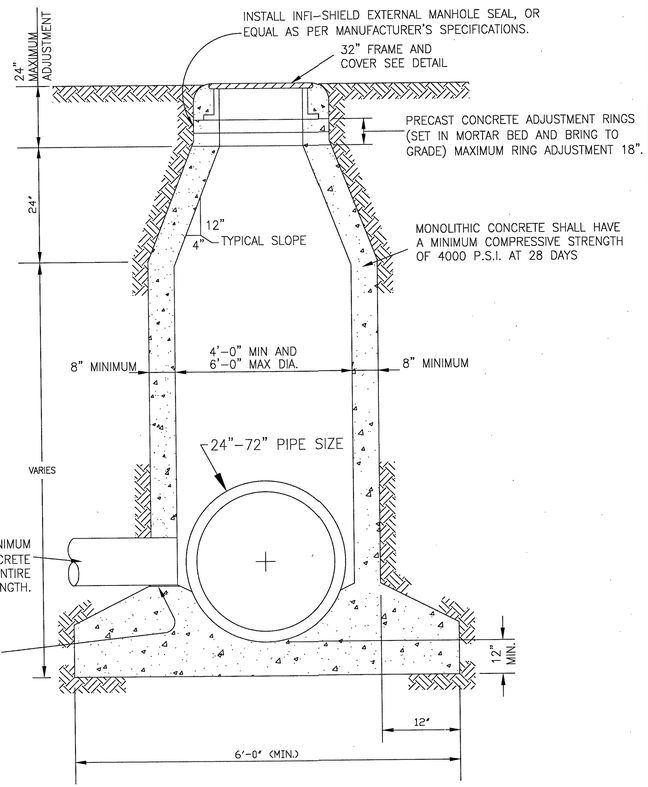
REINFORCEMENT: STRUCTURAL REINFORCEMENT CONFORMING TO ASTM-C-478.

C.I. CASTINGS: CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 35.

PRECAST CONCRETE MANHOLE

N.T.S.

SL-DR-02



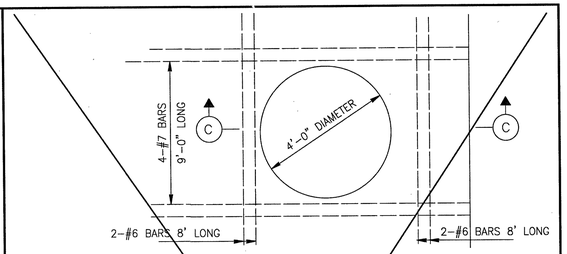
TYPE "C" CAST-IN-PLACE MANHOLE

N.T.S.

NOTES:

1. CONCRETE SHALL BE A MONOLITHIC POUR.
2. #4 REBAR TO BE PLACED IN BASE AND WALLS @ 12" C-C EW.
3. 1-1/2" C.S.S. BACKFILL TO BE PLACED AROUND MANHOLE COMPACTED IN 8" LIFTS (MAX).

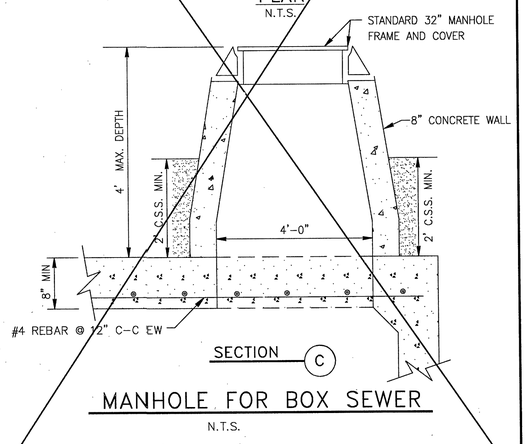
SL-DR-01



STANDARD TYPE "E" INLET MAY BE USED AT TOP OF MANHOLE.

PLAN

N.T.S.



MANHOLE FOR BOX SEWER

N.T.S.

SL-DR-04

GENERAL CONSTRUCTION NOTES:

1. ALL CAST CONCRETE BASES AND WALLS SHALL HAVE # 4 REBAR @ 12" C-C EW
2. CONCRETE SHALL BE 3000 PSI MIN.
3. USE C.S.S. BEDDING AS PER DETAILS 1 1/2 SK, COMPACTED 8" LIFTS (MAX.). TO 95% STANDARD.

REFER TO:

1. *GENERAL NOTES, C.S.S & CONCRETE NOTES.*
2. *STORM SEWER NOTES*

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER MANHOLE CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-03

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

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Date: 9/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

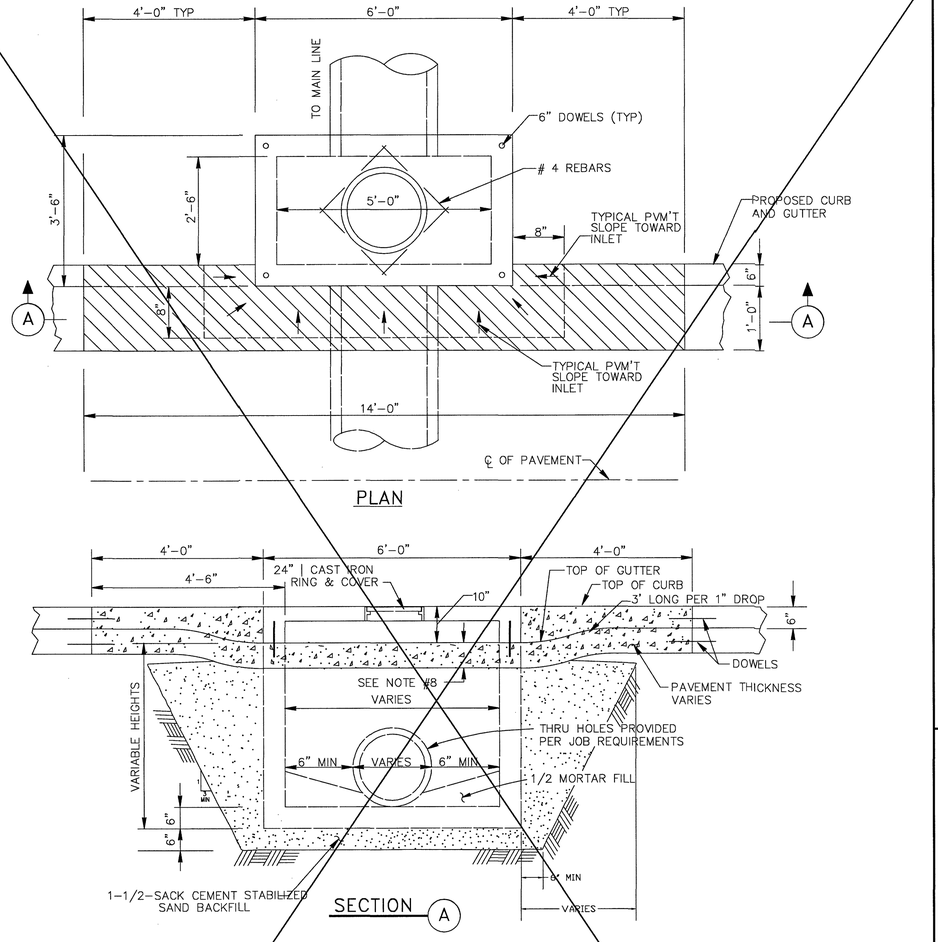
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

STORM SEWER MANHOLE CONSTRUCTION DETAILS
SL-03

PROJECT NO. 13743

13743 DETAIL SET.DWG



PLAN

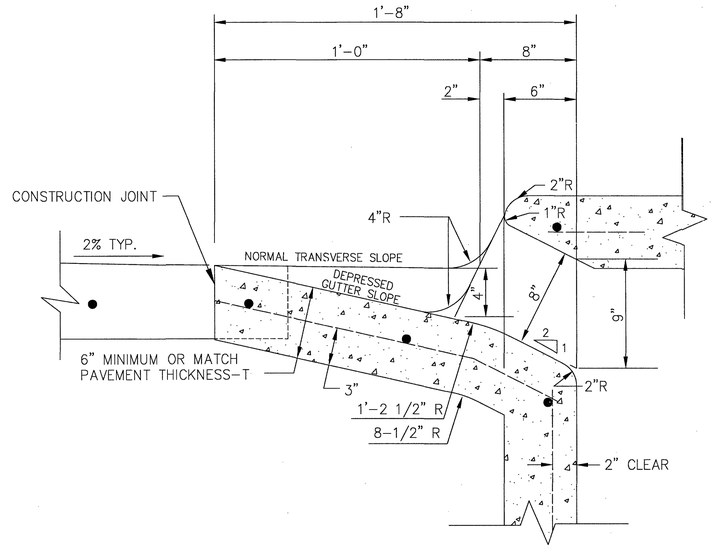
SECTION (A)

TYPE "H-2" INLET

SL-DR-25

NOTES:

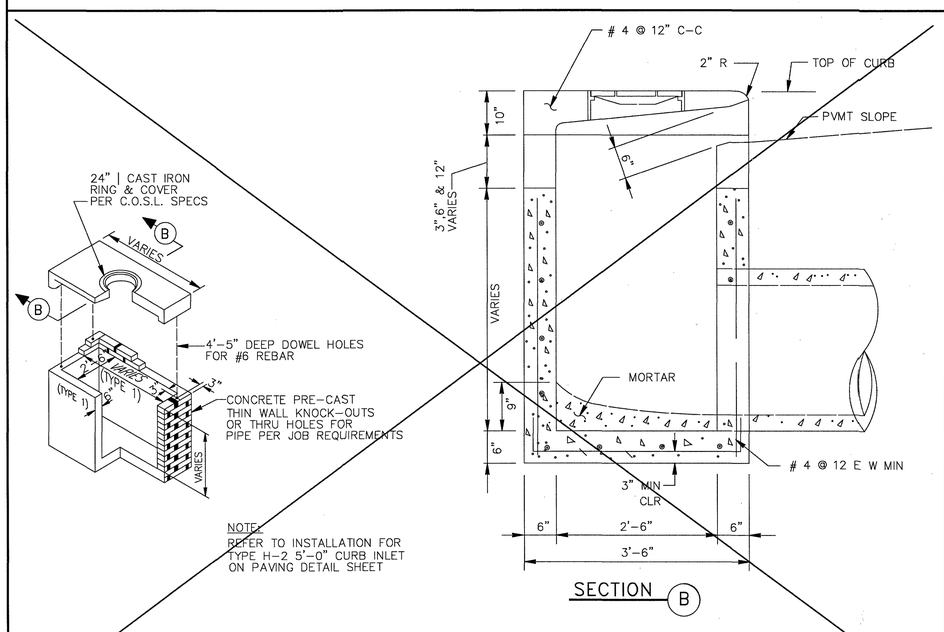
1. INLET WALLS MAY BE EXTENDED USING PRECAST RISER SECTION.
2. INLET TOPS MUST BE SECURED TO THE INLET WALL USING #6 DOWELS DRILLED AND GROUTED A MINIMUM DEPTH OF 5" INTO THE INLET WALL. A PLAN PREPARED BY THE MANUFACTURER MUST BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION. THE PLAN SHOULD DETAIL CONNECTIONS AND SEALING OF JOINTS.
3. PRECAST INLET TOPS SHALL NOT UTILIZE MULTIPLE ONE-FOOT SECTIONS TO ACHIEVE GRADE.
4. INLET BACKFILL SHALL BE CEMENT STABILIZED SAND TO THE TOP OF THE INLET FIRST STAGE.
5. GRADE 60 REINFORCEMENT. #4 STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
6. PRECAST INLET MUST BE CONSTRUCTED TO SPECIFICATIONS REQUIRED BY APPROVED DRAWINGS. (SEE GENERAL NOTES).
7. TOPS POURED-IN-PLACE REQUIRE #4 REBAR @ 12" C-C EACH WAY, 4,500 PSI CONCRETE MINIMUM AND 3" THICK MINIMUM.
8. PAVEMENT DEPTH AT INLET SHALL BE EQUAL TO OR GREATER THAN REQUIRED PAVEMENT DEPTH.
9. DEPRESS GUTTER TO INLET.
10. ALL SIDES OF ALL INLETS MUST BE COMPACTED.
11. REFER TO GEOTECHNICAL REPORTS FOR RECOMMENDED TRENCH SIDE SLOPES.



THROAT DETAIL FOR STANDARD INLETS ON CONCRETE STREETS

SCALE: N.T.S.

SL-DR-40



SECTION (B)

TYPE "H-2" PRECAST INLET

N.T.S.

SL-DR-26

REFER TO:

1. *GENERAL NOTES*
2. *SEE C.S.S., PAVEMENT NOTES*

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER INLET CONSTRUCTION DETAILS II

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-08

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

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CHECKED
DATE

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BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
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REG. NO. F-825

STATE OF TEXAS
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121992
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Date: 9/15/20

OWNER:

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ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

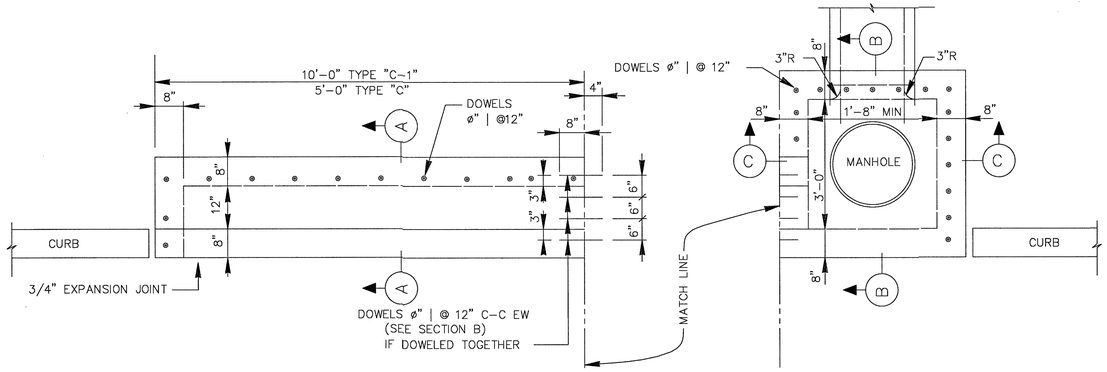
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

STORM SEWER INLET CONSTRUCTION DETAILS II
SL-08

PROJECT NO. 13743

23

S:\...\STORM SEWER INLET CONSTRUCTION DETAILS II SL-08.DWG



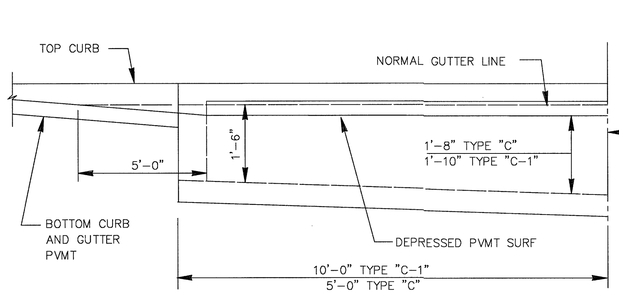
PLAN

GENERAL NOTES:

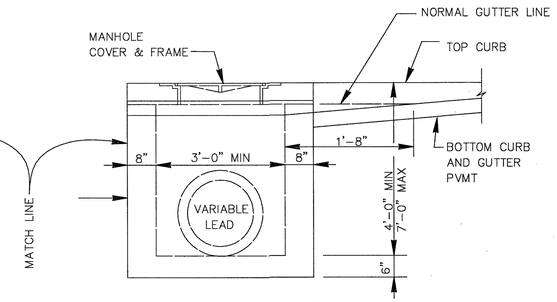
TYPE "C" INLET WITH ONE EXTENSION
TYPE "C-1" INLET WITH DOUBLE EXTENSION
TYPE "C-2" INLET WITH EXTEN. ON EACH SIDE
TYPE "C-2A" INLET WITH NO EXTENSION

NOTES:

1. FOR TYPE "C-1" INLETS PROVIDE A CENTER 6"X6" COLUMNS IN THE CURB LINE BETWEEN ALL EXTENSIONS.
2. WALLS TO BE 8" IF BUILT WITH REINFORCED CONCRETE. BRICK WALLS ARE NOT ALLOWED.

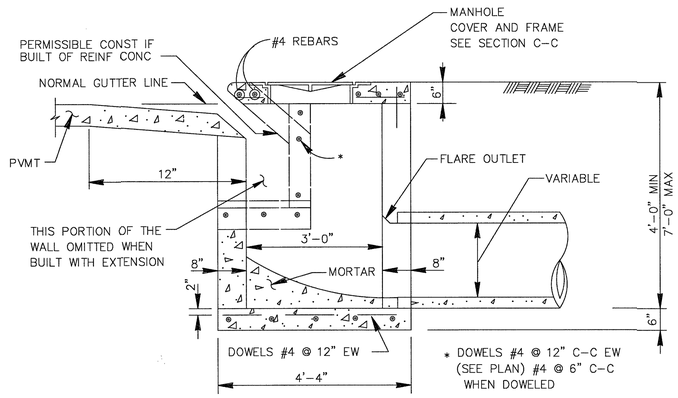


PLAN

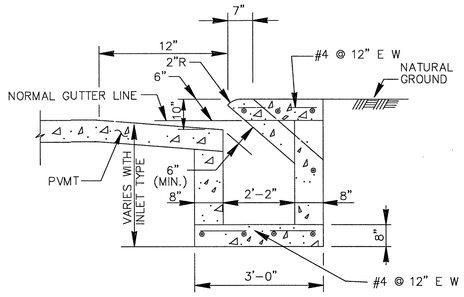


SECTION C

SL-DR-27



SECTION B



SECTION A

TYPE "C" INLET

N.T.S.

SL-DR-28

REFER TO:

1. *GENERAL NOTES*
2. *STORM SEWER NOTES*

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER INLET
CONSTRUCTION DETAILS III

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-09

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

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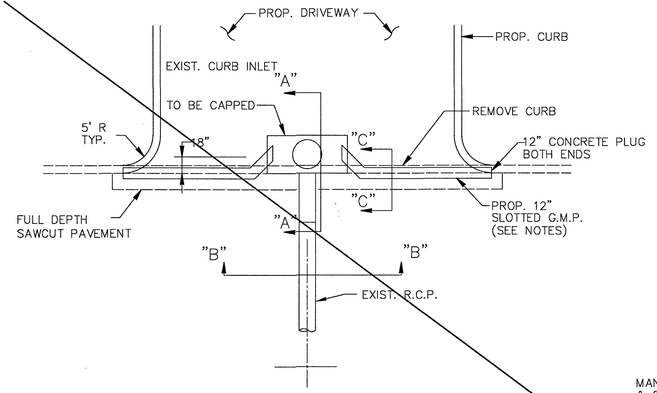
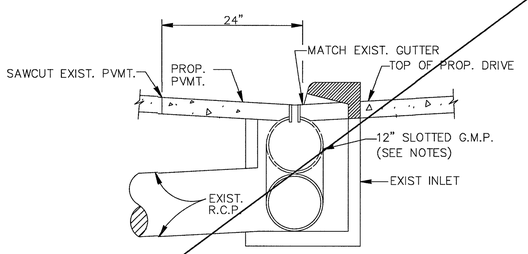
STORM SEWER INLET
CONSTRUCTION DETAILS III
SL-09

PROJECT NO. 13743

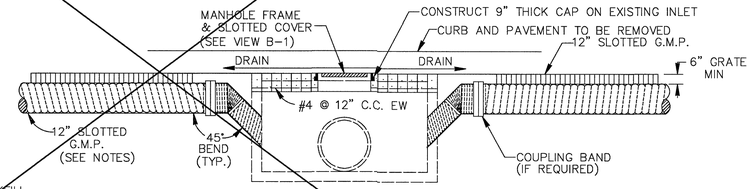
S:\DETAIL SET.DWG



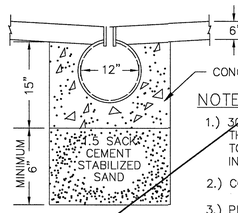
SLOTTED PIPE INSTALLATION
FOR DRIVEWAY CONSTRUCTION



SECTION A–A



SECTION B–B



SECTION C–C

NOTES

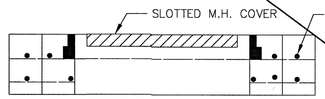
1.) 30 FEET OF SLOT IS THE MINIMUM REQUIREMENT TO REPLACE A TYPE B–B INLET.

2.) CONCRETE MIN. 3000 P.S.I.

3.) PIPE TO BE GALVANIZED TYPE II WITH GALVANIZED SLOT

4.) CONDITIONS MAY VARY. CONTRACTOR TO ROLL FITTING AND ENTER BOX BELOW 9" CAP.

5.) SEE C.S.S. NOTES.

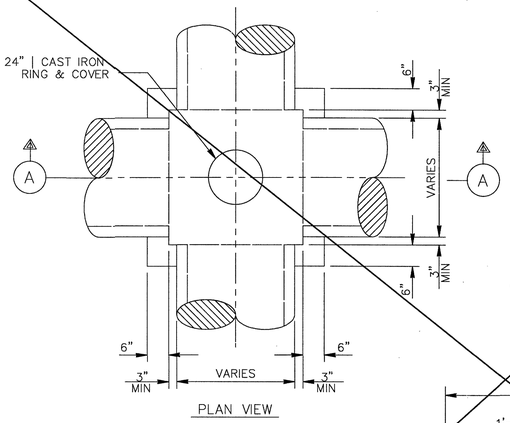


VIEW B–1

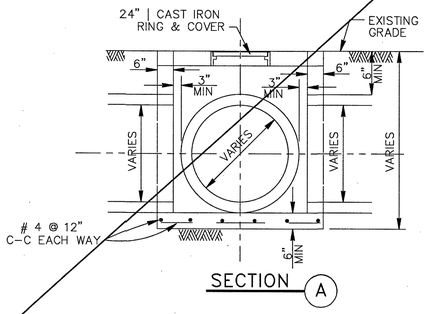
SLOTTED DRAIN DETAIL

N.T.S.

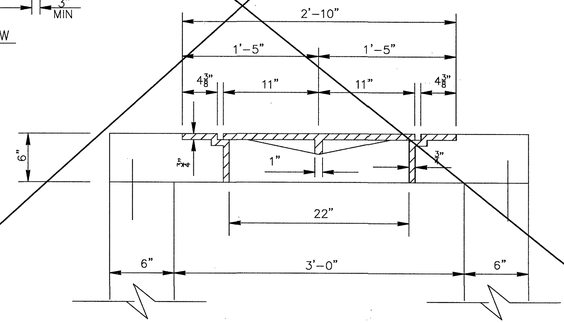
SL–DR–29



PLAN VIEW



SECTION A

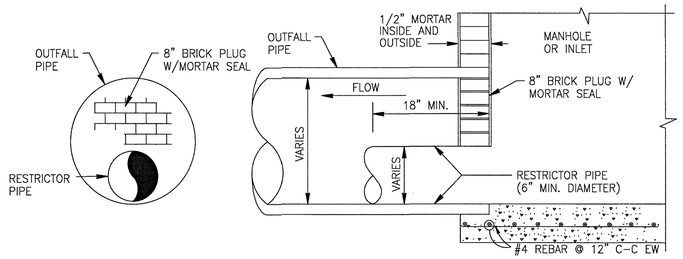


FRAME AND COVER SECTION

JUNCTION BOX

N.T.S.

SL–DR–30



CHOKE OUTFALL RESTRICTOR DETAIL

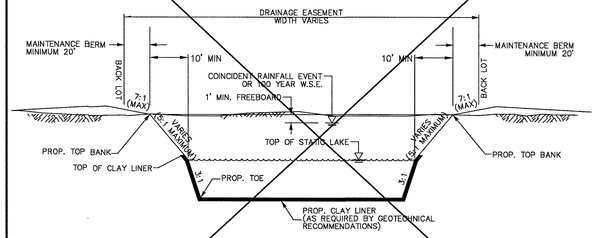
STORM SEWER CHOKE RESTRICTOR

N.T.S.

SL–DR–31

REFER TO:

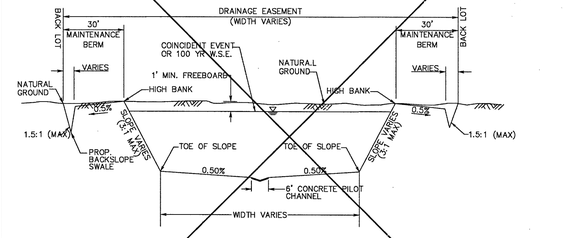
1. *GENERAL NOTES*
2. *STORM SEWER NOTES*



WET DETENTION POND/AMENITY LAKE

N.T.S.

SL–DR–32



DRY DETENTION POND

N.T.S.

SL–DR–33

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–10

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
309 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

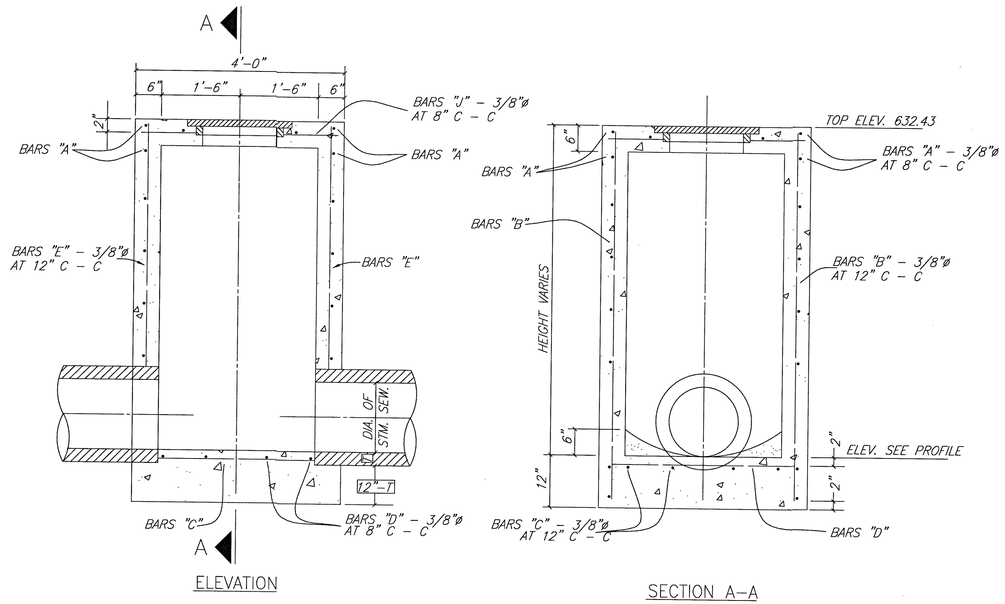
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

STORM SEWER CONSTRUCTION DETAILS SL–10

PROJECT NO. 13743

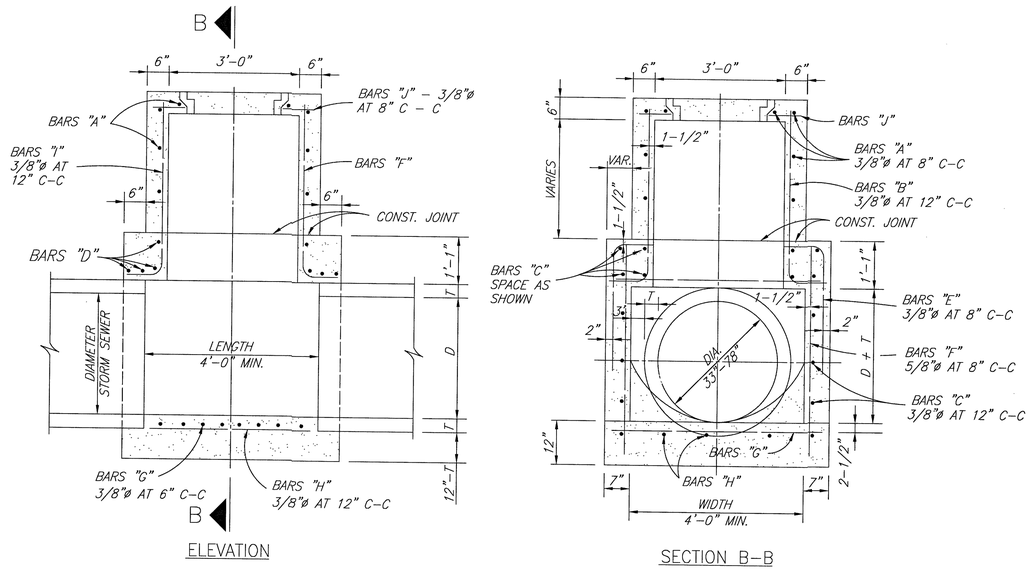
25

S DETAIL SET.DWG



STORM SEWER TYPE A MANHOLE

MAX. PIPE SIZE 30" - N.T.S.



TYPE B STORM SEWER MANHOLE

MAX. PIPE SIZE 78" - N.T.S.

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEEREING DEPARTMENT

CONSTRUCTION PLANS FOR:

JUNCTION BOX MANHOLES

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-11

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6881 FAX: (979) 849-4689
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PLAN:
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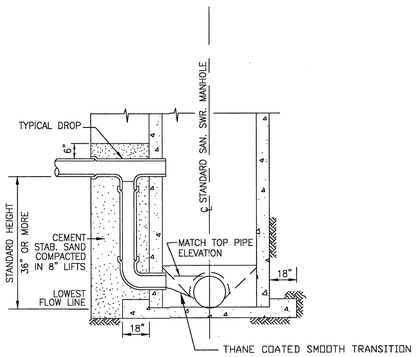
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

JUNCTION BOX MANHOLES SL-11

PROJECT NO. 13743

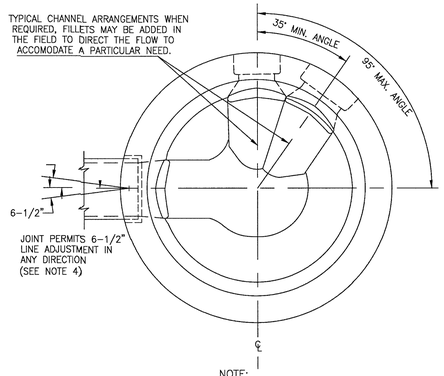
DETAIL SET.DWG



STANDARD DROP DETAIL

(SEE C.S.S. NOTES)

SL-SS-05



PIPING CONNECTIONS DETAIL

SL-SS-05

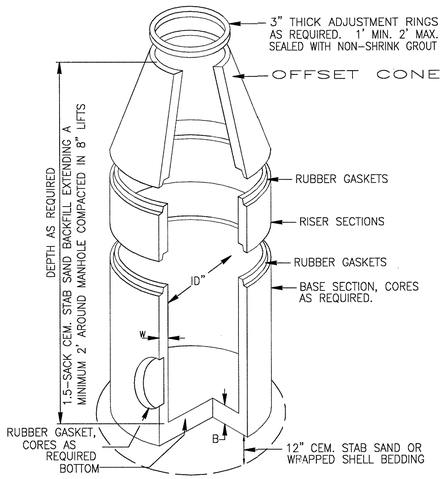
NOTE:

1. INFLUENT AND EXFLUENT PIPING CONNECTIONS TO MANHOLE SHALL BE ALIGNED TO PREVENT REVERSE FLOW.
2. INFLUENT AND EXFLUENT CONNECTIONS ARE LIMITED TO A MAXIMUM 90° INCLUDED ANGLE OF CONVERGENCE.
3. MINIMUM 35° AND MAXIMUM 90° INCLUDED ANGLES MUST BE PROVIDED BETWEEN MULTIPLE INFLUENT CONNECTIONS.
4. ANGLE OF DEFLECTION AT PIPING JOINTS AS PER MANUFACTURE'S RECOMMENDATIONS.

NOTES:

1. CONTRACTOR SHALL CONTACT CITY OF SUGAR LAND ENGINEERING DEPARTMENT AT (281) 275-2780 IF WET SAND OR OTHER UNSTABLE SOIL CONDITIONS, HIGH WATER TABLE AND/OR UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED.
2. SHOULD A CONFLICT ARISE BETWEEN INFORMATION DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL GOVERN.
3. SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED A MINIMUM OF FOUR FOOT FROM BACK OF CURB ON CURB AND GUTTER ROADWAYS AND THREE FEET FROM EDGE OF TRAVELLED ROADWAY ON THOSE THOROUGHFARES HAVING NO CURBING, MEASURED FROM OUTSIDE DIAMETER OF MANHOLE. SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED BENEATH STREET PAVING EXCEPT WHERE SPECIFICALLY AUTHORIZED BY CITY ENGINEER AND SO DESIGNATED ON APPROVED CONSTRUCTION DRAWINGS.
4. ALL SUCH MANHOLE COVERS SHALL HAVE THE CITY OF SUGAR LAND EMBLEM AND THE WORDS "SUGAR LAND" AND "SANITARY SEWER" CAST IN RAISED RELIEF AS DEPICTED IN CITY OF SUGAR LAND STANDARD CONSTRUCTION DETAILS SHEETS. ALL SANITARY SEWER MANHOLES SHALL INCORPORATE INFLOW PROTECTORS.
5. MANHOLE RIM ELEVATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY. CONTRACTORS SHALL ADJUST RIM ELEVATIONS TO 0.4 FEET ABOVE FINISHED GRADE WITHIN RIGHTS-OF-WAY AND EASEMENTS AT EACH MANHOLE LOCATION AFTER FINAL GRADING. ADJUSTMENTS TO MANHOLE RIM ELEVATIONS SHALL BE ACCOMPLISHED BY THE USE OF THROAT RINGS ONLY (MAX. OF 24 INCHES PERMITTED). THE AREA ADJACENT TO SANITARY SEWER MANHOLE LOCATIONS SHALL BE GRADED AWAY FROM SUCH MANHOLES SO AS PREVENT ENTRY OF STORM WATER RUNOFF TO THE SANITARY SEWER SYSTEM.
6. DROP CONNECTIONS ARE REQUIRED WHEN INVERT ELEVATION OF SEWER LINE TO BE CONNECTED EXCEEDS 36 INCHES DISTANCE ABOVE INVERT ELEVATION OF MANHOLE BASE. ALL DROP CONNECTIONS SHALL BE CONSTRUCTED OF SAME MATERIALS AS SEWER AND SHALL BE CONSTRUCTED EXTERIOR TO MANHOLE. PIPE CONNECTIONS TO MANHOLES SHALL BE SO CONSTRUCTED AS TO BE WATERTIGHT AND TO ALIGN UPPER INSIDE PIPE WALL ELEVATIONS OF ALL PIPING CONNECTED TO BASE OF MANHOLE UNIFORMLY, REGARDLESS OF PIPE DIAMETERS. DROP ASSEMBLIES SHALL BE BEDDED IN CEMENT STABILIZED SAND. CEMENT STABILIZED SAND SHALL EXTEND A MINIMUM OF SIX INCHES PAST PIPING LATERALLY FROM BASE OF MANHOLE UPWARD TO A POINT SIX INCHES (MINIMUM) ABOVE THE HORIZONTAL SEWER PIPING WHERE CONNECTED TO THE MANHOLE ABOVE THE VERTICAL DROP.
7. CONNECTIONS TO EXISTING AND/OR NEW SANITARY SEWER MANHOLES CONSTRUCTED OF PRECAST CONCRETE NOT HAVING PRECORED HOLES OF CORRECT DIAMETER, LOCATION AND FIELD CORING ONLY SHALL ACCOMPLISH INVERT ELEVATION. IN NO INSTANCE WILL EITHER MANUAL OR PNEUMATIC CHISELS AND/OR HAMMER DRILLS BE UTILIZED TO BREAK HOLES IN PRECAST CONCRETE MANHOLES, PIPE SEGMENTS OR OTHER PRECAST STRUCTURES SUCH AS LIFT STATIONS.
8. BEDDING AND BACKFILL OF SANITARY SEWER PIPING AND MANHOLES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH CITY OF SUGAR LAND DESIGN STANDARDS. A 1.5-SACK MIX IS REQUIRED FOR ALL CEMENT STABILIZED SAND BEDDING AND SUCH BEDDING SHALL BE INSTALLED IN LIFTS OF EIGHT INCHES MAXIMUM.
9. SOLVENT WELDED JOINTS ARE NOT AN ACCEPTABLE JOINING METHOD FOR SANITARY SEWERS CONSTRUCTED OF PVC PIPING MATERIALS AND LOCATED WITHIN RIGHTS-OF-WAY OR EASEMENTS. RUBBER GASKETED BELL AND SPIGOT SANITARY SEWER JOINTS ARE MANDATORY. BELL (FEMALE) ENDS OF PIPE SHALL BE INSTALLED ON UPSTREAM SIDE WITH SPIGOT (MALE) ENDS ORIENTED DOWNSTREAM.
10. SANITARY SEWER SERVICE LEADS SHALL BE EXTENDED TO RIGHTS-OF-WAY AND/OR EASEMENT LINES AS APPLICABLE AND CAPPED/PLUGGED FOR FUTURE CONNECTIONS. SERVICE LEADS ARE TO BE INSTALLED SO AS TO PASS UNDER POTABLE WATER PIPING AT CROSSINGS WHERE POSSIBLE.
11. EACH SANITARY SEWER SERVICE LEAD STUB, PLUGGED WYE BRANCH OUTLET AND STACK SHALL BE MARKED WITH A PRESSURE TREATED 4 X 4 TIMBER AT THE TIME OF CONSTRUCTION, BEGINNING AT THE INVERT ELEVATION OF THE STUB OR WYE AND AT AN ELEVATION TWO FEET BELOW THE CAPPED TERMINATION POINT OF THE STACK AND EXTENDING TWO FEET ABOVE FINISHED GRADE. EACH TIMBER MARKER SHALL BE PAINTED RED AND LABELED "SANITARY SEWER STUB", "SANITARY SEWER WYE" OR "SANITARY SEWER STACK" AS APPROPRIATE WITH STUB, WYE BRANCH OUTLET OR STACK SIZE NOTED.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION. DURING THE COURSE OF ANY AND ALL CLEARING, GRUBBING, FILL, GRADING, EXCAVATION OR OTHER CONSTRUCTION, CONTRACTOR SHALL ENSURE THAT STORM DRAINAGE PATHWAYS ARE MAINTAINED AND REMAIN OPEN TO ENSURE POSITIVE DRAINAGE AND THAT SUCH CONVEYANCES ARE NOT IMPEDED OR BLOCKED IN ANY WAY. STORM SEWER INLETS SHALL BE PROTECTED FROM ENTRY OF SILT, TRASH, DEBRIS AND ANY SUBSTANCES DELETERIOUS TO THE STORM SEWER SYSTEM AND/OR WATERWAYS RECEIVING STORM WATER RUNOFF. CONTRACTOR SHALL AT COMPLETION OF WORK, FILL LOW SPOTS AND GRADE ALL RIGHTS-OF-WAY AND UTILITY EASEMENTS AND REGRADE/RESTORE DITCHES AS NECESSARY TO MAINTAIN AND/OR ESTABLISH POSITIVE DRAINAGE.
13. ALL SANITARY SEWER PIPING AND BEDDING SHALL BE INSPECTED BY CITY CONSTRUCTION INSPECTOR FOR CONFORMANCE WITH CITY INFRASTRUCTURE STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY NOTIFY THE CITY OF ALL CONSTRUCTION ACTIVITIES AND TO CONFORM TO CITY OF SUGAR LAND PUBLIC WOHKS DEPARTMENT INSPECTION POLICY.
14. C.S.S. 1" ABOVE PIPE AND 6" BELOW PIPE MINIMUM.
15. SEE GENERAL NOTES AND C.S.S. NOTES.

SL-SS-07



SPECIFICATIONS:

CONCRETE: CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. RATES FOR H-20 LOADING.

REINFORCEMENT: STRUCTURAL REINFORCEMENT CONFORMING TO ASTM-C-478.

C.I. CASTINGS: CAST IRON FRAMES AND LIDS ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 35.

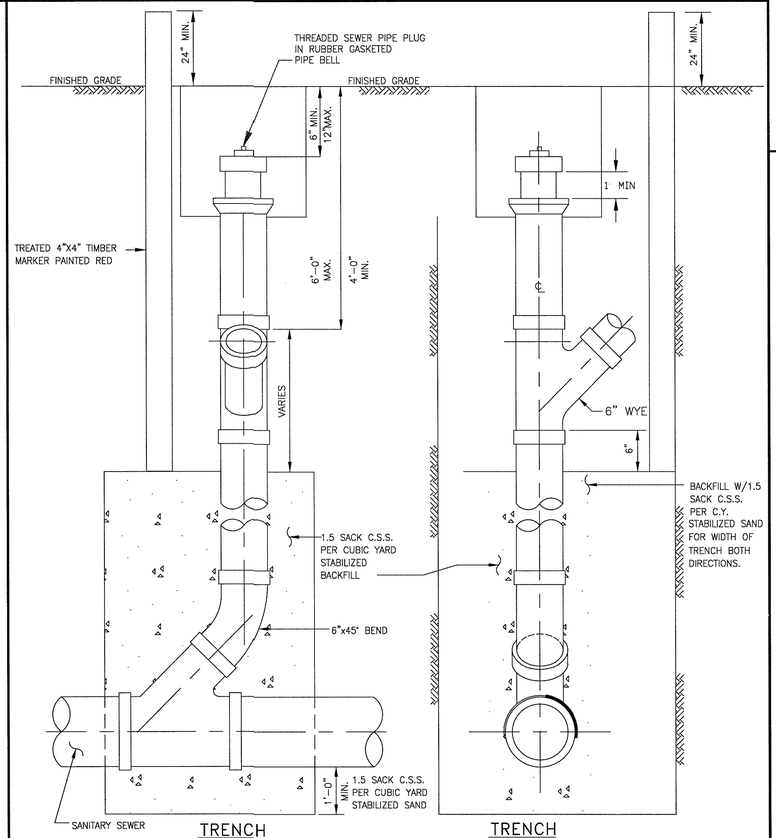
NOTES

1. LIFTING INSERTS AS REQUIRED.
2. ALL JOINTS SHALL BE SEALED WITH APPROVED RUBBER GASKET
3. STRUCTURE TO BE PLACED ON 12" STABILIZED BASE.
4. C.S.S. SHALL BE BROUGHT TO WITHIN 2-FT OF TOP OF MANHOLE.
5. PRE-CAST MANHOLE SHALL BE IN COMPLIANCE APPROVED PRODUCT LIST.
6. THANE COAT SHALL BE IN COMPLANCE WITH APPROVED PRODUCT LIST.
7. INVERTS SHALL COMPLY WITH C.O.S.L., DESIGN MANUAL SPECIFICATIONS.
8. INFLOW PROTECTORS REQUIRED ON ALL SANITARY MANHOLES.
9. REFER TO SANITARY MANHOLE LIDS, C.S.S. NOTES, MODIFIED BEDDING DETAILS AND NOTES.

PRECAST SANITARY MANHOLE

N.T.S.

SL-SS-03



TRENCH SIDE VIEW

TRENCH END VIEW

STACK DETAIL

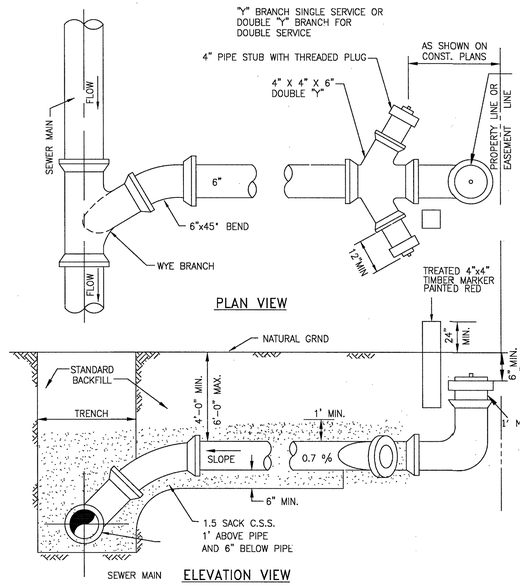
N.T.S.

NOTES:

A.) NO STACKS ON MAINS OVER 16' DEEP OR IN WET SAND CONDITIONS.

B.) ALL STACK CONNECTIONS SHALL BE IN-LINE FITTINGS.

SL-SS-04



SANITARY SEWER SERVICE CONNECTION

N.T.S.

SL-SS-06

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

SANITARY SEWER CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-14

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

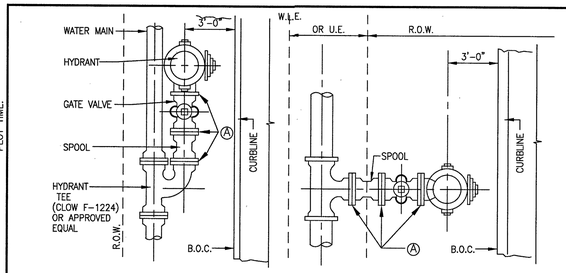
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

SANITARY SEWER CONSTRUCTION DETAILS SL-14

PROJECT NO. 13743

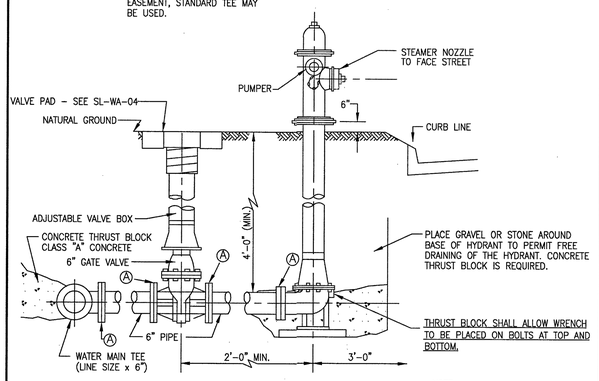
A3 DETAIL SET.DWG



R.O.W. INSTALLATION
N.T.S.

EASEMENT INSTALLATION
N.T.S.

NOTE:
WHEN WATER LINE IS LOCATED IN EASEMENT, STANDARD TEE MAY BE USED.



FLUSHING VALVE COLOR CODE

MAIN LINE DIAMETER	BONNET, PUMPER CAP AND STEAMER CAP
6 INCHES (AND LESS)	YELLOW
8 INCHES	WHITE
12 TO 16 INCHES	GREEN
GREATER THAN 16 INCHES	ORANGE

FIRE HYDRANT BODY TO BE PAINTED GEO-GLEN 301 BRIGHT SILVER ALUMINUM POLYURETHANE ENAMEL, BY GEO-GLEN ENTERPRISES OR APPROVED EQUAL.

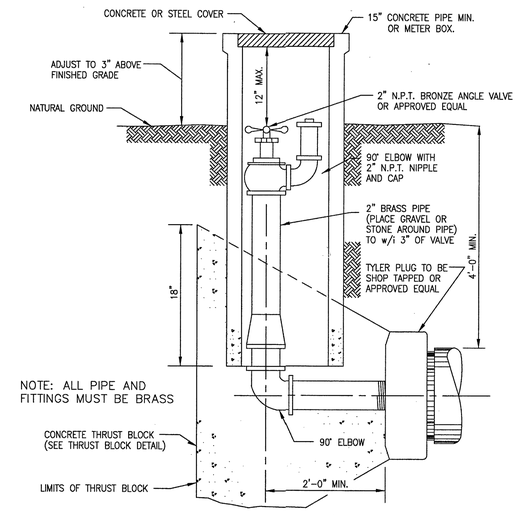
NOTE:
ALL FIRE HYDRANTS SHALL BE MUELLER SUPER CENTURION 250 W/ STORZ INTEGRAL CONNECTOR STEAMER NOZZLE SIZE 5-1/4" TWO PUMPER 2-1/2" N.S.T.

ALL FLUSHING VALVES TO BE SAND BLASTED AND PAINTED AS PER C.O.S.L. DESIGN STANDARDS.

Ⓐ =RESTRAINED JOINT

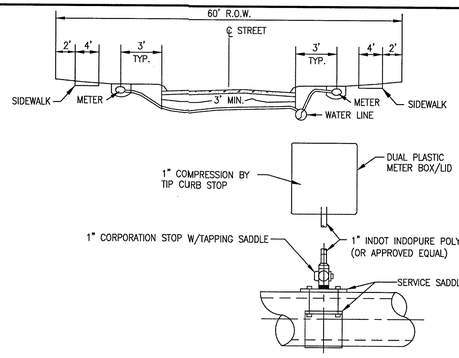
TYPICAL GATE & FIRE HYDRANT INSTALLATION
N.T.S.

SL-WA-01



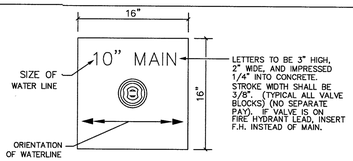
2" BLOW OFF VALVE ASSEMBLY
N.T.S.

SL-WA-02



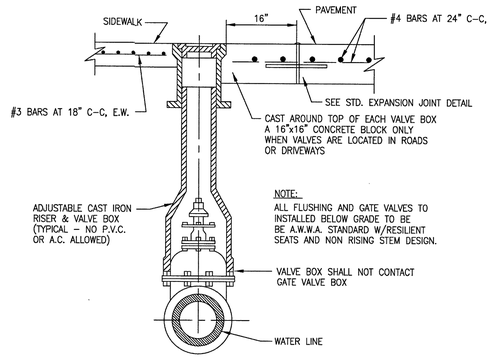
WATER SERVICE CONNECTION AND WATER SERVICE TAPPING ASSEMBLY DETAIL
N.T.S.

SL-WA-03



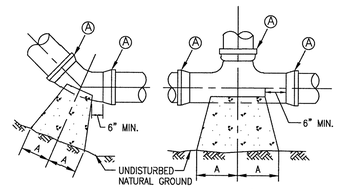
CONCRETE PAD
N.T.S.

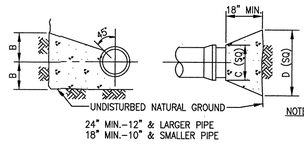
NOTE: ALL VALVES MUST HAVE CONCRETE PAD



VALVE BOX INSTALLATION DETAIL
N.T.S.

SL-WA-04



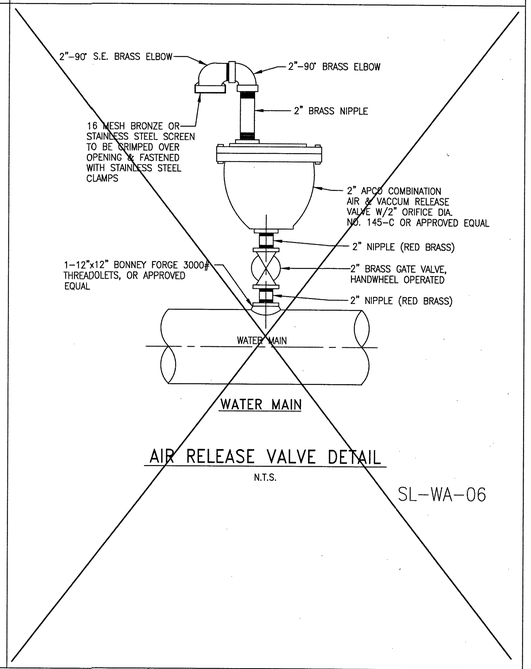


NOTE:
THRUST BLOCKS AT TRENCH FACE MUST HAVE A MINIMUM BEARING SURFACE OF 10 SQ. FEET AND SHALL BE NO SMALLER THAN 1.5 TIMES PIPE DIAMETER.
ALL CONCRETE SHALL BE 5 SACK MIN., 3000 P.S.I.

THRUST BLOCK DETAIL
N.T.S.

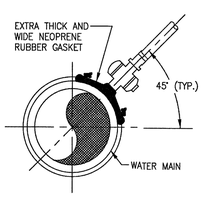
Ⓐ =RESTRAINED JOINT

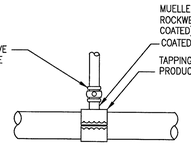
SL-WA-05



AIR RELEASE VALVE DETAIL
N.T.S.

SL-WA-06





TOP VIEW

TAPPING SLEEVE & VALVE DETAIL
N.T.S.

SL-WA-07

CONSTRUCTION NOTES:

1. WATER LINES 12" (IN.) AND LESS SHALL BE AWWA C-900 DR18
   WATER LINE GREATER THAN 12" (IN.) IN ø SHALL BE AWWA C-905 DR 18
2. ALL FLUSHING VALVES AND GATE VALVES TO BE AMERICAN WATER WORKS ASSOC. (AWWA) STANDARD COUNTERCLOCKWISE OPENING WITH NON-RISING STEM DESIGN.
3. ALL DUCTILE IRON PIPE SHALL BE CLASS 50 MORTAR LINED. NO A.C. PIPE WILL BE ALLOWED AND ALL DUCTILE IRON FITTINGS SHALL BE MORTAR LINED PUSHON OR MECHANICAL JOINTS.
4. ALL BACKFILL WITHIN THE R.O.W. SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
5. MINIMUM SPACING BETWEEN TAPS SHALL BE 2' AT ALTERNATING TAP ANGLES.

SL-WA-08

NOTES: POLYETHYLENE WRAP FOR IRON PIPE

NOTE:

1. POLYETHYLENE FILM SHALL BE USED AS A WRAP TO PROTECT CAST IRON AND OTHER METALS IN A CORROSIVE SOIL ENVIRONMENT.
2. AN 8 MIL POLYETHYLENE FILM WRAP SHALL BE REQUIRED AROUND ALL METAL PIPE AND APPURTENANCES (EXCEPT FIRE HYDRANTS).
3. POLYETHYLENE FILM SHALL BE FURNISHED AND INSTALLED EITHER IN TUBULAR FORM PRIOR TO LOWERING THE PIPE IN TRENCH OR IN SHEET FORM.
4. POLYETHYLENE TUBE ENCASEMENT SHALL CONFORM WITH THE MINIMUM REQUIREMENTS OF "POLYETHYLENE ENCASEMENT FOR GRAY AND DUCTILE CAST-IRON PIPING FOR WATER AND OTHER LIQUIDS", ANSI/AWWA C105, CURRENT REVISION. SOILS WITHIN A PROJECT SHALL BE TESTED IN ACCORDANCE WITH APPENDIX A OF ANSI/AWWA C105 TO ADEQUATELY DETERMINE THE REQUIREMENTS FOR ENCASEMENT.
5. ALL FITTINGS AND PIPE JOINTS WITHIN 10' OF A FITTING SHALL HAVE RESTRAINT JOINTS

SIZE	90° BEND		45° BEND		22 1/2° BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B	A	B
2 1/2"	12"	7"	6"	7"	6"	6"	7"	8"	8"	14"
6"	16"	10"	9"	10"	6"	12"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"
20"	50"	40"	30"	40"	18"	30"	30"	40"	30"	*78"
24"	50"	40"	30"	40"	18"	30"	30"	40"	30"	*78"
30"	60"	48"	36"	48"	20"	36"	36"	48"	36"	*96"

BENDS, TEES & PLUGS FOR PIPE OF VARIOUS SIZES

SL-WA-08

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-15

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 12/16/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

WATER LINE CONSTRUCTION DETAILS SL-15

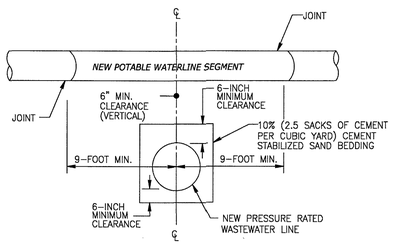
PROJECT NO. 13743

P:\01 DWG\13743 DETAIL SET.DWG

P:\01 DWG\13743 DETAIL SET.DWG

I

NEW POTABLE WATERLINE CROSSING NEW PRESSURE RATED WASTEWATER LINE WITH SEGMENT LENGHTS OF EIGHTEEN (18) FEET OR GREATER, HAVING 6 INCHES OF VERTICAL CLEARANCE AND 4 FEET OF HORIZONTAL CLEARANCE

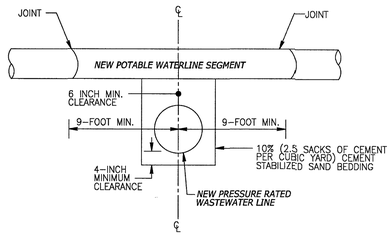


- WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN JOINTS OF THE WASTEWATER LINE.
- MINIMUM WASTEWATER PIPE STIFFNESS OF 115 PSI AT 5% DEFLECTION.
- EMBED WASTEWATER LINE IN CEMENT STABILIZED SAND TO AT LEAST 12" INCHES BEYOND EACH JOINT OF CROSSED SECTION OF PIPE.

SL–WA–09

II

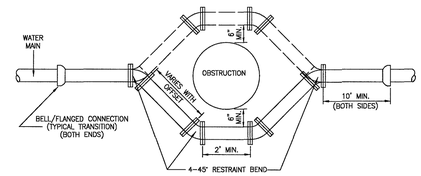
NEW POTABLE WATERLINE CROSSING NEW PRESSURE RATED WASTEWATER LINE



- WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN JOINTS OF THE WASTEWATER LINE.
- MINIMUM WASTEWATER PIPE STIFFNESS OF 115 PSI AT 5% DEFLECTION.
- EMBED WASTEWATER LINE IN CEMENT STABILIZED SAND TO AT LEAST 12" INCHES BEYOND EACH JOINT OF CROSSED SECTION OF PIPE.

SL–WA–10

III



FOR A LINE TO PASS OVER AN OBSTRUCTION RATHER THAN UNDER, IT MUST HAVE ADEQUATE COVER AND BE APPROVED BY THE ENGINEERING DEPARTMENT.

NOTES:

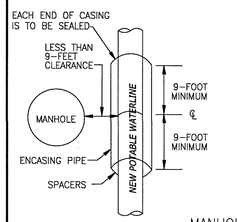
1. PIPE MATERIAL SHALL BE AWWA C900 PVC, DR–14, 200 PSI WITH INTEGRAL PVC RESTRAINED JOINTS.
2. OFFSET ASSEMBLY MUST PASS OVER THE OBSTRUCTION AS LONG AS THE MINIMUM CLEARANCE IS MAINTAINED. SPECIFIC APPROVAL FROM THE UTILITES DEPARTMENT MUST BE GRANTED FOR THE OFFSET TO PASS UNDER THE OBSTRUCTION.
3. MATERIAL AND COATINGS SHALL BE IN ACCCORDANCE WITH WATER MAIN STANDARD SPECIFICATIONS.
4. RESTRAIN EXISTING PIPING BEYOND OFFSET SECTION AS REQUIRED TO PREVENT MOVEMENT.
5. ALL PVC PRODUCTS MUST BE LISTED ON CITY OF SUGAR LAND'S APPROVED PRODUCTS LIST.

MIN. PIPE WALL THICKNESS		
4"	–	0.250"
6"	–	0.280"
8"	–	0.322"
12" AND LARGER	–	0.375"

PVC WATER PIPE OFFSET ASSEMBLY

SL–WA–11

DETAIL OF WATER LINE CROSSING WASTEWATER FACILITIES WHERE SEPARATION IS LESS THAN 9' (NINE FEET)

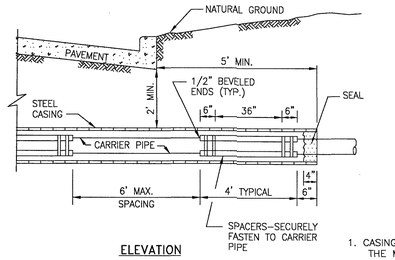


MANHOLE CLEARANCE

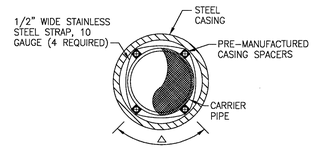
ENCASING PIPE

- 150 PSI PRESSURE CLASS PIPE MINIMUM 18 FEET LONG DIAMETER = 2 X WATERLINE DIAMETER
- SPACE AROUND CARRIER PIPE SHALL BE SUPPORTED AT FIVE (5) FOOT (OR LESS INTERVALS WITH SPACERS)
- CENTERED ON CROSSING
- BOTH ENDS SEALED WITH CEMENT GROUT OR A MANUFACTURED WATER TIGHT SEAL.

SL–WA–12



ELEVATION



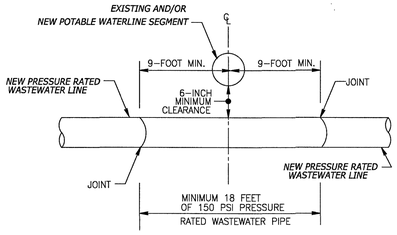
CASING SCHEDULE		
CARRIER PIPE	NOMINAL CASING	MIN. WALL THICKNESS (IN.)
6"	12"	0.11
8"	14"	0.15
10"	16"	0.18
12"	18"	0.20

1. CASING SIZE AND THICKNESS SHALL CONFORM TO THE MINIMUM REQUIREMENTS AS SHOWN ON CASING SCHEDULE, OTHER PERMITS AS REQUIRED.
2. MAINTAIN 1" MINIMUM CLEARANCE BETWEEN THE MAXIMUM OUTSIDE DIAMETER OF CARRIER PIPE AND CASING AT ALL LOCATIONS.
3. DIMENSIONS ARE APPROXIMATE ONLY. CONTRACTOR SHALL INSTALL ADEQUATELY SIZED CASING TO ACCOMMODATE THE CARRIER PIPE.

SL–WA–13

ALTERNATIVE A:

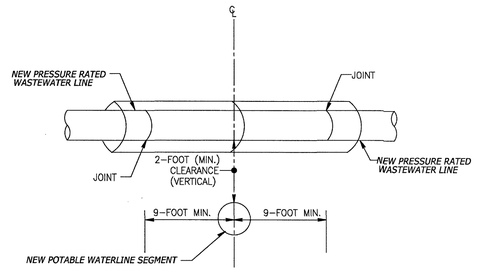
PRESSURE RATED WASTEWATER PIPE



SL–WA–14

ALTERNATIVE B:

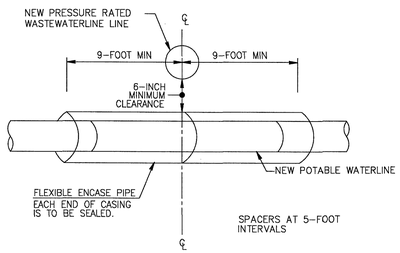
EXISTING POTABLE WATERLINE CROSSING EXISTING PRESSURE RATED WASTEWATER LINE



SL–WA–15

ALTERNATIVE C:

ENCASE NEW POTABLE WATERLINE UNDER A NEW PRESSURE RATED WASTEWATER LINE



- SAME ENCASEMENT CRITERIA AS "ALTERNATIVE B" OR
- NEW WATERLINE (WITHOUT CASING) TO BE CONSTRUCTED OF PVC C–900 (DR–18), DUCTILE IRON WITH MECHANICAL JOINT OR STEEL PIPE WITH WITH WELDED JOINTS.
- BOTH WATERLINE AND WASTEWATER LINE MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS.

SL–WA–16

GENERAL NOTES:

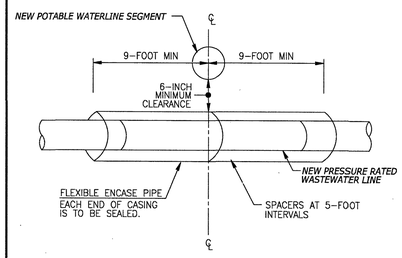
1. CONTRACTOR SHALL CONTACT CITY OF SUGAR LAND ENGINEERING DEPARTMENT AT (281) 275–2780 IF WET SAND OR OTHER UNSTABLE SOIL CONDITIONS, HIGH WATER TABLE AND/OR UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED.
2. SHOULD A CONFLICT ARISE BETWEEN INFORMATION DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL GOVERN.
3. ALL NEW POTABLE WATER LINES AND SANITARY SEWER FORCE MAINS SHALL BE BEDDED IN COMPACTED BANK SAND A MINIMUM OF 6 INCHES BELOW, ABOVE AND TO EITHER SIDE OF SUCH PIPING.
4. ALL NEW SANITARY SEWER GRAVITY DRAIN LINES SHALL BE BEDDED IN CEMENT STABILIZED SAND CONFORMING TO THE REQUIREMENTS FOR EITHER CLASS "A" STANDARD BEDDING OR CLASS "A–A" BEDDING AS APPLICABLE. USE OF MODIFIED "A" OR MODIFIED "A–A" BEDDING FOR SANITARY SEWER INSTALLATIONS WHERE WET SAND CONDITIONS ARE ENCOUNTERED AND SEPARATION DISTANCE TO POTABLE WATER LINES IS LESS THAN 9 FEET REQUIRES APPROVAL BY CITY ENGINEER.
5. CEMENT STABILIZED BEDDING SHALL BE A MINIMUM 1.5 SACK PER CUBIC YARD C.S.S., INSTALLED IN MAXIMUM LIFTS OF 8 INCHES AND MECHANICALLY TAMPED TO 95% PROCTOR.
6. WHERE REQUIRED, SLEEVING (ENCASEMENT) OF POTABLE WATER PIPING AND/OR SANITARY SEWER GRAVITY DRAIN LINES AND FORCE MAINS SHALL BE PROVIDED. SUCH SLEEVING (ENCASEMENT) SHALL BE CONSTRUCTED OF APPROVED PIPING MATERIALS HAVING A MINIMUM PRESSURE RATING OF 150 PSI AND ANNULAR SPACES AT EACH END SHALL BE SEALED WITH A MATERIAL APPROVED FOR SUCH USE.
7. ALL NEW POTABLE WATER LINES SHALL BE SLEEVED (ENCASED) WHERE A MINIMUM OF 9 FEET SEPARATION DISTANCE TO EXISTING OR PROPOSED SANITARY SEWER MANHOLE, LIFT STATION OR WASTEWATER TREATMENT PLANT CANNOT BE MAINTAINED. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CLOSEST PROXIMITY.
8. ALL NEW POTABLE WATER LINES SHALL BE SLEEVED (ENCASED) WHERE LESS THAN 2 FEET VERTICAL OR 4 FEET HORIZONTAL CLEARANCE TO EXISTING OR PROPOSED SANITARY SEWER GRAVITY LINES OR FORCE MAINS CANNOT BE MAINTAINED. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING. WHERE PIPING IS LAID PARALLEL AND MINIMUM SEPARATION DISTANCES CANNOT BE MAINTAINED, SLEEVING SHALL EXTEND AT LEAST 9 FEET PAST THE POINT WHERE MINIMUM SEPARATION DISTANCES ARE ACHIEVED.
9. ALL NEW POTABLE WATER LINES SHALL BE CONSTRUCTED ABOVE EXISTING OR PROPOSED SANITARY SEWER GRAVITY LINES OR FORCE MAINS WHERE POSSIBLE. WHERE INSTALLATION BENEATH SANITARY SEWER GRAVITY LINES OR FORCE MAINS IS UNAVOIDABLE AT POINTS OF CROSSING, SLEEVING (ENCASEMENT) IS REQUIRED FOR ALL NEW POTABLE WATER LINES CONSTRUCTED OF PVC PIPING MATERIALS, REGARDLESS OF SEPARATION DISTANCE. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING.
10. ALL NEW SANITARY SEWER GRAVITY LINES AND/OR FORCE MAINS CONSTRUCTED OF PVC PIPING MATERIALS SHALL BE SLEEVED (ENCASED) WHERE LESS THAN 2 FEET VERTICAL OR 4 FEET HORIZONTAL CLEARANCE TO EXISTING POTABLE WATER PIPING CANNOT BE MAINTAINED. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CLOSEST PROXIMITY.
11. ALL NEW SANITARY SEWER GRAVITY LINES AND/OR FORCE MAINS SHALL BE CONSTRUCTED BELOW EXISTING POTABLE WATER LINES WHERE POSSIBLE. WHERE INSTALLATION ABOVE POTABLE WATER LINES IS UNAVOIDABLE, SLEEVING (ENCASEMENT) IS REQUIRED FOR ALL SUCH SANITARY SEWER LINES CONSTRUCTED OF PVC PIPING MATERIALS, REGARDLESS OF SEPARATION DISTANCE. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING.
12. WHERE NEW SANITARY SEWER SIZING (24 INCH AND GREATER) PRECLUDES THE USE OF PVC PIPING MATERIALS AND SLEEVING (ENCASEMENT) OF THE SANITARY SEWER WOULD OTHERWISE BE REQUIRED BUT IS IMPRACTICAL, THE EXISTING POTABLE WATER PIPING SHALL EITHER BE OFFSET TO PROVIDE THE REQUIRED MINIMUM CLEARANCES OR SLEEVED (ENCASED) IN LIEU OF SLEEVING (ENCASING) THE SANITARY SEWER LINE. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING.
13. IN NO INSTANCE SHALL A FIRE HYDRANT BE INSTALLED WITHIN 9 LINEAR FEET OF A SANITARY SEWER SYSTEM.
14. NOTE: SEPARATION DISTANCES ARE MEASURED FROM THE OUTSIDE DIAMETERS OF EACH PIPE AND FROM THE EXTERIOR SURFACES OF MANHOLES, LIFT STATIONS, WASTEWATER TREATMENT PLANTS AND ASSOCIATED APPURTENANCES.
15. REFER TO GENERAL SANITARY, WATER AND C.S.S. NOTES.

SL–WA–18

IV

ENCASED WASTEWATER LINE

NEW POTABLE WATERLINE CROSSING NEW PRESSURE RATED WASTEWATER LINE WITH SEGMENT LENGHTS OF OF LESS THAN EIGHTEEN (18) FEET



- MINIMUM CASING PIPE STIFFNEESS OF 115 PSI AT 5% DELECTION.
- MINIMUM CASING PIPE DIAMETER ⁎ 2 X WASTEWATER LINE DIAMETER.
- THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE (F) FOOT (OR LESS). INTERVALS WITH SPACERS
- EACH END CASING IS TO BE SEALED WITH WATER TIGHT NO–SHRINK GROUT OR MANUFACTURED WATER TIGHT SEAL.

SL–WA–17

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE CROSSING DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–16

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849–6881 FAX: (979) 849–4689
REG. NO. F–825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

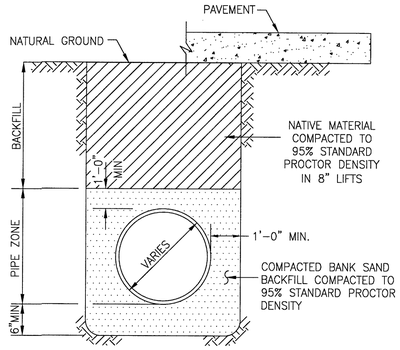
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

WATER LINE CROSSING DETAILS SL–16

PROJECT NO. 13743

S DETAIL SET.DWG



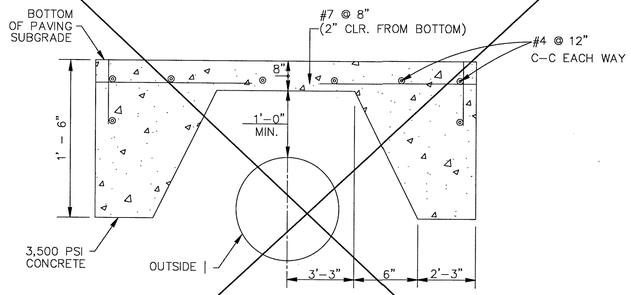
P.V.C. PIPE BEDDING & BACKFILL

N.T.S.

*SEE CONSTRUCTION NOTES

SANITARY FORCE MAIN & WATER LINE BEDDING AND BACKFILL

SL-BB-01



PROTECTIVE SLAB DETAIL

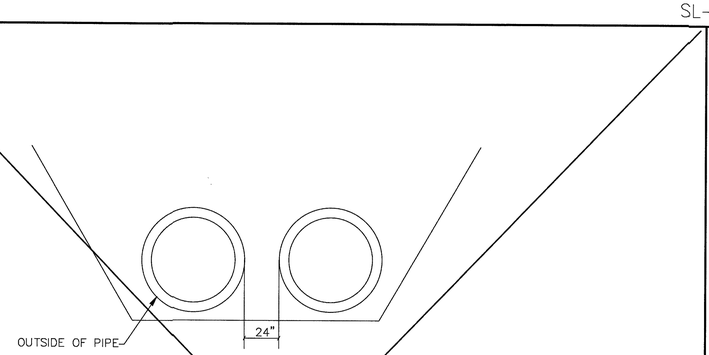
ZERO LOAD TRANSFER CONCRETE SLAB

SL-BB-04

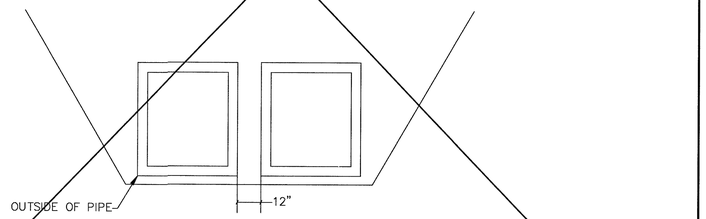
CONSTRUCTION NOTES

1. CONTRACTOR SHALL CONTACT SUGAR LAND ENGINEERING DEPARTMENT IMMEDIATELY IF WET SAND CONDITIONS ARE ENCOUNTERED.
2. LIMESTONE AND RECYCLED CONCRETE DIMENSIONS SHOWN ARE TYPICAL BUT MAY BE VARIED BY ORDER OF CITY ENGINEER.
3. LIMESTONE OR RECYCLED CONCRETE SHALL BE IN ACCORDANCE WITH TXDOT SPECIFICATION No. 248 FLEXIBLE BASE, TYPE A, GRADE 2 AGGREGATE.
4. NO BEDDING SHALL BE INSTALLED IN WET CONDITIONS. WHEN WELL POINTING OR IN WET SAND CONDITIONS, MAINTAIN GROUND WATER 1 (FT) BELOW BOTTOM OF TRENCH FOR A MINIMUM OF 24-HRS AFTER BEDDING AND BACKFILL IS IN PLACE.
5. ALL MATERIALS SHALL BE FROM THE APPROVED PRODUCTS LIST UNLESS SPECIFICALLY APPROVED BY THE CITY ENGINEER.
6. SANITARY SEWER BEDDING FOR WET SAND CONDITIONS SHALL BE AS PER MODIFIED "A".
7. ALL SAND BEDDING FOR WATER LINES SHALL BE CLEAN, MECHANICALLY COMPACTED BANK SAND.
8. REFER TO: MANHOLE DETAILS, SANITARY, C.S.S., GENERAL, WATER CROSSING, WATER DISTRIBUTION DETAILS AND NOTES.
9. ALL BEDDING WILL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
10. A GEOTECHNICAL REPORT MAY BE REQUIRED TO ANALYZE THE BEARING CAPACITY OF EXISTING SOILS AND MAKE A DETERMINATION IF ADDITIONAL BEDDING AND BACKFILL IS APPROPRIATE.

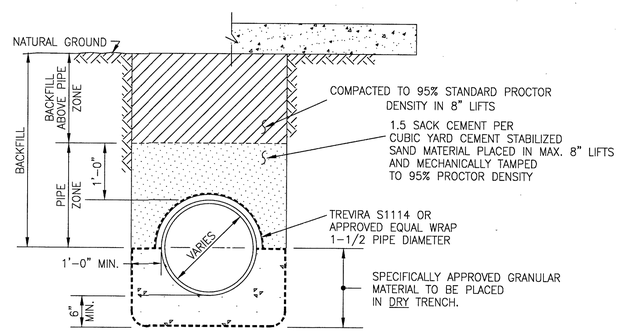
SL-BB-05



PIPE SEPARATION



RCB SEPARATION



MODIFIED "A"

N.T.S.

NOTE: C.S.S. SHALL BE INSTALLED A MIN. 1' ABOVE TOP OF PIPE.

SANITARY SEWER BEDDING AND BACKFILL

SL-BB-03

REFER TO:

1. GENERAL NOTES
2. C.S.S. NOTES

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE, SANITARY SEWER FORCE MAIN BEDDING DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-19

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 848-4689
REG. NO. F-825

STATE OF TEXAS · MIGUELANGEL A. SAUCEDA · 121992 · REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/5/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

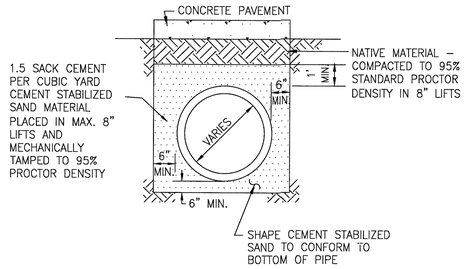
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

WATER LINE, SANITARY SEWER FORCE MAIN BEDDING DETAILS
SL-19

PROJECT NO. 13743

DETAIL SET.DWG

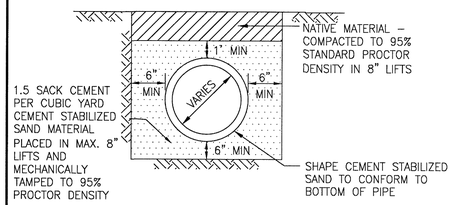


BEDDING DETAIL FOR
CONCRETE CULVERT USED
UNDER ROADWAY PAVEMENT

CLASS "A–A"

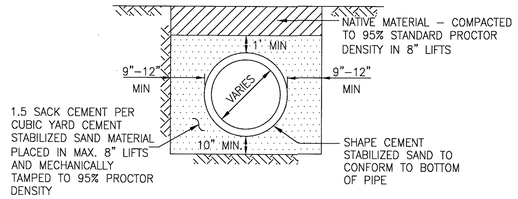
N.T.S.

SL–BB–06



BEDDING DETAIL FOR
REINFORCED CONCRETE PIPE
STORM SEWER
36" DIAMETER & SMALLER

SL–BB–07

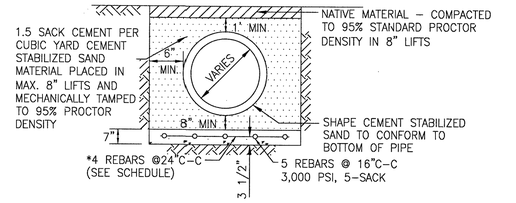


NOTES

1. 1.5–SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (10" MINIMUM FOR 42" TO 60", 14" MINIMUM FOR 66" TO 108")

BEDDING DETAIL FOR
REINFORCED CONCRETE PIPE
STORM SEWER
42" TO 108" DIAMETER
WHERE SATISFACTORY SOIL CONDITIONS EXIST

SL–BB–08

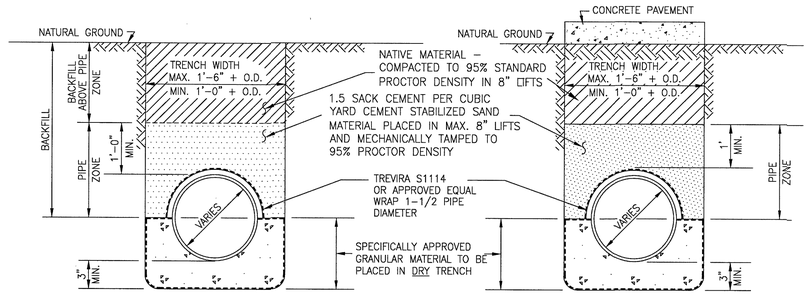


NOTES

1. 1.5–SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (8" MINIMUM FOR 42" TO 60", 12" MINIMUM FOR 66" TO 108").

SEAL SLAB
BEDDING DETAIL FOR
REINFORCED CONCRETE PIPE
STORM SEWER
42" TO 108" DIAMETER
WHERE UNSATISFACTORY SOIL CONDITIONS EXIST

SL–BB–09



MODIFIED "A"

N.T.S.

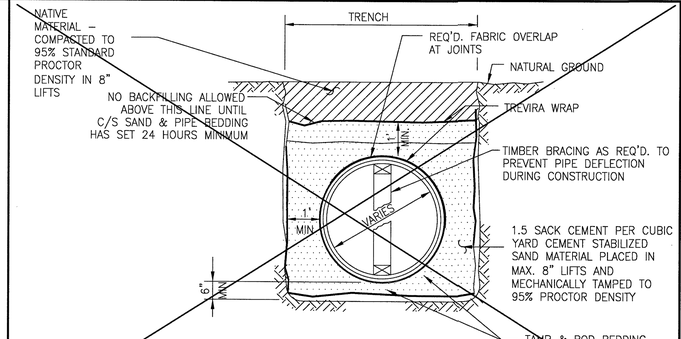
MODIFIED "A–A"

N.T.S.

USE FOR SEWERS UNDER EXISTING OR FUTURE ROADS, STREETS, DRIVEWAYS OR OTHER PVM'T.

1. MODOFIED BEDDING TO BE USED IN WET GROUND CONDITIONS FOR NON=COHESIVE MATERIALS WITH A SHEAR STRENGTH LESS THAN 1000 PSI.

SL–BB–10



BEDDING DETAIL FOR STORM SEWER–
CORREGATED METAL PIPE

N.T.S.

SL–BB–11

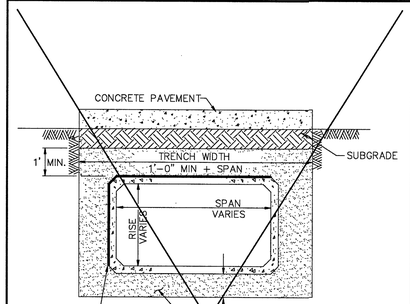
CONSTRUCTION NOTES

1. CONTRACTOR SHALL CONTACT SUGAR LAND ENGINEERING DEPARTMENT IMMEDIATELY IF WET SAND CONDITIONS ARE ENCOUNTERED.
2. SPECIFICALLY APPROVED GRANULAR MATERIAL DIMENSIONS SHOWN ARE TYPICAL BUT MAY BE VARIED BY ORDER OF CITY ENGINEER.
3. SPECIFICALLY APPROVED GRANULAR MATERIAL SHALL BE IN ACCORDANCE WITH TXDOT SPECIFICATION No. 247 FLEXIBLE BASE, TYPE A, GRADE 2 AGGREGATE.
4. NO BEDDING SHALL BE INSTALLED IN WET CONDITIONS. WHEN WELL POINTING OR IN WET SAND CONDITIONS, MAINTAIN GROUND WATER 1' (FT.) BELOW BOTTOM OF TRENCH FOR A MINIMUM OF 24–HRS AFTER BEDDING AND BACKFILL IS IN PLACE.
5. R.C.P. AND BOX CULVERTS SHALL BE INSTALLED WITH APPROVED GASKETS ONLY.
6. MANHOLES SHALL BE PROVIDED WHERE MODIFIED "A" OR MODIFIED "A–A" BEDDING IS USED. STACKS ARE NOT ALLOWED.
7. REFER TO: MANHOLE DETAILS, INLETS, OUTFALL AND END TREATMENT DETAILS, C.S.S., GENERAL NOTES, AND STORM NOTES.
8. SPECIFIC DESIGNS MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER FOR MANHOLE ACCESS TO BOX CULVERTS AS REQUIRED.
9. ALL BACKFILL WITHIN THE R.O.W. SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
10. A GEOTECHNICAL REPORT MAY BE REQUIRED TO ANALYZE THE BEARING CAPACITY OF EXISTING SOILS AND MAKE A DETERMINATION IF ADDITIONAL BEDDING AND BACKFILL IS APPROPRIATE.

TYPICAL SEAL SLAB
BAR SCHEDULE
(OR AS DIRECTED BY ENGINEER)

PIPE SIZE	LGT LAT #4 BARS	NO LONGIT #5 BARS
42"	5'4"	5
48"	6'8"	6
54"	6'8"	6
60"	8'0"	7
66"	8'0"	7
72"	9'4"	8
78"	9'4"	8
84"	9'4"	8
90"	10'8"	9
96"	10'8"	9
102"	12'0"	10
108"	12'0"	10

SL–BB–15

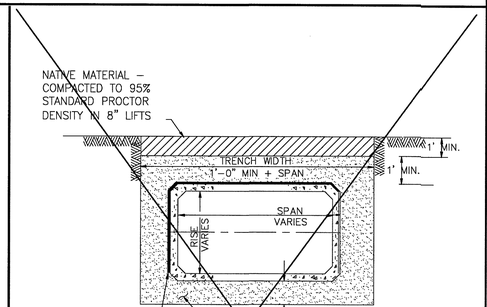


BEDDING DETAIL FOR
REINFORCED CONCRETE BOX
CULVERT UNDER ROADWAY PAVEMENT

NOTES

1. 1.5–SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (8" MINIMUM FOR 42" TO 60", 12" MINIMUM FOR 66" TO 108").

SL–BB–12

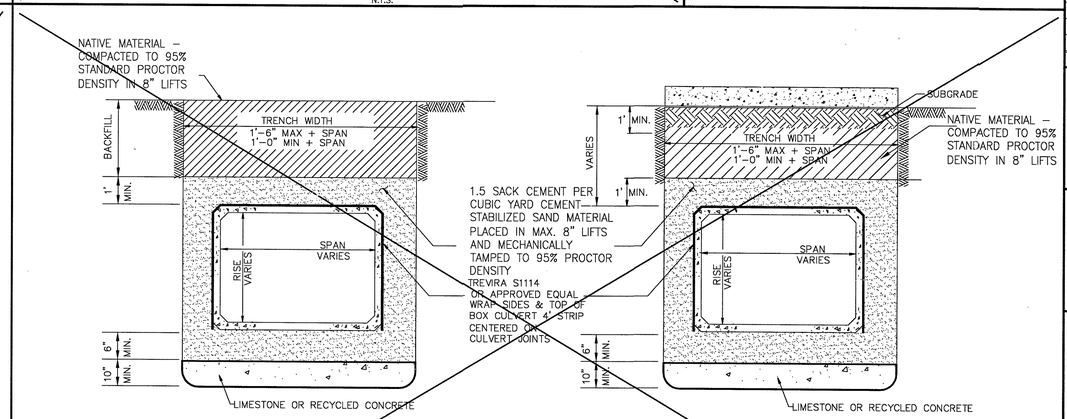


BEDDING DETAIL FOR
REINFORCED CONCRETE BOX
PLACED IN EASEMENT

NOTES

1. 1.5–SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (8" MINIMUM FOR 42" TO 60", 12" MINIMUM FOR 66" TO 108").

SL–BB–13



BEDDING DETAIL FOR
REINFORCED CONCRETE BOX CULVERT
W/MODIFIED BEDDING

BEDDING DETAIL FOR
REINFORCED CONCRETE BOX CULVERT
W/MODIFIED BEDDING
UNDER ROADWAY PAVEMENT

SL–BB–14

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER PIPE BEDDING AND BACKFILL DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–20

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849–6681 FAX: (979) 849–4689
REG. NO. F–825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

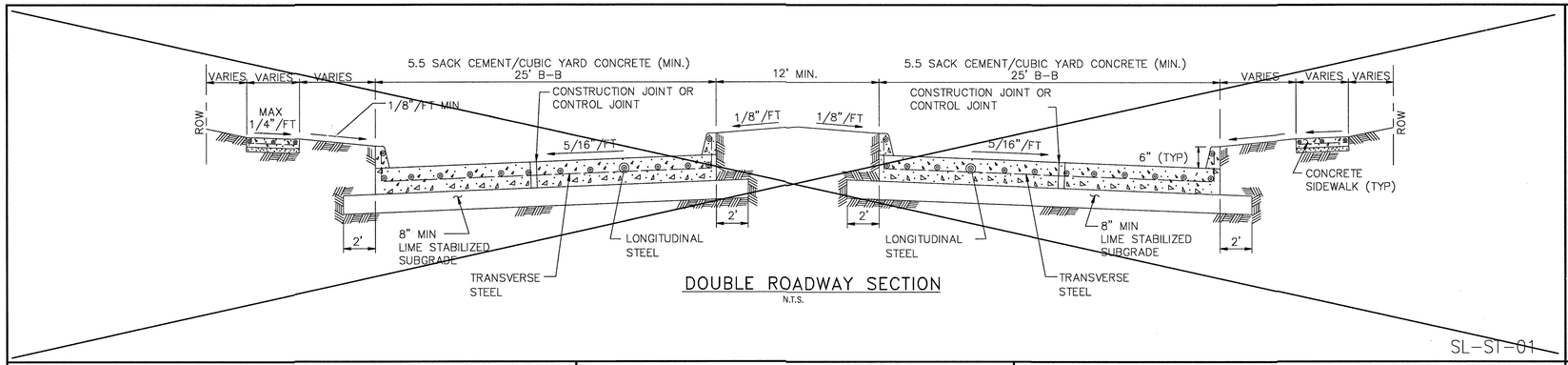
STORM SEWER PIPE BEDDING AND BACKFILL DETAILS
SL–20

PROJECT NO. 13743

31

78

SL DETAIL SET.DWG



DOUBLE ROADWAY SECTION
N.T.S.

SL-ST-01

CONSTRUCTION NOTES:

1. 6 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 24 INCHES C-C, E.W. IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR LOCAL STREETS

2. 7 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 18 INCHES C-C, IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR COLLECTOR STREETS

3. EIGHT (8) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR ARTERIAL STREETS.

4. HARD AGGREGATE IS NOT ALLOWED IN STREET PAVEMENT MIX. ADMIXTURES REQUIRE CITY OF SUGAR LAND PUBLIC WORKS DEPARTMENT APPROVAL.

5. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS. MAXIMUM SPACING SHALL BE 200' AND BE SEALED WITH SEALANT CONFORMING TO TXDOT ITEM 360 (& ITEM 438) AND TXDOT DMS-6310, CLASS-2.

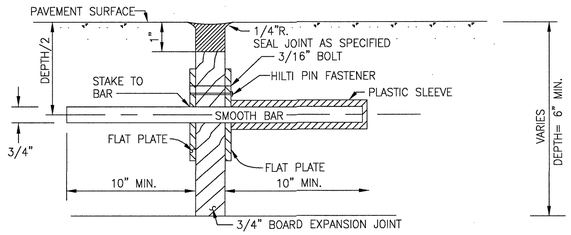
6. TRANSVERSE CONTROL JOINTS ARE REQUIRED AT MAXIMUM SPACING OF 20'-0" C-C, AND VERTICAL CURB JOINTS TO BE SEALED WITH SPECIAL JOINT SEALANT ASTM-D-1190-74 OR AASHTO-M173-60 FOR PAVEMENT 8" THICK AND GREATER. (ELASTONETRIC TYPE HOT POURED)

7. PAVEMENT FINISH SHALL BE BAKER BROOM FINISH. CURING COMPOUND REQUIRED ON ALL CONCRETE.

8. STORM WATER POLLUTION PROTECTION SHALL BE DESIGNED, CONSTRUCTED, MAINTAINED AND SHALL BE IN TOTAL COMPLIANCE WITH THE STORM QUALITY MANUAL OF THE CITY OF SUGAR LAND. CITY ENGINEER'S APPROVAL.

9. REFER TO GENERAL, C.S.S., AND PAVEMENT NOTES.

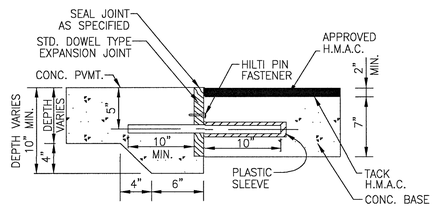
SL-ST-12



STEEL TO MEET ASTM STD. SPEC. FOR CONC. REBAR UNIT TO BE 24" C.-C., AND 10" MIN.

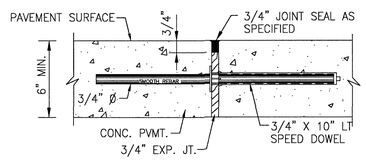
DOWEL TYPE EXPANSION JOINT
N.T.S.

SL-ST-03



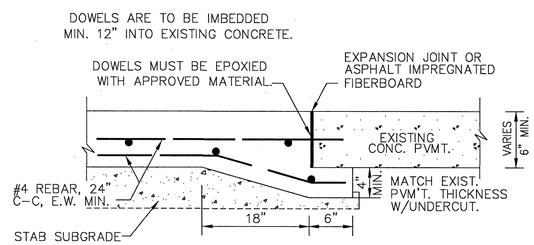
DOWEL TYPE EXPANSION JOINT
N.T.S.
(CONC. PAVING TO CONC. BASE)

SL-ST-06



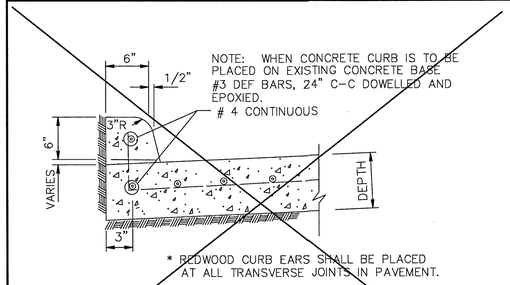
SPEED DOWEL EXPANSION JOINT
N.T.S.

SL-ST-08



UNDERCUT DETAIL WITH HEADER
N.T.S.

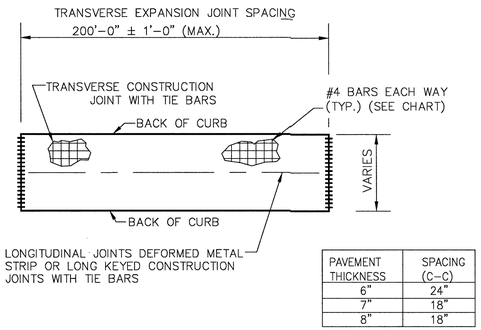
SL-ST-09



CONCRETE CURB
N.T.S.

CONSTRUCTION NOTE:
ALL NEW CURB REQUIRES 3,000 P.S.I. @ 28-DAYS.

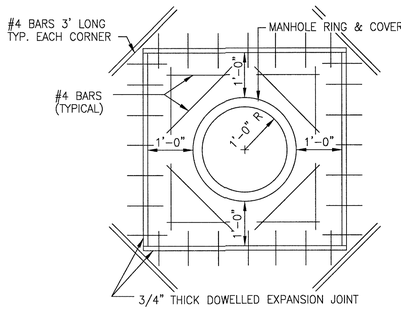
SL-ST-04



PAVEMENT THICKNESS	SPACING (C-C)
6"	24"
7"	18"
8"	18"

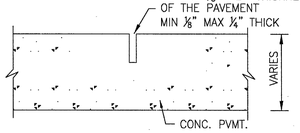
PAVING PANEL
N.T.S.

SL-ST-05



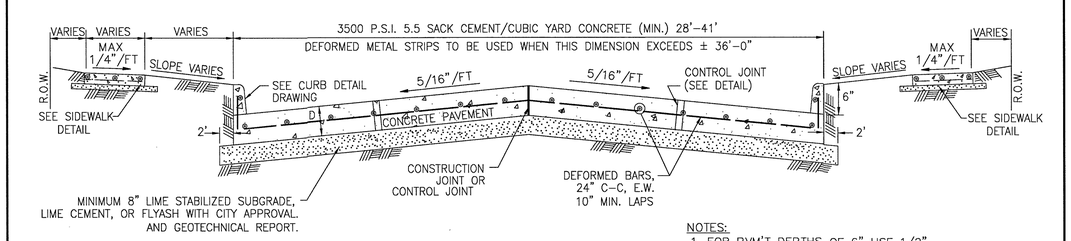
MANHOLE BLOCKOUT
N.T.S.
(STORM & SANITARY) IN PAVEMENT

SL-ST-10



CONTROL JOINT
N.T.S.

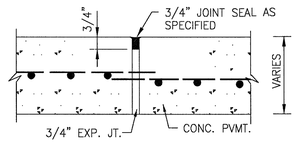
SL-ST-11



SL-ST-02

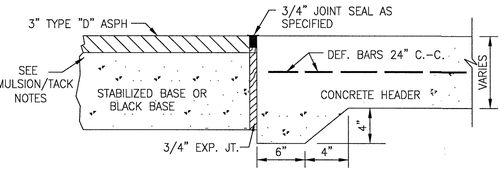
SINGLE ROADWAY SECTION
N.T.S.

NOTES:
1. FOR PVM'T DEPTHS OF 6" USE 1/2" DEFORMED BARS, 24" C-C, 10" LAPS. ALL REINFORCING STEEL SHALL CONFORM TO GRADE 60, A.S.T.M. NO. A615. LAP SPLICES TO BE A MINIMUM OF 10 INCHES. STAGGER SPLICES IN ADJACENT BARS.



CONSTRUCTION JOINT SEAL
N.T.S.

SL-ST-12



PAVING HEADER
(FOR USE IN CONNECTING CONC. PVMT. TO ASPHALT PVMT.) (PROP. OR EXIST.)

SL-ST-07

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

CONCRETE PAVEMENT CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-21

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/15/20

OWNER:
DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

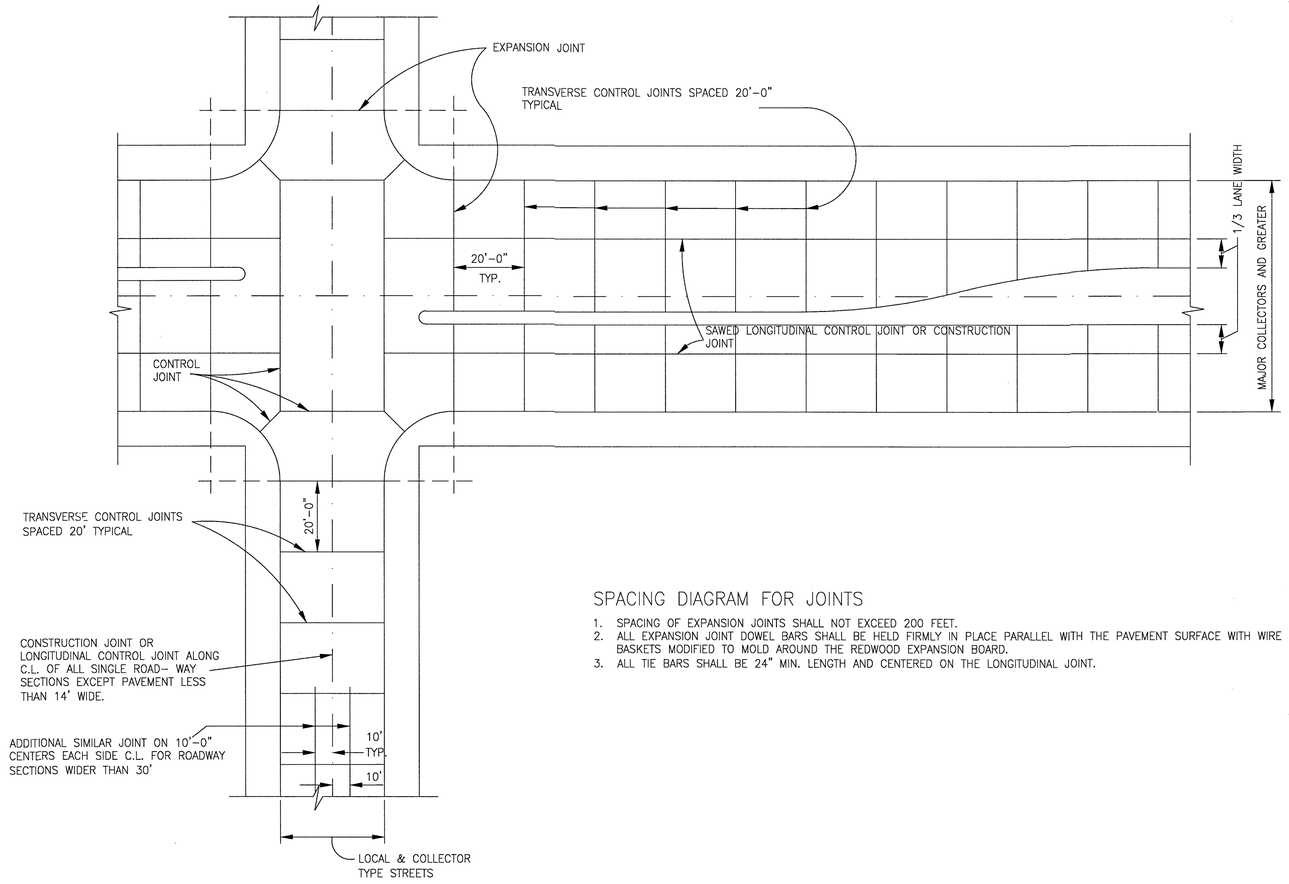
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

CONCRETE PAVEMENT CONSTRUCTION DETAILS SL-21

PROJECT NO. 13743

32

5 DETAIL SET.DWG



SPACING DIAGRAM FOR JOINTS

1. SPACING OF EXPANSION JOINTS SHALL NOT EXCEED 200 FEET.
2. ALL EXPANSION JOINT DOWEL BARS SHALL BE HELD FIRMLY IN PLACE PARALLEL WITH THE PAVEMENT SURFACE WITH WIRE BASKETS MODIFIED TO MOLD AROUND THE REDWOOD EXPANSION BOARD.
3. ALL TIE BARS SHALL BE 24" MIN. LENGTH AND CENTERED ON THE LONGITUDINAL JOINT.

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

CONCRETE PAVEMENT CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-22

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

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Date: 9/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

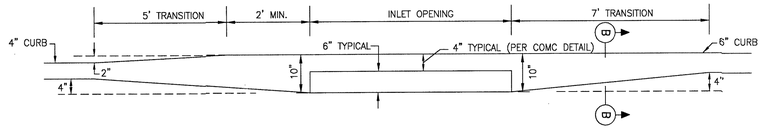
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

CONCRETE PAVEMENT CONSTRUCTION DETAILS
SL-22

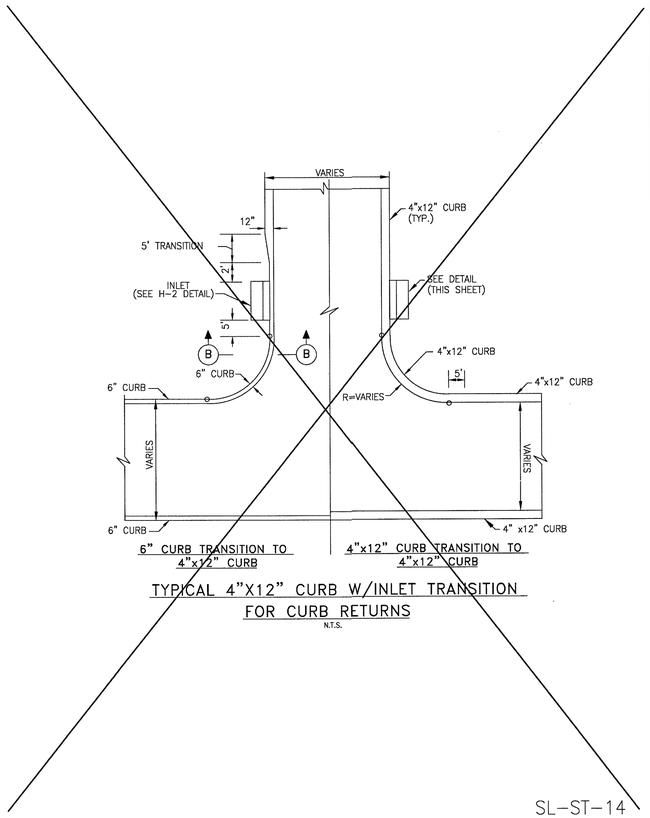
PROJECT NO. 13743

S:\DETAIL SET.DWG



TYPICAL CURB TRANSITION FOR INLET INSTALLATION

SL-ST-13



TYPICAL 4"X12" CURB W/INLET TRANSITION FOR CURB RETURNS

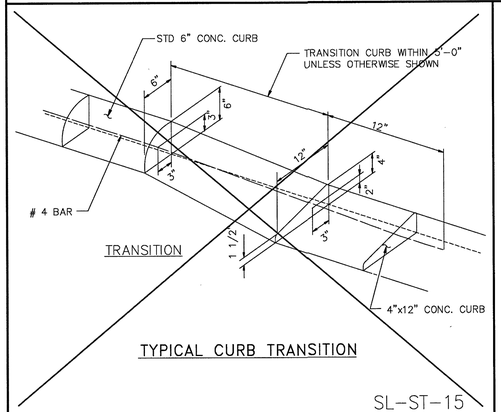
N.T.S.

SL-ST-14

CONSTRUCTION NOTES:

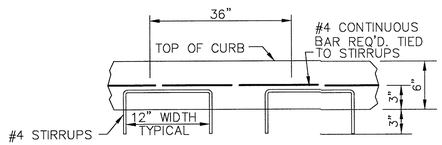
1. 6 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 24 INCHES C-C, E.W. IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR RESIDENTIAL STREETS.
2. 7 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 24 INCHES C-C, IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR COLLECTOR STREETS
3. EIGHT (8) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR ARTERIAL STREETS.
4. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS MAXIMUM SPACING SHALL BE 200' AND BE SEALED CONFORMING TO TXDOT ITEM 360 (& ITEM 438) AND TXDOT DMS-6310, CLASS-2.
5. TRANSVERSE CONTROL JOINTS ARE REQUIRED AT MAXIMUM SPACING OF 20'-0" C-C, AND VERTICAL CURB JOINTS TO BE SEALED WITH SPECIAL JOINT SEALANT ASTM-D-1190-74 OR AASHTO-M173-60 FOR PAVEMENT 8" THICK AND GREATER. (ELASTONETRIC TYPE HOT POURED)
6. PAVEMENT FINISH SHALL BE BAKER BROOM FINISH. CURING COMPOUND ON ALL CONCRETE.
7. STORM WATER POLLUTION PROTECTION SHALL BE DESIGNED, CONSTRUCTED, MAINTAINED AND SHALL BE IN TOTAL COMPLIANCE WITH THE STORM WATER QUALITY MANUAL OF THE CITY OF SUGAR LAND.
8. UNSTABLE SUBGRADE SHALL BE EXCAVATED AND REPLACED WITH CEMENT STABILIZED SAND.
9. USE 1"x2" REDWOOD STAKES FOR HEADERS.
10. EDGE ALL SIDES WITH EDGING TOOL.
11. DOWEL SHALL BE 3/4" DIAMETER, WITH MINIMUM 8" PENETRATION (BOTH SIDES).
12. IT IS THE CONTRACTOR'S RESPONSIBLITY TO NOTIFY THE CITY OF SUGAR LAND OF ANY BIRDBATH PROBLEMS PRIOR TO CONSTRUCTION OF DRIVEWAY.
13. REFER TO GENERAL, C.S.S., AND PAVEMENT NOTES.
14. 1.0 LBS. OF APPROVED POLYPROPYLENE FIBER MESH PER C/Y IN 4"X12" CURBS REQUIRED.

SL-ST-20



TYPICAL CURB TRANSITION

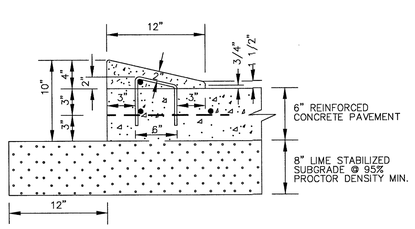
SL-ST-15



TYPICAL CONCRETE CURB REINFORCING

N.T.S.

SL-ST-16

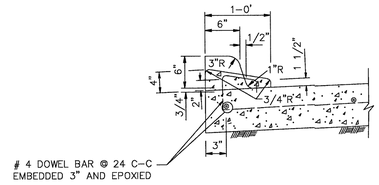


4"x12" MOUNTABLE CONCRETE CURB

NOTES:

1.) 1.0 LBS. OF APPROVED NON-METALLIC FIBER MESH PER C/Y IN 4"X12" CURBS.
2.) #3 RE-BAR STIRRUPS TO BE PLACED AT INTERVALS OF 2' (FT) C-C.
3.) #4 RE-BAR LONGITUDINAL SHALL BE TIED TO EACH STIRRUP
4.) MOUNTABLE CURB ONLY ALLOWED ON ≤ 41' (FT), UNDIVIDED, RESIDENTIAL ROADWAYS WITHIN SUBDIVISIONS.

SL-ST-17



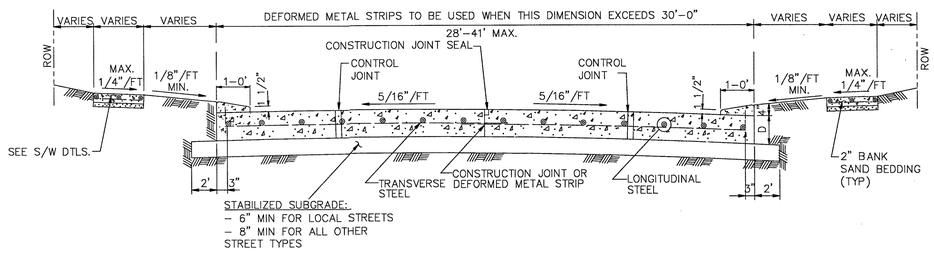
4-INCH x 12-INCH TRANSITION CURB

SL-ST-18

4"x12" MOUNTABLE CONCRETE CURB AND TRANSITION CURB NOTES:

1. 6-INCH CONCRETE CURB TO BE CONSTRUCTED ON ALL ESPLANADES, ISLANDS AND NON-RESIDENTIAL STREETS. RESIDENTIAL STREETS MAY BE CONSTRUCTED WITH EITHER 6-INCH CONCRETE CURB OR 4-INCH x 12-INCH CONCRETE CURB AS NOTED ON PLANS.
2. ALL 4-INCH x 12-INCH CONCRETE CURBS TO BE POURED SEPARATE FROM PROPOSED CONCRETE PAVEMENT.
3. TRANSITIONS FROM 6-INCH CONCRETE CURB TO 4-INCH x 12-INCH CONCRETE CURB TO BE ACCOMPLISHED WITHIN 5 FEET (TYP.), UNLESS OTHERWISE SHOWN. REINFORCING STEEL AS SHOWN IN "4-INCH x 12-INCH TRANSITION CURB" DETAIL IS TO BE INSTALLED.

SL-ST-20



TYPICAL SINGLE ROADWAY SECTION FOR CONCRETE PAVEMENT WITH 4"X12" CURB

* SEE 4" x 12" MOUNTABLE CURB DETAIL (THIS SHEET)

SL-ST-19

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

RESIDENTIAL CURB CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-23

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

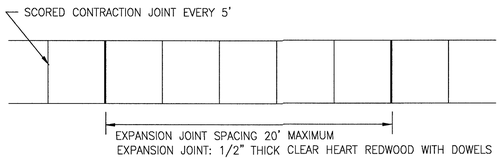
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

RESIDENTIAL CURB CONSTRUCTION DETAILS SL-23

PROJECT NO. 13743

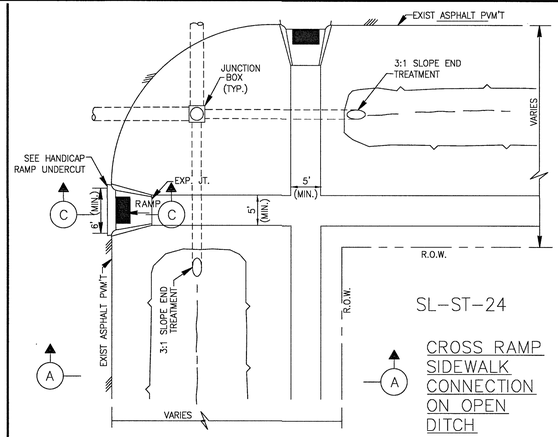
13743 DETAIL SET.DWG



SIDEWALK JOINT DETAILS

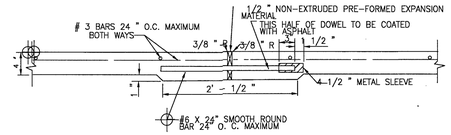
N.T.S.

SL-ST-23



SL-ST-24

CROSS RAMP SIDEWALK CONNECTION ON OPEN DITCH



B-B
EXPANSION JOINT DETAIL

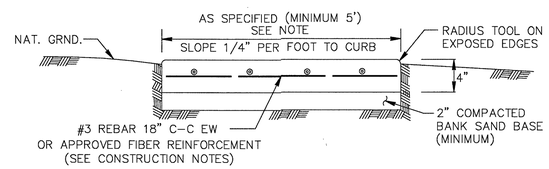
NOTES:

1. EXISTING CURB AND GUTTER TO BE SAW CUT, REMOVED AND REPLACED. DOWEL STEEL FOR MINIMUM REINFORCING OVERLAP OF 10 INCHES (10") DOWELS SHALL BE EIGHTEEN INCHES (18") LONG AND EPOXIED A MINIMUM OF (8") EIGHT INCHES INTO EXISTING PAVEMENT.
2. IF SIDEWALKS ARE NEITHER EXISTING NOR PROPOSED WHERE WHEELCHAIR RAMP ACCESS IS REQUIRED, CONCRETE SIDEWALKS SURFACE 4 1/2" THICK SHALL BE INSTALLED TO PROVIDE ACCESS TO THE PEDESTRIAN PUSH BUTTONS.
3. DETECTABLE WARNINGS REQUIRED BY T.A.S. SECTIONS 4.1 AND 4.7 SHALL COMPLY WITH T.A.S. SECTION 4.29
4. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACE SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE.
5. DETECTABLE WARNING SURFACE SHALL COVER THE ENTIRE WIDTH AND DEPTH OF RAMP.
6. DETECTABLE WARNINGS SHALL BE INSTALLED WITH PAVERS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
7. CONCRETE PAVER UNITS SHALL MEET ALL REQUIREMENTS OF ASTM C-935, C-33, AND SHALL BE PLACED IN A TWO BY TWO UNIT BASKET WEAVE PATTERN, UNLESS SHOWN OTHERWISE IN THE PLANS.
8. CONCRETE PAVER UNITS SHALL HAVE A TRUNCATED DOME TOP SURFACE FOR DETECTABLE WARNING TO PEDESTRIANS. DOMES SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL.
9. CONCRETE PAVER UNIT COLOR FOR THE RAMP SHALL BE A CONTRASTING COLOR THAT PROVIDES A LIGHT REFLECTIVE THAT SIGNIFICANTLY CONTRASTS WITH THE ADJACENT SURFACES. ADJACENT SURFACES INCLUDE SIDE FLARES.
10. CONCRETE PAVER UNITS SHALL BE SAW CUT ONLY, AND ANY CUT UNIT SHALL NOT BE LESS THAN 25% OF A FULL UNIT.

CONSTRUCTION NOTES:

1. THE MAXIMUM WIDTH BETWEEN EXPANSION JOINTS SHALL NOT EXCEED 20'-0"
2. EXPANSION JOINT IS TO BE 1/2" THICK CLEAR HEART REDWOOD WITH DOWELS.
3. SCORED CONTRACTION JOINTS SHALL BE EVERY 5' OR EQUAL TO WIDTH OF SIDEWALK.
4. ALL EARTHEN AREAS ARE TO BE SODDED UNLESS SHOWN OTHERWISE ON DRAWINGS.
5. 4 INCH, 5 SACK CEMENT PER CUBIC YARD CONCRETE, 3000 PSI. REINFORCED CONCRETE WITH #3 BARS, 18 INCHES C-C, FOR SIDEWALKS, #4 BARS 18' C-C FOR WHEEL CHAIR RAMPS IS THE MINIMUM ACCEPTED. MINIMUM 3 LONGITUDINAL BARS. FIBER REINFORCING SIDEWALKS-STEEL AND POLYPROPYLENE BLENDED FIBER REINFORCEMENT SYSTEM SUCH AS NOVOMESH e3 AS MANUFACTURED BY S.I. CONCRETE SYSTEMS (OR PRE-APPROVED EQUAL) MAY BE USED AS AN ALTERNATE TO CONVENTIONAL REBAR REINFORCING AT A DOSAGE RATE OF 24 LBS. PER CUBIC YARD OF CONCRETE.
6. USE RADIUS TOOL ON ALL EXPOSED EDGES.
7. TOP OF THE SIDEWALK ELEVATION TO BE TOP OF CURB.
8. MEMBRANE CURING COMPOUND IS REQUIRED AS DESCRIBED IN ITEM 526 IN THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
9. REFER TO GENERAL NOTES AND CONCRETE/PAVING NOTES.
10. SIDEWALK EXPANSION JOINTS SHALL CONFORM TO STREET EXPANSION JOINT STANDARDS.

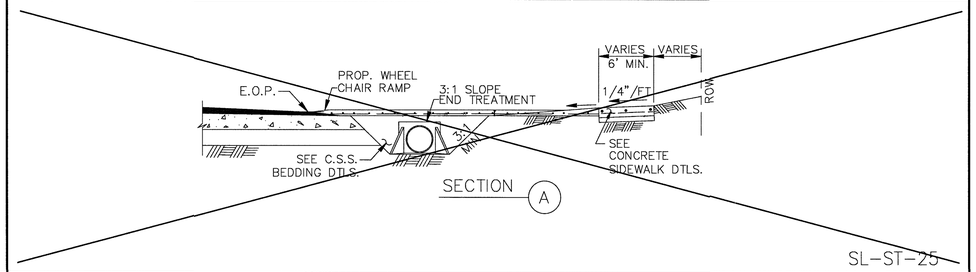
SL-ST-34



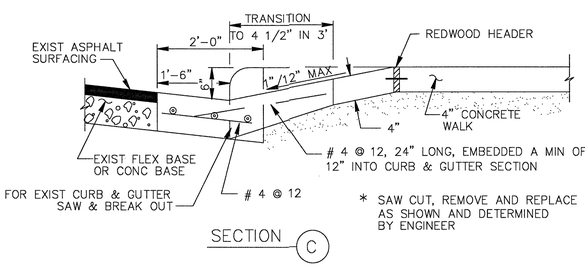
CONCRETE SIDEWALK

NOTE:
BANK SAND IS DEFINED AS A WELL-GRADED SAND, FREE OF SILT, CLAY, LOAM, FRIABLE OR SOLUBLE MATERIALS AND ORGANIC MATTER, MEETING THE UNIFIED SOILS CLASSIFICATION SYSTEM GROUP SYMBOL SW CRITERIA W/ A PLASTICITY INDEX OF <, 10. AND NO MORE THAN 12% OF MATERIAL CAN PASS THE No. 200 SIEVE.

SL-ST-29

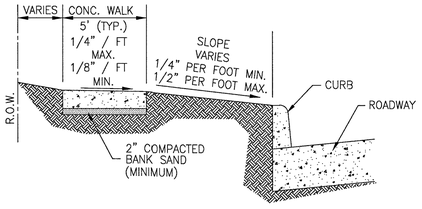


SL-ST-25



HANDICAP RAMP CURB & GUTTER*

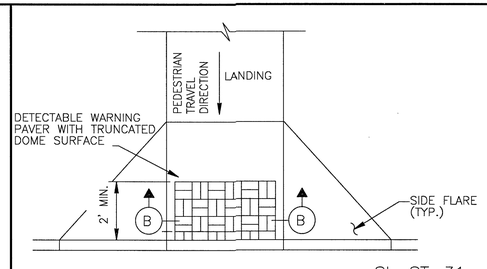
SL-ST-26



NOTE:
SEE SIDEWALK, CONC/PAVING, AND GENERAL NOTES

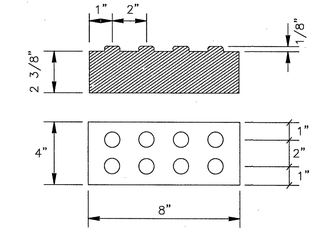
SL-ST-28

TYPICAL SINGLE ROADWAY SIDEWALK



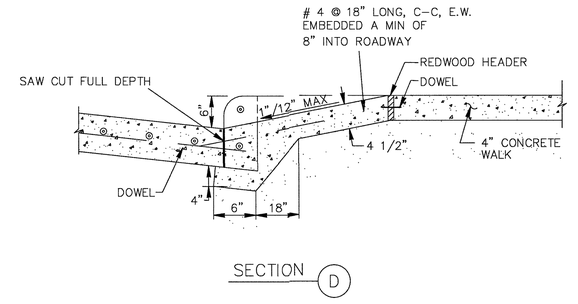
SL-ST-31

TRUNCATED DOME PATTERN CURB RAMP



SL-ST-32

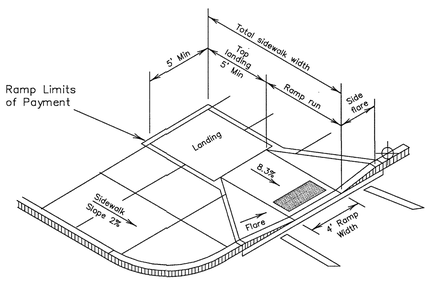
CONCRETE PAVER WITH TRUNCATED DOME SURFACE



HANDICAP RAMP UNDERCUT

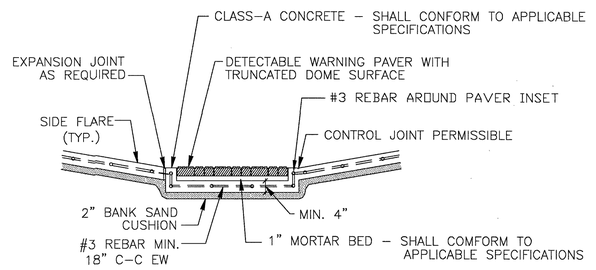
SL-ST-27

1. STANDARD FLARED SINGLE RAMPS ARE ALLOWED AT LOCAL/LOCAL STREET CROSSINGS



WHEELCHAIR RAMP SIDEWALK CONNECTION

SL-ST-30



SL-ST-33

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WHEEL CHAIR RAMP & SIDEWALK DETAILS I

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-25
SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/15/20

OWNER:
DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

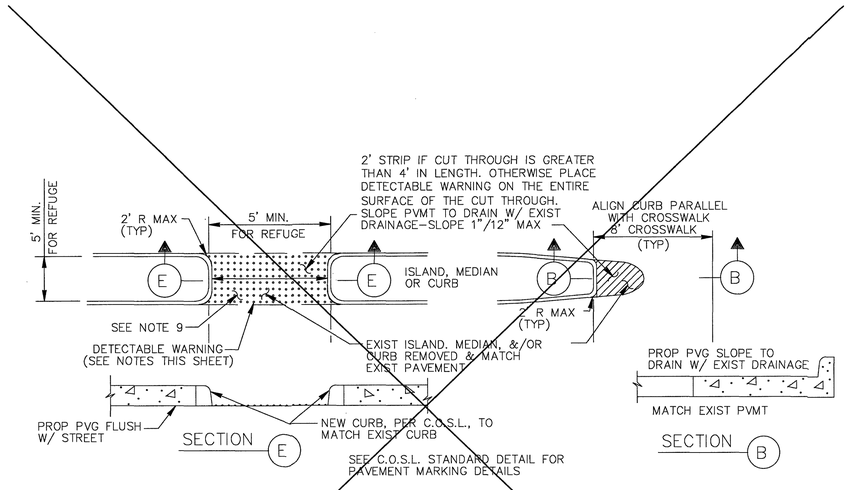
WHEEL CHAIR RAMP & SIDEWALK DETAILS I
SL-25

PROJECT NO. 13743

35

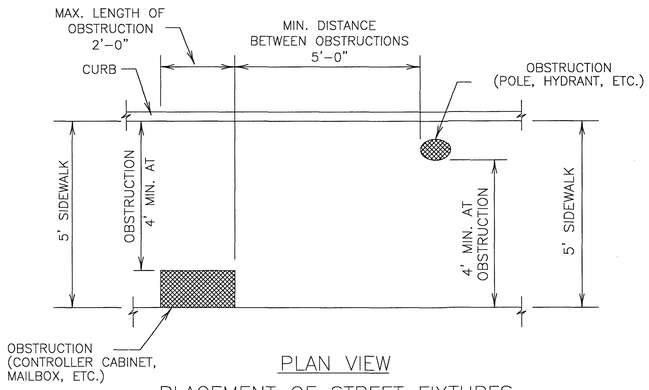
SL-ST-33 DETAIL SET.DWG

PLOT DATE:



FOR ISLAND, MEDIAN, OR CURB MODIFICATIONS FOR CROSSWALKS

SL-ST-35



PLAN VIEW

PLACEMENT OF STREET FIXTURES

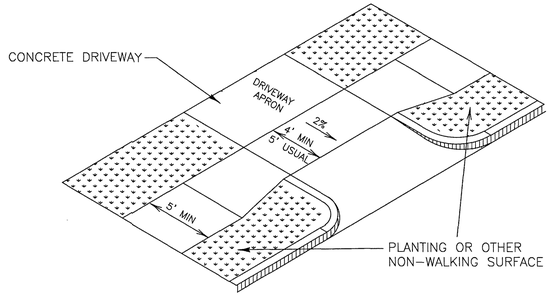
(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' x 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)

SL-ST-36

NOTES:

1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS MAY BE ADJUSTED AS DIRECTED
2. THE MINIMUM SIDEWALK WIDTH IS 5' (FEET). THE LANDING SHALL BE 5' x 5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND RAMP SURFACES IS 2%. USUAL SIDEWALK CROSS SLOPE EQUALS 1.5%. CHANGES IN LEVEL GREATER THAN 1/4" (IN.) ARE NOT PERMITTED.
3. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 5' x 5' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
4. ANY PART OF THE ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 (5%) SHALL BE CONSIDERED A RAMP. IF A RAMP HAS A RISE GREATER THAN 6" (IN.) OR A HORIZONTAL PROJECTION GREATER THAN 72 INCHES, THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES, WITH THE FOLLOWING EXCEPTIONS:
   A.) HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. CURB RAMPS SHALL BE PROVIDED WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
   B.) THE LEAST POSSIBLE GRADE SHOULD BE USED TO MAXIMIZE ACCESSIBILITY. WHERE STRUCTURALLY IMPRACTICAL TO ACHIEVE TEXAS ACCESSIBILITY STANDARDS (TAS) COMPLIANCE, THE RUNNING SLOPE OF SIDEWALKS AND CROSSWALKS, WITHIN THE PUBLIC R.O.W., MAY FOLLOW THE GRADE OF THE PARALLEL ROADWAY WITHOUT INVOKING TEXAS ACCESSIBILITY STANDARDS (TAS) VARIANCES FOR LANDINGS OR HANDRAILS. WHERE A CONTINUOUS GRADE GREATER THAN 5% MUST BE PROVIDED, HANDRAILS MAY BE DESIRABLE ON ONE OR BOTH SIDES OF THE SIDEWALK TO IMPROVE ACCESSIBILITY. HANDRAILS MAY ALSO BE NEEDED TO PROTECT PEDESTRIANS FROM POTENTIALLY HAZARDOUS CONDITIONS.
5. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. OTHERWISE, FLARED SIDES SHALL BE PROVIDED. ALL CONCRETE SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
6. RAMP TEXTURES MUST CONSIST OF TRUNCATED DOME SURFACES, IN ACCORDANCE WITH ADA AND TEXAS DEPARTMENT OF LICENSING AND REGULATIONS (TDLR), TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. TEXTURES ALSO SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).
8. RAISED MEDIANS SEPARATE OPPOSING DIRECTIONS OF TRAFFIC AND PROVIDE A REFUGE AREA FOR PEDESTRIANS UNABLE TO CROSS THE ENTIRE ROADWAY IN THE ALLOTTED SIGNAL PHASE. TO SERVE AS A REFUGE AREA, THE MEDIAN SHALL BE A MINIMUM OF 5' (FT.) WIDE. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR THROUGH THEM.
9. SMALL CHANNELIZATION ISLANDS, WHICH CAN NOT PROVIDE A MINIMUM 5' x 5' LANDING AT THE TOP OF RAMPS, SHALL BE CUT THROUGH LEVEL WITH THE SURFACE OF THE STREET.
10. CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE ENGINEER.
11. EXISTING FEATURES THAT COMPLY WITH T.A.S. MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
12. TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SHALL BE PLACED SO NOT TO OBSTRUCT THE ACCESSIBLE ROUTE.

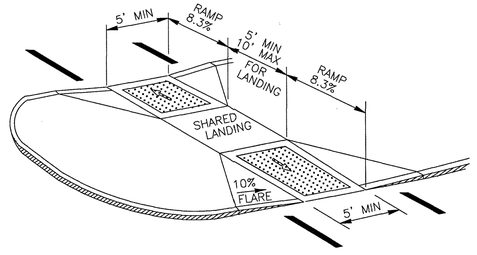
SL-ST-40



SETBACK SIDEWALK

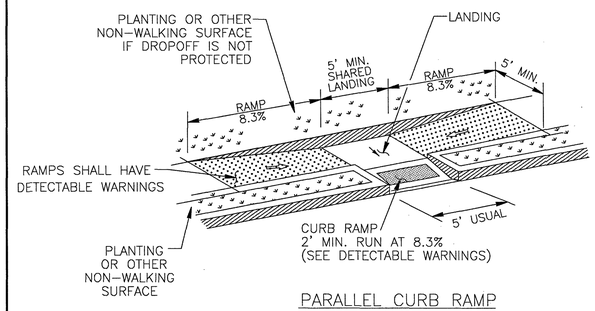
SIDEWALK TREATMENT AT DRIVEWAYS

SL-ST-38



CURB RAMPS AT MEDIAN ISLANDS

SL-ST-37



PARALLEL CURB RAMP

SL-ST-39

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WHEEL CHAIR RAMP & SIDEWALK DETAILS II

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-26

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-6689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992
Date: 9/15/20

OWNER:
DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

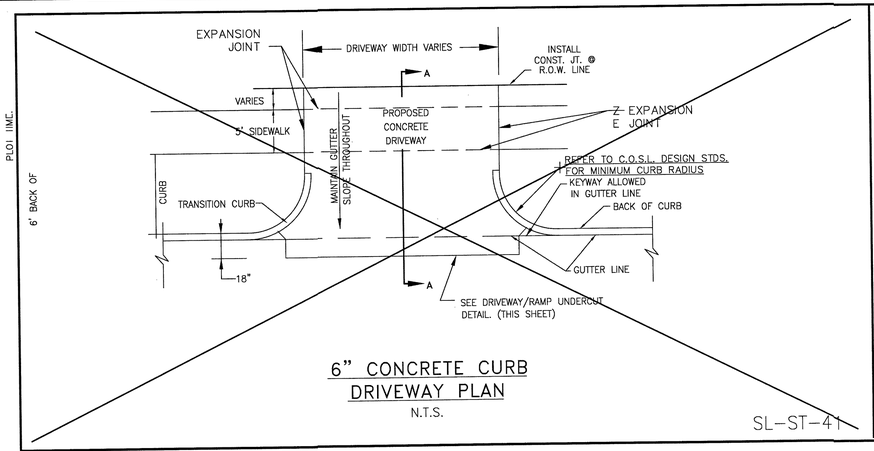
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

WHEEL CHAIR RAMP & SIDEWALK DETAILS II
SL-26

PROJECT NO. 13743

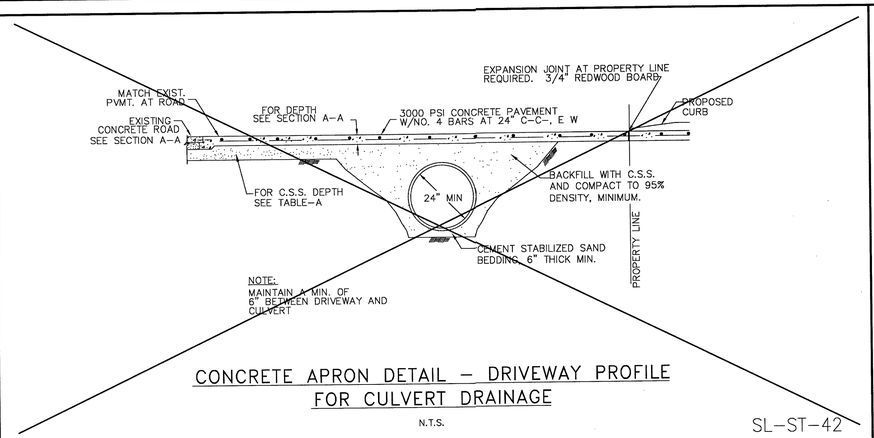
SL DETAIL SET.DWG



6" CONCRETE CURB DRIVEWAY PLAN

N.T.S.

SL-ST-41



CONCRETE APRON DETAIL – DRIVEWAY PROFILE FOR CULVERT DRAINAGE

N.T.S.

SL-ST-42

SL-ST-49

NOTES:

1.) SAW CUT & BREAKOUT NO MORE THAN 72 HOURS PRIOR TO PROPOSED CONCRETE PLACEMENT. NOTIFY SUGAR LAND PRIOR TO CUT.

2.) UNSTABLE SUBGRADE SHALL BE OVER EXCAVATED & REPLACED WITH CONCRETE.

3.) IT IS CONTRACTOR'S RESPONSIBILITY TO NOTIFY SUGAR LAND OF ANY BIRD BATH PROBLEMS PRIOR TO CONSTRUCTION OF DRIVEWAY.

4.) USE 1"x2" TREATED REDWOOD FOR HEADER.

5.) EDGE ALL SIDES WITH EDGING TOOL AND BROOM FINISH

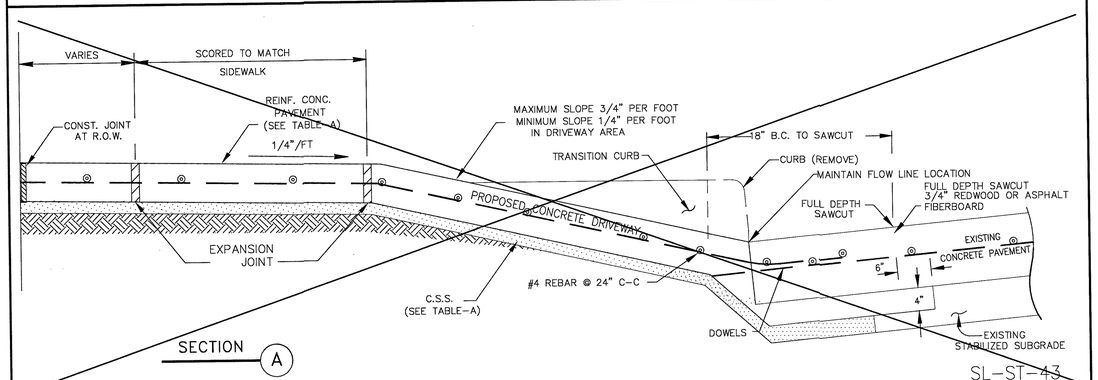
6.) FOR INDUSTRIAL DRIVES, PAVEMENT SHALL HAVE A DEPTH OF 8" (IN).

7.) EXPANSION JOINT AT PROPERTY LINE REQUIRED. 3/4" REDWOOD BOARD WITH No. 4 DOWELS MINIMUM.

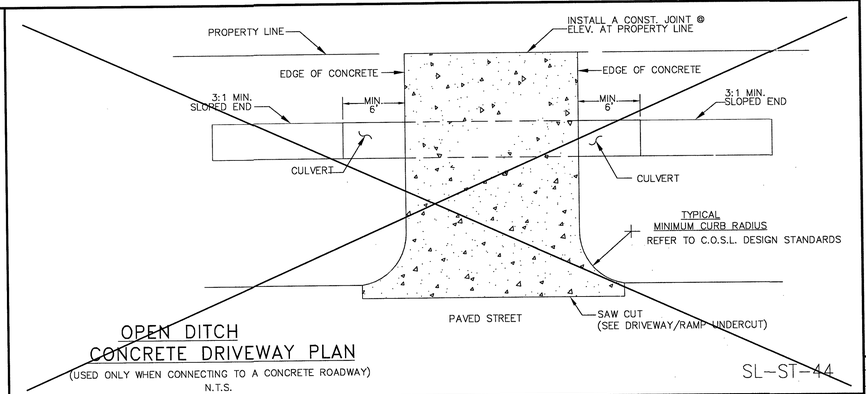
8.) MAXIMUM ALLOWABLE DRIVEWAY GRADE IN PULIC R.O.W. IS 5%

9.) DRIVEWAY GRADE MUST MEET A.D.A AND T.A.S. SIDEWALK SLOPE, SIDEWALKS MUST BE SCORED TO MATCH ADJACENT SIDEWALK. IF SLOPE IS CONTINUED THROUGH THE R.O.W. LINE, PROVIDE A 3/4" REDWOOD EXPANSION JOINT WITH DOWELS AT R.O.W. LINE.

10.) REFER TO GENERAL , C.S.S., ASPHALT, AND CONCRETE PAVEMENT NOTES.



SL-ST-43



OPEN DITCH CONCRETE DRIVEWAY PLAN

(USED ONLY WHEN CONNECTING TO A CONCRETE ROADWAY)

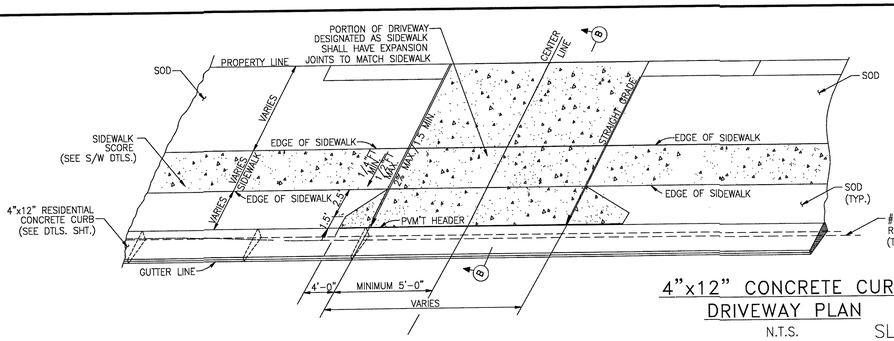
N.T.S.

SL-ST-44

TABLE-A

CEMENT STABILIZED SAND 2-SK/C.Y.	
RESIDENTIAL	4" MINIMUM
COMMERCIAL	6" MINIMUM
INDUSTRIAL	8" MINIMUM
REINFORCED CONCRETE PAVEMENT 3,000 PSI MIN	
RESIDENTIAL	4" MINIMUM
COMMERCIAL	6" MINIMUM
INDUSTRIAL	8" MINIMUM

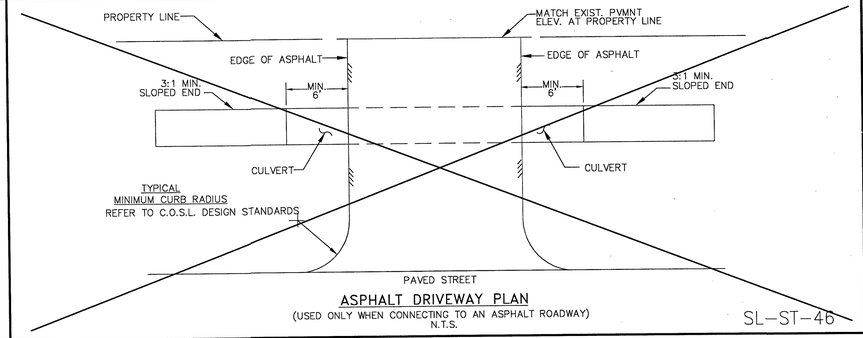
DRIVEWAY PAVEMENT CONSTRUCTION TABLE



4"x12" CONCRETE CURB DRIVEWAY PLAN

N.T.S.

SL-ST-45

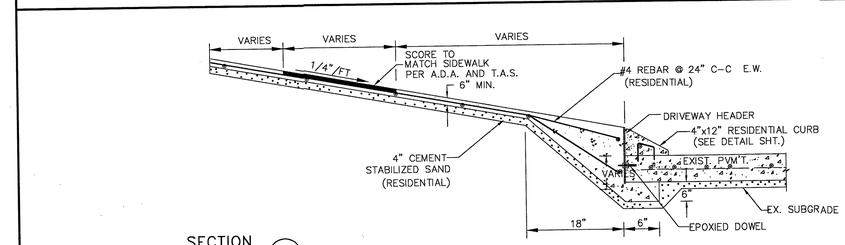


ASPHALT DRIVEWAY PLAN

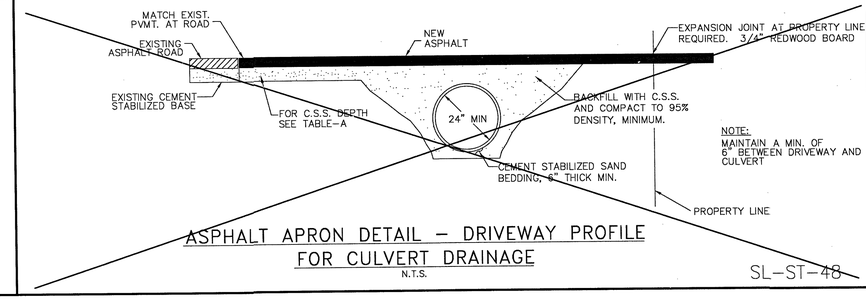
(USED ONLY WHEN CONNECTING TO AN ASPHALT ROADWAY)

N.T.S.

SL-ST-46



SL-ST-47



ASPHALT APRON DETAIL – DRIVEWAY PROFILE FOR CULVERT DRAINAGE

N.T.S.

SL-ST-48

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

DRIVEWAY CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-27

SHEET OF

PL01 DAIE.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
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PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
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PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

DRIVEWAY CONSTRUCTION DETAILS SL-27

PROJECT NO. 13743

13743 DETAIL SET.DWG

HYPER–CHLORINATED WATER NOTES

1. HYPER–CHLORINATED WATER SHALL NOT BE DISCHARGED TO THE STORM SEWER OR DRAINAGE SYSTEM UNLESS THE CHLORINE CONCENTRATION IS REDUCED TO 4 PPM OR LESS BY CHEMICALLY TREATING THE DECHLORINATE OR BY ONSITE RETENTION UNTIL NATURAL ATTENUATION OCCURS.
2. DISCHARGE OF HIGH FLOW RATE AND VELOCITIES SHALL BE DIRECTED TO VELOCITY DISSIPATION DEVICES.
3. CHLORINE CAN BURN VEGETATION, SO IT SHOULD NOT BE USED TO WATER VEGETATION THAT IS BEING USED FOR STABILIZATION, VEGETATED FILTERS OR BUFFERS, OR OTHER VEGETATION TO BE PRESERVED.
4. HYPER–CHLORINATED WATER MAY BE DISCHARGED TO AN ONSITE RETENTION AREA UNTIL NATURAL ATTENUATION OCCURS. THE AREA MAY BE A DRY STORMWATER RETENTION BASIN, OR A PORTION OF THE SITE MAY BE GRADED TO FORM A TEMPORARY PIT OR BERMED AREA.
5. NATURAL ATTENUATION OF THE CHLORINE MAY BE AIDED BY AERATION. AIR CAN BE ADDED TO THE WATER BY DIRECTING THE DISCHARGE OVER A ROUGH SURFACE BEFORE IT ENTERS THE TEMPORARY RETENTION AREA OR AN AERATION DEVICE CAN BE PLACED IN THE RETENTION AREA.
6. ONSITE DISCHARGE MAY REQUIRE SEVERAL HOURS TO A FEW DAYS BEFORE THE WATER IS SAFE TO DISCHARGE. THE RATE AT WHICH CHLORINE WILL ATTENUATE IS AFFECTED BY SOIL CONDITIONS AND WEATHER CONDITIONS. ATTENUATION WILL OCCUR QUICKEST DURING WARM, SUNNY, AND DRY PERIODS.

SANITARY WASTE NOTES

1. THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE NUMBER OF PORTABLE TOILETS BASED ON THE NUMBER OF EMPLOYEES USING THE TOILETS AND THE HOURS THEY WILL WORK.
2. SANITARY FACILITIES SHALL BE PLACED ON A MINIMUM OF 50 FEET AWAY FROM STORM DRAIN INLETS, CONVEYANCE, CHANNELS OR SURFACE WATERS. IF UNABLE TO MEET THE 50 FOOT REQUIREMENT DUE TO SITE CONFIGURATION, PORTABLE TOILETS SHALL BE A MINIMUM OF 20 FEET AWAY FROM STORM DRAIN INLETS, CONVEYANCE CHANNELS OR SURFACE WATER AND SECONDARY CONTAINMENT SHALL BE PROVIDE IN CASE OF SPILLS.
3. THE LOCATION OF THE PORTABLE TOILETS SHALL BE ACCESSIBLE TO MAINTENANCE TRUCKS WITHOUT DAMAGING EROSION AND SEDIMENT CONTROLS OR CAUSING EROSION OR TRACKING PROBLEMS.
4. SANITARY FACILITIES SHALL BE FULLY ENCLOSED AND DESIGNED IN A MANNER THAT MINIMIZES THE EXPOSURE OF SANITARY WASTE TO PRECIPITATION AND STORMWATER RUNOFF.
5. WHEN HIGH WINDS ARE EXPECTED, PORTABLE TOILETS SHALL BE ANCHORED OR OTHERWISE SECURED TO PREVENT THEM FROM BEING BLOWN OVER.
6. THE COMPANY THAT SUPPLIES AND MAINTAINS THE PORTABLE TOILETS SHALL BE NOTIFIED IMMEDIATELY IF A TOILET IS TIPPED OVER OR DAMAGED IN A WAY THAT THE RESULTS IN A DISCHARGE. DISCHARGED SOLID MATTER SHALL BE VACUUMED INTO A SEPTIC TRUCK BY THE COMPANY THAT MAINTAINS THE TOILETS.
7. THE OPERATOR OF THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) SHALL BE NOTIFIED IF A DISCHARGE FROM THE PORTABLE TOILETS ENTERS THE MS4 OR A NATURAL CHANNEL.
8. SANITARY FACILITIES SHALL NOT BE PERMITTED ON PUBLIC SIDEWALKS, STREETS OR INLETS.

DEBRIS AND TRASH NOTES

1. ALL WASTE SOURCES AND STORAGE AREAS SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS AND OTHER WATERS, IF THE SITE CONFIGURATION PROVIDES SUFFICIENT SPACE TO DO SO. IN NO CASE SHALL MATERIAL AND WASTE SOURCES BE CLOSER THAN 20 FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS, AND OTHER WATERS.
2. CONSTRUCTION WASTE AND TRASH SHALL BE STORED IN A MANNER THAT MINIMIZES ITS EXPOSURE TO PRECIPITATION AND STORMWATER RUNOFF.
3. WHENEVER POSSIBLE, MINIMIZE PRODUCTION OF DEBRIS AND TRASH.
4. INSTRUCT CONSTRUCTION WORKERS IN PROPER DEBRIS AND TRASH STORAGE AND HANDLING PROCEDURES.
5. SEGREGATE POTENTIAL HAZARDOUS WASTE FROM NON–HAZARDOUS CONSTRUCTION SITE DEBRIS.
6. PROHIBIT LITTERING BY WORKERS AND VISITORS.
7. POLICE SITE DAILY FOR LITTER AND DEBRIS.
8. ENFORCE SOLID WASTE HANDLING AND STORAGE PROCEDURES.
9. IF FEASIBLE, RECYCLE CONSTRUCTION AND DEMOLITION DEBRIS SUCH AS WOOD, METAL, AND CONCRETE.
10. TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AT REGULAR INTERVALS THAT ARE SCHEDULED TO EMPTY CONTAINERS WHEN THEY ARE 90 PERCENT FULL OR MORE FREQUENTLY.
11. GENERAL CONSTRUCTION DEBRIS MAY BE HAULED TO A LICENSED CONSTRUCTION DEBRIS LANDFILL.
12. USE WASTE AND RECYCLING HAULERS/FACILITIES APPROVED BY THE LOCAL MUNICIPALITY.
13. CHIPPING OF TREES AND BRUSH FOR USE SUCH AS MULCH IS PREFERRED ALTERNATIVE TO OFFSITE DISPOSAL.
14. NO WASTE, TRASH, OR DEBRIS SHALL BE BURIED, BURNED OR OTHER WISE DISPOSED OF ONSITE.
15. CLEARLY MARK ON ALL DEBRIS AND TRASH CONTAINERS WHICH MATERIALS ARE ACCEPTABLE. FOREMAN AND/OR CONSTRUCTION SUPERVISOR SHALL MONITOR ONSITE SOLID WASTE STORAGE AND DISPOSAL PROCEDURES DAILY.

CONCRETE SAWCUTTING WASTE NOTES

1. DURING SAWCUTTING OPERATIONS, THE SLURRY AND CUTTINGS SHALL BE CONTINUOUSLY VACUUMED OR OTHERWISE RECOVERED AND NOT BE ALLOWED TO DISCHARGE FROM THE SITE.
2. IF THE PAVEMENT TO BE CUT IS NEAR A STORM DRAIN INLET, THE INLET SHALL BE BLOCKED BY SANDBAGS OR EQUIVALENT TEMPORARY MEASURES TO PREVENT THE SLURRY FROM ENTERING THE INLET. REMOVE THE SANDBAGS IMMEDIATELY AFTER COMPLETING SAWCUTTING OPERATIONS, SO THEY DO NOT CAUSE DRAINAGE PROBLEMS DURING STORM EVENTS.
3. SLURRY AND CUTTINGS SHALL NOT BE ALLOWED TO REMAIN ON THE PAVEMENT TO DRY OUT
4. DEVELOP PRE–DETERMINED, SAFE SLURRY DISPOSAL AREAS.
5. COLLECTED SLURRY AND CUTTINGS SHOULD BE IMMEDIATELY HAULED FROM THE SITE FOR DISPOSAL AT A WASTE FACILITY. IF THIS IS NOT POSSIBLE, THE SLURRY AND CUTTINGS SHALL BE DISCHARGED INTO ONSITE CONTAINMENT.
6. THE ONSITE CONTAINMENT MAY BE EXCAVATED OR BERMED PIT LINED WITH PLASTIC MINIMUM OF 10 MILIMETERS THICK. IF THE PROJECT INCLUDES PLACEMENT OF NEW CONCRETE, SLURRY FROM SAWCUTTING MAY BE DISPOSED OF IN FACILITIES DESIGNATED FOR THE WASHOUT OF CONCRETE TRUCKS INSTEAD CONSTRUCTING A SEPARATE CONTAINMENT.
7. THE CONTAINMENT SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS, AND OTHER WATERS, IF THE SITE CONFIGURATION PROVIDES SUFFICIENT SPACE TO DO SO. IN NO CASE SHALL THE COLLECTION AREA BE CLOSER THAN 20 FEET FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS AND OTHER WATERS.
8. SEVERAL, PORTABLE, PRE–FABRICATED, CONCRETE WASHOUT, COLLECTION BASINS ARE COMMERCIALLY AVAILABLE AND ARE AN ACCEPTABLE ALTERNATIVE TO AN ONSITE CONTAINMENT PIT.
9. REMOVE WASTER CONCRETE WHEN THE CONTAINMENT IS HALF FULL. ALWAYS MAINTAIN A MINIMUM OF ONE FOOT FREEBOARD.
10. ONSITE EVAPORATION OF SLURRY WATER AND RECYCLING OF THE CONCRETE WASTE IS THE PREFERRED DISPOSAL METHOD. WHEN THIS IS NOT FEASIBLE, DISCHARGE FROM THE COLLECTION AREA SHALL ONLY BE ALLOWED IF A PASSIVE TREATMENT SYSTEM IS USED TO REMOVE THE FINES. MECHANICAL MIXING IS REQUIRED IN THE COLLECTION AREA. THE pH MUST BE TESTED, AND DISCHARGED IS ALLOWED IN IF THE pH DOES NOT EXCEED 8.0. THE pH MAY BE LOWERED BY ADDING SULFURIC ACID TO THE SLURRY WATER.
11. CARE SHALL BE EXERCISED WHEN TREATING THE SLURRY WATER FOR DISCHARGE. MONITORING MUST BE IMPLEMENTED TO VERIFY THAT DISCHARGES FROM THE COLLECTION AREA DO NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY STANDARDS.
12. GEOTEXTILE FABRICS SUCH AS THOSE USED FOR SILT FENCE SHOULD NOT BE USED TO CONTROL SAWCUTTING WASTE, SINCE THE GRAIN SIZE IS SIGNIFICANTLY SMALLER THAN THE APPARENT OPENING SIZE OF THE FABRIC.

SPILL AND LEAK RESPONSE NOTES

1. RECORDS OF RELEASES THAT EXCEED THE REPORTABLE QUANTITY (RQ) FOR OIL AND HAZARDOUS SUBSTANCES SHOULD BE MAINTAINED IN ACCORDANCE WITH THE FEDRAL AND STATE REGULATIONS.
2. EMERGENCY CONTACT INFORMATION AND SPILL RESPONSE PROCEDURES SHALL BE POSTED IN A READILY AVAILABLE REA FOR ACCESS BY ALL EMPLOYEES AND SUBCONTRACTORS.
3. SPILL CONTAINMENT KITS SHOULD BE MAINTAINED FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS THAT ARE REGULARLY ONSITE. MATERIALS IN KITS SHOULD BE BASED ON CONTAINMENT GUIDELINES IN THE MATERIALS SAFETY AND DATA SHEETS (MSDSS) FOR THE SUBSTANCE MOST FREQUENTLY ONSITE.
4. SPILL KITS ARE INTENDED FOR RESPONSE TO SMALL SPILLS, TYPICALLY LESS THAN 5 GALLONS, OF SUBSTANCES THAT ARE NOT EXTREMELY HAZARDOUS.
5. SIGNIFICANT SPILLS OR OTHER RELEASES WARRANT IMMEDIATE RESPONSE BY TRAINED PROFESSIONALS.
6. SUSPECTED JOB–SITE CONTAMINATION SHOULD BE IMMEDIATELY REPORTED TO REGULATORY AUTHORITIES AND PROTECTIVE ACTIONS TAKEN.
7. THE CONTRACTOR SHOULD BE REQUIRED TO DESIGNATE A SITE SUPERINTENDENT, FOREMAN, SAFETY OFFICER, OR OTHER SENIOR PERSON WHO IS ONSITE DAILY TO BE THE SPILL AND LEAK RESPONSE COORDINATOR (SLRC) AND MUST HAVE KNOWLEDGE OF AND BE TRAINED IN CORRECT SPILL AND LEAK RESPONSE PROCEDURES.

SUBGRADE STABILIZATION NOTES

1. MINIMIZE THE DISCHARGE OF THE CHEMICAL STABILIZERS BY THE CONTRACTOR LIMITING THE AMOUNT OF STABILIZING AGENT ONSITE TO THAT WHICH CAN BE THOROUGHLY MIXED AND COMPACTED BY THE END OF EACH WORKDAY.
2. STABILIZERS SHALL BE APPLIED AT RATES THAT RESULT IN NO RUN OFF.
3. STABILIZATION SHALL NOT OCCUR IMMEDIATELY BEFORE AND DURING RAINFALL EVENTS.
4. NO TRAFFIC OTHER THAN WATER TRUCKS AND MIXING EQUIPMENT SHALL BE ALLOWED TO PASS OVER THE AREA BEING STABILIZED UNTIL AFTER COMPLETION OF MIXING THE CHEMICAL.
5. AREA ADJACENT AND DOWNSTREAM OF STABILIZED AREAS SHALL BE ROUGHENED TO INTERCEPT CHEMICAL RUNOFF AND REDUCE RUNOFF VELOCITY.
6. GEOTEXTILE FABRICS SUCH AS THOSE USED FOR SILT FENCE SHOULD NOT BE USED TO TREAT CHEMICAL RUNOFF, BECAUSE THE CHEMICALS ARE DISSOLVED IN THE WATER AND WON'T BE AFFECTED BY A BARRIER AND THE SUSPENDED SOLIDS ARE SIGNIFICANTLY SMALLER THAN THE APPARENT OPENING SIZE OF THE FABRIC.
7. IF SOIL STABILIZERS ARE STORED ONSITE, THEY SHALL BE CONSIDERED HAZARDOUS MATERIAL AND SHALL BE MANAGED ACCORDING TO THE CRITERIA OF CHEMICAL MANAGEMENT TO CAPTURE ANY ACCIDENTAL LIME OR CHEMICAL OVERFLOW.
8. THE CONTRACRTOR SHALL INSTALL BMP'S TO ALL INLETS AND OPENINGS CONNECTED TO THE STORM SEWER SYSTEMS TO PREVENT LIME FROM ENTERING THE MS4 SYSTEM.

SANDBLASTING WASTE NOTES

1. THE CONTRACTOR SHOULD BE REQUIRED TO DESIGNATE THE SITE SUPERINTENDENT, FOREMAN, OR OTHER PERSON WHO IS RESPONSIBLE FOR SANDBLASTING TO ALSO BE RESPONSIBLE FOR SANDBLASTING WASTE MANAGEMENT.
2. PROHIBIT THE DISCHARGE OF SANDBLASTING WASTE.
3. USE ONLY INERT, NON–DEGRADABLE SANDBLAST MEDIA.
4. USE APPROPRIATE EQUIPMENT FOR THE JOB; DO NOT OVER–BLAST.
5. WHENEVER POSSIBLE, BLAST IN A DOWNWARD DIRECTION.
6. CEASE BLASTING ACTIVITIES IN HIGH WINDS OR IF WIND DIRECTION COULD TRANSPORT GRIT TO DRAINAGE FACILITIES.
7. INSTALL DUST SHIELDING AROUND SANDBLASTING AREAS.
8. COLLECT AND DISPOSE OF ALL SPENT SANDBLAST GRIT, USE DUST CONTAINMENT FABRICS AND DUST COLLECTION HOPPERS AND BARRELS.
9. NON–HAZARDOUS SANDBLAST GRIT MAY BE DISPOSED IN PERMITTED CONSTRUCTION DEBRIS LANDFILLS OR PERMITTED SANITARY LANDFILLS.
10. IF SANDBLAST MEDIA CANNOT BE FULLY CONTAINED, CONSTRUCT SEDIMENT TRAPS DOWNSTREAM FROM BLASTING AREA WHERE APPROPRIATE.
11. USE SAND FENCING WHERE APPRORIATE IN AREAS WHERE BLAST MEDIA CANNOT BE FULLY CONTAINED.
12. IF NECESSARY, INSTALL MISTING EQUIPMENT TO REMOVE SANDBLAST GRIT FROM THE AIR PREVENT RUNOFF FROM MISTING OPERATIONS FROM ENTERING DRAINAGE SYSTEMS.
13. USE VACUUM GRIT COLLECTION SYSTEMS WHERE POSSIBLE.
14. KEEP RECORDS OF SANDBLASTING MATERIALS, PROCEDURES, AND WEATHER CONDITIONS ON A DAILY BASIS.
15. TAKE ALL REASONABLE PRECAUTIONS TO ENSURE THAT SANDBLASTING GRIT IS CONTAINED AND KEPT AWAY FROM DRAINAGE STRUCTURES.
16. SAND BLASTING MEDIA SHOULD ALWAYS BE STORED UNDER COVER AWAY FROM DRAINAGE STRUCTURES.
17. ENSURE THAT STORED MEDIA OR GRIT IS NOT SUBJECTED TO TRANSPORT BY WIND.
18. ENSURE THAT ALL SANDBLASTING EQUIPMENT AND STORAGE CONTAINERS COMPLY WITH CURRENT LOCAL, STATE, AND FEDERAL REGULATIONS.
19. CAPTURE AND TREAT RUNOFF, WHICH COMES INTO CONTACT WITH SANDBLASTING MATERIALS OR WASTE.

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

GENERAL EROSION CONTROL NOTES

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–33

SHEET OF

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REG. NO. F–825

STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/15/20

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DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
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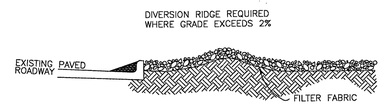
GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

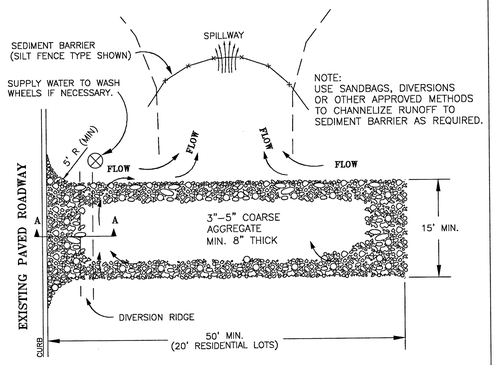
GENERAL EROSION CONTROL NOTES
SL–33

PROJECT NO. 13743

SL–33 DETAIL SET.DWG
85

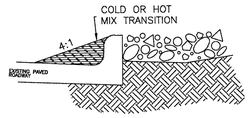


SECTION A – A



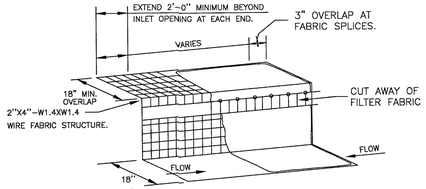
PLAN

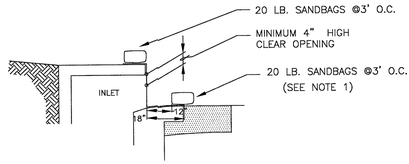
WHEN SEDIMENT HAS SUBSTANTIALLY CLOGGED THE VOID AREA BETWEEN THE ROCKS, THE AGGREGATE MAT MUST BE WASHED DOWN OR REPLACED. PERIODIC RE–GRADING AND TOP DRESSING WITH ADDITIONAL STONE MUST BE DONE TO KEEP THE EFFICIENCY OF THE ENTRANCE FROM DIMINISHING.

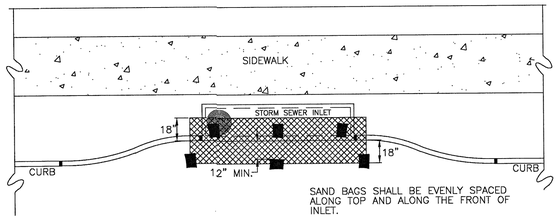


TRANSITION

TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIT
N.T.S.







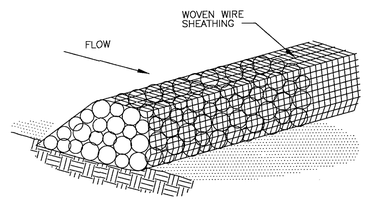
CURB INLET PROTECTION DETAIL
N.T.S.

NOTES:

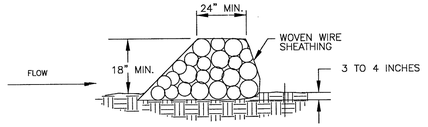
1. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL TO PROVIDE A 4" MINIMUM CLEAR OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION
2. INSPECTION SHALL BE MADE BY CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTION IF THE STORMWATER BEGINS TO OVERTOP THE CURB.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF THE SEDIMENT IS STABILIZED.

INLET OPENING	MINIMUM NUMBER OF SAND BAGS	
	TOP	FRONT
5'	2	3
10'	3	3
15'	3	4
20'	4	4

ROCK BERM DETAIL
N.T.S.



ISOMETRIC PLAN VIEW



CROSS SECTION
N.T.S.

ROCK BERM GENERAL NOTES

1. USE ONLY OPEN GRADED ROCK 4–8 INCHES IN DIAMETER FOR STREAM FLOW CONDITION. USE OPEN GRADED ROCK 3–5 INCHES IN DIAMETER FOR OTHER CONDITIONS.

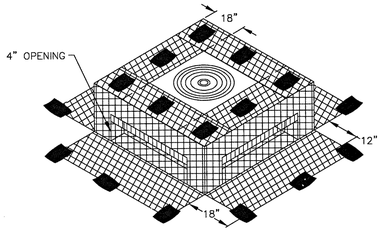
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING A MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE SIZE OF 20 GAUGE AND SHALL BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP.

3. THE ROCK BERM SHALL BE INSPECTED EVERY TWO WEEKS OR AFTER EACH 1/2" RAIN EVENT AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTEDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

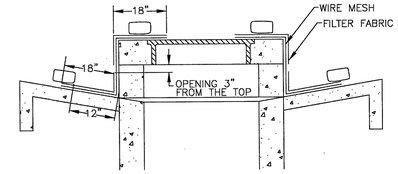
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE–THIRD OF THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY.

5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

6. ROCK BERM SHOULD BE USED AS CHECK DAMS FOR CONCENTRATED FLOW AND ARE NOT INTENDED FOR USE IN PERIMETER PROTECTION.

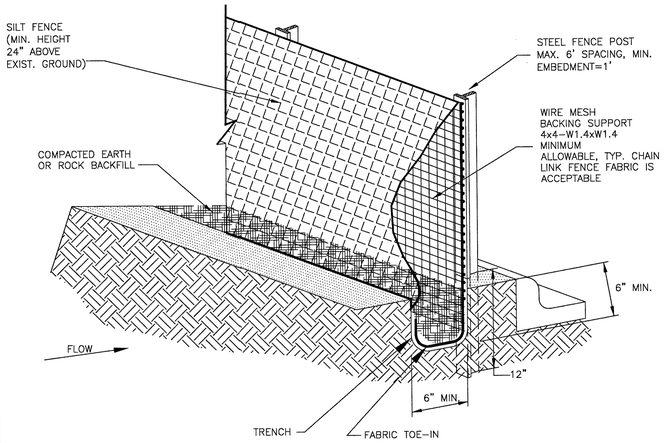


ISOMETRIC VIEW



SECTION

FILTER FABRIC WYE INLET PROTECTION
N.T.S.



ISOMETRIC PLAN VIEW
N.T.S.

SILT FENCE GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

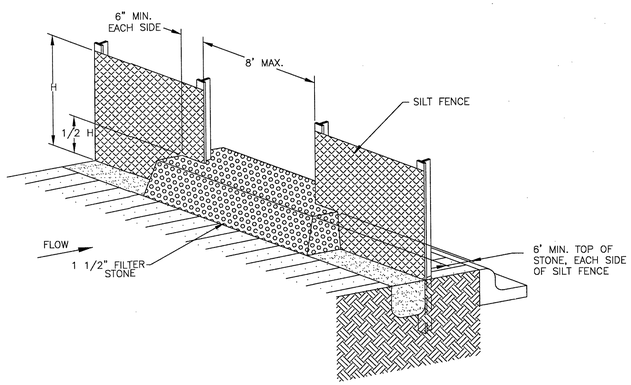
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

5. INSPECTION SHALL BE MADE EVERY TWO WEEKS AND AFTER EACH 1/2" RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

NOTE: STONE OVERFLOW STRUCTURES OF OTHER OUTLET CONTROL DEVICES SHALL BE INSTALLED AT ALL LOW POINTS ALONG THE FENCE OR EVERY 300 FEET IF THERE IS NO APPARENT LOW POINT



SILT FENCE
STONE OVERFLOW STRUCTURE
N.T.S.

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

EROSION CONTROL DETAILS – 1

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–34

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849–6681 FAX: (979) 849–4689
REG. NO. F–825

STATE OF TEXAS · MIGUELANGEL A. SAUCEDA · 121992 · REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/15/20

OWNER:
DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

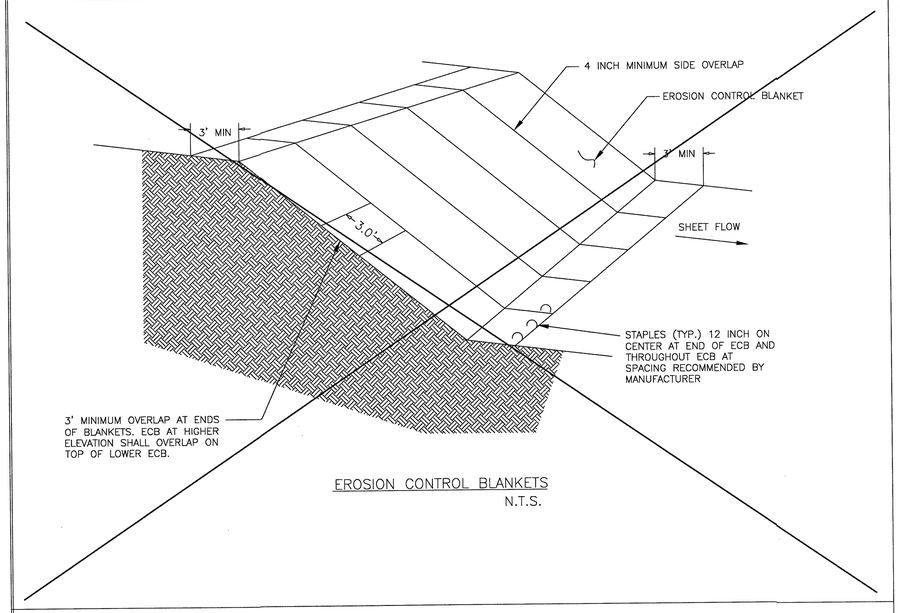
PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

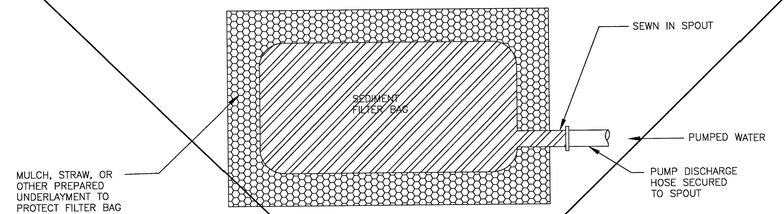
EROSION CONTROL DETAILS – 1
SL–34

PROJECT NO. 13743

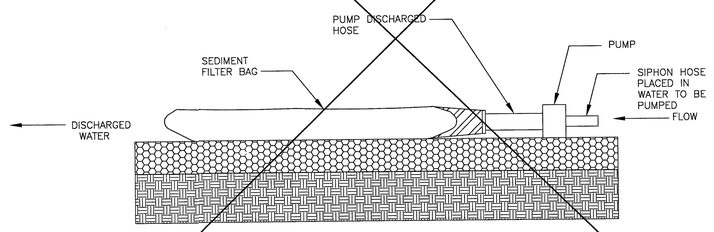
13743 DETAIL SET.DWG



EROSION CONTROL BLANKETS
N.T.S.



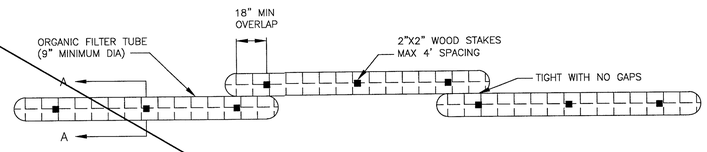
SEDIMENT FILTER BAG PLAN VIEW
N.T.S.



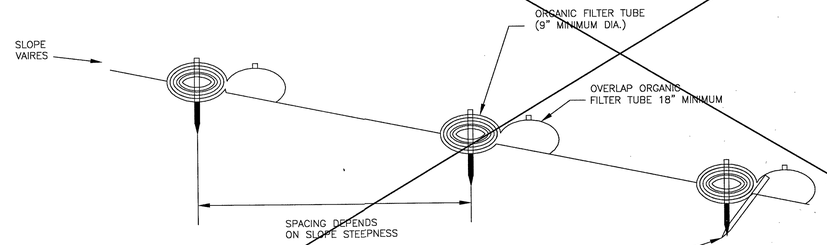
SEDIMENT FILTER BAG PROFILE
N.T.S.

NOTE: A FILTRATION BAG IS NOT REQUIRED IF IF THE DRAINAGE SYSTEM CAN BE ADEQUATELY PROTECTED

DEWATERING CONTROLS
N.T.S.



ORGANIC FILTER TUBE PERIMETER CONTROL PLAN VIEW
N.T.S.

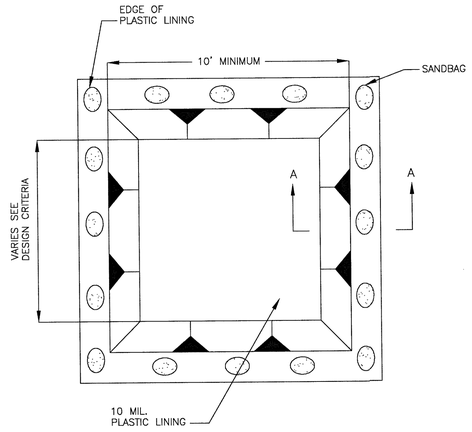


ORGANIC FILTER TUBE PERIMETER CONTROL PROFILE
N.T.S.

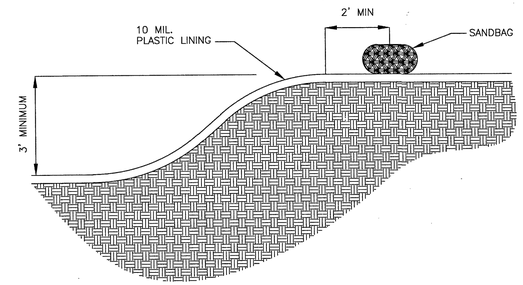
ORGANIC FILTER TUBES NOTES

1. TYPE OF NETTING, FILTER MATERIAL, DIAMETER OF TUBE, AND SPACING OF TUBES SHALL BE SPECIFIED BY THE DESIGNER BASED ON THE FOLLOWING SITE PARAMETERS:
   - SIZE OF CONTRIBUTING DRAINAGE AREA
   - STEEPNESS OF SLOPE
   - GROUND CONDITIONS (SOIL OR PAVEMENT)
2. DESIGNER SHALL SHOW ON THE DRAWINGS THE LOCATIONS WHERE TUBE ARE TO BE TURNED UPSLOPE. UPSLOPE LENGTHS SHALL BE MINIMUM OF 10 FEET.

FILTER TUBE
N.T.S.



CONCRETE WASHOUT PLAN VIEW
N.T.S.



CONCRETE WASHOUT SECTION A–A
N.T.S.

CONCRETE WASHOUT NOTES

1. SANDBAGS MAYBE REPLACED BY A SOIL BERM TO ANCHOR THE PLASTIC BAG

CONCRETE WASHOUT AREA
N.T.S.

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

EROSION CONTROL DETAILS – 2

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–35

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED MS
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
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STATE OF TEXAS
MIGUELANGEL A. SAUCEDA
121992
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Miguelangel A. Sauceda P.E. 121992

Date: 9/15/20

OWNER:

DAVID ROGERS
ADOBE HOLDINGS INC. 1800 AUGUSTA DRIVE, SUITE 340
HOUSTON TX. 77057

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

GIFFORD MEADOWS
A 17.37 AC, 85-LOT SUBDIVISION
ANGLETON, TEXAS 77515

EROSION CONTROL DETAILS – 2
SL–35

PROJECT NO. 13743

13743 DETAIL SET.DWG

AGENDA ITEM SUMMARY FORM

MEETING DATE: January 7, 2020

PREPARED BY: Walter E. Reeves Jr., AICP Development Services Director

AGENDA CONTENT: Conduct a public hearing, discussion and possible action on a recommendation regarding a request for approval of the Final Replat of Gifford Meadows Subdivision being all of Lots 1-7 and Lot 16 of the Gifford Meadows Subdivision. The proposed final replat consists of 85 lots and 2 reserve lots on 17.31 acres, is zoned a Planned Development Overlay district and is located on the east side of Gifford Road approximately 700 feet south of Cemetery Road.

AGENDA ITEM SECTION: Public Hearing

BUDGETED AMOUNT: None **FUNDS REQUESTED:** None

FUND: None

EXECUTIVE SUMMARY:

This is a request for approval of the Final Replat of Gifford Meadows Subdivision. The proposed final replat consists of 85 lots and 2 reserve lots on 17.31 acres, is in a Planned Development Overlay District and is located on the east side of Gifford Road approximately 700 feet south of Cemetery Road. The proposed replat meets all the requirements of the Code of Ordinances of the City of Angleton and the PD overlay district except as otherwise noted by the City Engineer.

RECOMMENDATION:

Staff recommends approval of the proposed Final Replat of Gifford Meadows Subdivision subject to the City Engineer's comments being cleared prior to recording.

AGENDA ITEM SUMMARY FORM

MEETING DATE: January 7, 2021

PREPARED BY: Walter E. Reeves Jr., AICP Development Services Admnistrator

AGENDA CONTENT: Conduct a public hearing, discussion and possible action on a recommendation regarding a request for approval of the Final Replat of Angleton Village being a portion of Lots 27 and 28 of the Oliver and Barrow Subdivision. The proposed final replat consists of one lot on 14.571 acres, is in the Multi-Family Residential - 29 (MFR-29) district and is located on the north side of Henderson Road approximately 900 feet east of Buchta Road.

AGENDA ITEM SECTION: Public Hearing

BUDGETED AMOUNT: None **FUNDS REQUESTED:** None

FUND: None

EXECUTIVE SUMMARY:

This is a request for approval of the Final Replat of Angleton Village. The propose final replat consists of one lot on 14.571 acres in the Multi-Family Residential – 29 (MFR-29) district and is located on the north side of Henderson Road approximately 900 feet east of Buchta Road. The proposed final plat meets all requirements of the Code of Ordinances of the City of Angleton except as otherwise noted by the City Engineer.

RECOMMENDATION:

Staff recommends approval of the proposed Final Replat of Angleton Village subject to the conditions listed in the City Engineer's memo.

December 31, 2020

Mr. Walter Reeves
Director of Development Services
City of Angleton
121 S. Velasco
Angleton, TX 77515

Re: On-Going Services
Plat and Plan Review of Angleton Village Final Replat and Plans – 3rd Submittal Review
Angleton, Texas
HDR Job No. 20-007

Dear Mr. Reeves:

HDR Engineering, Inc. (HDR) has reviewed the plat plans for the above referenced property and offers the following comments

1. A final letter of approval from the Angleton Drainage District will be required.
2. A Floodplain Development Permit will be required prior to any construction activities including grading.

HDR takes no objection to the proposed Angleton Village Final Replat and Plans with the exceptions noted. Please note, this does not necessarily mean that the entire drawings, including all supporting data and calculations, has been completely checked and verified; however, the drawings and calculations are signed, dated, and sealed by a professional engineer licensed to practice in the State of Texas, which therefore conveys the engineer's responsibility and accountability.

If you have any questions, please feel free to contact us at our office at (713)-622-9264.

Sincerely,
HDR Engineering, Inc.

Javier Vasquez, P.E., CFM
Project Engineer

cc: Files (20-007)

Attachments

hdrinc.com 4828 Loop Central Drive, Suite 800, Houston, TX 77081-2220
T (713) 622-9264 F (713) 622-9265
Texas Registered Engineering Firm F-754

DEDICATION STATEMENT:

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: THAT DOAK D. BROWN, President And Managing Director of the BAH ANGLETON VILLAGE, LLC, acting herein by and through its duly authorized officers, does hereby adopt this plat designating the hereinabove described property as ANGLETON VILLAGE, a subdivision in the jurisdiction of the City of Angleton, Texas, and does hereby dedicate, in fee simple, to the public use forever, the streets, alleys and public parkland shown thereon. The streets, alleys and parkland are dedicated for street purposes. The easements and public use areas, as shown, are dedicated for the public use forever, for the purposes indicated on this plat. No buildings, fences, trees, shrubs, or other improvements or growths shall be constructed or placed upon, over, or across the easements as shown, except that landscape improvements may be placed in landscape easements, if approved by the City of Angleton. In addition, utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easement limits the use to particular utilities, said use by public utilities being subordinate to the public's and City of Angleton's use thereof. The City of Angleton and public utility entities shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs, or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of their respective systems in said easements. The City of Angleton and public utility entities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, reading meters, and adding to or removing all or parts of their respective systems without the necessity at any time of procuring permission from anyone.

FIRE LANE AND FIRE EASEMENT

That the undersigned does hereby covenant and agree that they shall construct upon the fire lane easements, as dedicated and shown hereon, a hard all-weather surface and that they shall maintain the same in a state of good repair at all times and keep the same free and clear of any structures, fences, trees, shrubs, or other improvements or obstruction, including but not limited to the parking of motor vehicles, trailers, boats, or other impediments to the access of fire apparatus. The maintenance of paving on the fire lane easements is the responsibility of the owner, and the owner shall post and maintain appropriate signs in conspicuous places along such fire lanes, stating "Fire Lane, No Parking." The police or his duly authorized representative is hereby authorized to cause such fire lanes and utility easements to be maintained free and unobstructed at all times for Fire Department and emergency use.

DRAINAGE AND DETENTION EASEMENT:

This plat is hereby adopted by the Owners and approved by the City of Angleton (called "City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees and successors: The portion of Block 1, as shown on the plat is called "Drainage and Detention Easement."
The Drainage and Detention Easement within the limits of this addition, will remain open at all times and will be maintained in a safe and sanitary condition by the owners of the lot or lots that are traversed by or adjacent to the Drainage and Detention Easement. The City will not be responsible for the maintenance and operation of said Easement or for any damage to private property or person that results from conditions in the Easement, or for the control of erosion. No obstruction to the natural flow of stormwater run-off shall be permitted by construction of any type of building, fence, or any other structure within the Drainage and Detention Easement as herein above defined, unless approved by the City Engineer. Provided, however, it is understood that in the event it becomes necessary for the City to erect or consider erecting any type of drainage structure in order to improve the storm drainage that may be occasioned by the City shall have the right to enter upon the Drainage and Detention Easement at any point, or points, to investigate, survey or to erect, construct and maintain any drainage facility deemed necessary for drainage purposes. Each property owner shall keep the Drainage and Detention Easement clean and free of debris, silt, and any substance which would result in unsanitary conditions or obstruct the flow of water, and the City shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the property owner to alleviate any undesirable conditions which may occur. The natural drainage through the Drainage and Detention Easement is subject to storm water overflow and natural bank erosion to an extent which cannot be definitely defined. The City shall not be held liable for any damages of any nature resulting from the occurrence of these natural phenomena, or resulting from the failure of any structure, or structures, within the Easement.

OWNER'S ACKNOWLEDGEMENT:

STATE OF TEXAS §
COUNTY OF BRAZORIA §

Doak D. Brown, manager of BAH Angleton Village, LLC, Angleton Texas, in person or through a duly authorized agent, dedicates to the use of the public forever all streets, alleys, parks, watercourses, drains, easements and public places thereon shown for the purpose and consideration therein expressed.

_____
DOAK D. BROWN, MANAGER

STATE OF TEXAS §
COUNTY OF BRAZORIA §

Before me, the undersigned, personally appeared Doak D. Brown known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same for the purposes and considerations therein expressed and, in the capacity, therein stated. Given under my hand and seal of office this ____ day of _____, ____.

_____
Notary Public
State of Texas

PLANNING AND ZONING COMMISSION AND CITY COUNCIL:

APPROVED this _____ day of _____, 20____, by the Planning and Zoning Commission, City of Angleton, Texas.

_____
BILL GARWOOD, Chairman, Planning and Zoning Commission

_____
FRANCES AGUILAR, City Secretary

APPROVED this _____ day of _____, 20____, by the City Council, City of Angleton, Texas.

_____
JASON PEREZ, Mayor

_____
FRANCES AGUILAR, City Secretary

STATE OF TEXAS §
COUNTY OF BRAZORIA §

This instrument was acknowledged before me on the _____ day of _____, 20____, by

FRANCES AGUILAR, City Secretary, City of Angleton, on behalf of the City.

_____
Notary Public
State of Texas

ANGLETON DRAINAGE DISTRICT

ANGLETON DRAINAGE DISTRICT ACCEPTED, THIS THE _____ DAY OF _____ 20_____.
THE BOARD OF SUPERVISORS OF THE ANGLETON DRAINAGE DISTRICT DOES NOT WARRANT, REPRESENT OR GUARANTEE:

1. THAT DRAINAGE FACILITIES OUTSIDE THE BOUNDARIES OF THE SUBDIVISION PLAT ARE AVAILABLE TO RECEIVE RUNOFF FROM THE FACILITIES DESCRIBED IN THIS PLAT.

2. THAT DRAINAGE FACILITIES DESCRIBED IN THIS PLAT ARE ADEQUATE FOR RAINFALL IN EXCESS OF ANGLETON DRAINAGE DISTRICT MINIMUM REQUIREMENTS.

3. THAT BUILDING ELEVATION REQUIREMENTS HAVE BEEN DETERMINED BY THE ANGLETON DRAINAGE DISTRICT.

4. THAT THE DISTRICT ASSUMES ANY RESPONSIBILITY FOR CONSTRUCTION, OPERATION OR MAINTENANCE OF SUBDIVISION DRAINAGE FACILITIES.

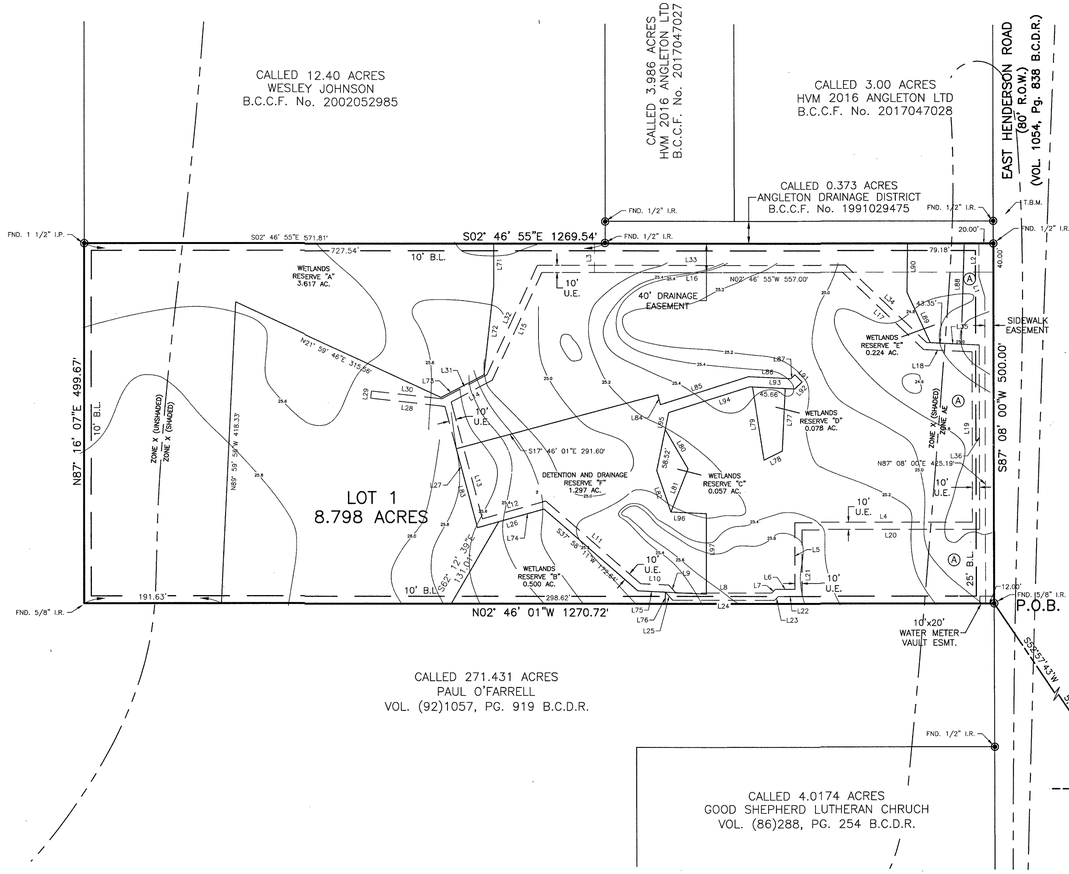
THE DISTRICT'S REVIEW IS BASED SOLELY ON THE DOCUMENTATION SUBMITTED FOR REVIEW, AND ON THE RELIANCE ON THE REPORT SUBMITTED BY THE TEXAS REGISTERED PROFESSIONAL ENGINEER.

THE DISTRICT'S REVIEW IS NOT INTENDED NOR WILL SERVE AS A SUBSTITUTION OF THE OVERALL RESPONSIBILITY AND/OR DECISION MAKING POWER OF THE PARTY SUBMITTING THE PLAT OR PLAN HEREIN, THEIR OR ITS PRINCIPALS OR AGENTS.

_____ CHAIRMAN, BOARD OF SUPERVISORS

_____ BOARD MEMBER

_____ BOARD MEMBER



Line Table		
Line No.	Length	Direction
L1	29.00'	N71°07'03"E
L2	46.97'	N87°08'00"E
L3	40.00'	N87°13'05"E
L4	248.03'	S02°46'04"E
L5	91.85'	N87°13'50"E
L6	27.25'	S02°46'01"E
L7	7.28'	S47°46'10"E
L8	133.84'	S02°46'15"E
L9	14.62'	S44°59'51"W
L10	39.62'	S00°00'00"W
L11	174.55'	S37°58'11"W
L12	91.88'	S18°20'37"E
L13	168.21'	S72°13'59"W
L14	65.17'	N30°48'01"W
L15	165.21'	N67°54'59"W
L16	419.39'	N02°46'55"W
L17	156.57'	N40°46'40"E
L18	67.81'	N00°00'00"E
L19	236.95'	N87°08'00"E
L20	248.05'	N02°46'04"W
L21	91.85'	S87°13'50"W
L22	33.11'	N02°46'01"W
L23	7.28'	N47°46'10"W
L24	142.41'	N02°46'15"W
L25	14.90'	N44°59'51"E
L26	96.63'	N18°20'37"W
L27	174.73'	N72°13'59"E
L28	104.26'	N03°33'03"E
L29	10.00'	S86°26'57"E
L30	98.98'	S03°33'03"W

Line Table		
Line No.	Length	Direction
L31	71.08'	S30°48'01"E
L32	168.24'	S67°54'59"E
L33	429.78'	S02°46'55"E
L34	156.85'	S40°46'40"W
L35	73.61'	S00°00'00"W
L36	256.48'	S87°08'00"W
L71	58.59'	S87°13'05"W
L72	124.80'	N86°29'15"W
L73	67.88'	N30°25'56"W
L74	65.55'	S18°20'37"E
L75	38.88'	S00°00'00"W
L76	15.89'	N89°58'26"W
L77	87.38'	N90°00'00"W
L78	28.48'	N29°04'52"W
L79	103.33'	N78°24'13"E
L80	63.10'	S57°07'27"W
L81	64.35'	N71°02'28"W
L82	60.29'	N68°18'11"E
L83	113.38'	N72°13'59"E
L84	14.02'	S72°13'59"W
L85	129.00'	S20°23'26"E
L86	59.42'	S00°00'00"W
L87	7.78'	S47°46'01"E
L88	140.51'	N88°56'25"E
L89	77.24'	S62°19'05"W
L90	68.28'	S87°56'18"W
L91	14.00'	S42°13'59"W
L92	13.97'	N47°46'01"W
L93	63.11'	N00°00'20"W
L94	118.95'	N20°23'26"W

Line Table		
Line No.	Length	Direction
L95	82.93'	N81°12'43"W
L96	49.63'	S00°00'00"W
L97	111.07'	S87°13'59"W

KNOW ALL MEN BY THESE PRESENTS:
That I, Devin R. Royal, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown thereon were properly placed under my supervision.

SIGNED: _____
DEVIN R. ROYAL DATE
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6667

SCALE : 1" = 100'
0 50' 100' 200'

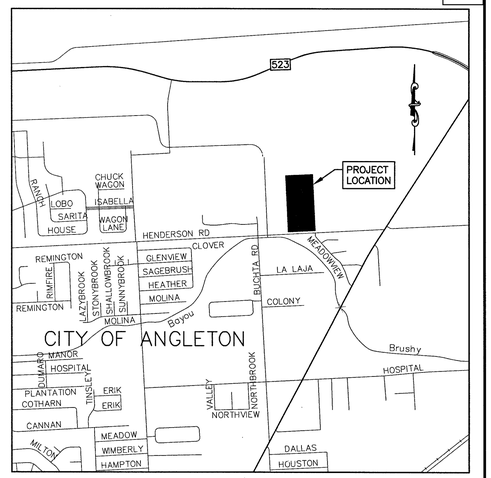
LEGEND

B.C.C.F. =	BRAZORIA COUNTY CLERK'S FILE
B.C.D.R. =	BRAZORIA COUNTY DEED RECORDS
B.C.P.R. =	BRAZORIA COUNTY PLAT RECORDS
B.L. =	BUILDING LINE
BM =	BENCHMARK
D.M.E.=	DRAINAGE/MAINTENANCE EASEMENT
U.E.=	UTILITY EASEMENT
W.L.E. =	WATER LINE EASEMENT
FND =	FOUND
I.R. =	IRON ROD
I.P. =	IRON PIPE
P.O.B. =	POINT OF BEGINNING
R.O.W. =	RIGHT-OF-WAY
VOL., Pg. =	VOLUME, PAGE

SYMBOLS

- O = SET 5/8" I.R. W/CAP "BAKER & LAWSON"
- ◉ = FOUND MONUMENT (AS NOTED)
- ⊕ = (TBM) TEMPORARY BENCHMARK

RESERVE TABLE		
RESERVE	PURPOSE	ACREAGE
A	WETLANDS	3.617
B	WETLANDS	0.500
C	WETLANDS	0.057
D	WETLANDS	0.078
E	WETLANDS	0.224
F	DETENTION &DRAINAGE	1.297



VICINITY MAP
NTS

Ⓐ 100 YEAR FLOODWAY EASEMENT BETWEEN SOUTH PROPERTY LINE AND ZONE "AE" LINE.

NOTES:

1. ALL BEARINGS AND DISTANCES ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD-83, U.S. SURVEY FEET.

2. FLOOD ZONE STATEMENT: ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR BRAZORIA COUNTY, MAP NUMBER 48039C0435H, WITH EFFECTIVE DATE OF JUNE 05, 1989, REVISED BY LOMR CASE NO. 03-06-2336P EFFECTIVE OCTOBER 6, 2004, THE PROPERTY SURVEYED LIES FULLY WITHIN ZONE "X" (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD-PLAIN, "X" (SHADED), AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD, AND "AE", SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT, BASE FLOOD ELEVATION DETERMINED. WARNING: THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES WILL BE FREE FROM FLOODING OR FLOOD DAMAGE, AND WILL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.
BASE FLOOD ELEVATION = 26.00' NGVD 1973 ADJUSTMENT

3. REFERENCE BENCHMARK:
HERITAGE PARK BENCHMARK: CHISELED SQUARE ON THE SOUTHWEST CORNER OF CONCRETE FOOTING FOR PIPE SUPPORT ON THE SOUTH SIDE OF HENDERSON ROAD, WEST OF CULVERT UNDER HENDERSON ROAD, AND 215' EAST OF BUCHTA ROAD.
ELEVATION = 26.08 NGVD, 1973 ADJUSTMENT.
TBM: CUT "□" ON THE TOP OF A HEADWALL ON THE WEST SIDE OF E.HENDERSON RD. AT ENTRANCE TO NORTHSIDE MANOR
ELEVATION = 26.11'

3. THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES OR SUBSURFACE CONDITIONS OTHER THAN THOSE SHOWN MAY AFFECT THE USE AND DEVELOPMENT OF THE SUBJECT PROPERTY SHOWN HEREON.

4. NOTICE: SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF THE UNIFIED DEVELOPMENT CODE OF THE CITY OF ANGLETON AND STATE PLATTING STATUTES AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.

5. NOTICE: PLAT APPROVAL SHALL NOT BE DEEMED TO OR PRESUMED TO GIVE AUTHORITY TO VIOLATE, NULLIFY, VOID, OR CANCEL ANY PROVISIONS OF LOCAL, STATE, OR FEDERAL LAWS, ORDINANCES, OR CODES.

6. NOTICE: THE APPLICANT IS RESPONSIBLE FOR SECURING ANY FEDERAL PERMITS THAT MAY BE NECESSARY AS THE RESULT OF PROPOSED DEVELOPMENT ACTIVITY. THE CITY OF ANGLETON IS NOT RESPONSIBLE FOR DETERMINING THE NEED FOR, OR ENSURING COMPLIANCE WITH ANY FEDERAL PERMIT.

7. NOTICE: APPROVAL OF THIS PLAT DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD OR REGISTERED PUBLIC LAND SURVEYOR IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY THE CITY ENGINEER.

8. NOTICE: ALL RESPONSIBILITY FOR THE ADEQUACY OF THIS PLAT REMAINS WITH THE ENGINEER OR SURVEYOR WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF ANGLETON MUST RELY ON THE ADEQUACY OF THE WORK OF THE ENGINEER AND/OR SURVEYOR OF RECORD.

9. THE OWNER SHALL BE RESPONSIBLE FOR MAINTAINING THE DETENTION AND DRAINAGE RESERVE.

10. THE OWNER SHALL NOT DEVELOP AREAS DESIGNATED AS WETLAND RESERVES.

11. THE MINIMUM FINISHED FLOOR ELEVATION FOR STRUCTURE LOCATED IN FLOOD ZONE "AE" SHALL BE 27.00' NGVD 1973 ADJUSTMENT

FIELD NOTES FOR 14.571 ACRE

Being a tract of land containing 14.571 acre (634,856 square feet), located within Theodore S. Lee Survey, Abstract Number (No.) 318, in Brazoria County, Texas; Said 14.571 acre being a portion of Lots 27 and 28 of the Oliver and Barrow Subdivision recorded under Volume (Vol.) 2, Page 97 of the Brazoria County Plat Records (B.C.P.R.), being all of a called 14.571 acre tract recorded in the name of E.J. King, Sr. and Jackie M. King under Brazoria County Clerk's File (B.C.C.F.) No. 2014054480; Said 14.571 acres being more particularly described by metes and bounds as follows (bearings are based on the Texas Coordinate System of 1983, (NAD83) South Central Zone, per GPS observations):

BEGINNING at a 5/8-inch iron rod on the north right-of-way (R.O.W.) line of East Henderson Road (called eighty feet wide per Vol. 1054, Page 838 of the Brazoria County Deed Records (B.C.D.R.)), at a southeasterly corner of a called 271.431 acre tract recorded in the name of Paul O'Farrell under Vol. (92)1057, Pg. 919 B.C.D.R., for the southwest corner of the herein described tract;

THENCE, with an easterly line of said 271.431 acre tract, North 02 degrees 46 minutes 01 seconds West, a distance of 1,270.72 feet to a 5/8-inch iron rod found at an interior corner of said 271.431 acre tract, for the northwest corner of the herein described tract;

THENCE, with the southerly line of said 271.431 acre tract, North 87 degrees 16 minutes 07 seconds East, a distance of 499.67 feet to a 1 1/2" iron pipe found at the northwest corner of a called 12.40 acre tract recorded in the name of Wesley Johnson under B.C.C.F. No. 2002052985, for the northeast corner of the herein described tract;

THENCE, with the west line of said 12.40 acre tract, and a called 0.373 acre tract recorded in the name of Angleton Drainage District under B.C.C.F. No. 1991029475, South 02 degrees 46 minutes 55 seconds East, a distance of 1,269.54 feet to a 1/2-inch iron rod found on the north R.O.W. line of said East Henderson Road, at the southwest corner of said 0.373 acre tract, for the southeast corner of the herein described tract;

THENCE, with the north R.O.W. line of said East Henderson Road, South 87 degrees 08 minutes 00 seconds West, a distance of 500.00 feet to the POINT OF BEGINNING and containing 14.571 acres of land.

KNOW ALL MEN BY THESE PRESENTS:
That I, Douglas B. Roesler, do hereby certify that proper engineering consideration has been provided in this plat. To the best of my knowledge, this plat conforms to all requirements of the Angleton LDC, except for any variances that were expressly granted by the City Council.

SIGNED: _____ 12-29-20
DOUGLAS B. ROESLER DATE
PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 56739

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

OWNERS:
BAH ANGLETON VILLAGE, LLC

REVISED:

FINAL REPLAT
ANGLETON VILLAGE
A 14.571 ACRE, 1-LOT, 1 BLOCK, 6 RESERVE SUBDIVISION

PORTION OF LOTS 27 AND 28 OF THE
OLIVER AND BARROW SUBDIVISION, VOL. 2, Pg. 97 B.C.P.R.
LOCATED IN THE
THEODORE S. LEE SURVEY, ABSTRACT No. 318
BRAZORIA COUNTY, TEXAS

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 EAST CEDAR ST.
ANGLETON, TEXAS 77515
OFFICE: (979) 849-6681
TBPLS No. 10052500
REG. NO. F-825

PROJECT NO.: 13781	SCALE: 1" = 100'	DRAWN BY: DRR
DRAWING NO.: 13781 PLAT.DWG	DATE: 12/29/2020	CHECKED BY: AH

PLANS FOR CONSTRUCTION OF

PAVING, DRAINAGE AND UTILITIES ON

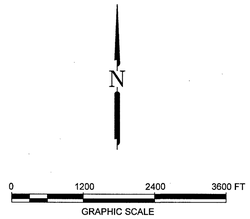
ANGLETON VILLAGE APARTMENTS

FOR THE

CITY OF ANGLETON

BRAZORIA COUNTY

B&L JOB No. 13781



CITY OF ANGLETON

CITY COUNCIL

MAYOR
JASON PEREZ

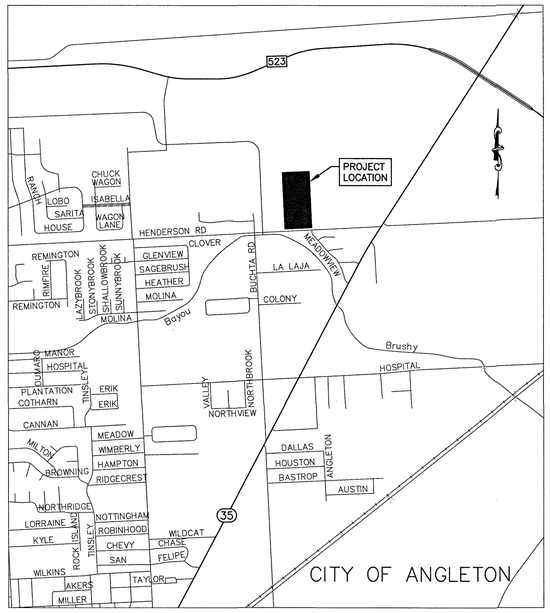
CITY MANAGER
CHRIS WHITTAKER

MIKEY SVOBODA
CECIL BOOTH
JOHN WRIGHT
TRAVIS TOWNSEND
MARK GONGORA

"RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF THEIR SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY THE CITY ENGINEER.

"ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF ANGLETON MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

THIS PROPERTY LIES WITHIN THE BRUSHY BAYOU WATERSHED ACCORDING TO FEMA FIRM FOR BRAZORIA COUNTY, MAP NO. 48039C0435H AS REVISED BY LOMR DATED DECEMBER 14, 2004. THE PROPERTY SURVEYED HAS THE SOUTHERLY 70 FEET(±) IN ZONE "AE" WITH A BASE FLOOD ELEVATION OF 26 FEET. THE NORTHERLY PORTION OF THE PROPERTY LIES WITHIN A SHADED ZONE "X".



INDEX OF DRAWINGS

SHEET NO.	SHEET NAME
TS	TITLE SHEET
1	EXISTING CONDITIONS
2	DEVELOPMENT AREA
3	GRADING PLAN 1 OF 2
4	GRADING PLAN 2 OF 2
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5	DRAINAGE AREA MAP AND STORM SEWER LAYOUT
6	WINDSTORM DATA I-1 TO I-6, I-7 TO I-11
7	HYDRAULIC CALCULATIONS
8	DETENTION POND LAYOUT
9	UTILITY LAYOUT WATER 1 OF 2
10	UTILITY LAYOUT WATER 2 OF 2
11	UTILITY LAYOUT SANITARY SEWER 1 OF 2
12	UTILITY LAYOUT SANITARY SEWER 2 OF 2
13	UTILITY LAYOUT ELECTRIC 1 OF 2
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26	MISCELLANEOUS DETAILS
27	GENERAL EROSION CONTROL NOTES (SL-33)
28	EROSION CONTROL DETAILS - 1 (SL-34)
29	EROSION CONTROL DETAILS - 2 (SL-35)
30	TCP (1-1) - 18

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT/BB
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

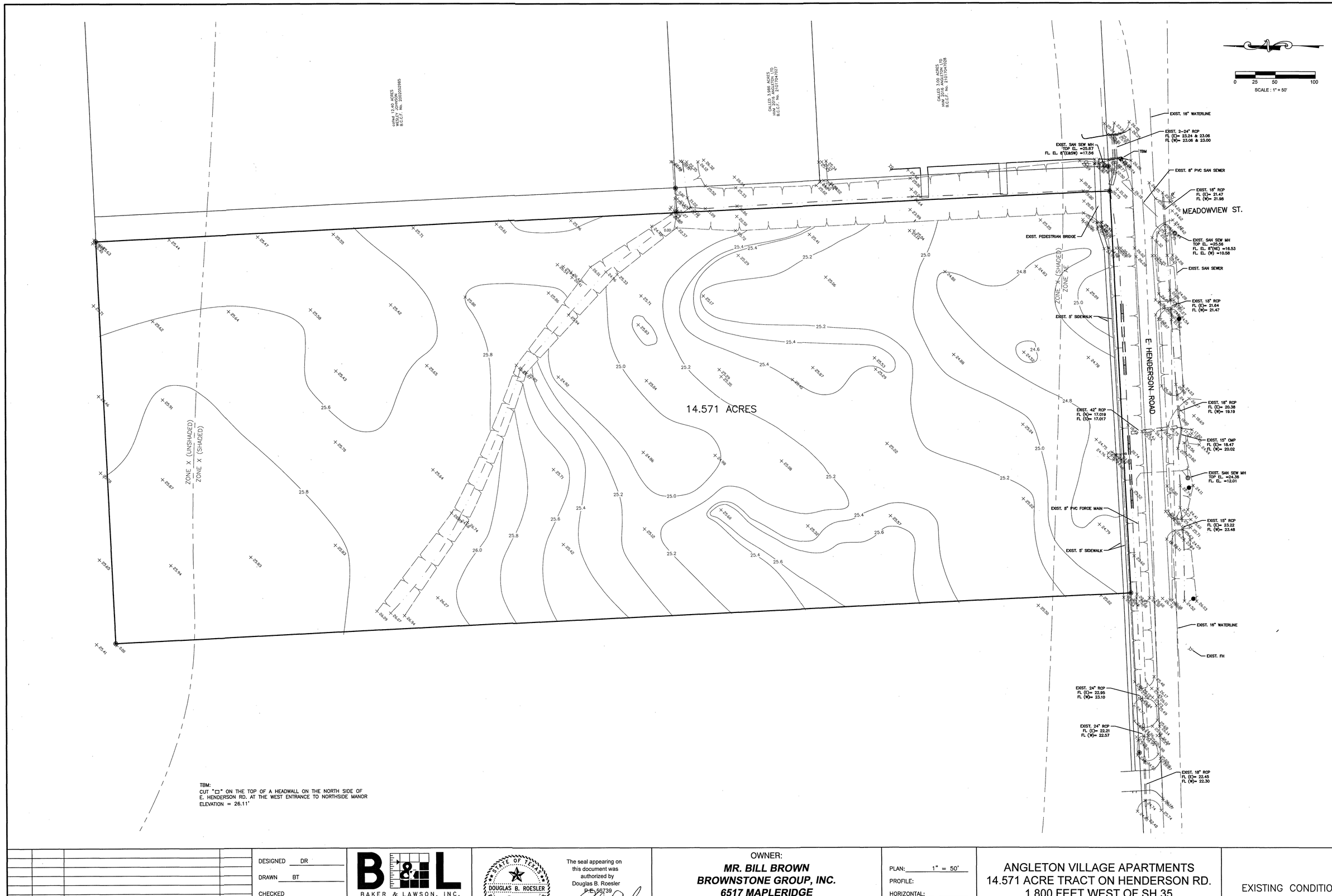
ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 -1BR, 2BR AND 3BR UNITS

TITLE SHEET

PROJECT NO. 13781

TS

13781 SHEET SET.DWG



TBM:
CUT "□" ON THE TOP OF A HEADWALL ON THE NORTH SIDE OF E. HENDERSON RD. AT THE WEST ENTRANCE TO NORTHSIDE MANOR
ELEVATION = 26.11'

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

Date 12-29-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN: 1" = 50'
PROFILE:
HORIZONTAL:
VERTICAL:

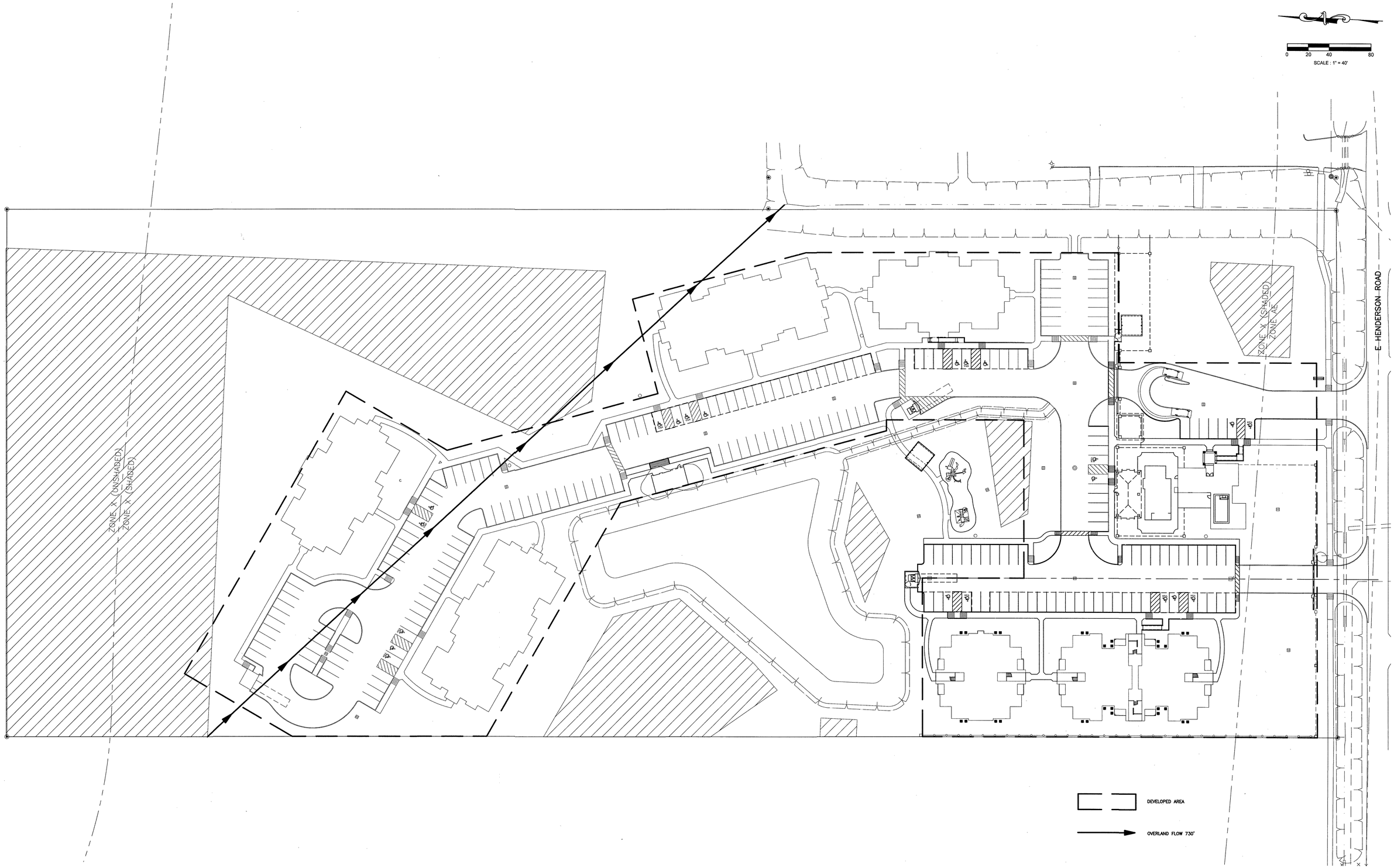
ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 -1BR, 2BR AND 3BR UNITS

EXISTING CONDITIONS

PROJECT NO. 13781

13781 SHEET SET.DWG

0 20 40 80
SCALE : 1" = 40'



NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-29-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

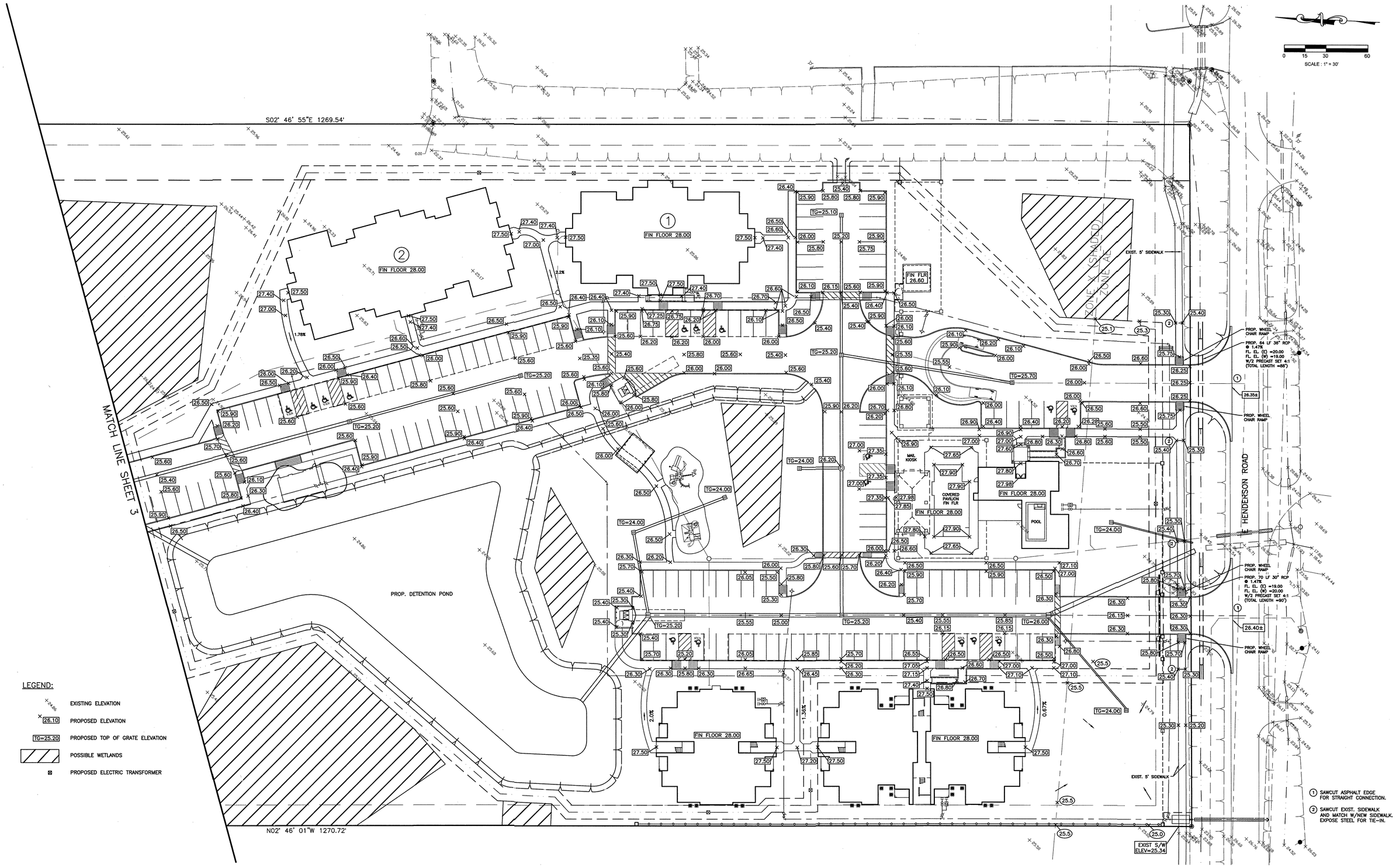
PLAN: 1" = 40'
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 -1BR, 2BR AND 3BR UNITS

DEVELOPMENT AREA
(5.06 AC.)
EXISTING OVERLAND
FLOW PATH

PROJECT NO. 13781

13781 SHEET SET.DWG



LEGEND:

- EXISTING ELEVATION
- 26.10 PROPOSED ELEVATION
- TG=25.20 PROPOSED TOP OF GRATE ELEVATION
- POSSIBLE WETLANDS
- PROPOSED ELECTRIC TRANSFORMER

1. SAWCUT ASPHALT EDGE FOR STRAIGHT CONNECTION.
2. SAWCUT EXIST. SIDEWALK AND MATCH W/NEW SIDEWALK. EXPOSE STEEL FOR TIE-IN.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT/BB
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-17-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

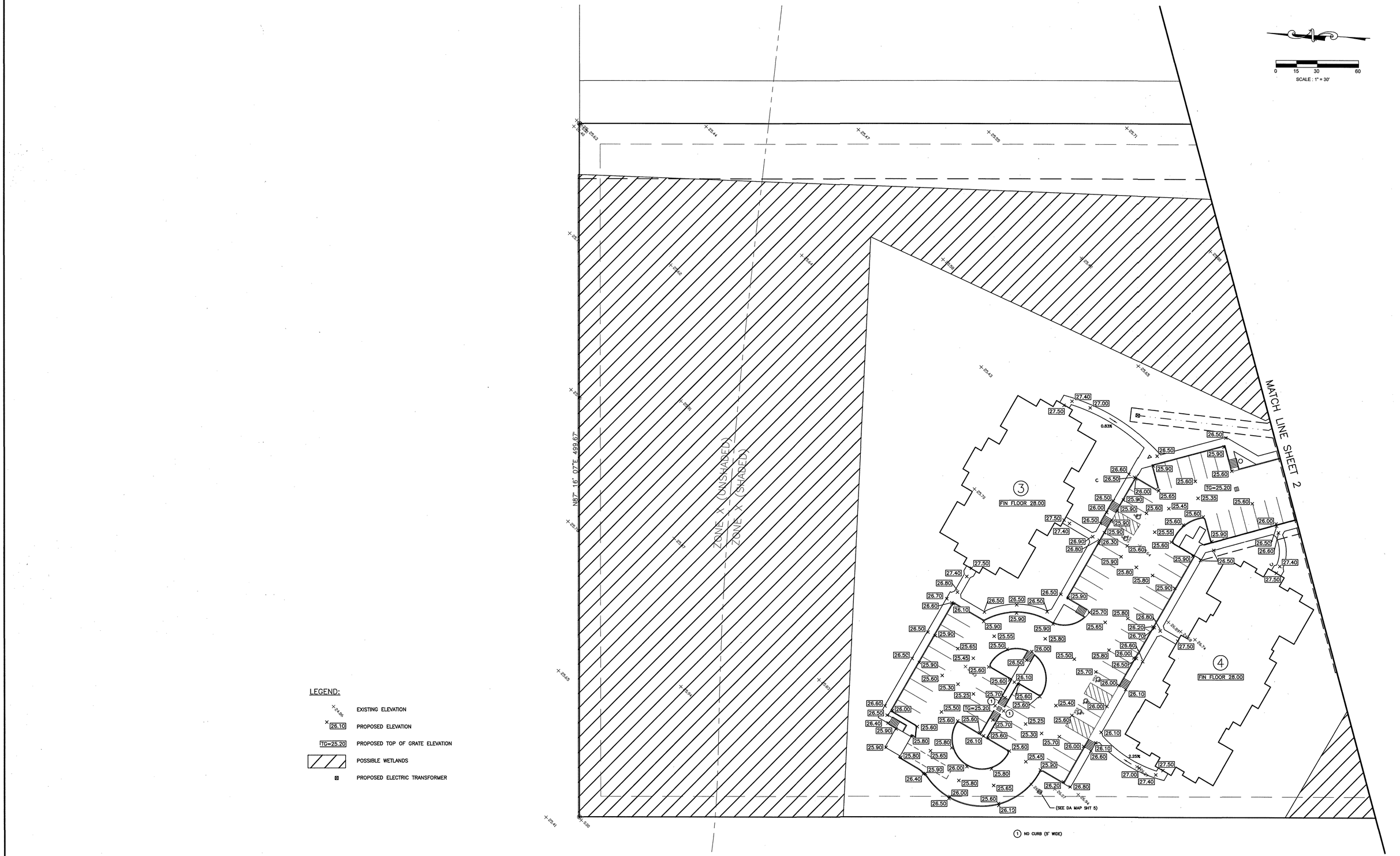
PLAN: 1" = 30'
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

GRADING PLAN
(1 OF 2)

PROJECT NO. 13781

13781 SHEET SET.DWG



LEGEND:

- EXISTING ELEVATION
- PROPOSED ELEVATION
- PROPOSED TOP OF GRATE ELEVATION
- POSSIBLE WETLANDS
- PROPOSED ELECTRIC TRANSFORMER

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN: 1" = 30'
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

GRADING PLAN
(2 OF 2)

PROJECT NO. 13781

4

13781 SHEET SET.DWG

FILL MITIGATION

Fill added to the "AE" Zone area up to elevation 26.0' totals 13,851 c.f.
(15,822 c.f. fill - 1,971 c.f. cut).

Following are fill mitigation areas and volumes:

1. Detention Pond = 36,423 c.f.

   A. Required Detention volume = 175,024 c.f.
   Detention volume provided to 25.2' = 178,875 c.f.
   Excess volume for fill mitigation = 3,851 c.f.

   B. Volume provided from elevation 25.2' to the BFE 26.0':
   Area 26.0' = 42,261 s.f.
   Area 25.2' = 39,168 s.f.
   Avg. Area = 40,715 s.f.
   Depth = 26.0' - 25.2' = 0.80'
   Fill Mitigation volume to 26.0' = 32,572 c.f.

2. Roadways and Parking = Not Calculated

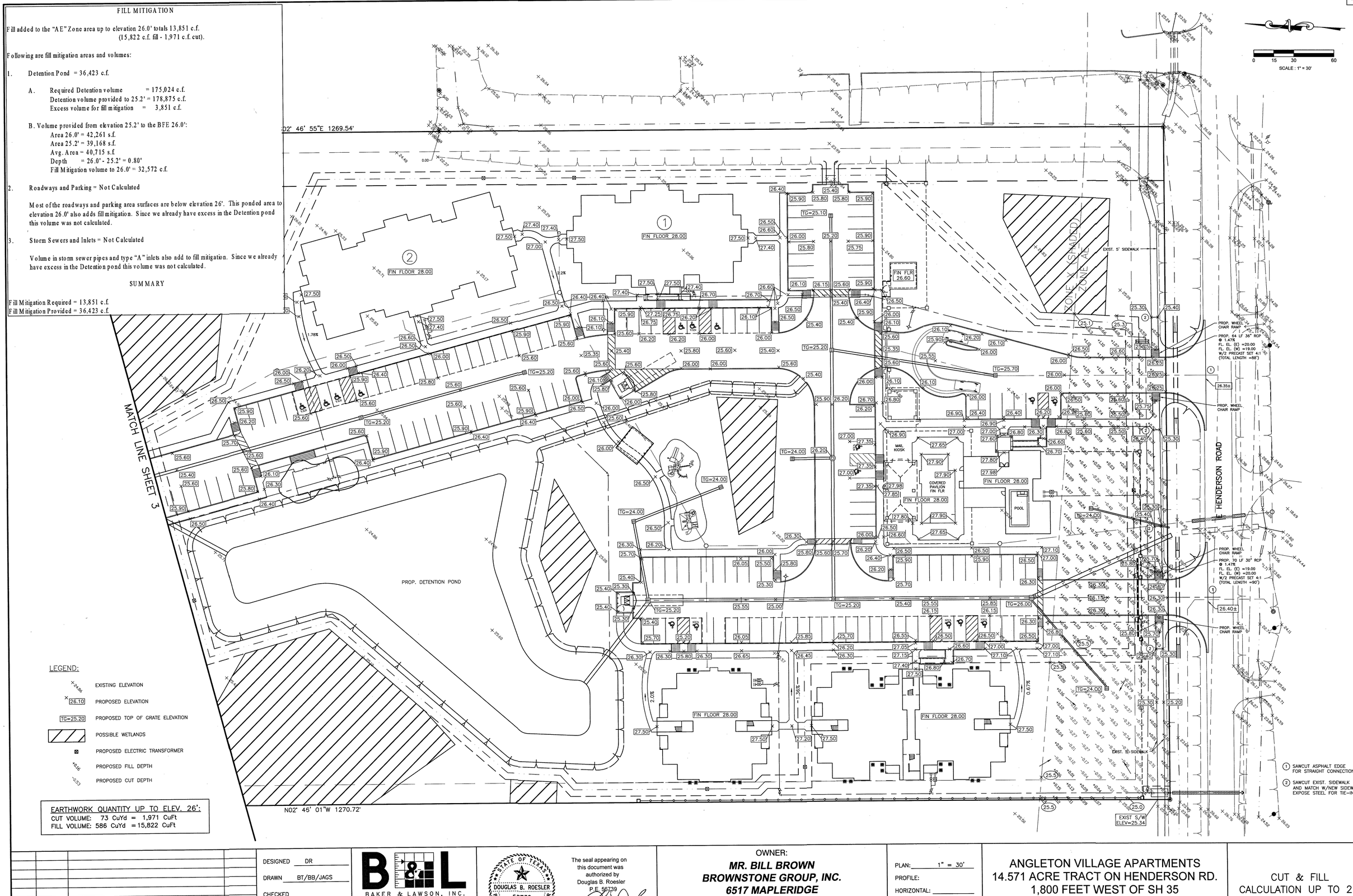
   Most of the roadways and parking area surfaces are below elevation 26'. This ponded area to elevation 26.0' also adds fill mitigation. Since we already have excess in the Detention pond this volume was not calculated.

3. Storm Sewers and Inlets = Not Calculated

   Volume in storm sewer pipes and type "A" inlets also add to fill mitigation. Since we already have excess in the Detention pond this volume was not calculated.

SUMMARY

Fill Mitigation Required = 13,851 c.f.
Fill Mitigation Provided = 36,423 c.f.



LEGEND:

- +24.86 — EXISTING ELEVATION
- 26.10 — PROPOSED ELEVATION
- TG=25.20 — PROPOSED TOP OF GRATE ELEVATION
- POSSIBLE WETLANDS
- PROPOSED ELECTRIC TRANSFORMER
- +0.16 — PROPOSED FILL DEPTH
- -0.57 — PROPOSED CUT DEPTH

EARTHWORK QUANTITY UP TO ELEV. 26':
CUT VOLUME: 73 CuYd = 1,971 CuFt
FILL VOLUME: 586 CuYd = 15,822 CuFt

1. SAWCUT ASPHALT EDGE FOR STRAIGHT CONNECTION.
2. SAWCUT EXIST. SIDEWALK AND MATCH W/NEW SIDEWALK. EXPOSE STEEL FOR TIE-IN.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT/BB/JAGS
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date 12-29-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN: 1" = 30'
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

CUT & FILL
CALCULATION UP TO 26'

PROJECT NO. 13781

4A

13781 SHEET SET.DWG

TRUNK STORM SEWER RUN CALLS

RUN	RUN LENGTH (FT)	PIPE SIZE (IN)	SLOPE (%)	UP-STRM FL. EL. (FT)	DN-STRM FL. EL. (FT)
I-1 to I-6DET.	175	24	0.20	21.00	20.75
I-4 to I-5	125	18	0.22	21.20	20.92
I-5 to I-6	195	24	0.21	20.92	20.52
I-6 to O.F.	110	36	0.29	20.52	20.20
OFF-SITE to I-1	60	18	1.5	22.50	21.60
I-7 to I-9	124	18	0.20	21.17	20.92
I-8 to I-9	100	18	0.20	21.12	20.92
I-9 to JB-1	80	24	0.20	20.92	20.76
I-10 to JB-1	30	18	0.20	21.50	21.44
JB-1 to I-14	105	24	0.20	20.76	20.55
I-11 to I-12	70	18	0.20	21.50	21.36
I-12 to I-13	60	18	0.20	21.36	21.24
DET. to I-13	80	30	0.10	18.00	17.92
I-13 to I-14	140	30	0.11	17.92	17.76
I-14 to I-15	150	30	0.10	17.76	17.61
I-15 to O.F.	114	36	0.10	17.61	17.50
I-16 to O.F.	60	10	4.83	21.50	18.60
I-17 to O.F.	90	10	0.16	21.50	21.36

TYPE "A" INLET CALLS

PROP TYPE"A" OFF-SITE	
TOP GRATE EL. =	25.20
FL. EL. 18" (NE) =	22.20

PROP TYPE"A" INLET I-1	
TOP GRATE EL. =	25.20
FL. EL. 18" (SW) =	21.60
FL. EL. 24" (SE) =	21.10

PROP TYPE"A" INLET I-4	
TOP GRATE EL. =	25.20
FL. EL. 18" (NW) =	21.20

PROP TYPE"A" INLET I-5	
TOP GRATE EL. =	25.20
FL. EL. 18" (SE) =	20.92
FL. EL. 24" (NW) =	20.92

PROP TYPE"A" INLET I-6	
TOP GRATE EL. =	25.20
FL. EL. 24" (NW) =	
FL. EL. 30" (SE) =	20.52
FL. EL. 36" (SW) =	20.52

PROP TYPE"A" INLET I-7	
TOP GRATE EL. =	25.70
FL. EL. 18" (NE) =	21.17

PROP TYPE"A" INLET I-8	
TOP GRATE EL. =	25.20
FL. EL. 18" (NE) =	21.12

PROP TYPE"A" INLET I-9	
TOP GRATE EL. =	25.20
FL. EL. 18" (SW) =	20.92
FL. EL. 18" (E) =	20.92
FL. EL 24" (W) =	20.92

PROP TYPE"A" INLET I-10	
TOP GRATE EL. =	24.00
FL. EL. 18" S) =	21.50

PROP. JUNC. BOX JB-1	
TOP LID EL	26.20
FL.EL 18" (N)	21.44
FL.EL. 24" (E)	20.76
FL. EL. 24" (W)	20.76

PROP TYPE"A" INLET I-11	
TOP GRATE EL. =	24.00
FL. EL. 18" (NW) =	21.50

PROP TYPE"A" INLET I-12	
TOP GRATE EL. =	24.00
FL. EL. 18" (SE) =	21.36
FL. EL. 18" (S) =	21.36

PROP TYPE"A" INLET I-13	
TOP GRATE EL. =	25.20
FL. EL. 18" (NE) =	21.24
FL. EL. 30" (NW) =	17.92
FL. EL. 30" (S) =	17.92

PROP TYPE"A" INLET I-14	
TOP GRATE EL. =	25.20
FL. EL. 30" (N) =	17.76
FL. EL. 30" (S) =	17.76
FL. EL 24" (E) =	20.55

PROP TYPE"A" INLET I-15	
TOP GRATE EL. =	26.00
FL. EL. 30" (N) =	21.36
FL. EL. 36" (SE) =	21.36
FL. EL. 10" (SW) =	21.36

PROP TYPE"A" INLET I-16	
TOP GRATE EL. =	24.00
FL. EL. 10" (S) =	21.50

PROP TYPE"A" INLET I-17	
TOP GRATE EL. =	24.00
FL. EL. 10" (S) =	21.50

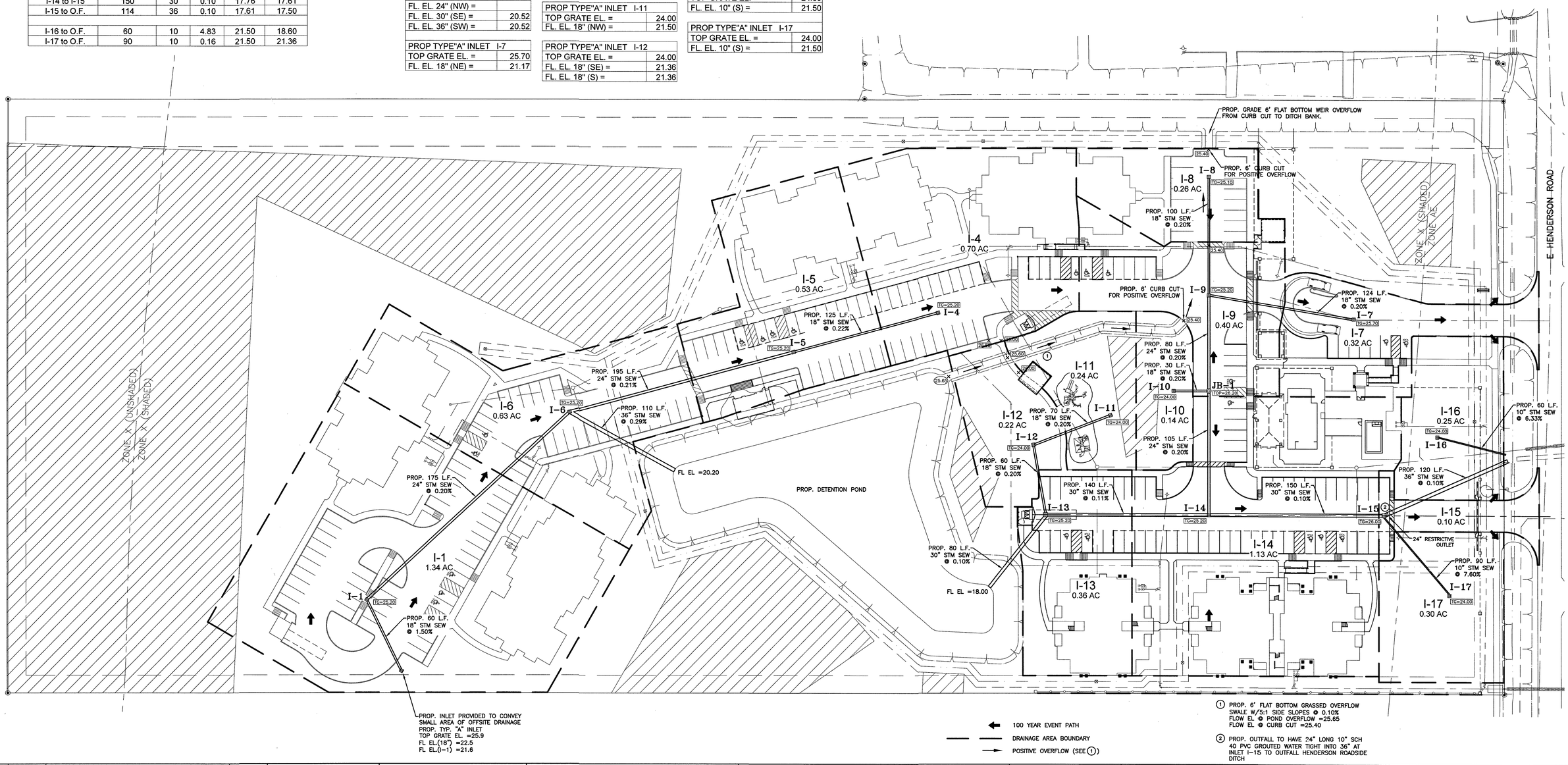
13781 - ANGLETON VILLAGE APARTMENTS, E. HENDERSON RD., ANGLETON, TX
RESTRICTIVE OUTLET WITH MAX. FLOW RATE OF 4.70 CFS AND 1.0' HEAD

A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	H.C.F.C.D. EQUATION FOR A HDPE PIPE WITH KNOWN "L", "n", "D" AND ASSUMED "H"												
2	H"	Q"	ENTR. LOSS	n	L	D		EQ. 2.5204(1+D4)	EQ. 466.18*E4^2*F4	EQ. B4/(C4/10)^2	EQ. I4/G4^4	EQ. J4/G4^5.333	EQ. L4-(L4+M4)
3													
4	1	3.5	0.5	0.011	2	0.83		3.7806	0.1128	8.2709	7.9661	0.3047	0.0000
5	1	5.1	0.5	0.011	2	1		3.7806	0.1128	3.8934	3.7806	0.1128	0.0000

USE 10" RESTRICTIVE OUTLET

ORIFICE EQUATION Q = Cd*A*(2*G*H)^0.5			
Where:			
Cd =	0.8		
G =	32.2		
H =	1		
Q =	4.07		
A =	0.63	10" Dia.	0.55 s.f.

0 20 40 80
SCALE : 1" = 40'



1 PROP. 6' FLAT BOTTOM GRASSED OVERFLOW SWALE W/5:1 SIDE SLOPES @ 0.10% FLOW EL @ POND OVERFLOW =25.65 FLOW EL @ CURB CUT =25.40

2 PROP. OUTFALL TO HAVE 24" LONG 10" SCH 40 PVC GROUTED WATER TIGHT INTO 36" AT INLET I-15 TO OUTFALL HENDERSON ROADSIDE DITCH

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT/BB
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-28-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN: 1" = 40'
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

DRAINAGE AREA MAP AND STORM SEWER LAYOUT

PROJECT NO. 13781

13781 SHEET SET.DWG

WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 12/2/2020 2:28:12 PM

PROJECT NAME : Angleton Village Apartments
JOB NUMBER : 13781
PROJECT DESCRIPTION : 108 Units on E. hendersomn
DESIGN FREQUENCY : 10 Years
ANALYSYS FREQUENCY : 100 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 10 Years

Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
I-7	0.8	0.32	15.00	15.00	6.21	0.000	1.590
I-8	0.8	0.26	15.00	15.00	6.21	0.000	1.291
I-9	0.8	0.40	15.00	15.00	6.21	0.000	1.987
I-10	0.3	0.14	15.00	15.00	6.21	0.000	0.261
I-11	0.3	0.24	15.00	15.00	6.21	0.000	0.447
I-12	0.3	0.22	15.00	15.00	6.21	0.000	0.410
I-13	0.8	0.36	15.00	15.00	6.21	0.000	1.788
I-14	0.8	1.13	15.00	15.00	6.21	0.000	5.613
I-15	0.8	0.10	15.00	15.00	6.21	0.000	0.497
I-16	0.3	0.25	15.00	15.00	6.21	0.000	0.466
I-17	0.3	0.30	15.00	15.00	6.21	0.000	0.559

Sag Inlets Configuration Data.

Inlet ID	Inlet Type	Length/ Perim. (ft)	Grate Area (sf)	Left-Slope Long (%)	Left-Slope Trans (%)	Right-Slope Long (%)	Right-Slope Trans (%)	Gutter n	Gutter DeprW (ft)	Depth Allowed (ft)	Critic Elev. (ft)
I-7	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	26.20
I-8	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	25.70
I-9	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	25.70
I-11	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	24.50
I-12	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	24.50
I-10	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	24.50
I-13	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	25.70
I-14	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	25.70
I-15	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	26.50

Sag Inlets Computation Data.

Inlet ID	Inlet Type	Length (ft)	Grate Perim (ft)	Grate Area (sf)	Total Q (cfs)	Inlet Capacity (cfs)	Total Head (ft)	Ponded Width Left (ft)	Ponded Width Right (ft)
I-7	Grate	n/a	7.34	3.74	1.590	8.011	0.170	7.15	7.15
I-8	Grate	n/a	7.34	3.74	1.291	8.011	0.148	6.60	6.60
I-9	Grate	n/a	7.34	3.74	1.987	8.011	0.197	7.80	7.80
I-11	Grate	n/a	7.34	3.74	0.447	8.011	0.073	4.45	4.45
I-12	Grate	n/a	7.34	3.74	0.410	8.011	0.069	4.30	4.30
I-10	Grate	n/a	7.34	3.74	0.261	8.011	0.051	3.65	3.65
I-13	Grate	n/a	7.34	3.74	1.788	8.011	0.184	7.50	7.50
I-14	Grate	n/a	7.34	3.74	5.613	8.011	0.394	11.50	11.50
I-15	Grate	n/a	7.34	3.74	0.497	8.011	0.078	4.65	4.65

Cumulative Junction Discharge Computations

Node I.D.	Node Type	Weighted C-Value	Cumulat. Dr.Area (acres)	Cumulat. Tc (min)	Intens. (in/hr)	User Supply Q cfs)	Additional Q in Node (cfs)	Total Disch. (cfs)
I-7	Grate	0.800	0.32	15.00	6.21	0.000	0.00	1.590
I-8	Grate	0.800	0.26	15.00	6.21	0.000	0.00	1.291
I-9	Grate	0.800	0.98	15.85	6.09	0.000	0.00	4.776
I-11	Grate	0.300	0.24	15.00	6.21	0.000	0.00	0.447
JB-1	CircMh	0.738	1.12	16.27	6.04	0.000	0.00	4.985
I-12	Grate	0.300	0.46	15.71	6.11	0.000	0.00	0.843
I-10	Grate	0.300	0.14	15.00	6.21	0.000	0.00	0.261
I-13	Grate	0.520	0.82	16.21	6.04	0.000	0.00	2.575
I-14	Grate	0.702	3.07	17.32	5.90	0.000	0.00	12.725
I-15	Grate	0.705	3.17	18.16	5.80	0.000	0.00	12.967
OUT	Outlt	0.705	3.17	18.16	5.80	0.000	0.00	12.967

Conveyance Configuration Data

Run#	Node I.D. US	Node I.D. DS	Flowline Elev. US (ft)	Flowline Elev. DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
1	I-7	I-9	21.17	20.92	Circ 1	0.00	1.50	124.00	0.20	0.013
2	I-8	I-9	21.12	20.92	Circ 1	0.00	1.50	100.00	0.20	0.013
3	I-9	JB-1	20.92	20.76	Circ 1	0.00	2.00	80.00	0.20	0.013
4	I-10	JB-1	21.50	21.44	Circ 1	0.00	1.50	30.00	0.20	0.013
5	JB-1	I-14	20.76	20.55	Circ 1	0.00	2.00	105.00	0.20	0.013
6	I-11	I-12	21.50	21.36	Circ 1	0.00	1.50	70.00	0.20	0.013
7	I-12	I-13	21.36	21.24	Circ 1	0.00	1.50	60.00	0.20	0.013
8	I-13	I-14	17.92	17.76	Circ 1	0.00	2.50	140.00	0.11	0.013
9	I-14	I-15	17.76	17.61	Circ 1	0.00	2.50	150.00	0.10	0.013
10	I-15	OUT	17.61	17.50	Circ 1	0.00	3.00	114.00	0.10	0.013

Conveyance Hydraulic Computations. Tailwater = 23.000 (ft)

Run#	Hydraulic Gradeline US Elev (ft)	Hydraulic Gradeline DS Elev (ft)	Fr.Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (f/s)	Velocity Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1	23.30	23.27	0.023	0.60	1.50	2.42	0.90	1.59	4.72	0.000
2	23.29	23.27	0.015	0.54	1.50	2.26	0.73	1.29	4.70	0.000
3	23.27	23.24	0.045	0.97	2.00	3.17	1.52	4.78	10.12	0.000
4*	23.24	23.24	0.001	0.24	1.50	1.43	0.15	0.26	4.70	0.000
5	23.24	23.19	0.049	1.00	2.00	3.17	1.59	4.99	10.12	0.000
6	23.20	23.19	0.002	0.32	1.50	1.65	0.25	0.45	4.70	0.000
7	23.19	23.19	0.006	0.43	1.50	1.99	0.48	0.84	4.70	0.000
8	23.19	23.19	0.004	0.74	2.50	2.11	0.52	2.57	13.87	0.000
9	23.19	23.04	0.096	2.03	2.50	2.98	2.59	12.72	12.97	0.000
10	23.04	23.00	0.038	1.69	3.00	3.17	1.83	12.97	20.72	0.000

NORMAL TERMINATION OF WINSTORM.

WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 12/2/2020 2:31:26 PM

PROJECT NAME : Angleton Village Apartments
JOB NUMBER : 13781
PROJECT DESCRIPTION : 108 Units on E. Hendersomn
DESIGN FREQUENCY : 10 Years
ANALYSYS FREQUENCY : 100 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR ANALYSYS FREQUENCY of: 100 Years

Runoff Computation for Analysis Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
I-7	0.8	0.32	15.00	15.00	8.39	0.000	2.149
I-8	0.8	0.26	15.00	15.00	8.39	0.000	1.746
I-9	0.8	0.40	15.00	15.00	8.39	0.000	2.686
I-10	0.3	0.14	15.00	15.00	8.39	0.000	0.353
I-11	0.3	0.24	15.00	15.00	8.39	0.000	0.604
I-12	0.3	0.22	15.00	15.00	8.39	0.000	0.554
I-13	0.8	0.36	15.00	15.00	8.39	0.000	2.418
I-14	0.8	1.13	15.00	15.00	8.39	0.000	7.589
I-15	0.8	0.10	15.00	15.00	8.39	0.000	0.672
I-16	0.3	0.25	15.00	15.00	8.39	0.000	0.630
I-17	0.3	0.30	15.00	15.00	8.39	0.000	0.756

Sag Inlets Configuration Data.

Inlet ID	Inlet Type	Length/ Perim. (ft)	Grate Area (sf)	Left-Slope Long (%)	Left-Slope Trans (%)	Right-Slope Long (%)	Right-Slope Trans (%)	Gutter n	Gutter DeprW (ft)	Depth Allowed (ft)	Critic Elev. (ft)
I-7	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	26.20
I-8	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	25.70
I-9	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	25.70
I-11	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	24.50
I-12	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	24.50
I-10	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	24.50
I-13	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	25.70
I-14	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	25.70
I-15	Grate	7.34	3.74	0.50	2.00	0.50	2.00	0.014	n/a	0.50	26.50

Sag Inlets Computation Data.

Inlet ID	Inlet Type	Length (ft)	Grate Perim (ft)	Grate Area (sf)	Total Q (cfs)	Inlet Capacity (cfs)	Total Head (ft)	Ponded Width Left (ft)	Ponded Width Right (ft)
I-7	Grate	n/a	7.34	3.74	2.149	8.011	0.208	8.00	8.00
I-8	Grate	n/a	7.34	3.74	1.746	8.011	0.181	7.40	7.40
I-9	Grate	n/a	7.34	3.74	2.686	8.011	0.241	8.70	8.70
I-11	Grate	n/a	7.34	3.74	0.604	8.011	0.089	5.00	5.00
I-12	Grate	n/a	7.34	3.74	0.554	8.011	0.084	4.80	4.80
I-10	Grate	n/a	7.34	3.74	0.353	8.011	0.062	4.05	4.05
I-13	Grate	n/a	7.34	3.74	2.418	8.011	0.225	8.40	8.40
I-14	Grate	n/a	7.34	3.74	7.589	8.011	0.482	12.85	12.85
I-15	Grate	n/a	7.34	3.74	0.672	8.011	0.096	5.20	5.20

Cumulative Junction Discharge Computations

Node I.D.	Node Type	Weighted C-Value	Cumulat. Dr.Area (acres)	Cumulat. Tc (min)	Intens. (in/hr)	User Supply Q cfs)	Additional Q in Node (cfs)	Total Disch. (cfs)
I-7	Grate	0.800	0.32	15.00	8.39	0.000	0.00	2.149
I-8	Grate	0.800	0.26	15.00	8.39	0.000	0.00	1.746
I-9	Grate	0.800	0.98	15.78	8.26	0.000	0.00	6.478
I-11	Grate	0.300	0.24	15.00	8.39	0.000	0.00	0.604
JB-1	CircMh	0.738	1.12	16.17	8.20	0.000	0.00	6.773
I-12	Grate	0.300	0.46	15.64	8.29	0.000	0.00	1.144
I-10	Grate	0.300	0.14	15.00	8.39	0.000	0.00	0.353
I-13	Grate	0.520	0.82	16.09	8.21	0.000	0.00	3.498
I-14	Grate	0.702	3.07	17.09	8.05	0.000	0.00	17.364
I-15	Grate	0.705	3.17	17.80	7.95	0.000	0.00	17.767
OUT	Outlt	0.705	3.17	17.80	7.95	0.000	0.00	17.767

Conveyance Configuration Data

Run#	Node I.D. US	Node I.D. DS	Flowline Elev. US (ft)	Flowline Elev. DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
1	I-7	I-9	21.17	20.92	Circ 1	0.00	1.50	124.00	0.20	0.013
2	I-8	I-9	21.12	20.92	Circ 1	0.00	1.50	100.00	0.20	0.013
3	I-9	JB-1	20.92	20.76	Circ 1	0.00	2.00	80.00	0.20	0.013
4	I-10	JB-1	21.50	21.44	Circ 1	0.00	1.50	30.00	0.20	0.013
5	JB-1	I-14	20.76	20.55	Circ 1	0.00	2.00	105.00	0.20	0.013
6	I-11	I-12	21.50	21.36	Circ 1	0.00	1.50	70.00	0.20	0.013
7	I-12	I-13	21.36	21.24	Circ 1	0.00	1.50	60.00	0.20	0.013
8	I-13	I-14	17.92	17.76	Circ 1	0.00	2.50	140.00	0.11	0.013
9	I-14	I-15	17.76	17.61	Circ 1	0.00	2.50	150.00	0.10	0.013
10	I-15	OUT	17.61	17.50	Circ 1	0.00	3.00	114.00	0.10	0.013

Conveyance Hydraulic Computations. Tailwater = 24.000 (ft)

Run#	Hydraulic Gradeline US Elev (ft)	Hydraulic Gradeline DS Elev (ft)	Fr.Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (f/s)	Velocity Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1	24.56	24.51	0.042	0.70	1.50	2.64	1.22	2.15	4.72	0.000
2	24.53	24.51	0.028	0.63	1.50	2.46	0.99	1.75	4.70	0.000
3	24.51	24.44	0.082	1.16	2.00	3.44	2.06	6.48	10.12	0.000
4	24.44	24.44	0.001	0.28	1.50	1.54	0.20	0.35	4.70	0.000
5	24.44	24.35	0.090	1.19	2.00	3.48	2.16	6.77	10.12	0.000
6	24.37	24.37	0.003	0.36	1.50	1.83	0.34	0.60	4.70	0.000
7	24.37	24.36	0.012	0.50	1.50	2.19	0.65	1.14	4.70	0.000
8	24.36	24.35	0.007	0.86	2.50	2.34	0.71	3.50	13.87	0.000
9	24.35	24.08	0.179	2.50	2.50	3.54	3.54	17.36	12.97	0.000
10	24.08	24.00	0.071	2.06	3.00	3.43	2.51	17.77	20.72	0.000

END

NORMAL TERMINATION OF WINSTORM.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
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DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-4681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN: 1" = 50'
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

WINDSTORM DATA
I-1 TO I-6 &
I-7 TO I-11

PROJECT NO. 13781

(1)

Drainage Analysis

Job # 13781 - Angleton Village Apts. - N Henderson Rd.

Rainfall intensity calculations for Brazoria County

I	=	intensity (in/hr)
b	=	coefficient
t	=	time of concentration
d	=	coefficient
e	=	coefficient

subscript

i = 1 = 2year storm
i = 2 = 5 year storm
i = 3 = 10 year strom
i = 4 = 25 year storm
i = 5 = 50 year storm
i = 6 = 100 year storm

$i := 1..6$

$b_i :=$ $e_i :=$ $d_i :=$

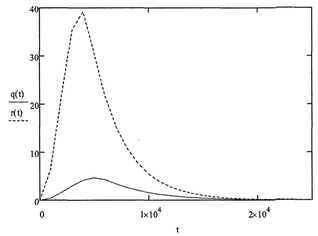
b_i	e_i	d_i
71.0	0.774	8.4
70.1	0.752	7.7
96.6	0.770	17.2
89.2	0.736	10.4
86.5	0.709	10.0
120.2	0.741	21.3

$T_\emptyset := 45.42$ ENTER PREDEVELOPMENT TIME OF CONCENTRATION

$I_i := \frac{b_i}{(d_i + T_\emptyset)^{e_i}}$ $I_6 = 5.347$ Predevelopment Intensity of interest

$C := .1197$ ENTER PREDEVELOPMENT C VALUE

$A := 5.88$ ENTER AREA



$f(t) := ((r(t) - q(t))) \cdot 1$

$v(t) := if(f(t) > 0, f(t), 0)$

THE REQUIRED STORAGE COMPUTED AS THAT PART OF THE POST DEVELOPMENT HYDROGRAPH THAT FALLS ABOVE THE PREDEVELOPMENT HYDROGRAPH

ACRE -FEET

$$\frac{\int_0^{86400} v(t)\,dt}{43560} = 4.018$$

(2)

$C_f := 1.25$

$Q := C \cdot C_f \cdot I_6 \cdot A$ Must Insert correct subscript for I to obtain the relevant Q

$Q = 4.704$

$V := (C) \cdot A \cdot 43560 \cdot 1.08$ For these calculations, total volume storage is assumed to equal (C)*A with A converted to square feet multiplied by 13" (1.08')

$V = 3.311 \times 10^4$

DEVELOPMENT OF RUNOFF HYDROGRAPH MALCOM'S METHOD AS DESCRIBED IN THE BRAZORIA COUNTY DRAINAGE CRITERIA MANUAL

$T := \frac{V}{1.39 \cdot Q}$ $T = 5.064 \times 10^3$ T = Time to peak, presented as a function of volume and peak flow and therefore indirectly related to time of concentration

$t := 0, 1000.. 84000$

$f(t) := \left(\frac{Q}{2}\right)\left(1 - \cos\left(\frac{t \cdot \pi}{T}\right)\right)$ f(t) describes rising limb of hydrograph

$g(t) := 4.34 \cdot Q \cdot \exp\left[-1.30 \cdot \left(\frac{t}{T}\right)\right]$ g(t) describes descending limb of hydrograph

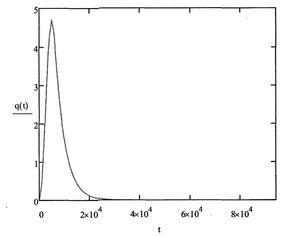
$q(t) := if(t \le 1.25 \cdot T, f(t), g(t))$

$Volume_{pre} := \int_0^{86400} q(t)\,dt$

$Volume_{pre} = 3.323 \times 10^4$

(3)

Predevelopment hydrograph



$T_\emptyset := 23.67$ ENTER POST DEVLOPMENT TIME OF CONCENTRATION

$I_i := \frac{b_i}{(d_i + T_0)^{e_i}}$ $I_6 = 7.163$ Post development I of interest

ENTER POST DEVELOPMENT C FACTOR REVISE CfAND AREA IF NECESSARY

$C := 0.75$

$C_f := 1.25$

$Q := C \cdot I_6 \cdot A \cdot C_f$

$Q = 39.485$

$V := (C) \cdot A \cdot 43560 \cdot 1.08$

$V = 2.075 \times 10^5$

$T := \frac{V}{1.39 \cdot Q}$ $T = 3.78 \times 10^3$

(4)

$t := 0, 1000.. 25000$

$f(t) := \left(\frac{Q}{2}\right)\left(1 - \cos\left(\frac{t \cdot \pi}{T}\right)\right)$

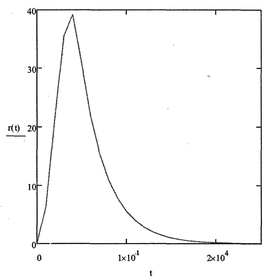
$g(t) := 4.34 \cdot Q \cdot \exp\left[-1.30 \cdot \left(\frac{t}{T}\right)\right]$

$r(t) := if(t \le 1.25 \cdot T, f(t), g(t))$

$Volume_{post} := \int_0^{86400} r(t)\,dt$

$Volume_{post} = 2.082 \times 10^5$

Post development hydrograph



Combined pre and post development hydrographs

(5)

$f(t) := ((r(t) - q(t))) \cdot 1$

$v(t) := if(f(t) > 0, f(t), 0)$

THE REQUIRED STORAGE COMPUTED AS THAT PART OF THE POST DEVELOPMENT HYDROGRAPH THAT FALLS ABOVE THE PREDEVELOPMENT HYDROGRAPH

ACRE -FEET

$$\frac{\int_0^{86400} v(t)\,dt}{43560} = 4.018$$

(6)

Hydrological and Hydraulic Impacts

Angleton Village Apts. - N. Henderson Rd.
Job # 13781

Brazoria County, Texas

A = 5.88 Acre Development

Pre Development:

C = 0.1197
TC = 45.42 Minutes, I = 5.347
Q = 100 Year Storm = 4.70 cfs
Q-Allowable is 0.80 cfs / ac. = 4.70 cfs

Post Development

C = 0.75
T/C = 23.67 Minutes, I= 7.163
Q = 100 Year Storm = 39.49 cfs

Required Detention:

4.018 ac - feet (175,024 c.f.)

Douglas B. Roesler, P.E. Mar. 20, 2020

EXISITNG CONDITIONS

Bra. Co. Master Drg. Study allows only 0.80 cfs/acre in this area. These are Bastrop Bayou drainage area BB 36.

TC = 15 Minutes gather time plus diagonal length (730') overland at 0.40 fps = 45.42 Minutes

PROPOSED CONDITIONS

TC = 15 Minutes gather time + 100' overland at 0.50 fps + 100' gutter at 1.5 fps + 760 l.f. storm sewer at 3 fps = 23.67 Minutes

C = Bra. Co. Drg. Criteria Manual - Apartments = 0.75

NO.	DATE	DESCRIPTION	APPROVED

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713-545-0826

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PROFILE:
HORIZONTAL:
VERTICAL:

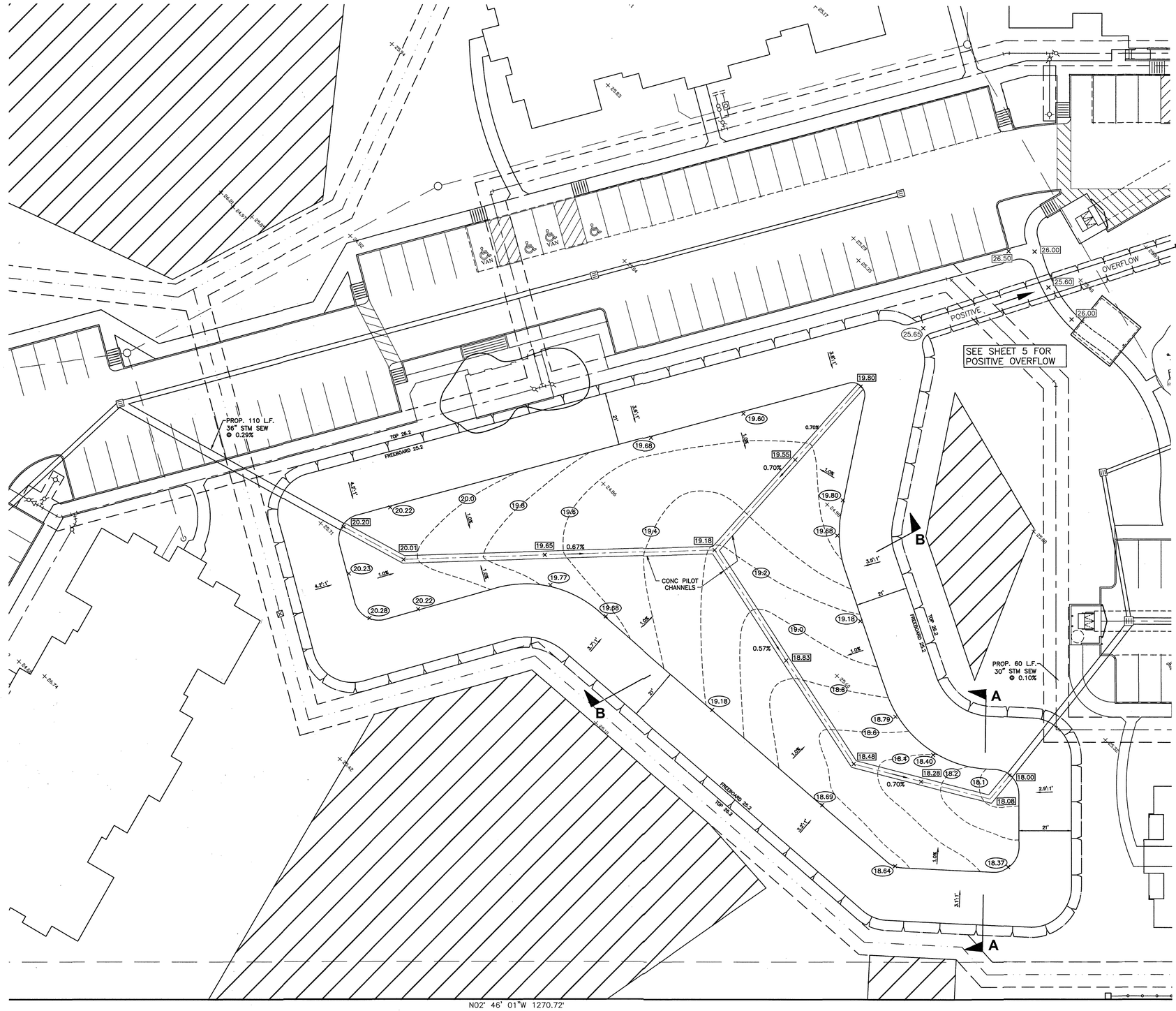
ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

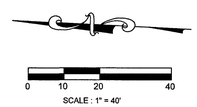
HYDROLOGICAL CALCULATIONS

PROJECT NO. 13781

7

11 SHEET SET.DWG





DETENTION REQUIRED 4.018 AC.–FT (175,024 C.F.)

EXISTING CONDITION
A =5.88 AC.
C =0.25
TC =15 MIN. + 730 LF OL @ 0.40 FPS X 45.42 MINUTE

DETENTION VOLUME PROVIDED

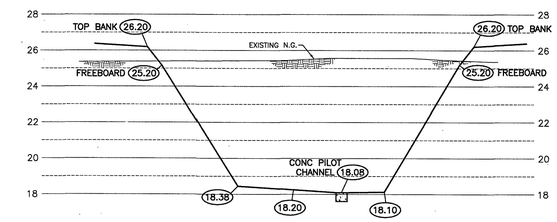
PROPOSED CONDITION
A =10.9 AC.
C =5.06 AC. @ 0.75 = 0.57
4.84 AC. @ 0.30
TC =15 MIN. + 760 LF STM SEW @ 3.0 FPS = 19.2 MINUTE

DETENTION POND VOLUME

EL. 26.2' TOP (43,034 S.F.)
EL. 25.2' FREEBOARD (39,168 S.F.) — AVG. AREA =29,812.5 S.F.
19.2' BOTTOM (20,475 S.F.)

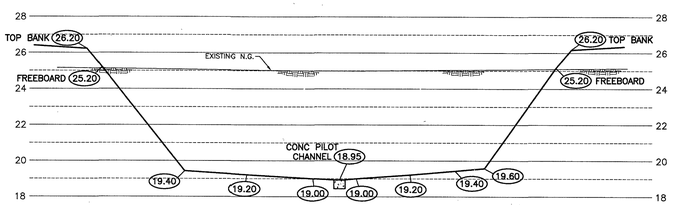
AVG. DEPTH =6.0'

VOLUME PROVIDED TO ELEV. 25.2 =4.106 AC–FT (178,875 C.F.)
(DOES NOT INCLUDE INLETS @ STORM SEWER STORAGE)



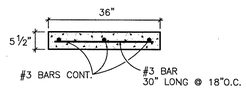
SECTION A-A

SCALE: 1" = 20' HORIZ
1" = 4' VERT



SECTION B-B

SCALE: 1" = 20' HORIZ
1" = 4' VERT



CONCRETE PILOT CHANNEL
N.T.S.

LEGEND:

- EXISTING ELEVATION
- PROPOSED ELEVATION
- POSSIBLE WETLANDS
- PROPOSED ELECTRIC TRANSFORMER
- DETENTION POND BOTTOM SLOPE DIRECTION

NO.	DATE	DESCRIPTION	APPROVED

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DRAWN BT
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DATE

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REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

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Date: 12-13-20

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MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN: 1" = 20'
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

DETENTION POND
LAYOUT

PROJECT NO. 13781

51 SHEET SET.DWG

S02° 46' 55"E 1269.54'

N02° 46' 01"W 1270.72'

MATCH LINE SHEET 5

E HENDERSON ROAD

ZONE X SHADED ZONE AE

0 15 30 60
SCALE : 1" = 30'

PROP. 8"X4" TEE
1-4" GV W/BOX
1-4" DBL CHECK
1-2" W.M.

PROP. 8"X6" TEE
1-8" GV W/BOX
1-6" GV W/BOX
24 LF FH LEAD
1-FH

PROP. 641 LF 8" WL
3-22 ½° BENDS
W/4' COVER

PROP. 8"X6" TEE
1-4" GV W/BOX
15 LF FH LEAD
1-FH

PROP. 1-8" 90° BEND

PROP. 81 LF 8" WL
W/4' COVER

PROP. 168 LF 8" WL
W/4' COVER

PROP. 1-8" TEE
2-8" GV W/BOX

PROP. 1-8" 45° BEND

PROP. 322 LF 8" WL
W/4' COVER

PROP. 1-8" 90° BEND

PROP. 8"X4" TEE
1-4" GV W/BOX
1-4" DBL CHECK
1-2" W.M.

PROP. 75 LF 4" FIRE
LINE W/3.5' COVER

PROP. 8"X6" TEE
1-6" GV W/BOX
75 LF FH LEAD
1-FH

PROP. 8"X8" TEE
1-8"X6" REDUCER
1-6" GV W/BOX
60 LF FH LEAD
1-FH

PROP. 8"X4" TEE
1-4" GV W/BOX
1-4" DBL CHECK
1-2" W.M.
20 LF 4" FIRE LINE

PROP. 116 LF 8" WL
W/4' COVER

PROP. 8"X4" TEE
1-4" GV W/BOX
1-4" DBL CHECK
1-2" W.M.

PROP. 338 LF 8" WL
W/4' COVER

PROPOSED SENSUS F-2
COMBINATION FIRE/DOMESTIC
METER ASSEMBLY IN VAULT
IN 10'x20' WATER METER
VAULT EASEMENT

APPROXIMATE LOCATION
OF EXIST. 16" W.L.

PROP. 10"X16" TS&V

PROPOSED 50 LF BORE
FOR WELDED STEEL CASING
FOR 10" WATER LINE

PROP. 10"X8" REDUCER

1-8"X8" TEE
2-8" GV W/BOX

PROP. 401 LF 10" WL
W/4' COVER

1-10"-90° BEND
1-10"X8" REDUCER
1-8" GV W/BOX

PROP. 1-8" 90° BEND

PROP. 1-8" 90° BEND

PROP. 1-8" 45° BEND

PROP. 1-8" 45° BEND

PROP. 1-8" 90° BEND

PROP. 8"X4" TEE
1-4"-90° BEND
1-4" GV W/BOX
1-4" DBL CHECK
1-2" W.M.

PROP. 641 LF 8" WL
3-22 ½° BENDS
W/4' COVER

PROP. 8"X6" TEE
1-8" GV W/BOX
1-6" GV W/BOX
24 LF FH LEAD
1-FH

PROP. 8"X4" TEE
1-4" GV W/BOX
1-4" DBL CHECK
1-2" W.M.

PROP. 8"X6" TEE
1-6" GV W/BOX
15 LF FH LEAD
1-FH

PROP. 1-8" 90° BEND

PROP. 81 LF 8" WL
W/4' COVER

PROP. 168 LF 8" WL
W/4' COVER

PROP. 1-8" TEE
2-8" GV W/BOX

PROP. 1-8" 45° BEND

PROP. 322 LF 8" WL
W/4' COVER

PROP. 1-8" 90° BEND

PROP. 8"X4" TEE
1-4" GV W/BOX
1-4" DBL CHECK
1-2" W.M.

PROP. 75 LF 4" FIRE
LINE W/3.5' COVER

PROP. 8"X6" TEE
1-6" GV W/BOX
75 LF FH LEAD
1-FH

PROP. 8"X8" TEE
1-8"X6" REDUCER
1-6" GV W/BOX
60 LF FH LEAD
1-FH

PROP. 8"X4" TEE
1-4" GV W/BOX
1-4" DBL CHECK
1-2" W.M.
20 LF 4" FIRE LINE

PROP. 116 LF 8" WL
W/4' COVER

PROP. 8"X4" TEE
1-4" GV W/BOX
1-4" DBL CHECK
1-2" W.M.

PROP. 338 LF 8" WL
W/4' COVER

PROPOSED SENSUS F-2
COMBINATION FIRE/DOMESTIC
METER ASSEMBLY IN VAULT
IN 10'x20' WATER METER
VAULT EASEMENT

APPROXIMATE LOCATION
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FOR WELDED STEEL CASING
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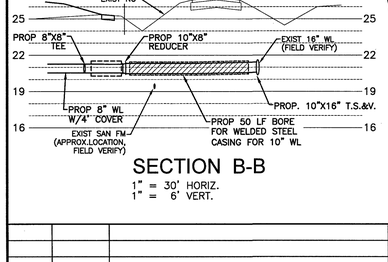
2-8" GV W/BOX

PROP. 401 LF 10" WL
W/4' COVER

1-10"-90° BEND
1-10"X8" REDUCER
1-8" GV W/BOX

B

B



SECTION B-B
1" = 30' HORIZ.
1" = 6' VERT.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT/BB
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DATE

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VERTICAL:

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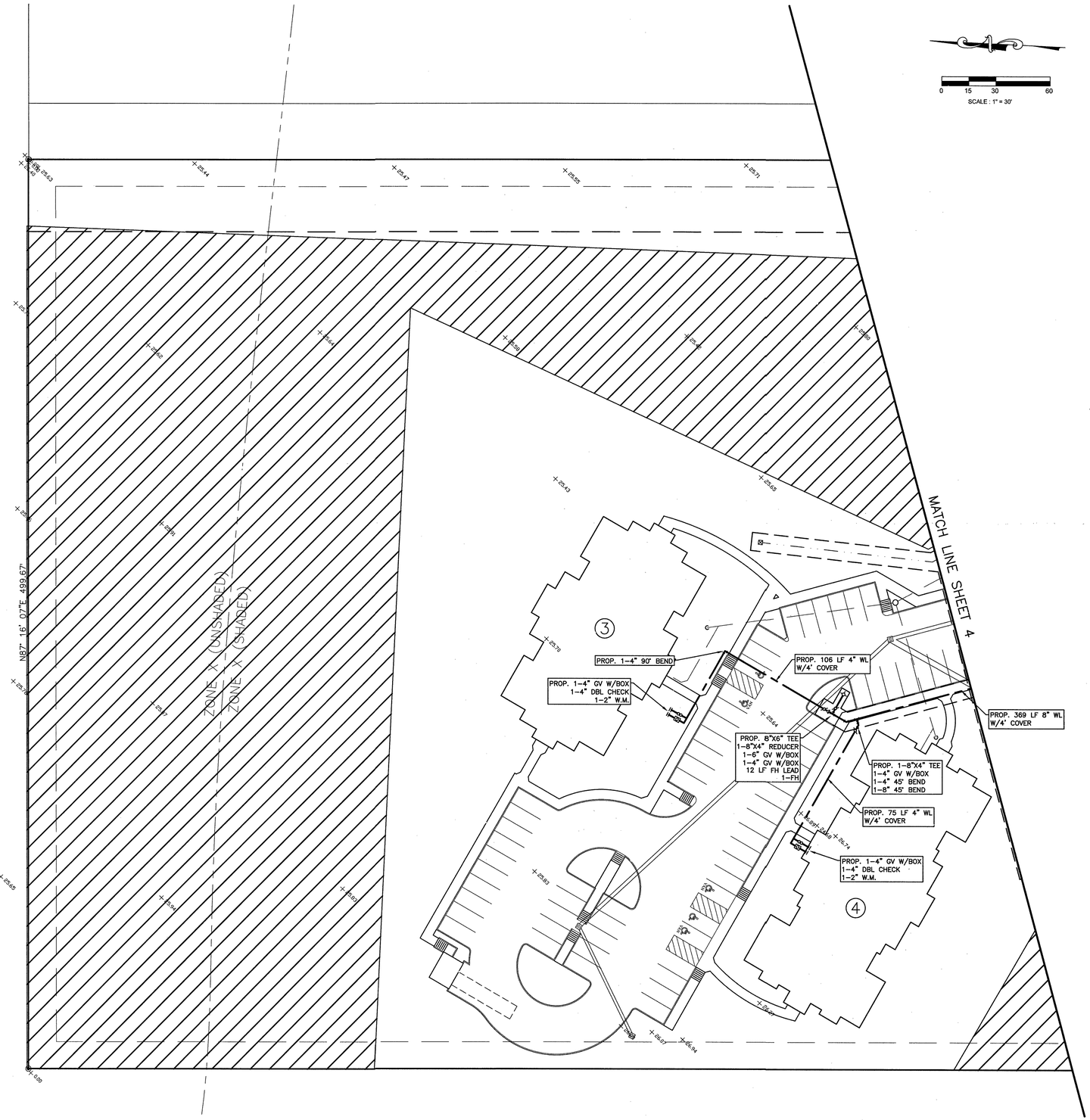
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

UTILITY LAYOUT WATER
(1 OF 2)

PROJECT NO. 13781

13781 SHEET SET.DWG



NO.	DATE	DESCRIPTION	APPROVED

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BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN: 1" = 30'

PROFILE:

HORIZONTAL:

VERTICAL:

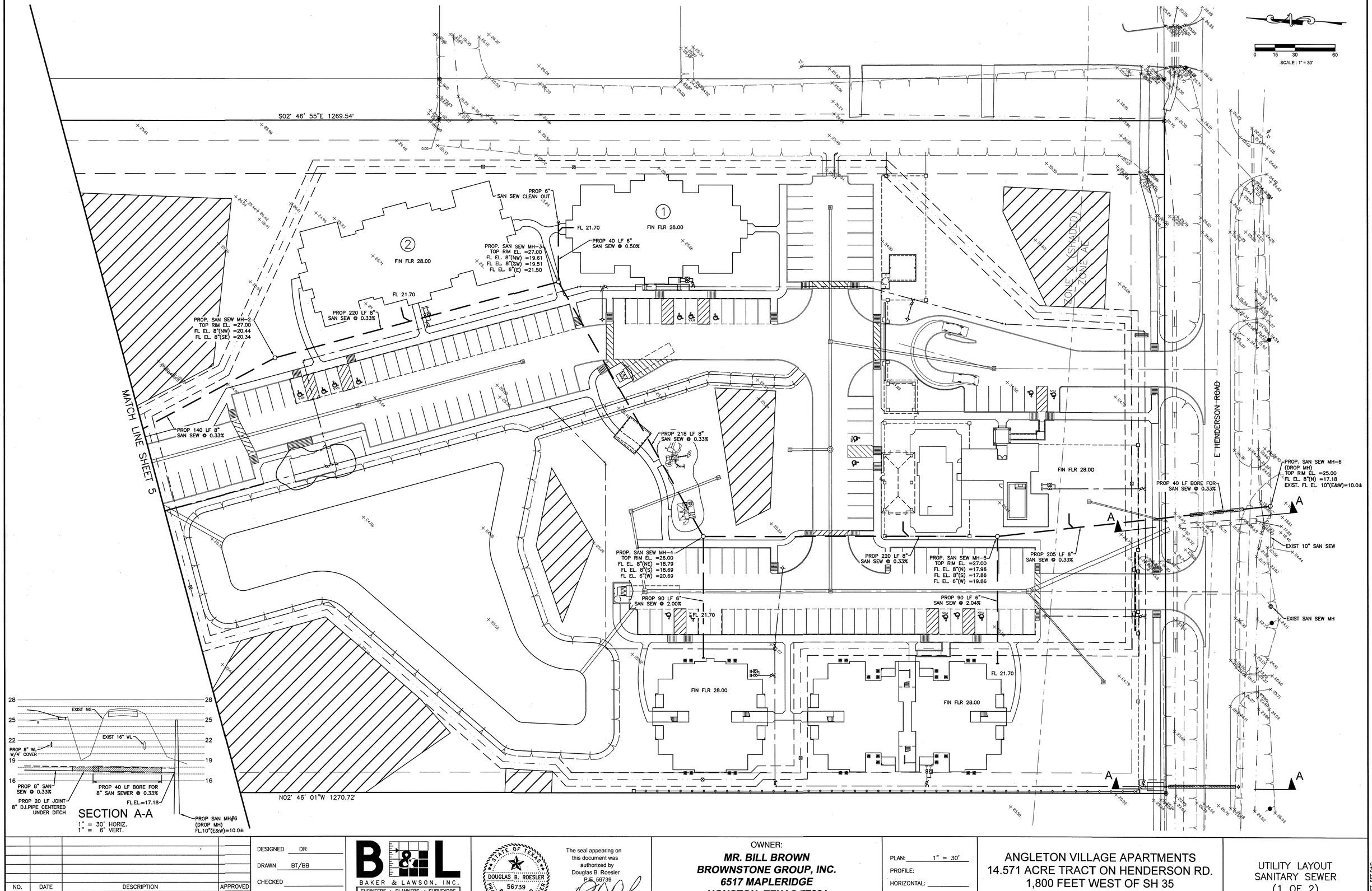
ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

UTILITY LAYOUT WATER
(2 OF 2)

PROJECT NO. 13781

10

R1 SHEET SET.DWG



SECTION A-A
1" = 30' HORIZ.
1" = 6' VERT.

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

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DRAWN BT/BB
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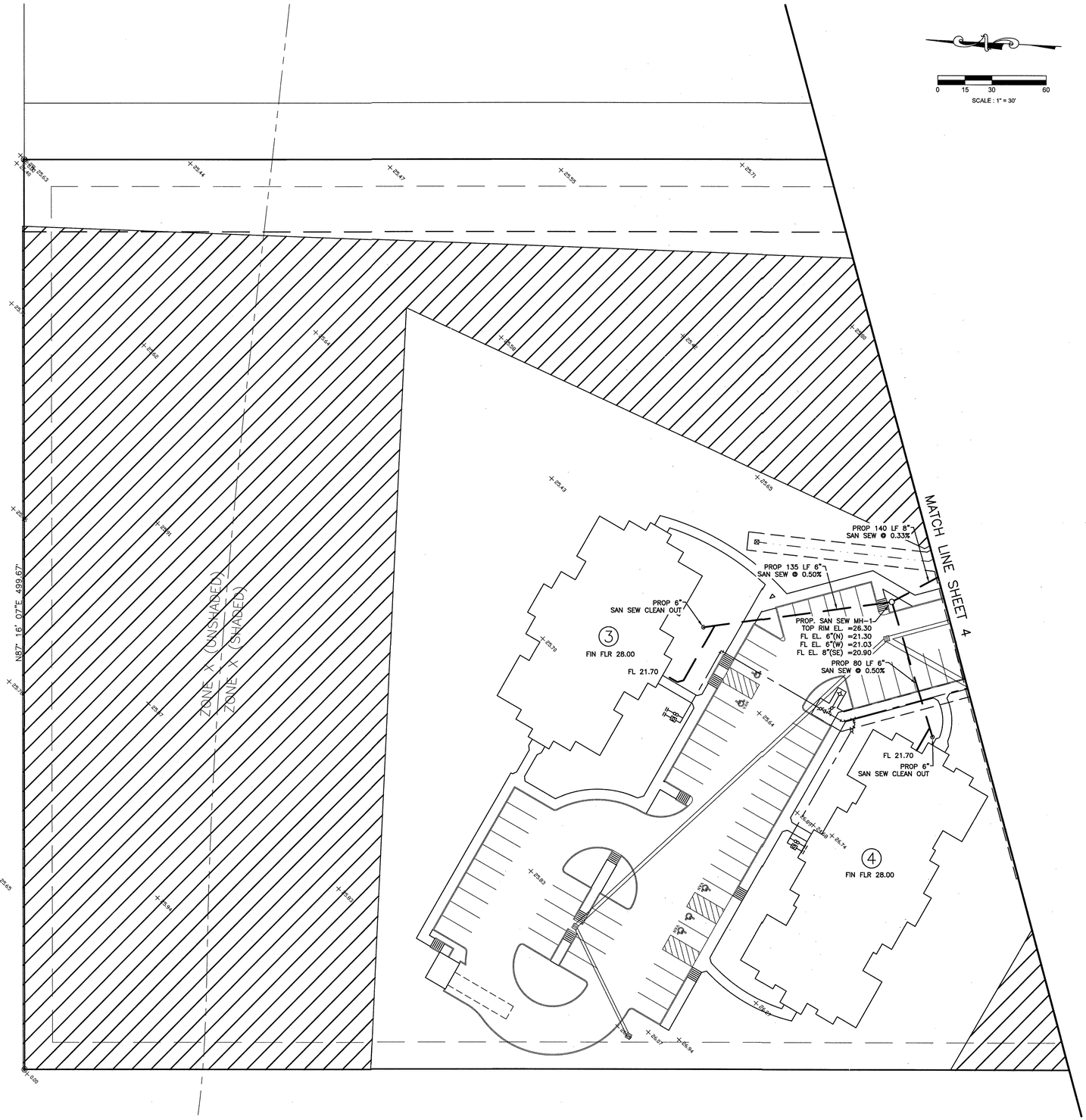
SANITARY SEWER
(1 OF 2)

PROJECT NO. 13781

13781 SHEET SET.DWG



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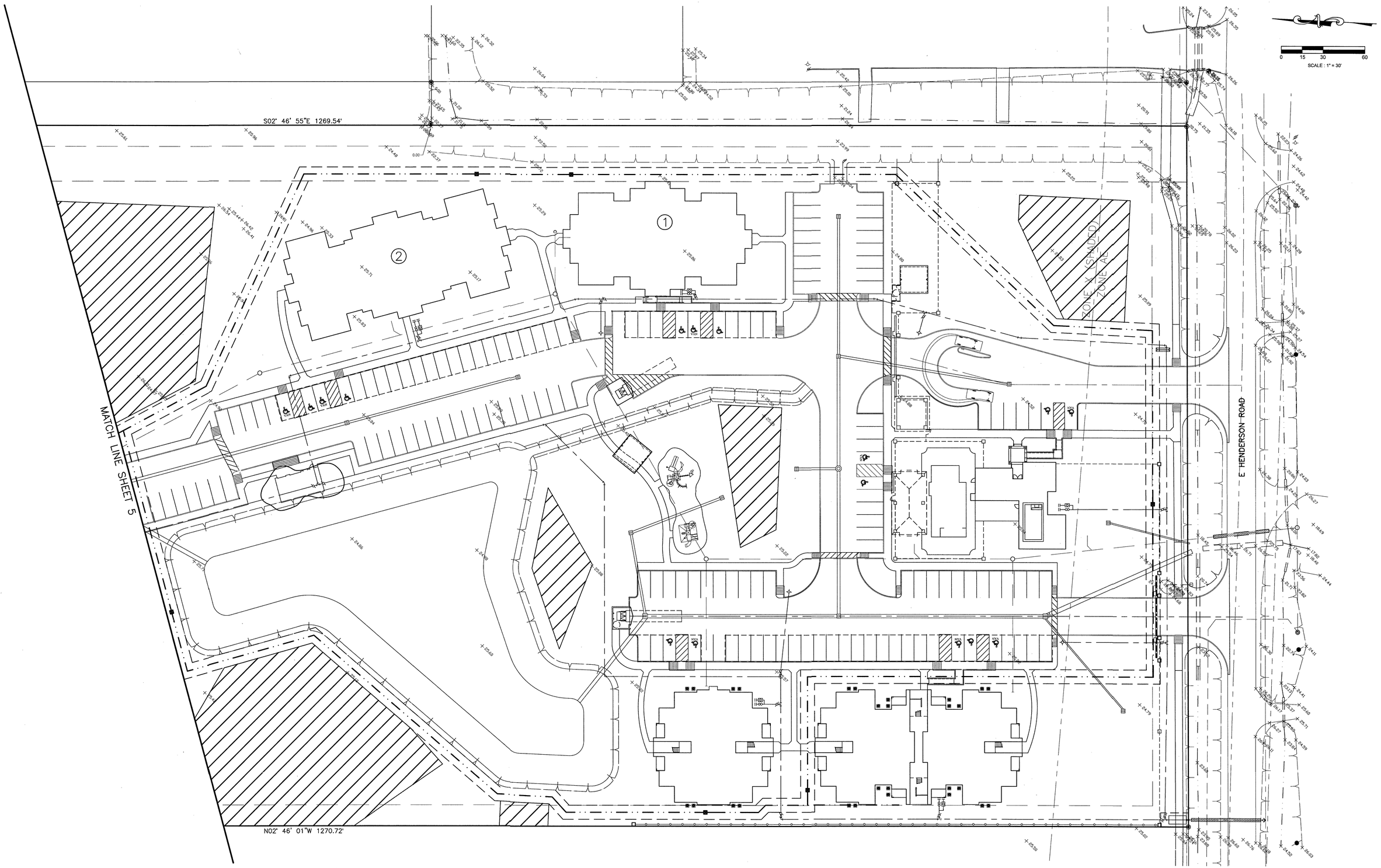
(2 OF 2)

PROJECT NO. 13781

12

R1 SHEET SET.DWG



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ELECTRICAL
(1 OF 2)

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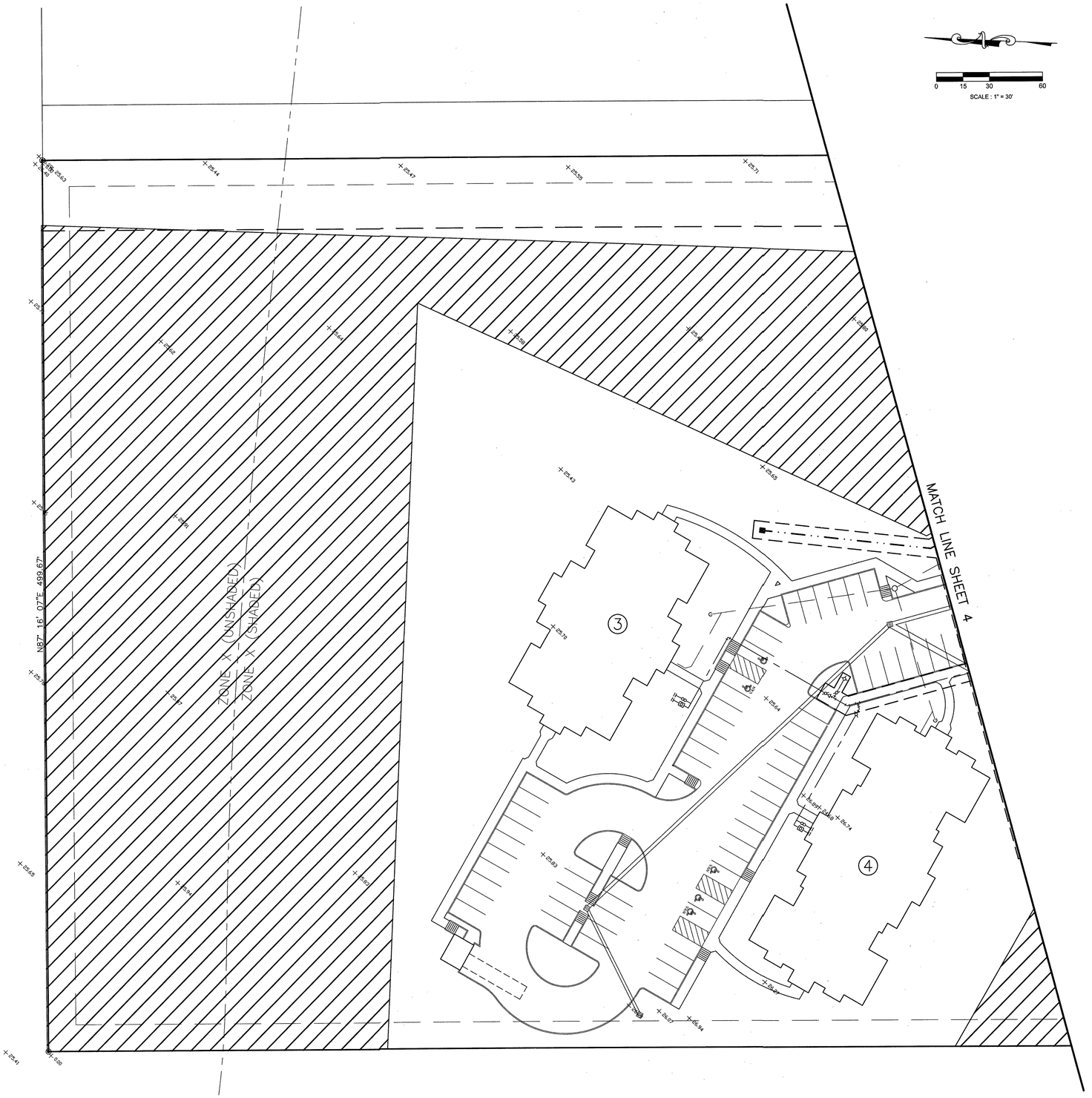

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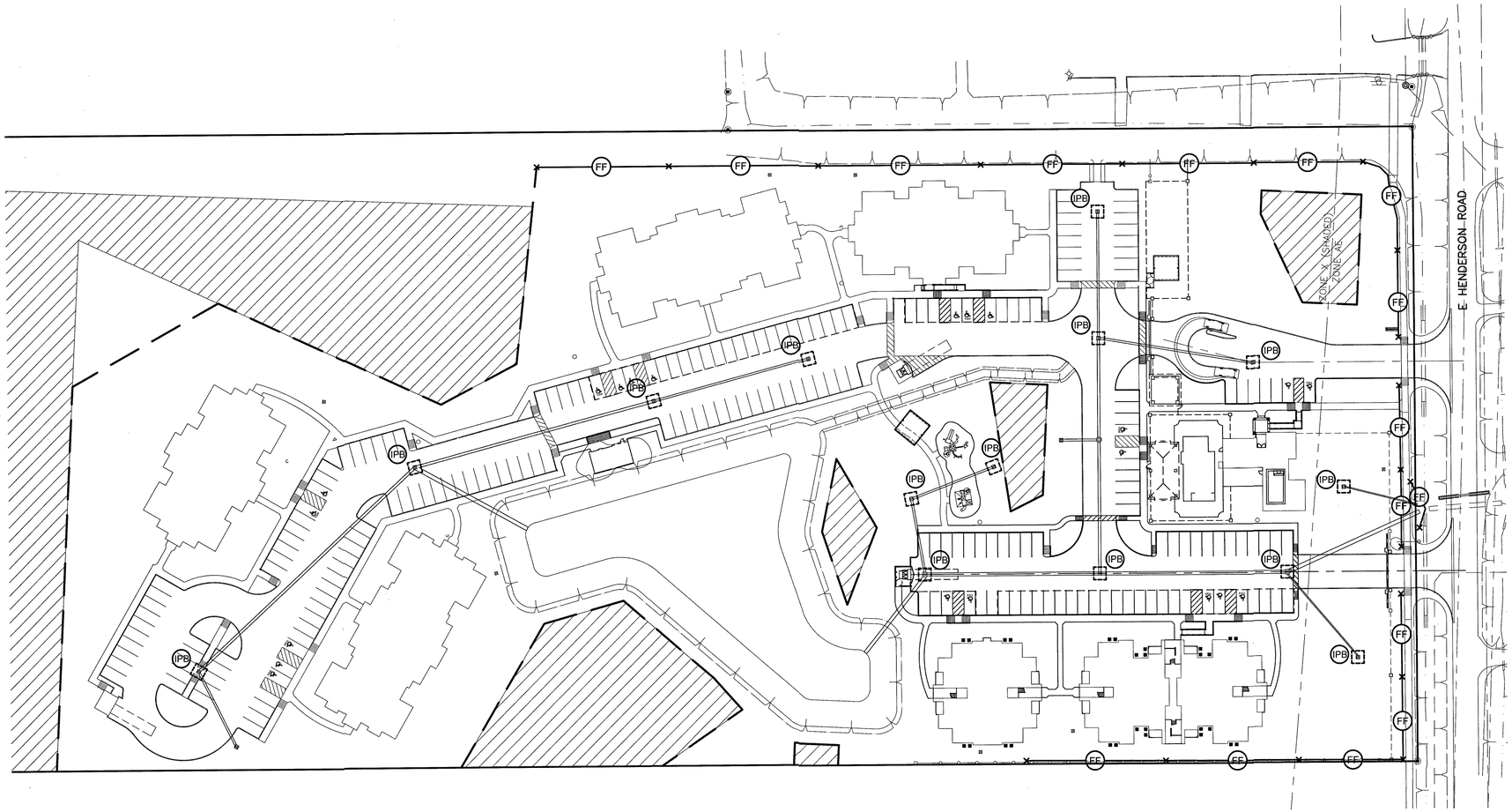
(2 OF 2)

PROJECT NO. 13781

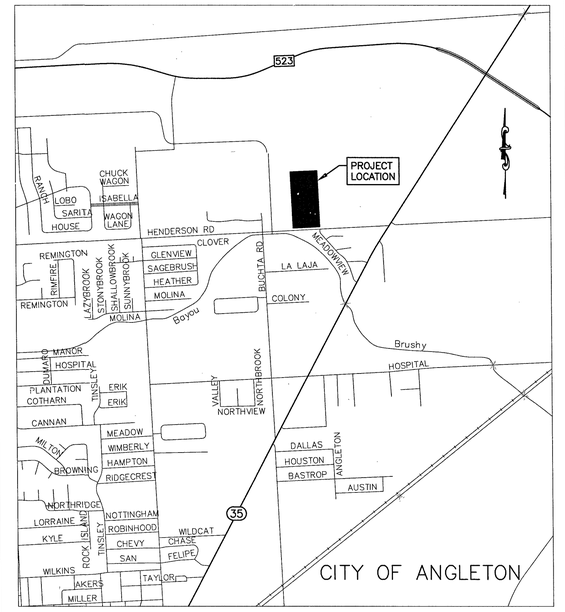
14

3781 SHEET SET.DWG



0 25 50 100
SCALE : 1" = 50'

GENERAL LOCATION MAP



PROJECT/SITE INFORMATION

PROJECT NAME: ANGLETON VILLAGE APARTMENTS

PROJECT ADDRESS/LOCATION: N. SIDE OF HENDERSON RD. AND N. 1,800' WEST OF S.H. 35

CITY: ANGLETON STATE: TX. ZIP CODE: 77515

LATITUDE: 95°24'27.2" LONGITUDE: 29°11'41.6" COUNTY: BRAZORIA

NAME OF RECEIVING WATERS: GULF OF MEXICO

01/15/2021 — MONTH/DAY/YEAR — ESTIMATED CONSTRUCTION START DATE

12/15/2021 — MONTH/DAY/YEAR — ESTIMATED COMPLETION DATE

ESTIMATE OF AREA TO BE DISTURBED: 5.06 ACRES

ESTIMATE OF LIKELYHOOD OF DISCHARGE:

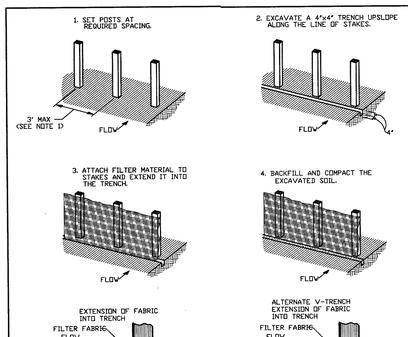
☐ UNLIKELY ☐ ONCE PER WEEK ☐ CONTINUAL
☒ ONCE PER MONTH ☐ ONCE PER DAY

ARE THERE ANY LISTED ENDANGERED OR THREATENED SPECIES, OR DESIGNATED CRITICAL HABITAT IN THE PROJECT AREA?

☐ YES ☒ NO

ELIGIBILITY WITH REGARD TO PROTECTION OF ENDANGERED SPECIES HAS BEEN SATISFIED THROUGH THE INDICATED SECTION OF PART 1.B.3.e.(2) OF THE PERMIT.

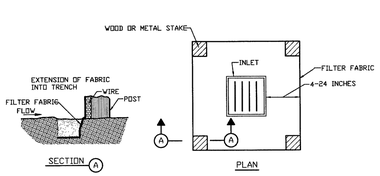
(a) ☒ (b) ☐ (c) ☐ (d) ☐



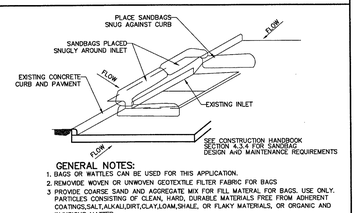
CONSTRUCTION NOTES:

1. 1 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC FENCE SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.

FILTER FABRIC FENCE



SILT FENCE PROTECTION BARRIER



GENERAL NOTES:

1. BAGS OR WATTLES CAN BE USED FOR THIS APPLICATION.
2. REMOVOBE WOVEN OR UNWOVEN GEOTEXTILE FILTER FABRIC FOR BAGS
3. PROVIDE COARSE SAND AND AGGREGATE MIX FOR FILL MATERAL FOR BAGS. USE ONLY PARTICLES CONSISTING OF CLEAN, HARD, DURABLE MATERIALS FREE FROM ADHERENT COATINGS,SALT,ALKALI,DIRT,CLAY,LOAM,SHALE, OR FLAKY MATERIALS, OR ORGANIC AND INJUROUS MATTER.
4. REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE BARRIER.

IPB
SYMBOL

INLET PROTECTION BARRIERS FOR STAGE II INLETS
N.T.S

LEGEND

IPB — SILT FENCE AROUND STRUCTURE UNDER CONSTRUCTION

FF — SILT FENCE ACROSS EXISTING DITCH REINFORCED FILTER BARRIER

4' HIGH 2"X3" PVC WELDED WIRE ROLLED GARDEN FENCE TO PREVENT INTRUSION TO POSSIBLE WETLANDS. METAL SUPPORT POST @ 6' O.C.

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1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

SWPPP LAYOUT

PROJECT NO. 13781

13781 SHEET SET.DWG

1. SITE DESCRIPTION

A. NATURE OF THE CONSTRUCTION ACTIVITY:
THE PROJECT CONSISTS OF THE CONSTRUCTION OF THE ANGLETON VILLAGE APARTMENTS (14.571 ACRE TRACT) IN ANGLETON, BRAZORIA COUNTY, TEXAS. THE SITE HAS AN APARTMENT COMPLEX TO THE EAST. HENDERSON ROAD TO THE SOUTH AND VACANT LAND TO THE WEST AND NORTH. CONSTRUCTION SHALL CONSIST OF 6 APARTMENT BUILDINGS, CLUBHOUSE, DRIVES, PARKING, DETENTION POND, UNDERGROUND UTILITIES, AND STORM SEWER.

B. INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:
THE BUILDING'S SLAB AREA, ALL PARKING AREAS, THE ENTRANCE DRIVES, AND ALL UNDERGROUND UTILITY AND STORM SEWER CONSTRUCTION BEYOND THE ABOVE LISTED AREAS, WILL BE STRIPPED OF ALL VEGETATION.
UTILITY AND STORM SEWER CONSTRUCTION, WILL INVOLVE THE EXCAVATION OF TRENCHES. THE BUILDING SLAB, PARKING AREAS, AND ENTRANCE DRIVES CONSTRUCTION WILL INCLUDE EXCAVATION AND TRANSPORTATION OF SOIL. STORM WATER RUNOFF FROM THE SITE WILL BE DIRECTED TO INLETS.
TRUCKS WILL BE USED TO HAUL WASTES FROM CONSTRUCTION AND TO DELIVER EARTH FILL, LIME, CONCRETE, ASPHALTIC CONCRETE, BASE & OTHER CONSTRUCTION MATERIALS TO THE PROJECT. THESE TRUCKS WILL BE ROUTED ALONG HENDERSON ROAD FOR INGRESS AND EGRESS. RUTTING DURING WET WEATHER WILL PROVIDE THE POTENTIAL FOR TRACKING MUD ALONG HAUL ROUTES.

C. TOTAL PROJECT AREA: 14.571 ACRES

D. TOTAL AREA TO BE DISTURBED: 5.06 ACRES

WEIGHTED RUNOFF COEFFICIENT
(BEFORE CONSTRUCTION): 0.30 (AFTER CONSTRUCTION): 0.75

E. REFER TO GENERAL LOCATION MAP AND SITE MAP FOR DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER MAJOR GRADING ACTIVITIES; AREAS OF SOIL DISTURBANCE; AREAS WHICH WILL NOT BE DISTURBED; LOCTIONS OF MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS; LOCATIONS WHERE STABILIZATION PRACTICES ARE EXPECTED TO OCCUR; LOCATION OF OFF-SITE MATERIAL, WASTE, BORROW OR EQUIPMENT STORAGE AREAS; SURFACE WATERS (INCLUDING WETLANDS); AND LOCATIONS WHERE STORM WATER DISCHARGES TO A SURFACE WATER.

F. LOCATION AND DESCRIPTION OF ANY DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION:

G. NAME OF RECEIVING WATERS:
DRAINAGE WILL BE COLLECTED INTO STORM DRAINAGE PIPES VIA TYPE "A" INLETS AND FLOW BY STORM SEWER (AFTER RELEASE FROM THE DETENTION POND) INTO HENDERSON ROADSIDE DITCH WHICH FLOWS SOUTH ACROSS HENDERSON RD. TO BRUSHY BAYOU WHICH OUTFALLS INTO BASTROP BAYOU.

AREAL EXTENT AND DESCRIPTION OF WETLAND OR SPECIAL AQUATIC SITE AT OR NEAR THE SITE WHICH WILL BE DISTURBED OR WHICH WILL RECEIVE DISCHARGES FROM DISTURBED AREAS OFTHE PROJECT.

NONE

H. REFER TO FEDERAL REGISTER, VOLUME 63, NO.128, MONDAY JULY 6, 1998, PAGES 36497 TO 36515 FOR REQUIREMENTS OF NPDES GENERAL PERMITS FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES IN REGION 6.

I. LISTED ENDANGERED OR THREATENED SPECIES OR CRITICAL HABITAT FOUND IN PROXIMITY TO THE CONSTRUCTION ACTIVITY:

NONE

J. PROPERTY LISTED OR ELIGIBLE FOR LISTING ON THE NATIONAL REGISTER OF HISTORIC PLACES:

NONE

2. CONTROLS

NARRATIVE - SEQUENCE OF CONSTRUCTION ACTIVITIES AND APPROPRIATE CONTROL MEASURES DURING CONSTRUCTION

THE ORDER OF ACTIVITIES WILL BEGIN WITH THE STRIPPING OF ALL VEGETATION FROM AREAS TO BE GRADED.

1. PRIOR TO ANY WORK ON SITE, INSTALL FENCING AROUND POSSIBLE WETLAND AREAS TO PREVENT INTRUSION.

1. CONSTRUCT EITHER A SILT FENCE OR DIVERSION DIKE ALONG ALL AREAS ADJACENT TO CONSTRUCTION OPERATION AND IN THE HENDERSON ROADSIDE DITCH.

2. AFTER STRIPPING IS COMPLETED TO THE POINT WHERE UNDERGROUND UTILITIES MAY BE CONSTRUCTED, THE WATER AND SANITARY SEWER LINES AND STORM SEWER WILL BE INSTALLED. THE NEW STORM SEWER INLETS WILL BE UTILIZED TO DRAIN PORTIONS OF THE AREA DURING CONSTRUCTION. INLET PROTECTION BARRIERS WILL BE INSTALLED AND MAINTAINED UNTIL CONSTRUCTION IS COMPLETED.

3. PAVING OPERATIONS AND GRADING WILL FOLLOW UTILITY AND STORM SEWER CONSTRUCTION, BEGINNING WITH STREET EXCAVATION, LIME TREATMENT OF SUBGRADE, AND CONCRETE PAVING.

4. AS SOON AS CURBS AND INLETS ARE COMPLETE AND BACKFILLED, BROADCAST SEED AND (OR HYDROMULCH SEED) FERTILIZER WILL BE PLACED ON ALL DISTURBED AREAS.

5. THE DISTURBED AREAS ADJACENT TO THE DRIVEWAY OPENING SHALL BE MULCHED.

6. ALL SEEDED AND SODDED AREAS ARE TO BE FERTILIZED AND IRRIGATED TO INSURE GROWTH. IRRIGATION SHALL BE CONTINUED UNTIL GROWTH IS ESTABLISHED. INLET PROTECTION BARRIERS TO REMAIN IN PLACE UNTIL GROWTH IS ESTABLISHED.

A. EROSION AND SEDIMENT CONTROLS: EROSION AND SEDIMENT CONTROLS SHALL RETAIN SEDIMENT ON SITE TO THE EXTENT PRACTICABLE. CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS (WHERE APPLICABLE) AND GOOD ENGINEERING PRACTICES. OFFSITE SEDIMENT ACCUMULATIONS MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS WHEN CAPACITY HAS BEEN REDUCED BY 50%. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WALL SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.

SOIL STABILIZATION PRACTICES:	OWNER/ DEVELOPER	GENERAL CNTRTR.	BUILDER	OTHER
TEMPORARY SEEDING				
PERMANENT PLANTING, SODDING, OR SEEDING		X		
MULCHING- WHERE INDICATED		X		
SOIL RETENTION BLANKET				
VEGETATIVE BUFFER STRIPS				
PRESERVATION OF NATURAL RESOURCES				
OTHER:				

THE FOLLOWING RECORDS SHALL BE MAINTAINED AND ATTACHED TO THIS SWPPP:
DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED.

STRUCTURAL PRACTICES:	OWNER/ DEVELOPER	GENERAL CNTRTR.	BUILDER	OTHER
SILT FENCES		X		
HAY BALES				
ROCK BERMS				
DIVERSION, INTERCEPTOR, OR PERIMETER DIKES				
DIVERSION, INTERCEPTOR, OR PERIMETER SWALES				
DIVERSION DIKE AND SWALE COMBINATIONS				
PIPE SLOPE DRAINS				
ROCK BEDDING AT CONSTRUCTION EXIT				
TIMBER MATTING AT CONSTRUCTION EXIT				
SEDIMENT TRAPS				
SEDIMENT BASINS				
STORM INLET PROTECTION		X		
STONE OUTLET STRUCTURES				
OTHER:				

B. STORM WATER MANAGEMENT MEASURES INSTALLED DURING CONSTRUCTION TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION:
CURBS & GUTTERS STORM SEWERS

C. OTHER CONTROLS

NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO WATERS OF THE UNITED STATES, EXCEPT AS AUTHORIZED BY A PERMIT ISSUED UNDER SECTION 404 OF THE CLEAN WATER ACT.

WASTE MATERIALS: ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL CONTAINER. THE CONTAINER SHALL MEET ALL STATE AND CITY SOLID WASTE MANAGEMENT REGULATIONS. THE CONTAINER SHALL BE EMPTIED AS NECESSARY AND THE TRASH HAULED TO AN APPROPRIATE DUMP SITE. NO CONSTRUCTION MATERIALS WILL BE BURIED ON SITE.

HAZARDOUS WASTE (INCLUDING SPILL REPORTING): AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES ARE CONSIDERED TO BE HAZARDOUS: PAINT, CLEANING SOLVENTS, ASPHALT PRODUCTS, PETROLEUM PRODUCTS, CHEMICAL ADDITIVES FOR SOIL STABILIZATION, AND CONCRETE CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE SPILL COORDINATOR SHOULD BE CONTACTED IMMEDIATELY.

SANITARY WASTE: PORTABLE SANITARY FACILITIES WILL BE PROVIDED BY THE CONTRACTOR. ALL SANITARY WASTES WILL BE COLLECTED FROM PORTABLE UNITS AND SERVICED BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

OFFSITE VEHICLE TRACKING SHALL BE MINIMIZED BY:
___ HAUL ROADS DAMPENED FOR DUST CONTROL LOADED
_X_ HAUL TRUCKS TO BE COVERED WITH TARPAULIN
_X_ EXCESS DIRT ON ROAD REMOVED DAILY STABILIZED
___ CONSTRUCTION ENTRANCE

OTHER: TRUCKS HAULING VEGETATION AND DEBRIS WILL BE MONITORED AND SHALL BE COVERED WITH TARPAULINS IF REQUIRED TO PREVENT DUST OR OTHER PARTICLES FROM BLOWING OR FALLING FROM TRUCK.

REMARKS: ALL OPERATIONS WILL BE CONDUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNTS OF SEDIMENT THAT MAY ENTER THE RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY, OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS.

3. MAINTENANCE

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. IF A REPAIR IS NECESSARY IT SHALL BE DONE AT THE EARLIEST TIME POSSIBLE, BUT NO LATER THAN SEVEN CALENDAR DAYS AFTER THE GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT. THE AREAS ADJACENT TO DRAINAGE WAYS SHALL HAVE PRIORITY, FOLLOWED BY DEVICES PROTECTING STORM SEWER INLETS. MAINTENANCE SHALL BE PERFORMED BEFORE THE NEXT ANTICIPATED STORM EVENT OR AS SOON AS PRACTICABLE.

4. INSPECTION

AN INSPECTION WILL BE PERFORMED BY THE PERMITEE EVERY FOURTEEN DAYS AS WELL AS AFTER EVERY ONE-HALF INCH OR GREATER RAINFALL EVENT. AN INSPECTION AND RAINFALL REPORT WILL BE MADE AFTER EACH INSPECTION. ANY DEFICIENCIES WILL BE NOTED AND APPROPRIATE CHANGES SHALL BE MADE TO THE SYSTEM TO COMPLY WITH REQUIREMENTS.

5. NON-STORMWATER DISCHARGES

___ FIRE HYDRANT FLUSHING
_X_ BUILDING WASHDOWN WITHOUT DETERGENTS
_X_ PAVEMENT WASHDOWN WITHOUT DETERGENTS
_X_ CONDENSATE
___ UNCONTAMINATED GROUNDWATER
___ UNCONTAMINATED FOUNDATION DRAINS

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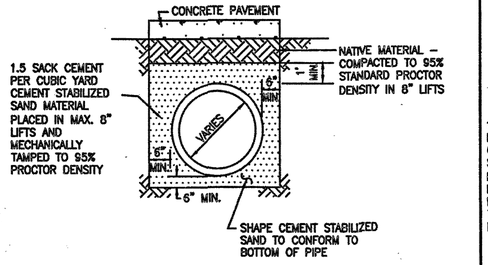
SWPPP NARRATIVE

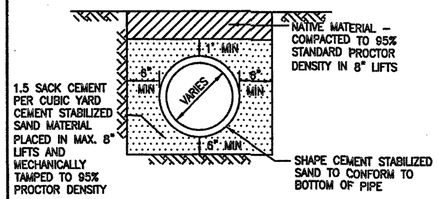
PROJECT NO. 13781



BEDDING DETAIL FOR
CONCRETE CULVERT USED
UNDER ROADWAY PAVEMENT

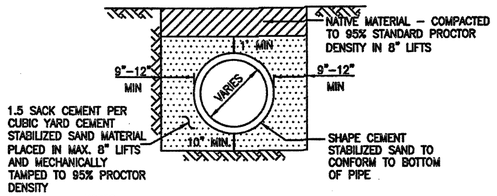
CLASS "A-A"
N.T.S.

SL-BB-06



BEDDING DETAIL FOR
REINFORCED CONCRETE PIPE
STORM SEWER
36" DIAMETER & SMALLER

SL-BB-07

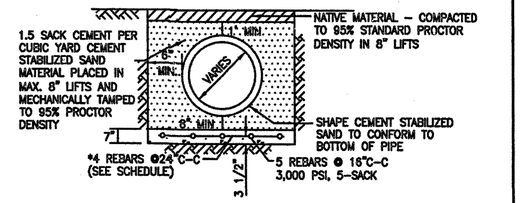


NOTES

1. 1.5-SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (10" MINIMUM FOR 42" TO 60", 14" MINIMUM FOR 66" TO 108")

BEDDING DETAIL FOR
REINFORCED CONCRETE PIPE
STORM SEWER
42" TO 108" DIAMETER
WHERE SATISFACTORY SOIL CONDITIONS EXIST

SL-BB-08

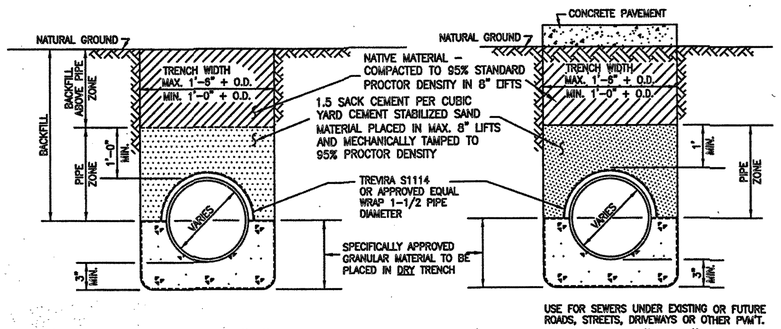


NOTES

1. 1.5-SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (8" MINIMUM FOR 42" TO 60", 12" MINIMUM FOR 66" TO 108").

SEAL SLAB
BEDDING DETAIL FOR
REINFORCED CONCRETE PIPE
STORM SEWER
42" TO 108" DIAMETER
WHERE UNSATISFACTORY SOIL CONDITIONS EXIST

SL-BB-09



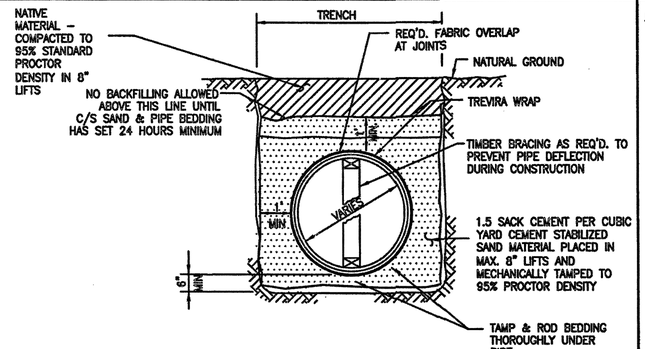
MODIFIED "A"
N.T.S.

USE FOR SEWERS UNDER EXISTING OR FUTURE ROADS, STREETS, DRIVEWAYS OR OTHER PVM'T.

MODIFIED "A-A"
N.T.S.

1. MODOFIED BEDDING TO BE USED IN WET GROUND CONDITIONS FOR NON-COHESIVE MATERIALS WITH A SHEAR STRENGTH LESS THAN 1000 psi.

SL-BB-10



BEDDING DETAIL FOR STORM SEWER-
CORREGATED METAL PIPE
N.T.S.

SL-BB-11

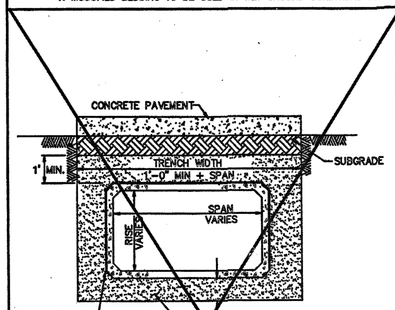
CONSTRUCTION NOTES

1. CONTRACTOR SHALL CONTACT THE CITY OF ANGLETON ENGINEERING DEPARTMENT IMMEDIATELY IF WET SAND CONDITIONS ARE ENCOUNTERED.
2. SPECIFICALLY APPROVED GRANULAR MATERIAL DIMENSIONS SHOWN ARE TYPICAL BUT MAY BE VARIED BY ORDER OF CITY ENGINEER.
3. SPECIFICALLY APPROVED GRANULAR MATERIAL SHALL BE IN ACCORDANCE WITH TXDOT SPECIFICATION No. 247 FLEXIBLE BASE, TYPE A, GRADE 2 AGGREGATE.
4. NO BEDDING SHALL BE INSTALLED IN WET CONDITIONS. WHEN WELL POINTING OR IN WET SAND CONDITIONS, MAINTAIN GROUND WATER 1' (FT.) BELOW BOTTOM OF TRENCH FOR A MINIMUM OF 24-HRS AFTER BEDDING AND BACKFILL IS IN PLACE.
5. R.C.P. AND BOX CULVERTS SHALL BE INSTALLED WITH APPROVED GASKETS ONLY.
6. MANHOLES SHALL BE PROVIDED WHERE MODIFIED "A" OR MODIFIED "A-A" BEDDING IS USED. STACKS ARE NOT ALLOWED.
7. REFER TO: MANHOLE DETAILS, INLETS, OUTFALL AND END TREATMENT DETAILS, C.S.S., GENERAL NOTES, AND STORM NOTES.
8. SPECIFIC DESIGNS MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER FOR MANHOLE ACCESS TO BOX CULVERTS AS REQUIRED.
9. ALL BACKFILL WITHIN THE R.O.W. SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
10. A GEOTECHNICAL REPORT MAY BE REQUIRED TO ANALYZE THE BEARING CAPACITY OF EXISTING SOILS AND MAKE A DETERMINATION IF ADDITIONAL BEDDING AND BACKFILL IS APPROPRIATE.

TYPICAL SEAL SLAB
BAR SCHEDULE
(OR AS DIRECTED BY ENGINEER)

PIPE SIZE	LGT LAT #4 BARS	NO LONGIT #5 BARS
42"	5'4"	5
48"	6'8"	6
54"	6'8"	6
60"	8'0"	7
66"	8'0"	7
72"	9'4"	8
78"	9'4"	8
84"	9'4"	8
90"	10'8"	9
96"	10'8"	9
102"	12'0"	10
108"	12'0"	10

SL-BB-15

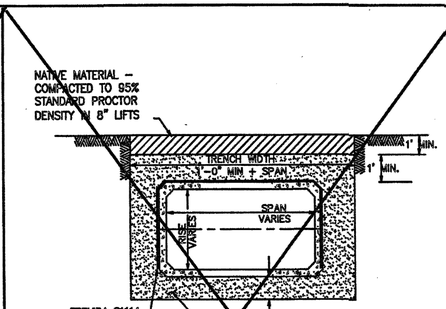


BEDDING DETAIL FOR
REINFORCED CONCRETE BOX
CULVERT UNDER ROADWAY PAVEMENT

NOTES

1. 1.5-SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (8" MINIMUM FOR 42" TO 60", 12" MINIMUM FOR 66" TO 108").

SL-BB-12

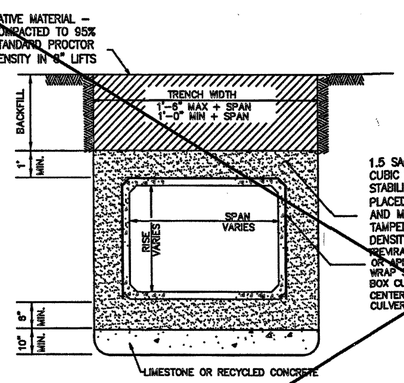


BEDDING DETAIL FOR
REINFORCED CONCRETE BOX
PLACED IN EASEMENT

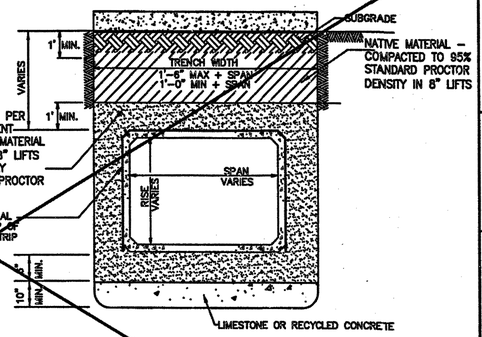
NOTES

1. 1.5-SACK CEMENT PER CUBIC YARD STABILIZED SAND PLACED BEFORE PIPE IS PLACED (8" MINIMUM FOR 42" TO 60", 12" MINIMUM FOR 66" TO 108").

SL-BB-13



BEDDING DETAIL FOR
REINFORCED CONCRETE BOX CULVERT
W/MODIFIED BEDDING



BEDDING DETAIL FOR
REINFORCED CONCRETE BOX CULVERT
W/MODIFIED BEDDING
UNDER ROADWAY PAVEMENT

SL-BB-14

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

STORM SEWER PIPE BEDDING AND BACKFILL DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-20

SHEET OF

CAD FILE PATH:
PLOT DATE:

PLOT TIME:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-3-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

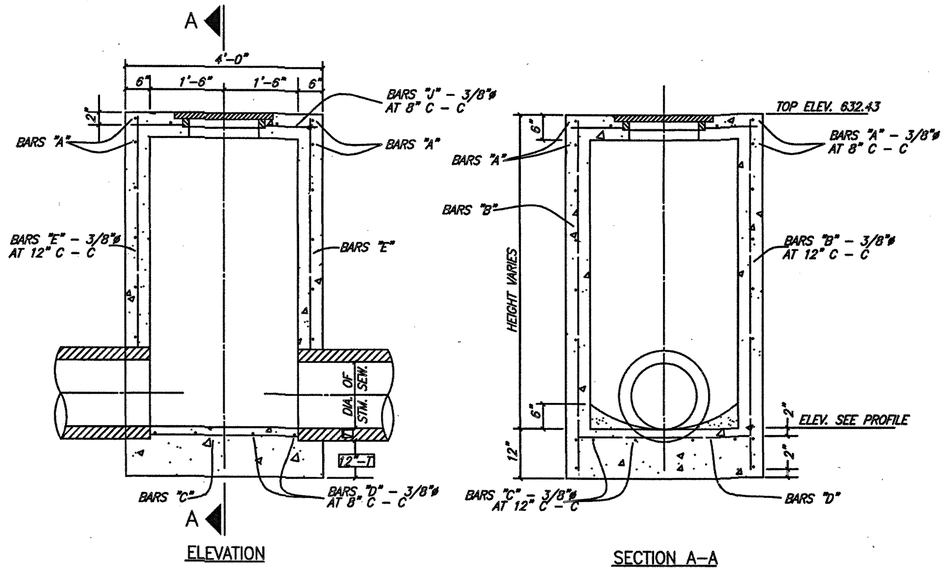
ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

STORM SEWER
PIPE BEDDING AND
BACKFILL DETAILS
SL-20

PROJECT NO. 13781

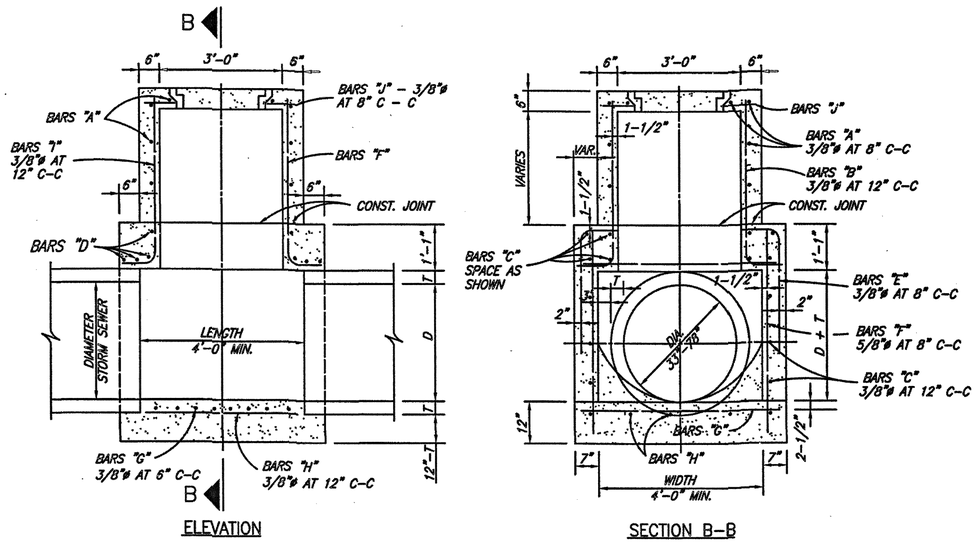
17 OF SHEET SET.DWG

PLOT TIME:



STORM SEWER TYPE A MANHOLE

MAX. PIPE SIZE 30" – N.T.S.



TYPE B STORM SEWER MANHOLE

MAX. PIPE SIZE 78" – N.T.S.

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

JUNCTION BOX MANHOLES
SL–11

PROJECT NO. 13781

18

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEEREING DEPARTMENT

CONSTRUCTION PLANS FOR:

JUNCTION BOX MANHOLES

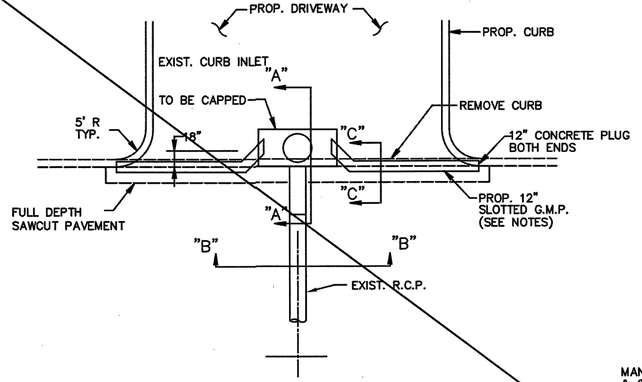
JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–11

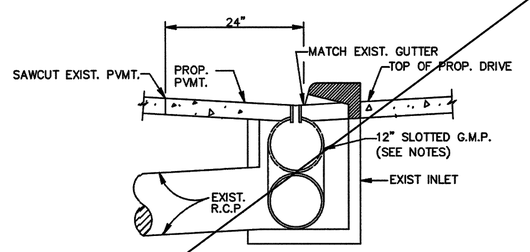
SHEET OF

81 SHEET SET.DWG

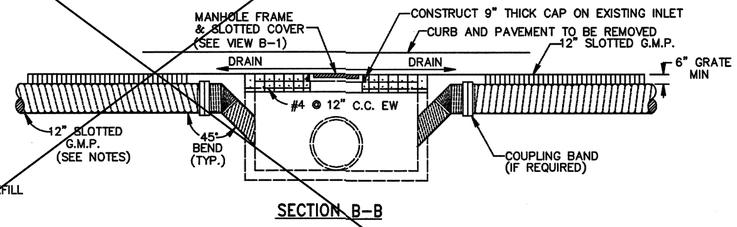
PLOT TIME:



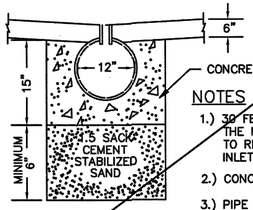
SLOTTED PIPE INSTALLATION FOR DRIVEWAY CONSTRUCTION



SECTION A–A



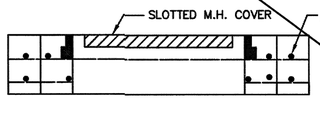
SECTION B–B



SECTION C–C

NOTES

1.) 30 FEET OF SLOT IS THE MINIMUM REQUIREMENT TO REPLACE A TYPE B–B INLET.
2.) CONCRETE MIN. 3000 P.S.I.
3.) PIPE TO BE GALVANIZED TYPE II WITH GALVANIZED SLOT
4.) CONDITIONS MAY VARY. CONTRACTOR TO ROLL FITTING AND ENTER BOX BELOW 9" CAP.
5.) SEE C.S.S. NOTES.

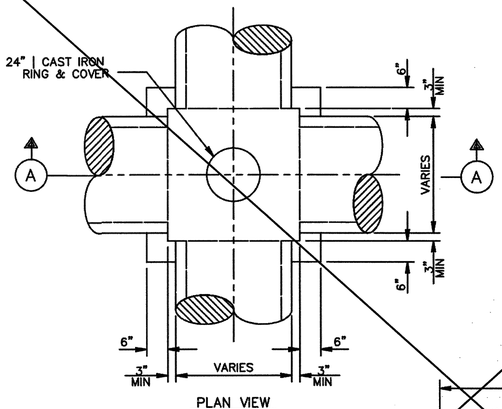


VIEW B–1

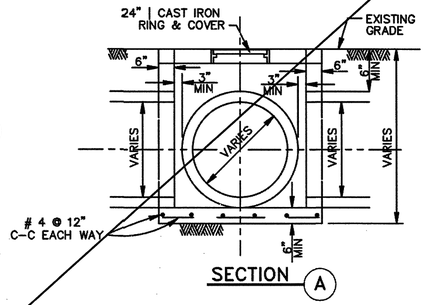
SLOTTED DRAIN DETAIL

N.T.S.

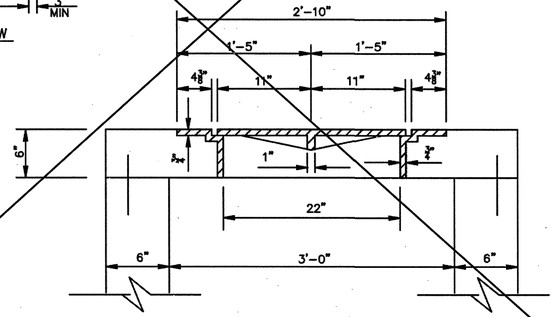
SL–DR–29



PLAN VIEW



SECTION A



FRAME AND COVER SECTION

JUNCTION BOX

N.T.S.

SL–DR–30

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

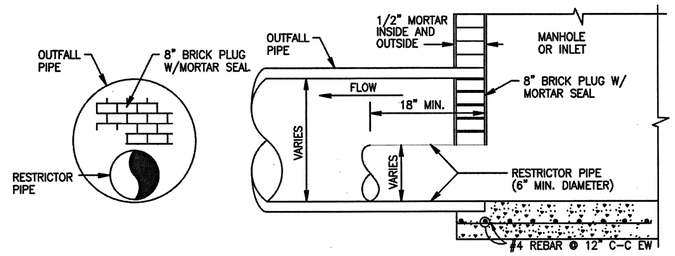
STORM SEWER CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–10

SHEET OF

CAD FILE PATH:
PLOT DATE:



CHOKE OUTFALL RESTRICTOR DETAIL

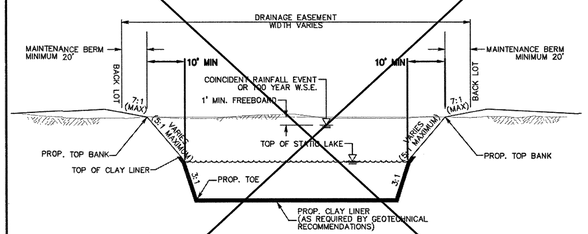
STORM SEWER CHOKE RESTRICTOR

N.T.S.

SL–DR–31

REFER TO:

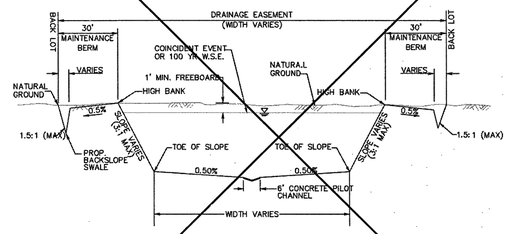
1. GENERAL NOTES
2. STORM SEWER NOTES



WET DETENTION POND/AMENITY LAKE

N.T.S.

SL–DR–32



DRY DETENTION POND

N.T.S.

SL–DR–33

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6881 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

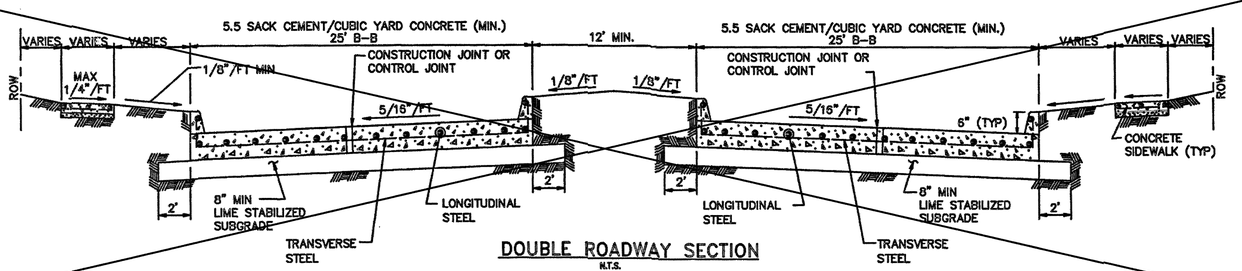
ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

STORM SEWER CONSTRUCTION DETAILS SL–10

PROJECT NO. 13781

18A

81 SHEET SET.DWG



DOUBLE ROADWAY SECTION
N.T.S.

SL-ST-01

CONSTRUCTION NOTES:

1. 6 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 24 INCHES C-C, E.W. IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR LOCAL STREETS

2. 7 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 18 INCHES C-C, IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR COLLECTOR STREETS

3. EIGHT (8) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR ARTERIAL STREETS.

4. HARD AGGREGATE IS NOT ALLOWED IN STREET PAVEMENT MIX. ADMIXTURES REQUIRE CITY OF ANGLETON PUBLIC WORKS DEPARTMENT APPROVAL.

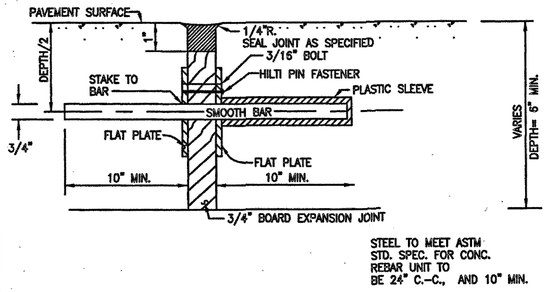
5. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS. MAXIMUM SPACING SHALL BE 200' AND BE SEALED WITH SEALANT CONFORMING TO TXDOT ITEM 360 (& ITEM 438) AND TXDOT DMS-6310, CLASS-2.

6. TRANSVERSE CONTROL JOINTS ARE REQUIRED AT MAXIMUM SPACING OF 20'-0" C-C, AND VERTICAL CURB JOINTS TO BE SEALED WITH SPECIAL JOINT SEALANT ASTM-D-1190-74 OR AASHTO-M173-80 FOR PAVEMENT 6" THICK AND GREATER. (ELASTOMETRIC TYPE HOT POURED)

7. PAVEMENT FINISH SHALL BE BAKER BROOM FINISH. CURING COMPOUND REQUIRED ON ALL CONCRETE.

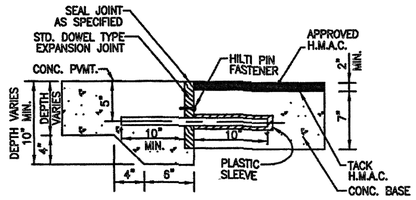
8. REFER TO GENERAL, C.S.S., AND PAVEMENT NOTES

SL-ST-12



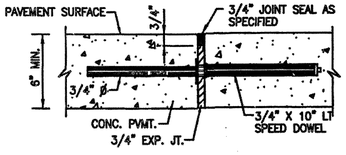
DOWEL TYPE EXPANSION JOINT
N.T.S.

SL-ST-03



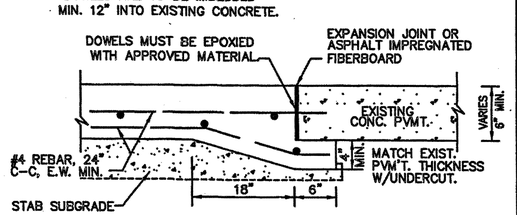
DOWEL TYPE EXPANSION JOINT
N.T.S.
(CONC. PAVING TO CONC. BASE)

SL-ST-06



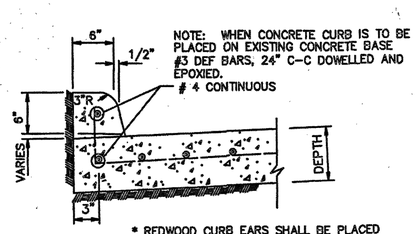
SPEED DOWEL EXPANSION JOINT
N.T.S.

SL-ST-08



UNDERCUT DETAIL WITH HEADER
N.T.S.

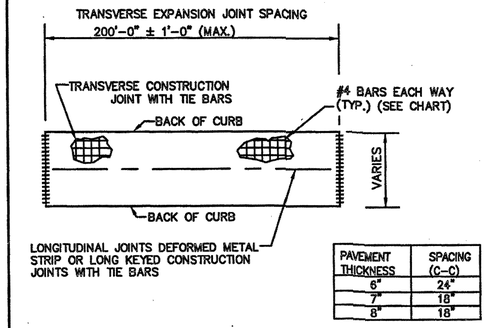
SL-ST-09



CONCRETE CURB
N.T.S.

CONSTRUCTION NOTE:
ALL NEW CURB REQUIRES 3,000 P.S.I. @ 28-DAYS.

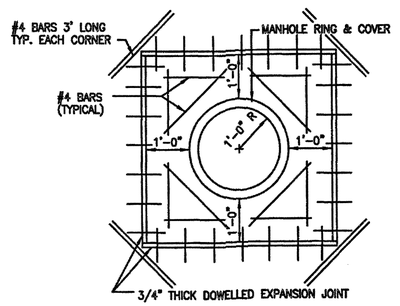
SL-ST-04



PAVEMENT THICKNESS	SPACING (C-C)
6"	24"
7"	18"
8"	18"

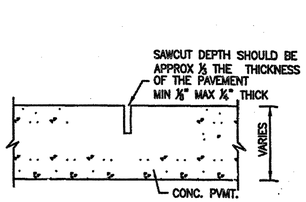
PAVING PANEL
N.T.S.

SL-ST-05



MANHOLE BLOCKOUT
N.T.S.
(STORM & SANITARY) IN PAVEMENT

SL-ST-10



CONTROL JOINT
N.T.S.

SL-ST-11

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

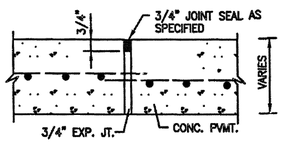
OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

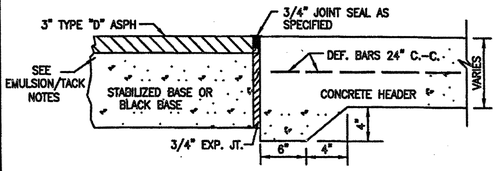
CONCRETE PAVEMENT CONSTRUCTION DETAILS
SL-21

PROJECT NO. 13781



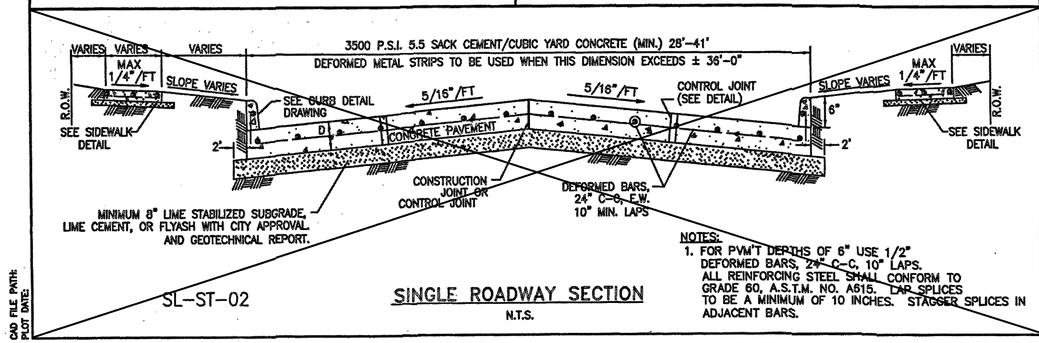
CONSTRUCTION JOINT SEAL
N.T.S.

SL-ST-12



PAVING HEADER
(FOR USE IN CONNECTING CONC. PVMT. TO ASPHALT PVMT.) (PROP. OR EXIST.)

SL-ST-07



SINGLE ROADWAY SECTION
N.T.S.

SL-ST-02

NOTES:
1. FOR PVM'T DEPTHS OF 6" USE 1/2" DEFORMED BARS, 24" C-C, 10" LAPS. ALL REINFORCING STEEL SHALL CONFORM TO GRADE 60, A.S.T.M. NO. A615. LAP SPLICES TO BE A MINIMUM OF 10 INCHES. STAGGER SPLICES IN ADJACENT BARS.

NO.	DATE	DESCRIPTION

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

CONCRETE PAVEMENT CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

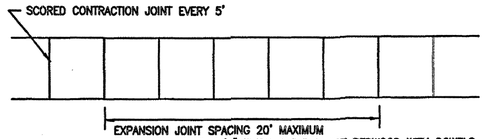
SL-21
SHEET OF

SEAL:
DESIGN ENGINEER: DATE

CAD FILE PATH:
PLOT DATE:

SHEET SET.DWG

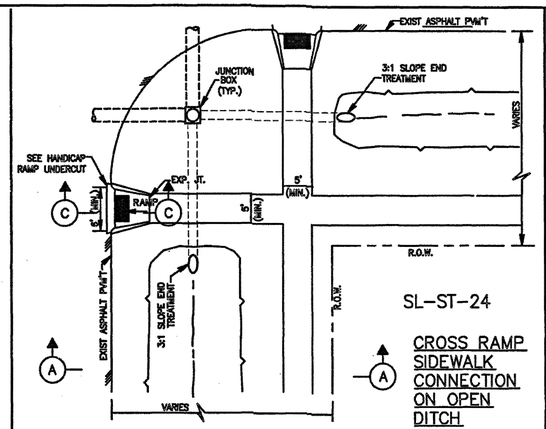
PLOT TIME:



SIDEWALK JOINT DETAILS

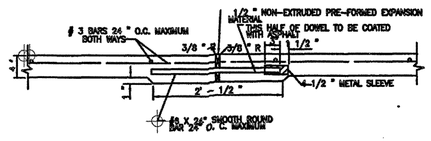
N.T.S.

SL-ST-23



SL-ST-24

CROSS RAMP SIDEWALK CONNECTION ON OPEN DITCH



B–B
EXPANSION JOINT DETAIL

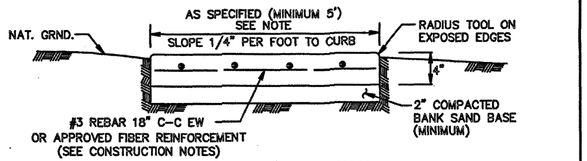
NOTES:

1. EXISTING CURB AND GUTTER TO BE SAW CUT, REMOVED AND REPLACED. DOWEL STEEL FOR MINIMUM REINFORCING OVERLAP OF 10 INCHES (10") DOWELS SHALL BE EIGHTEEN INCHES (18") LONG AND EPOXIED A MINIMUM OF (8") EIGHT INCHES INTO EXISTING PAVEMENT.
2. IF SIDEWALKS ARE NEITHER EXISTING NOR PROPOSED WHERE WHEELCHAIR RAMP ACCESS IS REQUIRED, CONCRETE SIDEWALKS SURFACE 4 1/2" THICK SHALL BE INSTALLED TO PROVIDE ACCESS TO THE PEDESTRIAN PUSH BUTTONS.
3. DETECTABLE WARNINGS REQUIRED BY T.A.S. SECTIONS 4.1 AND 4.7 SHALL COMPLY WITH T.A.S. SECTION 4.29
4. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACE SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE.
5. DETECTABLE WARNING SURFACE SHALL COVER THE ENTIRE WIDTH AND DEPTH OF RAMP.
6. DETECTABLE WARNINGS SHALL BE INSTALLED WITH PAVERS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
7. CONCRETE PAVER UNITS SHALL MEET ALL REQUIREMENTS OF ASTM C-936, C-33, AND SHALL BE PLACED IN A TWO BY TWO UNIT BASKET WEAVE PATTERN, UNLESS SHOWN OTHERWISE IN THE PLANS.
8. CONCRETE PAVER UNITS SHALL HAVE A TRUNCATED DOME TOP SURFACE FOR DETECTABLE WARNING TO PEDESTRIANS. DOMES SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL.
9. CONCRETE PAVER UNIT COLOR FOR THE RAMP SHALL BE A CONTRASTING COLOR THAT PROVIDES A LIGHT REFLECTIVE THAT SIGNIFICANTLY CONTRASTS WITH THE ADJACENT SURFACES. ADJACENT SURFACES INCLUDE SIDE FLARES.
10. CONCRETE PAVER UNITS SHALL BE SAW CUT ONLY, AND ANY CUT UNIT SHALL NOT BE LESS THAN 25% OF A FULL UNIT.

CONSTRUCTION NOTES:

1. THE MAXIMUM WIDTH BETWEEN EXPANSION JOINTS SHALL NOT EXCEED 20'-0"
2. EXPANSION JOINT IS TO BE 1/2" THICK CLEAR HEART REDWOOD WITH DOWELS.
3. SCORED CONTRACTION JOINTS SHALL BE EVERY 5' OR EQUAL TO WIDTH OF SIDEWALK.
4. ALL EARTHEN AREAS ARE TO BE SODDED UNLESS SHOWN OTHERWISE ON DRAWINGS.
5. 4 INCH, 5 SACK CEMENT PER CUBIC YARD CONCRETE, 3000 PSI. REINFORCED CONCRETE WITH #3 BARS, 18 INCHES C-C, FOR SIDEWALKS, #4 BARS 18' C-C FOR WHEEL CHAIR RAMPS IS THE MINIMUM ACCEPTED. MINIMUM 3 LONGITUDINAL BARS. FIBER REINFORCING SIDEWALKS-STEEL AND POLYPROPYLENE BLENDED FIBER REINFORCEMENT SYSTEM SUCH AS NOVOMESH e3 AS MANUFACTURED BY S.I. CONCRETE SYSTEMS (OR PRE-APPROVED EQUAL) MAY BE USED AS AN ALTERNATE TO CONVENTIONAL REBAR REINFORCING AT A DOSAGE RATE OF 24 LBS. PER CUBIC YARD OF CONCRETE.
6. USE RADIUS TOOL ON ALL EXPOSED EDGES.
7. TOP OF THE SIDEWALK ELEVATION TO BE TOP OF CURB.
8. MEMBRANE CURING COMPOUND IS REQUIRED AS DESCRIBED IN ITEM 526 IN THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
9. REFER TO GENERAL NOTES AND CONCRETE/PAVING NOTES.
10. SIDEWALK EXPANSION JOINTS SHALL CONFORM TO STREET EXPANSION JOINT STANDARDS.

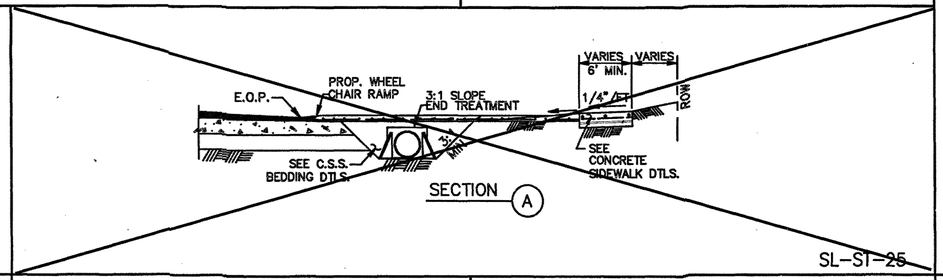
SL-ST-34



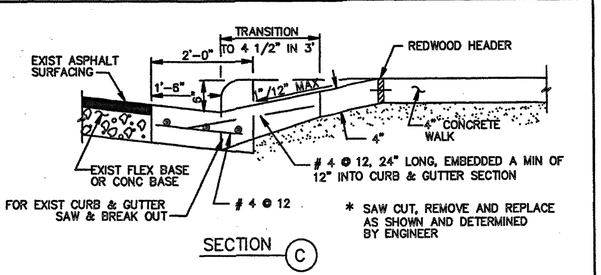
CONCRETE SIDEWALK

NOTE:
BANK SAND IS DEFINED AS A WELL-GRADED SAND, FREE OF SILT, CLAY, LOAM, FRIABLE OR SOLUBLE MATERIALS AND ORGANIC MATTER, MEETING THE UNIFIED SOILS CLASSIFICATION SYSTEM GROUP SYMBOL SW CRITERIA W/ A PLASTICITY INDEX OF ≤ 10. AND NO MORE THAN 12% OF MATERIAL CAN PASS THE No. 200 SIEVE.

SL-ST-29

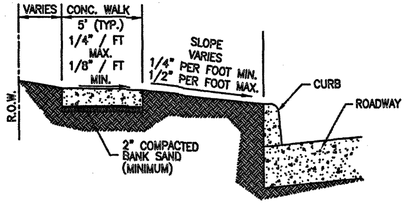


SL-ST-25



HANDICAP RAMP CURB & GUTTER*

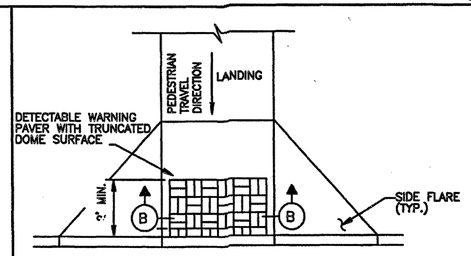
SL-ST-26



NOTE:
SEE SIDEWALK, CONC/PAVING, AND GENERAL NOTES

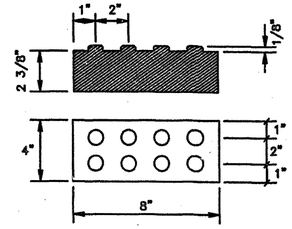
TYPICAL SINGLE ROADWAY SIDEWALK

SL-ST-28



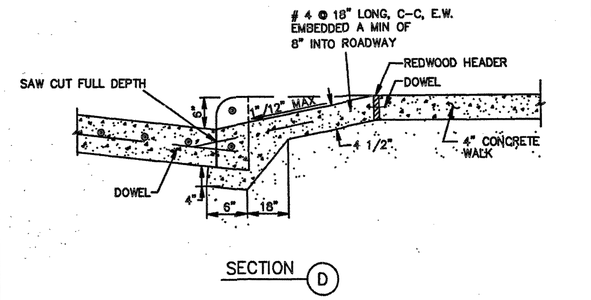
TRUNCATED DOME PATTERN CURB RAMP

SL-ST-31



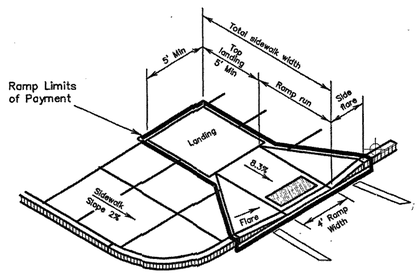
CONCRETE PAVER WITH TRUNCATED DOME SURFACE

SL-ST-32



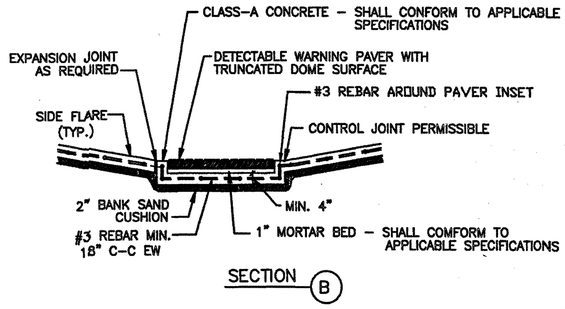
HANDICAP RAMP UNDERCUT

SL-ST-27



WHEELCHAIR RAMP SIDEWALK CONNECTION

SL-ST-30



SL-ST-33

No.	DATE	REMARKS

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WHEEL CHAIR RAMP & SIDEWALK DETAILS I

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-25

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

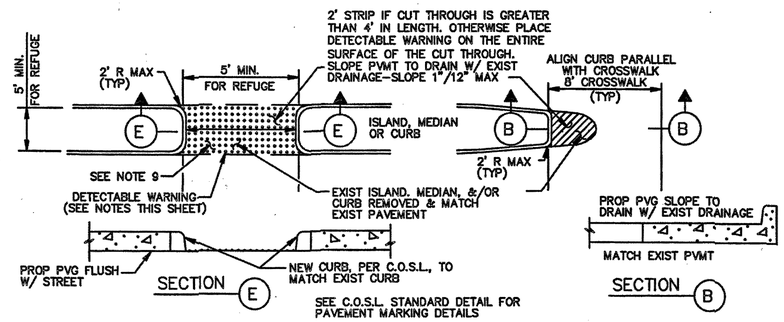
ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

WHEEL CHAIR RAMP & SIDEWALK DETAILS 1
SL-25

PROJECT NO. 13781

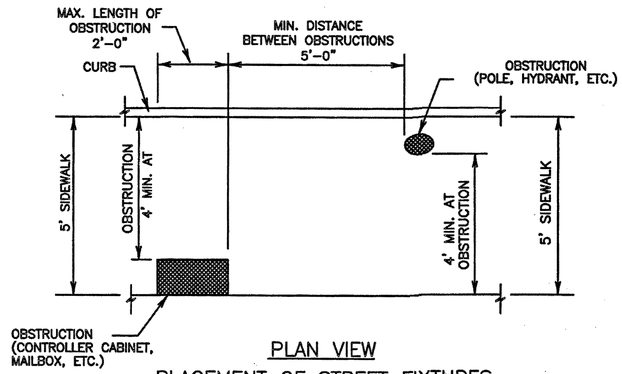
T SHEET SET.DWG

PLOT TIME:



FOR ISLAND, MEDIAN, OR CURB MODIFICATIONS FOR CROSSWALKS

SL–ST–35



PLAN VIEW

PLACEMENT OF STREET FIXTURES

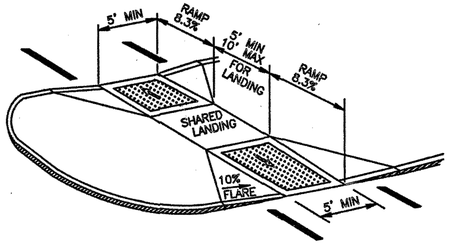
(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' x 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)

SL–ST–36

NOTES:

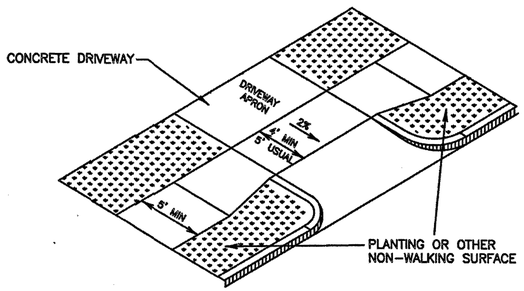
1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS MAY BE ADJUSTED AS DIRECTED
2. THE MINIMUM SIDEWALK WIDTH IS 5' (FEET). THE LANDING SHALL BE 5' x 5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND RAMP SURFACES IS 2%. USUAL SIDEWALK CROSS SLOPE EQUALS 1.5%. CHANGES IN LEVEL GREATER THAN 1/4" (IN.) ARE NOT PERMITTED.
3. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 5' x 5' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
4. ANY PART OF THE ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 (5%) SHALL BE CONSIDERED A RAMP. IF A RAMP HAS A RISE GREATER THAN 6" (IN.) OR A HORIZONTAL PROJECTION GREATER THAN 72 INCHES, THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES, WITH THE FOLLOWING EXCEPTIONS:
   A.) HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. CURB RAMPS SHALL BE PROVIDED WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
   B.) THE LEAST POSSIBLE GRADE SHOULD BE USED TO MAXIMIZE ACCESSIBILITY. WHERE STRUCTURALLY IMPRACTICAL TO ACHIEVE TEXAS ACCESSIBILITY STANDARDS (TAS) COMPLIANCE, THE RUNNING SLOPE OF SIDEWALKS AND CROSSWALKS, WITHIN THE PUBLIC R.O.W., MAY FOLLOW THE GRADE OF THE PARALLEL ROADWAY WITHOUT INVOKING TEXAS ACCESSIBILITY STANDARDS (TAS) VARIANCES FOR LANDINGS OR HANDRAILS. WHERE A CONTINUOUS GRADE GREATER THAN 5% MUST BE PROVIDED, HANDRAILS MAY BE DESIRABLE ON ONE OR BOTH SIDES OF THE SIDEWALK TO IMPROVE ACCESSIBILITY. HANDRAILS MAY ALSO BE NEEDED TO PROTECT PEDESTRIANS FROM POTENTIALLY HAZARDOUS CONDITIONS.
5. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. OTHERWISE, FLARED SIDES SHALL BE PROVIDED. ALL CONCRETE SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
6. RAMP TEXTURES MUST CONSIST OF TRUNCATED DOME SURFACES, IN ACCORDANCE WITH ADA AND TEXAS DEPARTMENT OF LICENSING AND REGULATIONS (TDLR), TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. TEXTURES ALSO SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).
8. RAISED MEDIANS SEPARATE OPPOSING DIRECTIONS OF TRAFFIC AND PROVIDE A REFUGE AREA FOR PEDESTRIANS UNABLE TO CROSS THE ENTIRE ROADWAY IN THE ALLOTTED SIGNAL PHASE. TO SERVE AS A REFUGE AREA, THE MEDIAN SHALL BE A MINIMUM OF 5' (FT.) WIDE. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR THROUGH THEM.
9. SMALL CHANNELIZATION ISLANDS, WHICH CAN NOT PROVIDE A MINIMUM 5' x 5' LANDING AT THE TOP OF RAMPS, SHALL BE CUT THROUGH LEVEL WITH THE SURFACE OF THE STREET.
10. CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE ENGINEER.
11. EXISTING FEATURES THAT COMPLY WITH T.A.S. MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
12. TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SHALL BE PLACED SO NOT TO OBSTRUCT THE ACCESSIBLE ROUTE.

SL–ST–40



CURB RAMPS AT MEDIAN ISLANDS

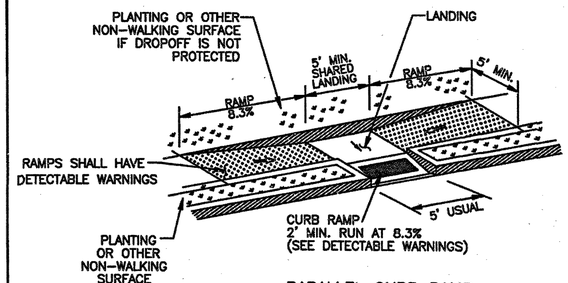
SL–ST–37



SETBACK SIDEWALK

SIDEWALK TREATMENT AT DRIVEWAYS

SL–ST–38



PARALLEL CURB RAMP

SL–ST–39

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WHEEL CHAIR RAMP & SIDEWALK DETAILS II

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–26

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
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VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

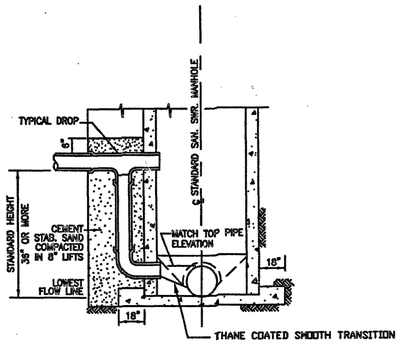
WHEEL CHAIR RAMP & SIDEWALK DETAILS 2
SL–26

PROJECT NO. 13781

21

T SHEET SET.DWG

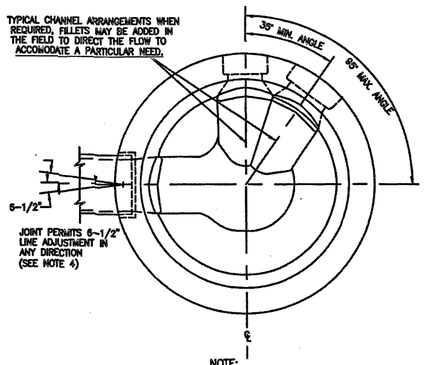
PLOT TIME:



STANDARD DROP DETAIL

(SEE C.S.S. NOTES)

SL-SS-05



PIPING CONNECTIONS DETAIL

SL-SS-05

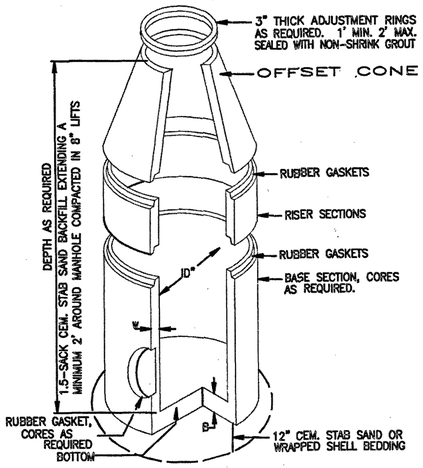
NOTE:

1. INFLUENT AND EXFLUENT PIPING CONNECTIONS TO MANHOLE SHALL BE ALIGNED TO PREVENT REVERSE FLOW.
2. INFLUENT AND EXFLUENT CONNECTIONS ARE LIMITED TO A MAXIMUM 90° INCLUDED ANGLE OF CONVERGENCE.
3. MINIMUM 35° AND MAXIMUM 90° INCLUDED ANGLES MUST BE PROVIDED BETWEEN MULTIPLE INFLUENT CONNECTIONS.
4. ANGLE OF DEFLECTION AT PIPING JOINTS AS PER MANUFACTURE'S RECOMMENDATIONS.

NOTES:

1. CONTRACTOR SHALL CONTACT CITY OF ANGLETON ENGINEERING DEPARTMENT AT (979) 849-4364 IF WET SAND OR OTHER UNSTABLE SOIL CONDITIONS, HIGH WATER TABLE AND/OR UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED.
2. SHOULD A CONFLICT ARISE BETWEEN INFORMATION DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF ANGLETON DESIGN STANDARDS SHALL GOVERN.
3. SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED A MINIMUM OF FOUR FOOT FROM BACK OF CURB ON CURB AND GUTTER ROADWAYS AND THREE FEET FROM EDGE OF TRAVELLED ROADWAY ON THOSE THOROUGHFARES HAVING NO CURBING, MEASURED FROM OUTSIDE DIAMETER OF MANHOLE. SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED BENEATH STREET PAVING EXCEPT WHERE SPECIFICALLY AUTHORIZED BY CITY ENGINEER AND SO DESIGNATED ON APPROVED CONSTRUCTION DRAWINGS.
4. ALL SUCH MANHOLE COVERS SHALL HAVE THE CITY OF ANGLETON EMBLEM AND THE WORDS "ANGLETON" AND "SANITARY SEWER" CAST IN RAISED RELIEF AS DEPICTED IN CITY OF ANGLETON STANDARD CONSTRUCTION DETAILS SHEETS. ALL SANITARY SEWER MANHOLES SHALL INCORPORATE INFLOW PROTECTORS.
5. MANHOLE RIM ELEVATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY. CONTRACTORS SHALL ADJUST RIM ELEVATIONS TO 0.4 FEET ABOVE FINISHED GRADE WITHIN RIGHTS-OF-WAY AND EASEMENTS AT EACH MANHOLE LOCATION AFTER FINAL GRADING. ADJUSTMENTS TO MANHOLE RIM ELEVATIONS SHALL BE ACCOMPLISHED BY THE USE OF THROAT RINGS ONLY (MAX. OF 24 INCHES PERMITTED). THE AREA ADJACENT TO SANITARY SEWER MANHOLE LOCATIONS SHALL BE GRADED AWAY FROM SUCH MANHOLES SO AS PREVENT ENTRY OF STORM WATER RUNOFF TO THE SANITARY SEWER SYSTEM.
6. DROP CONNECTIONS ARE REQUIRED WHEN INVERT ELEVATION OF SEWER LINE TO BE CONNECTED EXCEEDS 38 INCHES DISTANCE ABOVE INVERT ELEVATION OF MANHOLE BASE. ALL DROP CONNECTIONS SHALL BE CONSTRUCTED OF SAME MATERIALS AS SEWER AND SHALL BE CONSTRUCTED EXTERIOR TO MANHOLE. PIPE CONNECTIONS TO MANHOLES SHALL BE SO CONSTRUCTED AS TO BE WATERTIGHT AND TO ALIGN UPPER INSIDE PIPE WALL ELEVATIONS OF ALL PIPING CONNECTED TO BASE OF MANHOLE UNIFORMLY, REGARDLESS OF PIPE DIAMETERS. DROP ASSEMBLIES SHALL BE BEDDED IN CEMENT STABILIZED SAND. CEMENT STABILIZED SAND SHALL EXTEND A MINIMUM OF SIX INCHES PAST PIPING LATERALLY FROM BASE OF MANHOLE UPWARD TO A POINT SIX INCHES (MINIMUM) ABOVE THE HORIZONTAL SEWER PIPING WHERE CONNECTED TO THE MANHOLE ABOVE THE VERTICAL DROP.
7. CONNECTIONS TO EXISTING AND/OR NEW SANITARY SEWER MANHOLES CONSTRUCTED OF PRECAST CONCRETE NOT HAVING PRECORED HOLES OF CORRECT DIAMETER, LOCATION AND FIELD CORING ONLY SHALL ACCOMPLISH INVERT ELEVATION. IN NO INSTANCE WILL EITHER MANUAL OR PNEUMATIC CHISELS AND/OR HAMMER DRILLS BE UTILIZED TO BREAK HOLES IN PRECAST CONCRETE MANHOLES, PIPE SEGMENTS OR OTHER PRECAST STRUCTURES SUCH AS LIFT STATIONS.
8. BEDDING AND BACKFILL OF SANITARY SEWER PIPING AND MANHOLES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH CITY OF ANGLETON DESIGN STANDARDS. A 1.5-SACK MIX IS REQUIRED FOR ALL CEMENT STABILIZED SAND BEDDING AND SUCH BEDDING SHALL BE INSTALLED IN LIFTS OF EIGHT INCHES MAXIMUM.
9. SOLVENT WELDED JOINTS ARE NOT AN ACCEPTABLE JOINING METHOD FOR SANITARY SEWERS CONSTRUCTED OF PVC PIPING MATERIALS AND LOCATED WITHIN RIGHTS-OF-WAY OR EASEMENTS. RUBBER GASKETED BELL AND SPIGOT SANITARY SEWER JOINTS ARE MANDATORY. BELL (FEMALE) ENDS OF PIPE SHALL BE INSTALLED ON UPSTREAM SIDE WITH SPIGOT (MALE) ENDS ORIENTED DOWNSTREAM.
10. SANITARY SEWER SERVICE LEADS SHALL BE EXTENDED TO RIGHTS-OF-WAY AND/OR EASEMENT LINES AS APPLICABLE AND CAPPED/PLUGGED FOR FUTURE CONNECTIONS. SERVICE LEADS ARE TO BE INSTALLED SO AS TO PASS UNDER POTABLE WATER PIPING AT CROSSINGS WHERE POSSIBLE.
11. EACH SANITARY SEWER SERVICE LEAD STUB, PLUGGED WYE BRANCH OUTLET AND STACK SHALL BE MARKED WITH A PRESSURE TREATED 4 X 4 TIMBER AT THE TIME OF CONSTRUCTION, BEGINNING AT THE INVERT ELEVATION OF THE STUB OR WYE AND AT AN ELEVATION TWO FEET BELOW THE CAPPED TERMINATION POINT OF THE STACK AND EXTENDING TWO FEET ABOVE FINISHED GRADE. EACH TIMBER MARKER SHALL BE PAINTED RED AND LABELED "SANITARY SEWER STUB", "SANITARY SEWER WYE" OR "SANITARY SEWER STACK" AS APPROPRIATE WITH STUB, WYE BRANCH OUTLET OR STACK SIZE NOTED.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION. DURING THE COURSE OF ANY AND ALL CLEARING, GRUBBING, FILL, GRADING, EXCAVATION OR OTHER CONSTRUCTION, CONTRACTOR SHALL ENSURE THAT STORM DRAINAGE PATHWAYS ARE MAINTAINED AND REMAIN OPEN TO ENSURE POSITIVE DRAINAGE AND THAT SUCH CONVEYANCES ARE NOT IMPEDED OR BLOCKED IN ANY WAY. STORM SEWER INLETS SHALL BE PROTECTED FROM ENTRY OF SILT, TRASH, DEBRIS AND ANY SUBSTANCES DELETERIOUS TO THE STORM SEWER SYSTEM AND/OR WATERWAYS RECEIVING STORM WATER RUNOFF. CONTRACTOR SHALL AT COMPLETION OF WORK, FILL LOW SPOTS AND GRADE ALL RIGHTS-OF-WAY AND UTILITY EASEMENTS AND REGRADE/RESTORE DITCHES AS NECESSARY TO MAINTAIN AND/OR ESTABLISH POSITIVE DRAINAGE.
13. ALL SANITARY SEWER PIPING AND BEDDING SHALL BE INSPECTED BY CITY CONSTRUCTION INSPECTOR FOR CONFORMANCE WITH CITY INFRASTRUCTURE STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY NOTIFY THE CITY OF ALL CONSTRUCTION ACTIVITIES AND TO CONFORM TO CITY OF ANGLETON PUBLIC WORKS DEPARTMENT INSPECTION POLICY.
14. C.S.S. 1" ABOVE PIPE AND 6" BELOW PIPE MINIMUM.
15. SEE GENERAL NOTES AND C.S.S. NOTES.

SL-SS-07



SPECIFICATIONS:

CONCRETE: CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. RATES FOR H-20 LOADING.

REINFORCEMENT: STRUCTURAL REINFORCEMENT CONFORMING TO ASTM-C-478.

C.I. CASTINGS: CAST IRON FRAMES AND LIDS ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 35.

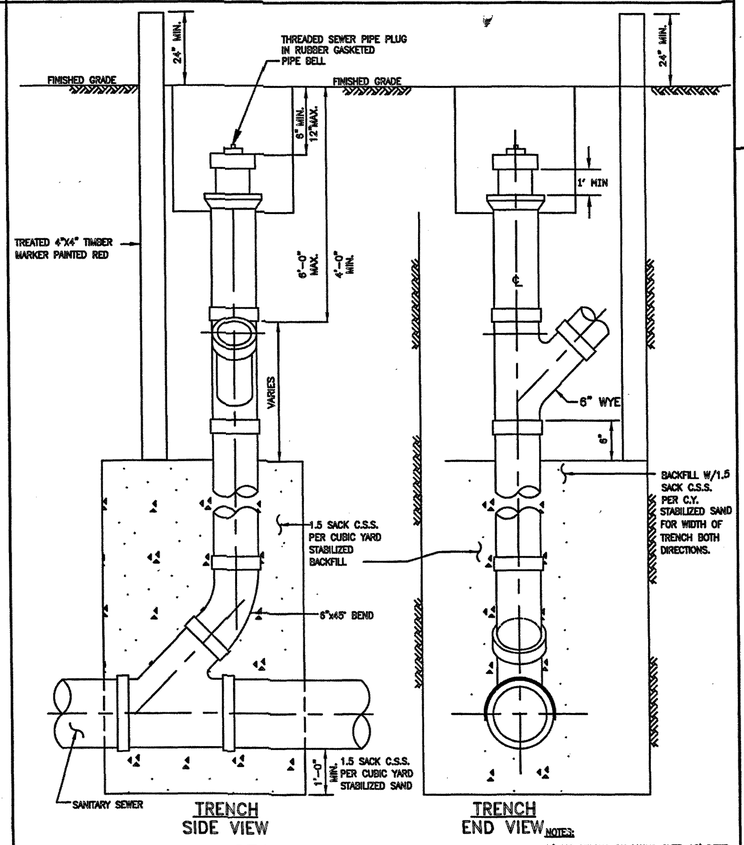
NOTES

1. LIFTING INSERTS AS REQUIRED.
2. ALL JOINTS SHALL BE SEALED WITH APPROVED RUBBER GASKET
3. STRUCTURE TO BE PLACED ON 12" STABILIZED BASE.
4. C.S.S. SHALL BE BROUGHT TO WITHIN 2-FT OF TOP OF MANHOLE.
5. PRE-CAST MANHOLE SHALL BE IN COMPLIANCE APPROVED PRODUCT LIST.
6. THANE COAT SHALL BE IN COMPLIANCE WITH APPROVED PRODUCT LIST.
7. INVERTS SHALL COMPLY WITH C.O.S.L., DESIGN MANUAL SPECIFICATIONS.
8. INFLOW PROTECTORS REQUIRED ON ALL SANITARY MANHOLES.
9. REFER TO SANITARY MANHOLE LIDS, C.S.S. NOTES, MODIFIED BEDDING DETAILS AND NOTES.

PRECAST SANITARY MANHOLE

N.T.S.

SL-SS-03



TRENCH SIDE VIEW

TRENCH END VIEW

STACK DETAIL

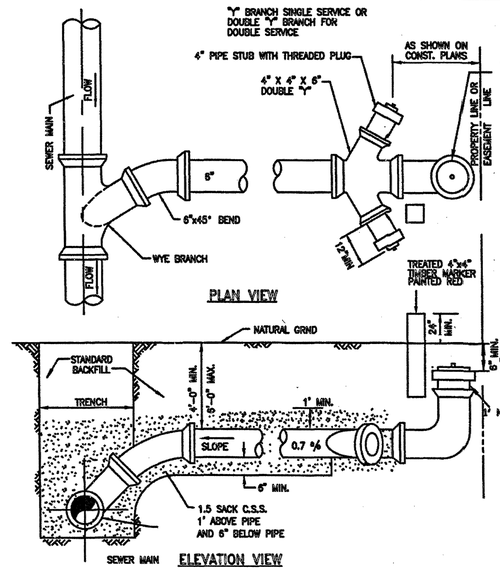
N.T.S.

SL-SS-04

NOTES:

A.) NO STACKS ON MAINS OVER 18' DEEP OR IN WET SAND CONDITIONS.

B.) ALL STACK CONNECTIONS SHALL BE IN-LINE FITTINGS.



SANITARY SEWER SERVICE CONNECTION

N.T.S.

SL-SS-06

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

SANITARY SEWER CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-14

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6881 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

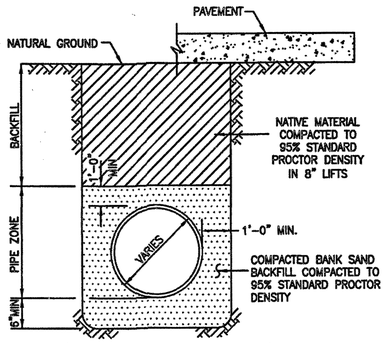
ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

SANITARY SEWER CONSTRUCTION DETAILS SL-14

PROJECT NO. 13781

SHEET SET.DWG

PLOT TIME:



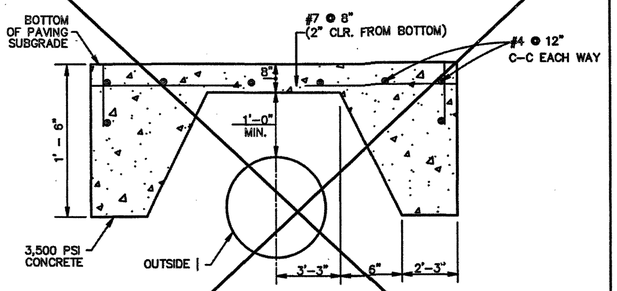
P.V.C. PIPE BEDDING & BACKFILL

N.T.S.

*SEE CONSTRUCTION NOTES

SANITARY FORCE MAIN & WATER LINE BEDDING AND BACKFILL

SL-BB-01



PROTECTIVE SLAB DETAIL

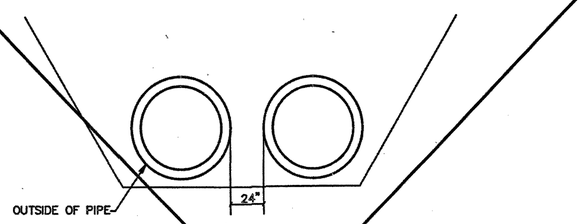
ZERO LOAD TRANSFER CONCRETE SLAB

SL-BB-04

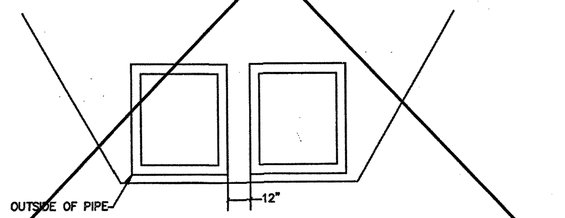
CONSTRUCTION NOTES

1. CONTRACTOR SHALL CONTACT CITY OF ANGLETON ENGINEERING DEPARTMENT AT (979) 849-4364 IMMEDIATELY IF WET SAND CONDITIONS ARE ENCOUNTERED.
2. LIMESTONE AND RECYCLED CONCRETE DIMENSIONS SHOWN ARE TYPICAL BUT MAY BE VARIED BY ORDER OF CITY ENGINEER.
3. LIMESTONE OR RECYCLED CONCRETE SHALL BE IN ACCORDANCE WITH TXDOT SPECIFICATION NO. 248 FLEXIBABLE BASE, TYPE A, GRADE 2 AGGREGATE.
4. NO BEDDING SHALL BE INSTALLED IN WET CONDITIONS, WHEN WILL POINTING OR IN WET SAND CONDITIONS, MAINTAIN GROUND WATER 1 (FT) BELOW BOTTOM OF TRENTCH FOR A MINIMUM OF 24-HOURS AFTER BEDDING ANND BACKFILL IS IN PLACE.
5. ALL MATERIALS SHALL BE FROM THE APPROVED PRODUCTS LIST UNLESS SPECIFICALLY APPROVED BY THE CITY ENGINEER.
6. SANITARY SEWER BEDDING FOR WET SAND CONDITIONS SHALL BE AS PER MODIFIED "A".
7. ALL SAND BEDDING FOR WATER LINES SHALL BE CLEAN, MECHANICALLY COMPACTED BANK SAND.
8. REFER TO: MANHOLE DETAILS, SANITARY, C.S.S., GENERAL, WATER CROSSING, WATER DISTRIBUTION DETAILS AND NOTES.
9. ALL BEDDING WILL BE COMPACTED TO 95% STANDARD DENSITY.
10. A GEOTECHNICAL REPORT MAY BE REQUIRED TO ANALYZE THE BEARING CAPACITY OF EXISTING SOILS AND MAKE A DETERMINATION IF ADDITIONAL BEDDING AND BACKFILL IS APPROPRIATE.

SL-BB-05



PIPE SEPARATION



RCB SEPARATION

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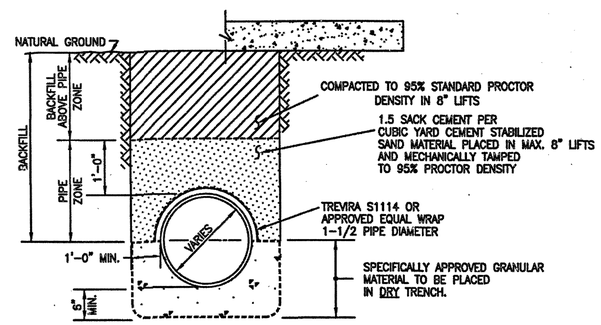
PLOT DATE:



MODIFIED "A"

N.T.S.

NOTE: C.S.S. SHALL BE INSTALLED A MIN. 1' ABOVE TOP OF PIPE.

SANITARY SEWER BEDDING AND BACKFILL

SL-BB-03

REFER TO:

1. *GENERAL NOTES*
2. *C.S.S. NOTES*

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE, SANITARY SEWER FORCE MAIN BEDDING DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-19

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

WATER LINE, SANITARY SEWER FORCE MAIN BEDDING DETAILS SL-19

PROJECT NO. 13781

SL1 SHEET SET.DWG

PLOT TIME:

B. **Fire Hydrant Specifications.** Fire hydrants shall be installed in accordance with the ***Mueller Super Centurion 250*** specifications, as shown below, or an equivalent hydrant, including but not limited to the EJ Water Master SCD250 Hydrant. All hydrants shall include an integral Storz Pumper Connection, as shown below.

City of Angleton Fire Hydrant Detail

UL / FM — Mueller Co. — FIRE PROTECTION PRODUCTS

SUPER CENTURION® & MODERN CENTURION® FIRE HYDRANTS

SECTION A-1

Super Centurion 350: 350 p.s.i. (1725 kPa/17 barg) Working Pressure - 500 p.s.i. (3450 kPa/35 barg) Test Pressure.
Super Centurion 250: 250 p.s.i. (2400 kPa/24 barg) Working Pressure - 700 p.s.i. (4800 kPa/48 barg) Test Pressure.
Super Centurion 200: 200 p.s.i. (1400 kPa/14 barg) Working Pressure - 400 p.s.i. (2800 kPa/28 barg) Test Pressure.
Modern Centurion: 175 p.s.i. (1200 kPa/12 barg) Working Pressure - 350 p.s.i. (2800 kPa/28 barg) Test Pressure

Underwriter Laboratories (UL) Listed/Factory Mutual (FM) Approved/AWWA C502 Hydrants

Nominal Size of Main Valve Opening	3-way: Two 2-1/2" Hose Nozzles	3-way: Two Hose Gates and Two 4-1/2" Pumper Nozzles	3-way: Two 2-1/2" Nozzles and One 4-1/2" Pumper Nozzle	3-way: Two Hose Gates and One Pumper Nozzle	3-way: Three Hose Gates	4-way: Four Hose Gate Valves	4-way: Three Hose Gate Valves and One Pumper Nozzle	
	Super Centurion 250	Modern Centurion	Super Centurion 250	Super Centurion 200	Super Centurion 350	Modern Centurion	Super Centurion 250	Super Centurion 250
4-1/2"	A-423	-	A-423 or option 370	A-421 or option 370	-	A-421 + option 370	-	-
5-1/4"	A-458	A-443	A-458 or option 370	A-423 or option 370	A-444	A-458 or option 370	A-446	A-459 or option 370

Integral Storz Connection

SECTION A-1 — SPECIAL SERVICE FIRE HYDRANTS AND ACCESSORIES — Mueller Co. — UL / FM — FIRE PROTECTION PRODUCTS

Mueller® Centurion® Fire Hydrant with Intergral Storz Connection

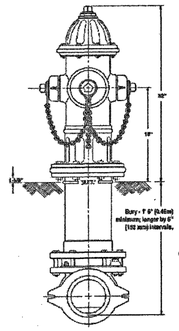
Now any Mueller Centurion Hydrant (traditional or Modern style), can be ordered with an integral Storz connection on the pumper nozzle. The nozzle can also be ordered separately to retrofit hydrants in the field.

The Storz connection allows the fire department to connect its pumper hose to the hydrant with a quick, quarter-turn action. The action is fast and smooth so firefighters can get to their tasks quickly without the thread alignment, cross threading, or leakage problems sometimes associated with threaded connections.

The Storz option is available for 4" or 5" pumper nozzles on any Centurion 200, 250, or Modern hydrants. Mueller hydrants retain their UL Approval, FM Listing, AWWA Compliance and published pressure rating when ordered with the Storz option. Hydrants are also compliant with NFPA 1963.

When ordering the integral Storz pumper nozzle, it is no longer necessary to provide an option number on the order. On the order, state the "Storz" size, and locking or non-locking cap.

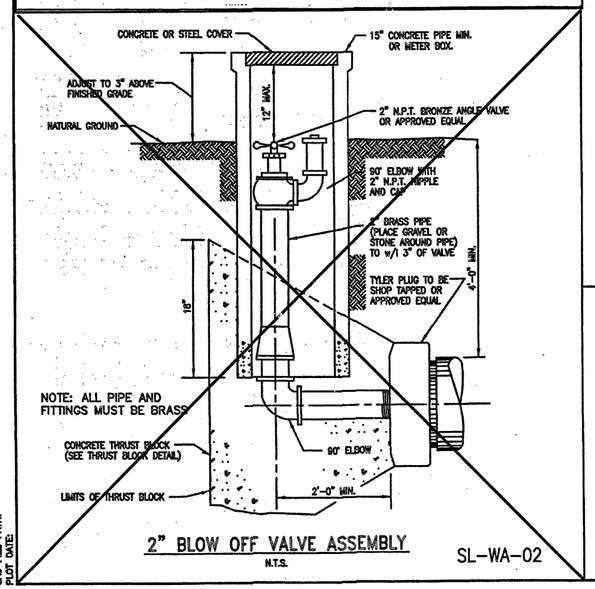
Dimensions



Super Centurion 250 Model Numbers and Dimensions

Super Centurion 250™ catalog numbers
- UL 246, FM 1510 ANSI/AWWA C502 250 psi rated

A421 4-1/2" main valve opening 3-way (2 hose nozzle / 1 pumper nozzle)
A423 5-1/4" main valve opening 3-way (2 hose nozzle / 1 pumper nozzle)
A454 5-1/4" main valve opening 3-way (3 hose nozzle) *
A455 5-1/4" main valve opening 4-way (4 hose nozzle) *
A458 5-1/4" main valve opening 4-way (3 hose nozzle / 1 pumper nozzle) *
A459 5-1/4" main valve opening 4-way (2 hose nozzle / 2 pumper nozzle)**
* *Hose Gate Valves required on Rkt Applmaed Models*
** *A459 is UL Listed and ANSI/AWWA C502*



2" BLOW OFF VALVE ASSEMBLY
N.T.S.

SL-WA-02

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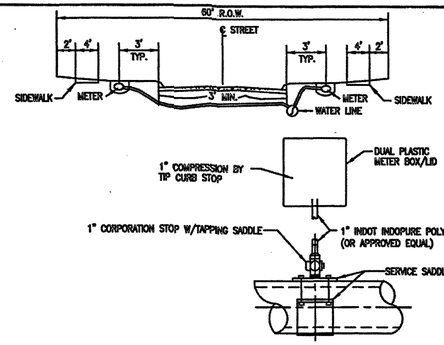
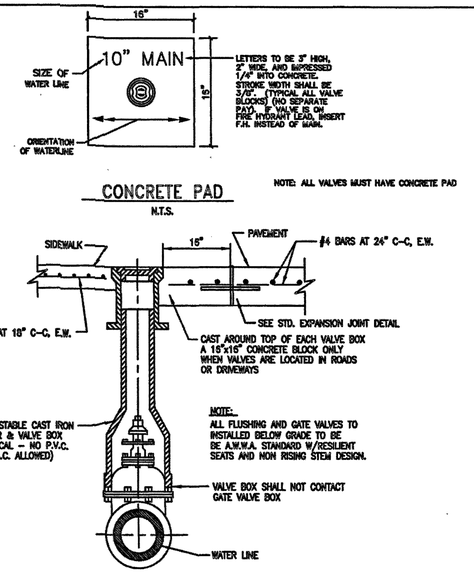


WATER SERVICE CONNECTION AND WATER SERVICE TAPPING ASSEMBLY DETAIL
N.T.S.

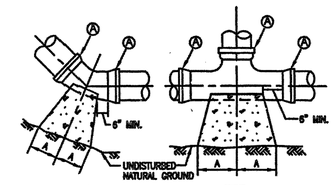
SL-WA-03



CONCRETE PAD
N.T.S.

VALVE BOX INSTALLATION DETAIL
N.T.S.

SL-WA-04

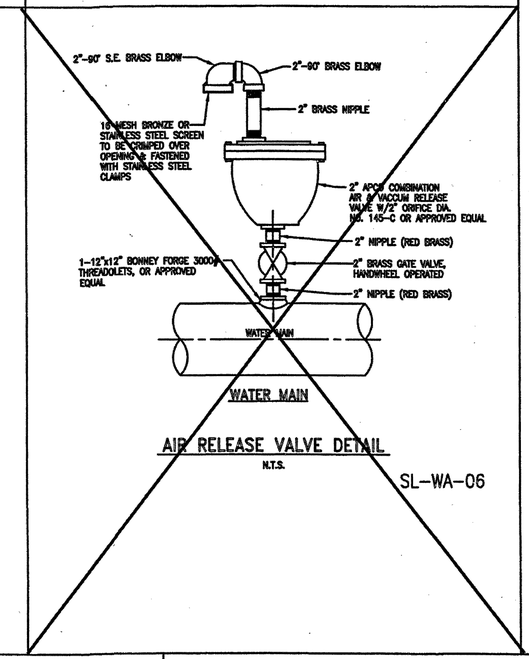


THRUST BLOCK DETAIL
N.T.S.

NOTE:
THRUST BLOCKS AT TRENCH FACE MUST HAVE A MINIMUM BEARING SURFACE OF 10 SQ. FEET AND SHALL BE NO SMALLER THAN 1.5 TIMES PIPE DIAMETER. ALL CONCRETE SHALL BE 5 SACK MIN., 3000 P.S.I.

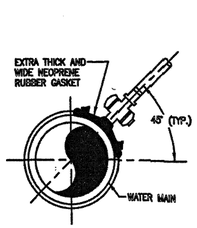
Ⓐ =RESTRAINED JOINT

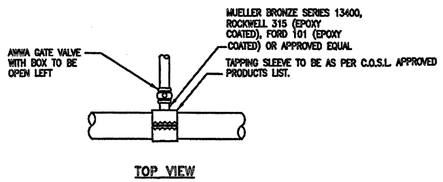
SL-WA-05



AIR RELEASE VALVE DETAIL
N.T.S.

SL-WA-06





TAPPING SLEEVE & VALVE DETAIL
N.T.S.

SL-WA-07

CONSTRUCTION NOTES:

1. WATER LINES 12" (IN.) AND LESS SHALL BE AWWA C-900 DR18 WATER LINE GREATER THAN 12" (IN.) IN ø SHALL BE AWWA C-905 DR 18
2. ALL FLUSHING VALVES AND GATE VALVES TO BE AMERICAN WATER WORKS ASSOC. (AWWA) STANDARD COUNTERCLOCKWISE OPENING WITH NON-RISING STEM DESIGN.
3. ALL DUCTILE IRON PIPE SHALL BE CLASS 50 MORTAR LINED. NO A.C. PIPE WILL BE ALLOWED AND ALL DUCTILE IRON FITTINGS SHALL BE MORTAR LINED PUSHON OR MECHANICAL JOINTS.
4. ALL BACKFILL WITHIN THE R.O.W. SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
5. MINIMUM SPACING BETWEEN TAPS SHALL BE 2' AT ALTERNATING TAP ANGLES.

SL-WA-08

NOTES: POLYETHYLENE WRAP FOR IRON PIPE

NOTE:

1. POLYETHYLENE FILM SHALL BE USED AS A WRAP TO PROTECT CAST IRON AND OTHER METALS IN A CORROSIVE SOIL ENVIRONMENT.
2. AN 8 MIL POLYETHYLENE FILM WRAP SHALL BE REQUIRED AROUND ALL METAL PIPE AND APPURTENANCES (EXCEPT FIRE HYDRANTS).
3. POLYETHYLENE FILM SHALL BE FURNISHED AND INSTALLED EITHER IN TUBULAR FORM PRIOR TO LOWERING THE PIPE IN TRENCH OR IN SHEET FORM.
4. POLYETHYLENE TUBE ENCASEMENT SHALL CONFORM WITH THE MINIMUM REQUIREMENTS OF "POLYETHYLENE ENCASEMENT FOR GRAY AND DUCTILE CAST-IRON PIPING FOR WATER AND OTHER LIQUIDS", ANSI/AWWA C105, CURRENT REVISION. SOILS WITHIN A PROJECT SHALL BE TESTED IN ACCORDANCE WITH APPENDIX A OF ANSI/AWWA C105 TO ADEQUATELY DETERMINE THE REQUIREMENTS FOR ENCASEMENT.
5. ALL FITTINGS AND PIPE JOINTS WITHIN 10' OF A FITTING SHALL HAVE RESTRAINT JOINTS

SIZE	90° BEND		45° BEND		22 1/2° BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B	A	B
1 1/2"	12"	7"	8"	7"	6"	8"	7"	8"	8"	14"
6"	16"	10"	9"	10"	6"	12"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	28"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"
20"	50"	40"	30"	40"	18"	30"	30"	40"	30"	*78"
24"	50"	40"	30"	40"	18"	30"	30"	40"	30"	*78"
30"	60"	48"	35"	48"	20"	36"	36"	48"	35"	*86"

BENDS, TEES & PLUGS FOR PIPE OF VARIOUS SIZES

SL-WA-08

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE CONSTRUCTION DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-15

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST. ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS — DOUGLAS B. ROESLER — 56739 — REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

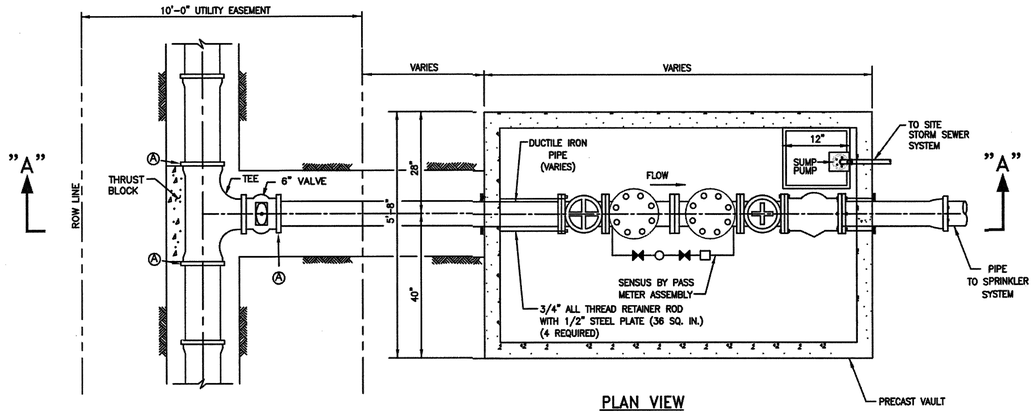
WATER LINE CONSTRUCTION DETAILS
SL-15

PROJECT NO. 13781

24

SL-15 SHEET SET.DWG

PLOT TIME:



PLAN VIEW

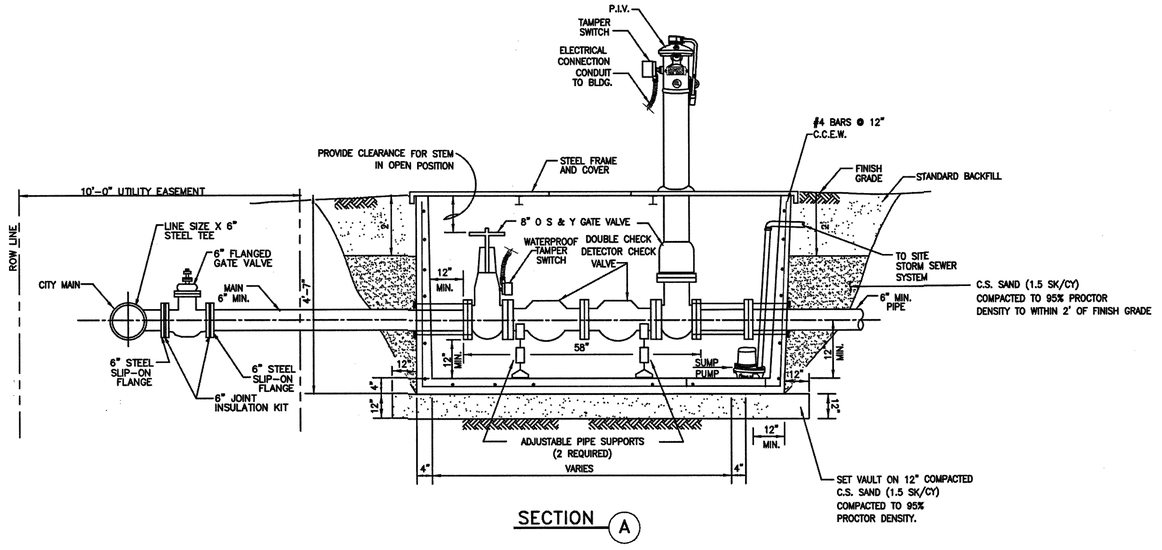
TYPICAL FIRE SERVICE METER

Ⓐ =RESTRAINED JOINT

SL-WA-23

NOTES:

1. FIRE HYDRANT REQUIRED WITHIN 50' LINEAR FEET OF THE FIRE DEPARTMENT CONNECTION.
2. FIRE VALVE MAY BE SUBSTITUTED FOR GATE VALVE ON THE CUSTOMER SIDE. SUPPLIED BY PARK EQUIPMENT COMPANY, OR APPROVED EQUAL.
3. ALL FIRE LINE VAULTS SHALL BE EQUIPPED WITH A SUMP PUMP CAPABLE OF MAINTAINING WATER LEVELS BELOW THE CENTER LINE OF THE CHECK VALVES. OUTLET SHALL BE CONNECTED TO SITE STORM SEWER SYSTEM.
4. SUMP PUMP MAY BE ELIMINATED IF BOX CAN BE DRAINED VIA GRAVITY TO SITE STORM SEWER SYSTEM.
5. ALL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13 "STANDARDS FOR THE INSTALLATION OF SPRINKLER SYSTEMS".
6. REFER TO GENERAL NOTES, WATER LINE AND STORM SEWER NOTES.
7. ALL FITTINGS AND PIPE JOINTS WITHIN 10' OF A FITTING SHALL HAVE RESTRAINT JOINTS



SECTION (A)

TYPICAL FIRE SERVICE METER

SL-WA-24

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE
FIRE SERVICE METER VAULT

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-18

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

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Date: 12-13-20

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MR. BILL BROWN
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6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

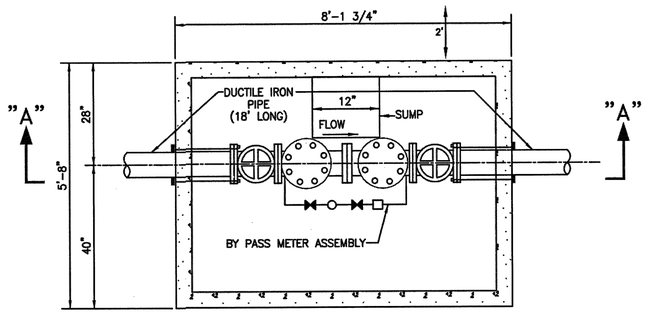
WATER LINE
CONSTRUCTION DETAILS
SL-18

PROJECT NO. 13781

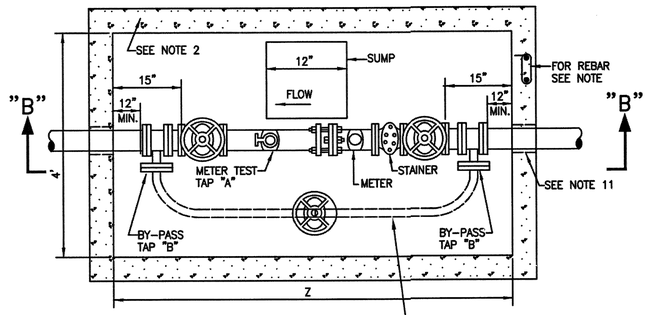
24A

B1 SHEET SET.DWG

PLOT TIME:



PLAN VIEW

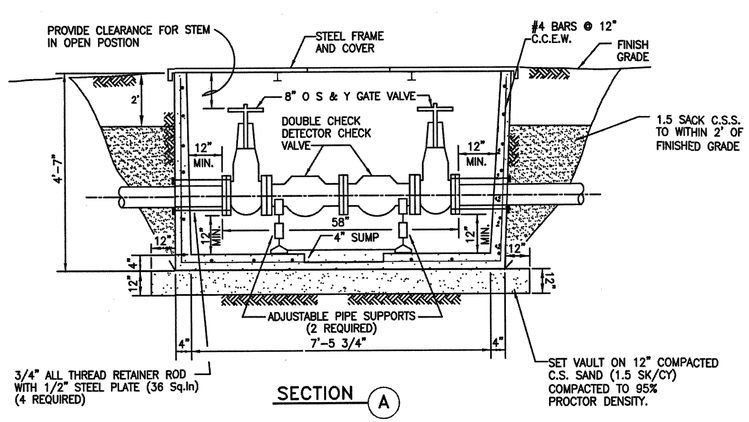


PLAN VIEW

NOTES:

1. NOTIFY THE ENGINEERING DEPARTMENT AT (281) 275-2780 PRIOR TO CONSTRUCTION OF VAULT OR BY-PASS ASSEMBLY.
2. THE METER VAULT CAN BE EITHER POURED IN PLACE OR PREFABRICATED. CONCRETE SHALL BE SIX INCHES (6") THICK AND BE 3,000 PSI WITH #4 REINFORCEMENT STEEL ON TWELVE INCH (12") CENTERS EACH WAY IF THE VAULT IS POURED IN PLACE. PREFABRICATED VAULTS SHALL BE FOUR INCHES (4") THICK AND BE 4,500 PSI CONCRETE WITH #4 REINFORCEMENT STEEL ON EIGHT INCH (8") CENTERS EACH WAY. THESE ARE MINIMAL SPECIFICATIONS.
3. THE VAULT WILL NOT BE LOCATED IN ANY DRIVE OR PARKING AREAS AND MUST BE LOCATED IN A WATER METER EASEMENT.
4. THE VAULT LID SHALL BE A BILCO LID, TYPE Q-4 SINGLE LEAF DESIGN. ANGLE FRAME IS 1/4-INCH STEEL WITH STRAP ANCHORS BOLTED TO THE EXTERIOR. THE LEAF IS 1/4-INCH STEEL DIAMOND PATTERN PLATE, PIVOTING ON TORSION BARS FOR EASY OPERATION. THE MINIMUM LIVE LOAD CAPACITY IS 150 POUNDS PER SQUARE FOOT. THE SIZE OF THE DOOR IS THREE FEET (3') BY THREE FEET (3').
5. THE LID SHALL BE PAINTED WITH 43-38 TNEMEC DIFFUSED ALUMINUM PAINT OR APPROVED EQUAL, AND CENTERED OVER METER/NO.
6. THE BY-PASS AND METER TEST TAP SHALL BE INSTALLED INSIDE THE VAULT. TAP "A" MUST BE AT LEAST TWO (2) PIPE DIAMETERS DOWNSTREAM OF THE METER. TAPS "B" AND "C" MUST BE MADE AT APPROXIMATE FORTY-FIVE DEGREE (45°) ANGLE ON EACH END OF THE PIPE AND CENTERED TEN INCHES (10") AWAY FROM THE WALL. ALL TAPS SHALL BE TWO INCHES (2") AND SHALL BE HARD PIPED
7. THE STRAINER, METER AND FLEXIBLE COUPLING WILL NOT BE SET UNTIL THE METER VAULT AND TAPS ARE ACCEPTED BY THE DISTRICT OPERATOR. ALL UTILITIES MUST ALSO HAVE BEEN ACCEPTED AND RELEASED BY THE CITY OF SUGAR LAND PUBLIC WORKS DEPARTMENT PRIOR TO METER
8. THE VALVES SHALL BE ANY RESILENT WEDGE DESIGN GATE VALVE WHICH HAS RECEIVED FORMAL APPROVAL FROM THE CITY OF SUGAR LAND ENGINEERING DEPARTMENT. ALL VALVES SHALL BE FLANGED BOTH ENDS AND HAVE HAND WHEELS.
9. THE METER VAULT SHALL BE SET ON 12" C.S.S. BEDDING AS SHOWN ON DETAIL DRAWINGS. A SUMP FOUR-INCHES (4") DEEP AND TWELVE INCHES (12") IN DIAMETER SHALL BE INSTALLED TO ONE SIDE IN THE CENTER OF THE BOTTOM SLAB. IF PRECAST VAULT IS USED, RAM-NEK SHALL BE USED TO SEAL ALL COLD JOINTS.
10. ALL THE WALL PENETRATIONS SHALL BE MADE WITH A CAST IN PLACE WALL SLEEVE AS APPROVED BY THE CITY OF SUGAR LAND ENGINEERING DEPARTMENT. BREAKING OUT THE WALL USING A JACKHAMMER OR USING KNOCKOUT PANELS WILL NOT BE ALLOWED.
11. A CONCRETE SUPPORT WILL BE INSTALLED UNDER EACH VALVE.
12. DEPTH OF VAULT SHALL BE A MINIMUM OF 4-1/2' AND A MAXIMUM OF 6'
13. ALL PIPING INSIDE THE VAULT SHALL BE DUCTILE IRON WITH FLANGE FITTINGS. ALL PIPING SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF SUGAR LAND ENGINEERING DEPARTMENT
14. THE TYPE OF METER, TURBINE OR COMPOUND, WILL BE DETERMINED BASED ON THE APPLICATION AND APPROVED BY THE ENGINEERING DEPARTMENT.

SL-WA-22



SECTION (A)

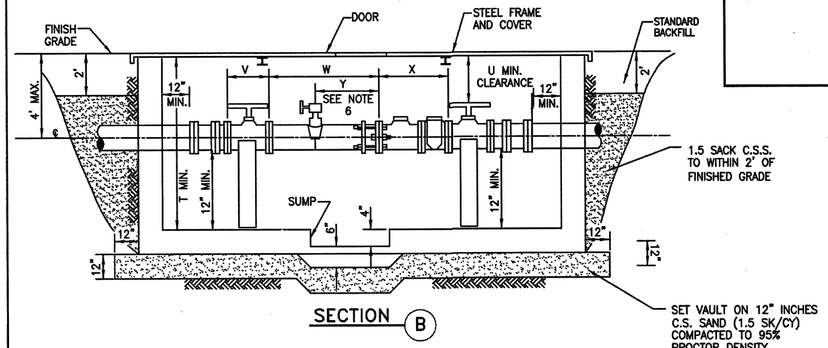
NOTES:

1. SIAMESE CONNECTION MAY BE ALLOWED WITHIN THE VAULT WHEN APPROVED BY THE ENGINEERING DEPARTMENT.
2. FIRE VALVE MAY BE SUBSTITUTED FOR GATE VALVE ON THE CUSTOMER SIDE. SUPPLIED BY PARK EQUIPMENT COMPANY, OR APPROVED EQUAL.

DETECTOR CHECK VALVE

N.T.S.

SL-WA-20



SECTION (B)

SL-WA-21

METER VAULT															
DOMESTIC															
METER SIZE	T	U	V	W	X	Y	Z	METER SIZE	T	U	V	W	X	Y	Z
3"	4'-6"	25"	8"	11-1/2"	24"	9"	6'-10"	3"	4'-6"	25"	8"	16-1/2"	19"	9"	6'-10"
4"	4'-6"	22"	9"	13-1/2"	29"	10"	7'-7"	4"	4'-6"	22"	9"	19-1/2"	23"	10"	7'-7"
6"	5'-2"	26"	10-1/2"	13-1/2"	33"	13"	8'-2"	6"	5'-2"	26"	10-1/2"	19-1/2"	27"	13"	8'-2"
								8"	6'-0"	31"	11-1/2"	25-1/2"	30"	17"	9'-1"
								10"	7'-0"	37"	13"	29-1/2"	41"	21"	10'-7"

3" TO 10" METER

N.T.S.

SL-WA-19

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE
METER VAULT DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-17

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

WATER LINE
CONSTRUCTION DETAILS
SL-17

PROJECT NO. 13781

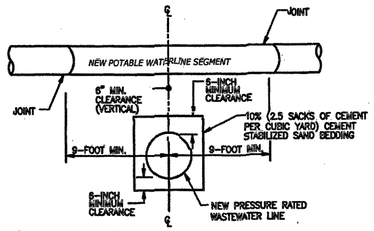
24B

13781 SHEET SET.DWG

PLOT TIME:

I

NEW POTABLE WATERLINE CROSSING NEW PRESSURE RATED WASTEWATER LINE WITH SEGMENT LENGHTS OF EIGHTEEN (18) FEET OR GREATER, HAVING 6 INCHES OF VERTICAL CLEARANCE AND 4 FEET OF HORIZONTAL CLEARANCE

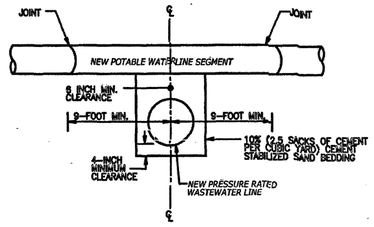


- WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN JOINTS OF THE WASTEWATER LINE.
- MINIMUM WASTEWATER PIPE STIFFNESS OF 115 PSI AT 5% DEFLECTION.
- EMBED WASTEWATER LINE IN CEMENT STABILIZED SAND TO AT LEAST 12" INCHES BEYOND EACH JOINT OF CROSSED SECTION OF PIPE.

SL-WA-09

II

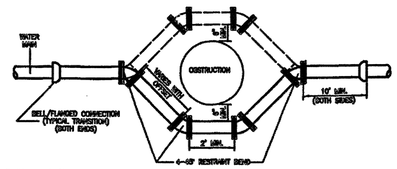
NEW POTABLE WATERLINE CROSSING NEW PRESSURE RATED WASTEWATER LINE



- WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN JOINTS OF THE WASTEWATER LINE.
- MINIMUM WASTEWATER PIPE STIFFNESS OF 115 PSI AT 5% DEFLECTION.
- EMBED WASTEWATER LINE IN CEMENT STABILIZED SAND TO AT LEAST 12" INCHES BEYOND EACH JOINT OF CROSSED SECTION OF PIPE.

SL-WA-10

III



FOR A LINE TO PASS OVER AN OBSTRUCTION RATHER THAN UNDER, IT MUST HAVE ADEQUATE COVER AND BE APPROVED BY THE ENGINEERING DEPARTMENT.

MIN. PIPE WALL THICKNESS		
4"	–	0.250"
6"	–	0.280"
8"	–	0.322"
12" AND LARGER	–	0.375"

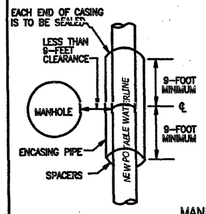
NOTES:

1. PIPE MATERIAL SHALL BE AWWA C900 PVC, DR-14, 200 PSI WITH INTEGRAL PVC RESTRAINED JOINTS.
2. OFFSET ASSEMBLY MUST PASS OVER THE OBSTRUCTION AS LONG AS THE MINIMUM CLEARANCE IS MAINTAINED. SPECIFIC APPROVAL FROM THE UTILITIES DEPARTMENT MUST BE GRANTED FOR THE OFFSET TO PASS UNDER THE OBSTRUCTION.
3. MATERIAL AND CORROSION SHALL BE IN ACCORDANCE WITH WATER MAIN STANDARD SPECIFICATIONS.
4. RESTRAIN EXISTING PIPING BEYOND OFFSET SECTION AS REQUIRED TO PREVENT MOVEMENT.
5. ALL PVC PRODUCTS MUST BE LISTED ON CITY OF SUGAR LAND'S APPROVED PRODUCTS LIST.

PVC WATER PIPE OFFSET ASSEMBLY

SL-WA-11

DETAIL OF WATER LINE CROSSING WASTEWATER FACILITIES WHERE SEPARATION IS LESS THAN 9' (NINE FEET)

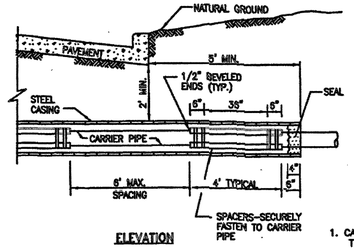


ENCASING PIPE

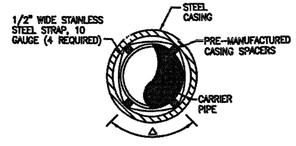
- 150 PSI PRESSURE CLASS PIPE MINIMUM 18 FEET LONG DIAMETER = 2 X WATERLINE DIAMETER
- SPACE AROUND CARRIER PIPE SHALL BE SUPPORTED AT FIVE (5) FOOT (OR LESS INTERVALS WITH SPACERS)
- CENTERED ON CROSSING
- BOTH ENDS SEALED WITH CEMENT GROUT OR A MANUFACTURED WATER TIGHT SEAL.

MANHOLE CLEARANCE

SL-WA-12



ELEVATION



CASING SCHEDULE		
CARRIER PIPE	NOMINAL CASING	MIN. WALL THICKNESS (IN.)
6"	12"	0.11
8"	14"	0.15
10"	16"	0.18
12"	18"	0.20

1. CASING SIZE AND THICKNESS SHALL CONFORM TO THE MINIMUM REQUIREMENTS AS SHOWN ON CASING SCHEDULE, OTHER PERMITS AS REQUIRED.
2. MAINTAIN 3" MINIMUM CLEARANCE BETWEEN THE MAXIMUM OUTSIDE DIAMETER OF CARRIER PIPE AND CASING AT ALL LOCATIONS.
3. DIMENSIONS ARE APPROXIMATE ONLY. CONTRACTOR SHALL INSTALL ADEQUATELY SIZED CASING TO ACCOMMODATE THE CARRIER PIPE.

SL-WA-13

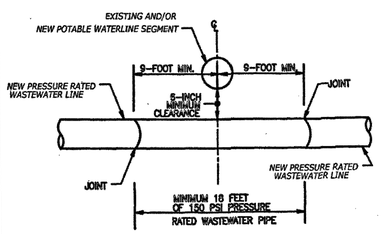
GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTACT CITY OF ANGLETON ENGINEERING DEPARTMENT AT 979 849 4364 IF WET SAND OR OTHER UNSTABLE SOIL CONDITIONS, HIGH WATER TABLE AND OR UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED.
2. SHOULD A CONFLICT ARISE BETWEEN INFORMATION DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS ; CITY OF ANGLETON STANDARDS SHALL GOVERN.
3. ALL NEW POTABLE WATER LINES AND SANITARY SEWER FORCE MAINS SHALL BE BEDDED IN COMPACTED BANK SAND A MINIMUM OF 6 INCHES BELOW, ABOVE AND TO EITHER SIDE OF SUCH PIPING.
4. ALL NEW SANITARY SEWER GRAVITY DRAIN LINES SHALL BE BEDDED IN CEMENT STABILIZED SAND CONFORMING TO THE REQUIREMENTS FOR EITHER CLASS "A" STANDARD BEDDING OR CLASS "A-A" BEDDING AS APPLICABLE. USE OF MODIFIED "A" OR MODIFIED "A-A" BEDDING FOR SANITARY SEWER INSTALLATIONS WHERE WET SAND CONDITIONS ARE ENCOUNTERED AND SEPARATION DISTANCE TO POTABLE WATER LINES IS LESS THAN 9 FEET REQUIRES APPROVAL BY CITY ENGINEER.
5. CEMENT STABILIZED BEDDING SHALL BE A MINIMUM 1.5 SACK PER CUBIC YARD C.S.S., INSTALLED IN MAXIMUM LIFTS OF 8 INCHES AND MECHANICALLY TAMPED TO 95% PROCTOR.
6. WHERE REQUIRED, SLEEVING (ENCASEMENT) OF POTABLE WATER PIPING AND/OR SANITARY SEWER GRAVITY DRAIN LINES AND FORCE MAINS SHALL BE PROVIDED. SUCH SLEEVING (ENCASEMENT) SHALL BE CONSTRUCTED OF APPROVED PIPING MATERIALS HAVING A MINIMUM PRESSURE RATING OF 150 PSI AND ANNULAR SPACES AT EACH END SHALL BE SEALED WITH A MATERIAL APPROVED FOR SUCH USE.
7. ALL NEW POTABLE WATER LINES SHALL BE SLEEVED (ENCASED) WHERE A MINIMUM OF 9 FEET SEPARATION DISTANCE TO EXISTING OR PROPOSED SANITARY SEWER MANHOLE, LIFT STATION OR WASTEWATER TREATMENT PLANT CANNOT BE MAINTAINED. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CLOSEST PROXIMITY.
8. ALL NEW POTABLE WATER LINES SHALL BE SLEEVED (ENCASED) WHERE LESS THAN 2 FEET VERTICAL OR 4 FEET HORIZONTAL CLEARANCE TO EXISTING OR PROPOSED SANITARY SEWER GRAVITY LINES OR FORCE MAINS CANNOT BE MAINTAINED. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING. WHERE PIPING IS LAID PARALLEL AND MINIMUM SEPARATION DISTANCES CANNOT BE MAINTAINED, SLEEVING SHALL EXTEND AT LEAST 9 FEET PAST THE POINT WHERE MINIMUM SEPARATION DISTANCES ARE ACHIEVED.
9. ALL NEW POTABLE WATER LINES SHALL BE CONSTRUCTED ABOVE EXISTING OR PROPOSED SANITARY SEWER GRAVITY LINES OR FORCE MAINS WHERE POSSIBLE. WHERE INSTALLATION BENEATH SANITARY SEWER GRAVITY LINES OR FORCE MAINS IS UNAVOIDABLE AT POINTS OF CROSSING, SLEEVING (ENCASEMENT) IS REQUIRED FOR ALL NEW POTABLE WATER LINES CONSTRUCTED OF PVC PIPING MATERIALS, REGARDLESS OF SEPARATION DISTANCE. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING.
10. ALL NEW SANITARY SEWER GRAVITY LINES AND/OR FORCE MAINS CONSTRUCTED OF PVC PIPING MATERIALS SHALL BE SLEEVED (ENCASED) WHERE LESS THAN 2 FEET VERTICAL OR 4 FEET HORIZONTAL CLEARANCE TO EXISTING POTABLE WATER PIPING CANNOT BE MAINTAINED. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CLOSEST PROXIMITY.
11. ALL NEW SANITARY SEWER GRAVITY LINES AND/OR FORCE MAINS SHALL BE CONSTRUCTED BELOW EXISTING POTABLE WATER LINES WHERE POSSIBLE. WHERE INSTALLATION ABOVE POTABLE WATER LINES IS UNAVOIDABLE, SLEEVING (ENCASEMENT) IS REQUIRED FOR ALL SUCH SANITARY SEWER LINES CONSTRUCTED OF PVC PIPING MATERIALS, REGARDLESS OF SEPARATION DISTANCE. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING.
12. WHERE NEW SANITARY SEWER SIZING (24 INCH AND GREATER) PRECLUDES THE USE OF PVC PIPING MATERIALS AND SLEEVING (ENCASEMENT) OF THE SANITARY SEWER WOULD OTHERWISE BE REQUIRED BUT IS IMPRACTICAL, THE EXISTING POTABLE WATER PIPING SHALL EITHER BE OFFSET TO PROVIDE THE REQUIRED MINIMUM CLEARANCES OR SLEEVED (ENCASED) IN LIEU OF SLEEVING (ENCASING) THE SANITARY SEWER LINE. SLEEVING SHALL BE A MINIMUM OF 18 FEET IN LENGTH AND CENTERED ON THE POINT OF CROSSING.
13. IN NO INSTANCE SHALL A FIRE HYDRANT BE INSTALLED WITHIN 9 LINEAR FEET OF A SANITARY SEWER SYSTEM.
14. NOTE: SEPARATION DISTANCES ARE MEASURED FROM THE OUTSIDE DIAMETERS OF EACH PIPE AND FROM THE EXTERIOR SURFACES OF MANHOLES, LIFT STATIONS, WASTEWATER TREATMENT PLANTS AND ASSOCIATED APPURTENANCES.
15. REFER TO GENERAL SANITARY, WATER AND C.S.S. NOTES.

SL-WA-18

ALTERNATIVE A:

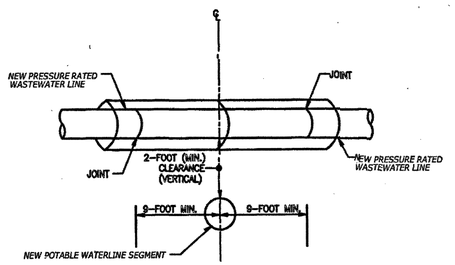
PRESSURE RATED WASTEWATER PIPE



SL-WA-14

ALTERNATIVE B:

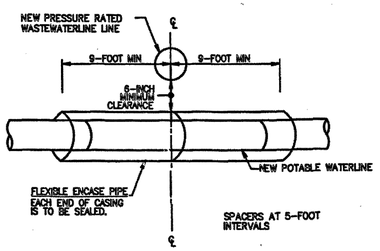
EXISTING POTABLE WATERLINE CROSSING EXISTING PRESSURE RATED WASTEWATER LINE



SL-WA-15

ALTERNATIVE C:

ENCASE NEW POTABLE WATERLINE UNDER A NEW PRESSURE RATED WASTEWATER LINE



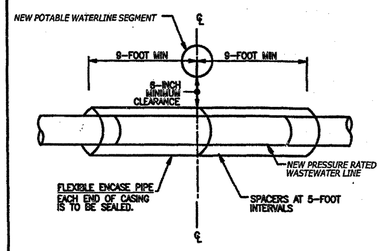
- SAME ENCASEMENT CRITERIA AS "ALTERNATIVE B" OR
- NEW WATERLINE (WITHOUT CASING) TO BE CONSTRUCTED OF PVC C-900 (DR-18), DUCTILE IRON WITH MECHANICAL JOINT OR STEEL PIPE WITH WITH WELDED JOINTS.
- BOTH WATERLINE AND WASTEWATER LINE MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C900 STANDARDS.

SL-WA-16

IV

ENCASED WASTEWATER LINE

NEW POTABLE WATERLINE CROSSING NEW PRESSURE RATED WASTEWATER LINE WITH SEGMENT LENGHTS OF OF LESS THAN EIGHTEEN (18) FEET



- MINIMUM CASING PIPE STIFFNESS OF 115 PSI AT 5% DELECTION.
- MINIMUM CASING PIPE DIAMETER = 2 X WASTEWATER LINE DIAMETER.
- THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE (F) FOOT (OR LESS). INTERVALS WITH SPACERS
- EACH END CASING IS TO BE SEALED WITH WATER TIGHT NO-SHRINK GROUT OR MANUFACTURED WATER TIGHT SEAL.

SL-WA-17

NO.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

WATER LINE CROSSING DETAILS

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL-16

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

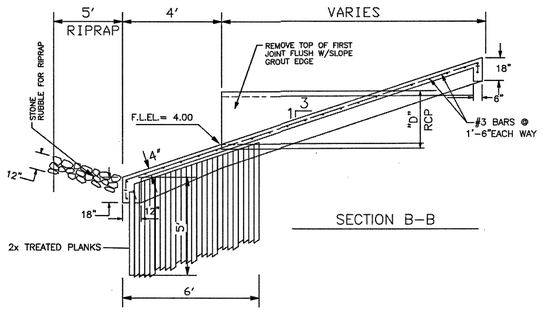
ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

WATER LINE CROSSING DETAILS SL-16

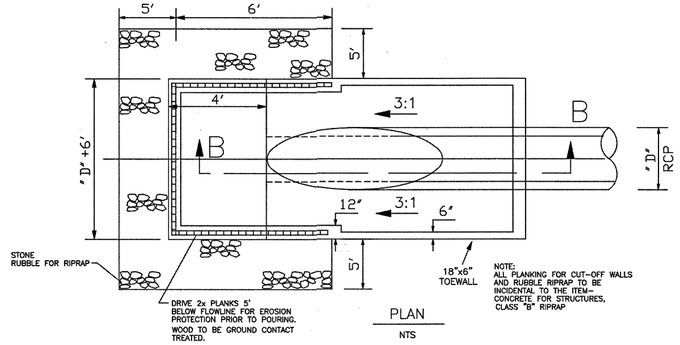
PROJECT NO. 13781

25

31 SHEET SET.DWG



SECTION B–B

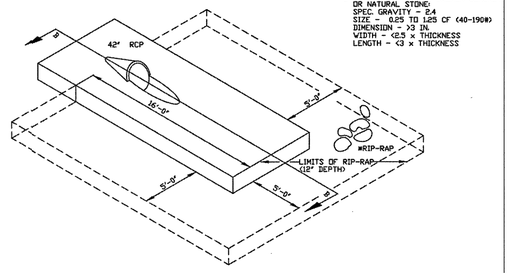


NOTE:
ALL PLANKING FOR CUT-OFF WALLS AND RUBBLE RIPRAP TO BE INCIDENTAL TO THE ITEM-CONCRETE FOR STRUCTURES, CLASS "B" RIPRAP

PLAN
NTS

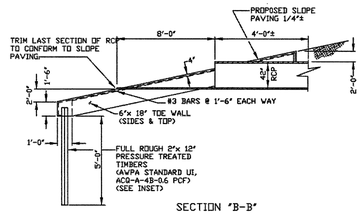
VELASCO DRAINAGE OUTFALL CHANNEL

DETAIL
PROPOSED SLOPE PAVING FOR SIDE SLOPE ENTRANCE



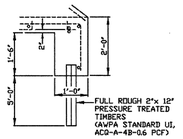
NOTES:
1. #RIP-RAP SHALL BE BROKEN CONCRETE OR NATURAL STONE.
SPEC. GRAVITY - 2.4
SIZE - 0.25 TO 1.25 CF (40-190#)
DIMENSION - >3 IN.
WIDTH - <2.5 x THICKNESS
LENGTH - <3 x THICKNESS

ISOMETRIC VIEW



SECTION "B-B"

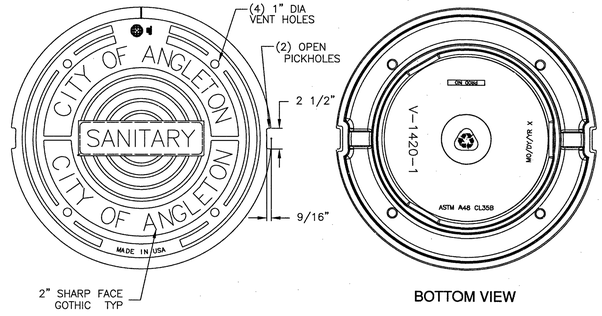
VELASCO DRAINAGE OUTFALL CHANNEL



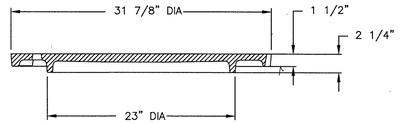
INSET

STANDARD CONCRETE SLOPE PAVING PIPE OUTFALL
N.T.S.

V1420-1 Cover



BOTTOM VIEW



COVER SECTION

NOTES
1. MATERIAL SPECIFICATION SHALL BE ASTM A-48 CLASS 35B.
2. COVER TO BE SOLID, WITHOUT HOLES AND WITH NON-PENETRATION RIM ACCESS RECESSES ONLY.
3. HORIZONTAL BEARING SURFACES TO BE MACHINED AND SEALED AT INSTALLATION WITH WATERPROOF GREASE COATING.
4. LOAD RATING TO BE HEAVY-DUTY.
5. MANHOLE FRAMES AND COVERS SET IN FARM TO MARKET ROADS OR HIGHWAYS SHALL FOLLOW TXDOT SPECIFICATIONS. (UNLESS OTHERWISE NOTED BY ANGLETON)

1 32" Manhole Cover and Frame
Scale: NTS

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
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14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

MISCELLANEOUS DETAILS

PROJECT NO. 13781

51 SHEET SET.DWG

PLOT TIME:

HYPER–CHLORINATED WATER NOTES

1. HYPER–CHLORINATED WATER SHALL NOT BE DISCHARGED TO THE STORM SEWER OR DRAINAGE SYSTEM UNLESS THE CHLORINE CONCENTRATION IS REDUCED TO 4 PPM OR LESS BY CHEMICALLY TREATING THE DECHLORINATE OR BY ONSITE RETENTION UNTIL NATURAL ATTENUATION OCCURS.
2. DISCHARGE OF HIGH FLOW RATE AND VELOCITIES SHALL BE DIRECTED TO VELOCITY DISSIPATION DEVICES.
3. CHLORINE CAN BURN VEGETATION, SO IT SHOULD NOT BE USED TO WATER VEGETATION THAT IS BEING USED FOR STABILIZATION, VEGETATED FILTERS OR BUFFERS, OR OTHER VEGETATION TO BE PRESERVED.
4. HYPER–CHLORINATED WATER MAY BE DISCHARGED TO AN ONSITE RETENTION AREA UNTIL NATURAL ATTENUATION OCCURS. THE AREA MAY BE A DRY STORMWATER RETENTION BASIN, OR A PORTION OF THE SITE MAY BE GRADED TO FORM A TEMPORARY PIT OR BERMED AREA.
5. NATURAL ATTENUATION OF THE CHLORINE MAY BE AIDED BY AERATION. AIR CAN BE ADDED TO THE WATER BY DIRECTING THE DISCHARGE OVER A ROUGH SURFACE BEFORE IT ENTERS THE TEMPORARY RETENTION AREA OR AN AERATION DEVICE CAN BE PLACED IN THE RETENTION AREA.
6. ONSITE DISCHARGE MAY REQUIRE SEVERAL HOURS TO A FEW DAYS BEFORE THE WATER IS SAFE TO DISCHARGE. THE RATE AT WHICH CHLORINE WILL ATTENUATE IS AFFECTED BY SOIL CONDITIONS AND WEATHER CONDITIONS. ATTENUATION WILL OCCUR QUICKEST DURING WARM, SUNNY, AND DRY PERIODS.

SANITARY WASTE NOTES

1. THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE NUMBER OF PORTABLE TOILETS BASED ON THE NUMBER OF EMPLOYEES USING THE TOILETS AND THE HOURS THEY WILL WORK.
2. SANITARY FACILITIES SHALL BE PLACED ON A MINIMUM OF 50 FEET AWAY FROM STORM DRAIN INLETS, CONVEYANCE, CHANNELS OR SURFACE WATERS. IF UNABLE TO MEET THE 50 FOOT REQUIREMENT DUE TO SITE CONFIGURATION, PORTABLE TOILETS SHALL BE A MINIMUM OF 20 FEET AWAY FROM STORM DRAIN INLETS, CONVEYANCE CHANNELS OR SURFACE WATER AND SECONDARY CONTAINMENT SHALL BE PROVIDE IN CASE OF SPILLS.
3. THE LOCATION OF THE PORTABLE TOILETS SHALL BE ACCESSIBLE TO MAINTENANCE TRUCKS WITHOUT DAMAGING EROSION AND SEDIMENT CONTROLS OR CAUSING EROSION OR TRACKING PROBLEMS.
4. SANITARY FACILITIES SHALL BE FULLY ENCLOSED AND DESIGNED IN A MANNER THAT MINIMIZES THE EXPOSURE OF SANITARY WASTE TO PRECIPITATION AND STORMWATER RUNOFF.
5. WHEN HIGH WINDS ARE EXPECTED, PORTABLE TOILETS SHALL BE ANCHORED OR OTHERWISE SECURED TO PREVENT THEM FROM BEING BLOWN OVER.
6. THE COMPANY THAT SUPPLIES AND MAINTAINS THE PORTABLE TOILETS SHALL BE NOTIFIED IMMEDIATELY IF A TOILET IS TIPPED OVER OR DAMAGED IN A WAY THAT THE RESULTS IN A DISCHARGE. DISCHARGED SOLID MATTER SHALL BE VACUUMED INTO A SEPTIC TRUCK BY THE COMPANY THAT MAINTAINS THE TOILETS.
7. THE OPERATOR OF THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) SHALL BE NOTIFIED IF A DISCHARGE FROM THE PORTABLE TOILETS ENTERS THE MS4 OR A NATURAL CHANNEL.
8. SANITARY FACILITIES SHALL NOT BE PERMITTED ON PUBLIC SIDEWALKS, STREETS OR INLETS.

DEBRIS AND TRASH NOTES

1. ALL WASTE SOURCES AND STORAGE AREAS SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS AND OTHER WATERS, IF THE SITE CONFIGURATION PROVIDES SUFFICIENT SPACE TO DO SO. IN NO CASE SHALL MATERIAL AND WASTE SOURCES BE CLOSER THAN 20 FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS, AND OTHER WATERS.
2. CONSTRUCTION WASTE AND TRASH SHALL BE STORED IN A MANNER THAT MINIMIZES ITS EXPOSURE TO PRECIPITATION AND STORMWATER RUNOFF.
3. WHENEVER POSSIBLE, MINIMIZE PRODUCTION OF DEBRIS AND TRASH.
4. INSTRUCT CONSTRUCTION WORKERS IN PROPER DEBRIS AND TRASH STORAGE AND HANDLING PROCEDURES.
5. SEGREGATE POTENTIAL HAZARDOUS WASTE FROM NON–HAZARDOUS CONSTRUCTION SITE DEBRIS.
6. PROHIBIT LITTERING BY WORKERS AND VISITORS.
7. POLICE SITE DAILY FOR LITTER AND DEBRIS.
8. ENFORCE SOLID WASTE HANDLING AND STORAGE PROCEDURES.
9. IF FEASIBLE, RECYCLE CONSTRUCTION AND DEMOLITION DEBRIS SUCH AS WOOD, METAL, AND CONCRETE.
10. TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AT REGULAR INTERVALS THAT ARE SCHEDULED TO EMPTY CONTAINERS WHEN THEY ARE 90 PERCENT FULL OR MORE FREQUENTLY.
11. GENERAL CONSTRUCTION DEBRIS MAY BE HAULED TO A LICENSED CONSTRUCTION DEBRIS LANDFILL.
12. USE WASTE AND RECYCLING HAULERS/FACILITIES APPROVED BY THE LOCAL MUNICIPALITY.
13. CHIPPING OF TREES AND BRUSH FOR USE SUCH AS MULCH IS PREFERRED ALTERNATIVE TO OFFSITE DISPOSAL.
14. NO WASTE, TRASH, OR DEBRIS SHALL BE BURIED, BURNED OR OTHER WISE DISPOSED OF ONSITE.
15. CLEARLY MARK ON ALL DEBRIS AND TRASH CONTAINERS WHICH MATERIALS ARE ACCEPTABLE. FOREMAN AND/OR CONSTRUCTION SUPERVISOR SHALL MONITOR ONSITE SOLID WASTE STORAGE AND DISPOSAL PROCEDURES DAILY.

CONCRETE SAWCUTTING WASTE NOTES

1. DURING SAWCUTTING OPERATIONS, THE SLURRY AND CUTTINGS SHALL BE CONTINUOUSLY VACUUMED OR OTHERWISE RECOVERED AND NOT BE ALLOWED TO DISCHARGE FROM THE SITE.
2. IF THE PAVEMENT TO BE CUT IS NEAR A STORM DRAIN INLET, THE INLET SHALL BE BLOCKED BY SANDBAGS OR EQUIVALENT TEMPORARY MEASURES TO PREVENT THE SLURRY FROM ENTERING THE INLET. REMOVE THE SANDBAGS IMMEDIATELY AFTER COMPLETING SAWCUTTING OPERATIONS, SO THEY DO NOT CAUSE DRAINAGE PROBLEMS DURING STORM EVENTS.
3. SLURRY AND CUTTINGS SHALL NOT BE ALLOWED TO REMAIN ON THE PAVEMENT TO DRY OUT.
4. DEVELOP PRE–DETERMINED, SAFE SLURRY DISPOSAL AREAS.
5. COLLECTED SLURRY AND CUTTINGS SHOULD BE IMMEDIATELY HAULED FROM THE SITE FOR DISPOSAL AT A WASTE FACILITY. IF THIS IS NOT POSSIBLE, THE SLURRY AND CUTTINGS SHALL BE DISCHARGED INTO ONSITE CONTAINMENT.
6. THE ONSITE CONTAINMENT MAY BE EXCAVATED OR BERMED PIT LINED WITH PLASTIC MINIMUM OF 10 MILLIMETERS THICK. IF THE PROJECT INCLUDES PLACEMENT OF NEW CONCRETE, SLURRY FROM SAWCUTTING MAY BE DISPOSED OF IN FACILITIES DESIGNATED FOR THE WASHOUT OF CONCRETE TRUCKS INSTEAD CONSTRUCTING A SEPARATE CONTAINMENT.
7. THE CONTAINMENT SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS, AND OTHER WATERS, IF THE SITE CONFIGURATION PROVIDES SUFFICIENT SPACE TO DO SO. IN NO CASE SHALL THE COLLECTION AREA BE CLOSER THAN 20 FEET FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS AND OTHER WATERS.
8. SEVERAL, PORTABLE, PRE–FABRICATED, CONCRETE WASHOUT, COLLECTION BASINS ARE COMMERCIALLY AVAILABLE AND ARE AN ACCEPTABLE ALTERNATIVE TO AN ONSITE CONTAINMENT PIT.
9. REMOVE WASTER CONCRETE WHEN THE CONTAINMENT IS HALF FULL. ALWAYS MAINTAIN A MINIMUM OF ONE FOOT FREEBOARD.
10. ONSITE EVAPORATION OF SLURRY WATER AND RECYCLING OF THE CONCRETE WASTE IS THE PREFERRED DISPOSAL METHOD. WHEN THIS IS NOT FEASIBLE, DISCHARGE FROM THE COLLECTION AREA SHALL ONLY BE ALLOWED IF A PASSIVE TREATMENT SYSTEM IS USED TO REMOVE THE FINES. MECHANICAL MIXING IS REQUIRED IN THE COLLECTION AREA. THE pH MUST BE TESTED, AND DISCHARGED IS ALLOWED IN IF THE pH DOES NOT EXCEED 8.0. THE pH MAY BE LOWERED BY ADDING SULFURIC ACID TO THE SLURRY WATER.
11. CARE SHALL BE EXERCISED WHEN TREATING THE SLURRY WATER FOR DISCHARGE. MONITORING MUST BE IMPLEMENTED TO VERIFY THAT DISCHARGES FROM THE COLLECTION AREA DO NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY STANDARDS.
12. GEOTEXTILE FABRICS SUCH AS THOSE USED FOR SILT FENCE SHOULD NOT BE USED TO CONTROL SAWCUTTING WASTE, SINCE THE GRAIN SIZE IS SIGNIFICANTLY SMALLER THAN THE APPARENT OPENING SIZE OF THE FABRIC.

SPILL AND LEAK RESPONSE NOTES

1. RECORDS OF RELEASES THAT EXCEED THE REPORTABLE QUANTITY (RQ) FOR OIL AND HAZARDOUS SUBSTANCES SHOULD BE MAINTAINED IN ACCORDANCE WITH THE FEDRAL AND STATE REGULATIONS.
2. EMERGENCY CONTACT INFORMATION AND SPILL RESPONSE PROCEDURES SHALL BE POSTED IN A READILY AVAILABLE REA FOR ACCESS BY ALL EMPLOYEES AND SUBCONTRACTORS.
3. SPILL CONTAINMENT KITS SHOULD BE MAINTAINED FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS THAT ARE REGULARLY ONSITE. MATERIALS IN KITS SHOULD BE BASED ON CONTAINMENT GUIDELINES IN THE MATERIALS SAFETY AND DATA SHEETS (MSDSS) FOR THE SUBSTANCE MOST FREQUENTLY ONSITE.
4. SPILL KITS ARE INTENDED FOR RESPONSE TO SMALL SPILLS, TYPICALLY LESS THAN 5 GALLONS, OF SUBSTANCES THAT ARE NOT EXTREMELY HAZARDOUS.
5. SIGNIFICANT SPILLS OR OTHER RELEASES WARRANT IMMEDIATE RESPONSE BY TRAINED PROFESSIONALS.
6. SUSPECTED JOB–SITE CONTAMINATION SHOULD BE IMMEDIATELY REPORTED TO REGULATORY AUTHORITIES AND PROTECTIVE ACTIONS TAKEN.
7. THE CONTRACTOR SHOULD BE REQUIRED TO DESIGNATE A SITE SUPERINTENDENT, FOREMAN, SAFETY OFFICER, OR OTHER SENIOR PERSON WHO IS ONSITE DAILY TO BE THE SPILL AND LEAK RESPONSE COORDINATOR (SLRC) AND MUST HAVE KNOWLEDGE OF AND BE TRAINED IN CORRECT SPILL AND LEAK RESPONSE PROCEDURES.

SUBGRADE STABILIZATION NOTES

1. MINIMIZE THE DISCHARGE OF THE CHEMICAL STABILIZERS BY THE CONTRACTOR LIMITING THE AMOUNT OF STABILIZING AGENT ONSITE TO THAT WHICH CAN BE THOROUGHLY MIXED AND COMPACTED BY THE END OF EACH WORKDAY.
2. STABILIZERS SHALL BE APPLIED AT RATES THAT RESULT IN NO RUN OFF.
3. STABILIZATION SHALL NOT OCCUR IMMEDIATELY BEFORE AND DURING RAINFALL EVENTS.
4. NO TRAFFIC OTHER THAN WATER TRUCKS AND MIXING EQUIPMENT SHALL BE ALLOWED TO PASS OVER THE AREA BEING STABILIZED UNTIL AFTER COMPLETION OF MIXING THE CHEMICAL.
5. AREA ADJACENT AND DOWNSTREAM OF STABILIZED AREAS SHALL BE ROUGHENED TO INTERCEPT CHEMICAL RUNOFF AND REDUCE RUNOFF VELOCITY.
6. GEOTEXTILE FABRICS SUCH AS THOSE USED FOR SILT FENCE SHOULD NOT BE USED TO TREAT CHEMICAL RUNOFF, BECAUSE THE CHEMICALS ARE DISSOLVED IN THE WATER AND WON'T BE AFFECTED BY A BARRIER AND THE SUSPENDED SOLIDS ARE SIGNIFICANTLY SMALLER THAN THE APPARENT OPENING SIZE OF THE FABRIC.
7. IF SOIL STABILIZERS ARE STORED ONSITE, THEY SHALL BE CONSIDERED HAZARDOUS MATERIAL AND SHALL BE MANAGED ACCORDING TO THE CRITERIA OF CHEMICAL MANAGEMENT TO CAPTURE ANY ACCIDENTAL LIME OR CHEMICAL OVERFLOW.
8. THE CONTRACRTOR SHALL INSTALL BMP'S TO ALL INLETS AND OPENINGS CONNECTED TO THE STORM SEWER SYSTEMS TO PREVENT LIME FROM ENTERING THE MS4 SYSTEM.

SANDBLASTING WASTE NOTES

1. THE CONTRACTOR SHOULD BE REQUIRED TO DESIGNATE THE SITE SUPERINTENDENT, FOREMAN, OR OTHER PERSON WHO IS RESPONSIBLE FOR SANDBLASTING TO ALSO BE RESPONSIBLE FOR SANDBLASTING WASTE MANAGEMENT.
2. PROHIBIT THE DISCHARGE OF SANDBLASTING WASTE.
3. USE ONLY INERT, NON–DEGRADABLE SANDBLAST MEDIA.
4. USE APPROPRIATE EQUIPMENT FOR THE JOB; DO NOT OVER–BLAST.
5. WHENEVER POSSIBLE, BLAST IN A DOWNWARD DIRECTION.
6. CEASE BLASTING ACTIVITIES IN HIGH WINDS OR IF WIND DIRECTION COULD TRANSPORT GRIT TO DRAINAGE FACILITIES.
7. INSTALL DUST SHIELDING AROUND SANDBLASTING AREAS.
8. COLLECT AND DISPOSE OF ALL SPENT SANDBLAST GRIT, USE DUST CONTAINMENT FABRICS AND DUST COLLECTION HOPPERS AND BARRELS.
9. NON–HAZARDOUS SANDBLAST GRIT MAY BE DISPOSED IN PERMITTED CONSTRUCTION DEBRIS LANDFILLS OR PERMITTED SANITARY LANDFILLS.
10. IF SANDBLAST MEDIA CANNOT BE FULLY CONTAINED, CONSTRUCT SEDIMENT TRAPS DOWNSTREAM FROM BLASTING AREA WHERE APPROPRIATE.
11. USE SAND FENCING WHERE APPROPRIATE IN AREAS WHERE BLAST MEDIA CANNOT BE FULLY CONTAINED.
12. IF NECESSARY, INSTALL MISTING EQUIPMENT TO REMOVE SANDBLAST GRIT FROM THE AIR PREVENT RUNOFF FROM MISTING OPERATIONS FROM ENTERING DRAINAGE SYSTEMS.
13. USE VACUUM GRIT COLLECTION SYSTEMS WHERE POSSIBLE.
14. KEEP RECORDS OF SANDBLASTING MATERIALS, PROCEDURES, AND WEATHER CONDITIONS ON A DAILY BASIS.
15. TAKE ALL REASONABLE PRECAUTIONS TO ENSURE THAT SANDBLASTING GRIT IS CONTAINED AND KEPT AWAY FROM DRAINAGE STRUCTURES.
16. SAND BLASTING MEDIA SHOULD ALWAYS BE STORED UNDER COVER AWAY FROM DRAINAGE STRUCTURES.
17. ENSURE THAT STORED MEDIA OR GRIT IS NOT SUBJECTED TO TRANSPORT BY WIND.
18. ENSURE THAT ALL SANDBLASTING EQUIPMENT AND STORAGE CONTAINERS COMPLY WITH CURRENT LOCAL, STATE, AND FEDERAL REGULATIONS.
19. CAPTURE AND TREAT RUNOFF, WHICH COMES INTO CONTACT WITH SANDBLASTING MATERIALS OR WASTE.

No.	DATE	REVISION

SEAL:

_____ DATE _____
DESIGN ENGINEER:

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

GENERAL EROSION CONTROL NOTES

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–33

SHEET OF

CAD FILE PATH:
PLOT DATE:

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
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DATE

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STATE OF TEXAS
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REGISTERED PROFESSIONAL ENGINEER

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1,800 FEET WEST OF SH 35
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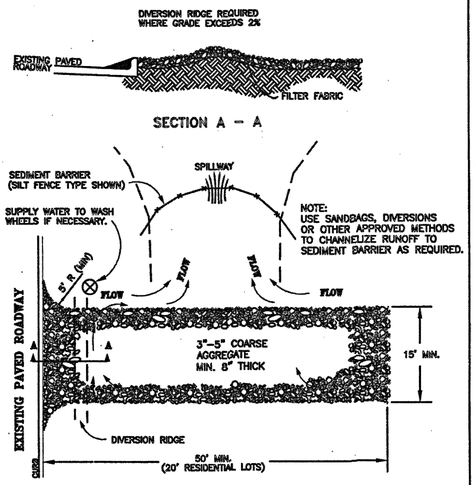
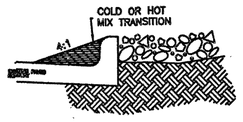
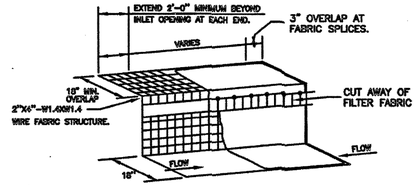
PLOT TIME:

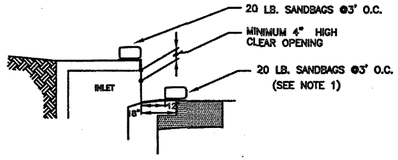


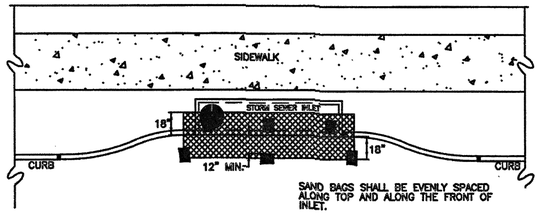
WHEN SEDIMENT HAS SUBSTANTIALLY CLOGGED THE VOID AREA BETWEEN THE ROCKS, THE AGGREGATE MAT MUST BE WASHED DOWN OR REPLACED. PERIODIC RE–GRADING AND TOP DRESSING WITH ADDITIONAL STONE MUST BE DONE TO KEEP THE EFFICIENCY OF THE ENTRANCE FROM DIMINISHING.



TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIT
N.T.S.







SAND BAGS SHALL BE EVENLY SPACED ALONG TOP AND ALONG THE FRONT OF INLET.

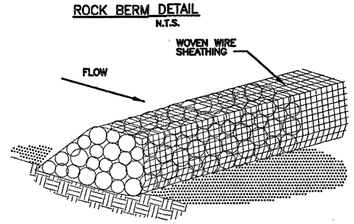
CURB INLET PROTECTION DETAIL
N.T.S.

NOTES:

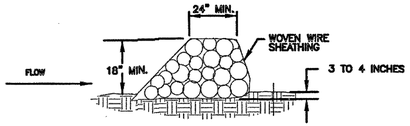
1. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL TO PROVIDE A 4" MINIMUM CLEAR OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION
2. INSPECTION SHALL BE MADE BY CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTION IF THE STORMWATER BEGINS TO OVERTOP THE CURB.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF THE SEDIMENT IS STABILIZED.

INLET OPENING	MINIMUM NUMBER OF SAND BAGS	
	TOP	FRONT
5'	2	3
10'	3	3
15'	3	4
20'	4	4

ROCK BERM DETAIL
N.T.S.



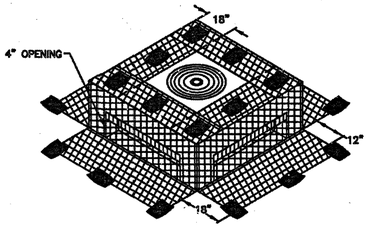
ISOMETRIC PLAN VIEW



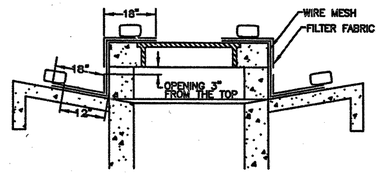
CROSS SECTION
N.T.S.

ROCK BERM GENERAL NOTES

1. USE ONLY OPEN GRADED ROCK 4–8 INCHES IN DIAMETER FOR STREAM FLOW CONDITION. USE OPEN GRADED ROCK 3–5 INCHES IN DIAMETER FOR OTHER CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING A MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE SIZE OF 20 GAUGE AND SHALL BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP.
3. THE ROCK BERM SHALL BE INSPECTED EVERY TWO WEEKS OR AFTER EACH 1/2" RAIN EVENT AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE–THIRD OF THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.
6. ROCK BERM SHOULD BE USED AS CHECK DAMS FOR CONCENTRATED FLOW AND ARE NOT INTENDED FOR USE IN PERIMETER PROTECTION.

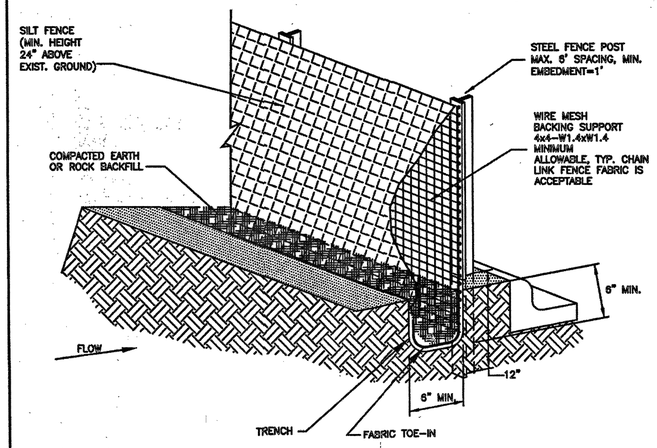


ISOMETRIC VIEW



SECTION

FILTER FABRIC WYE INLET PROTECTION
N.T.S.

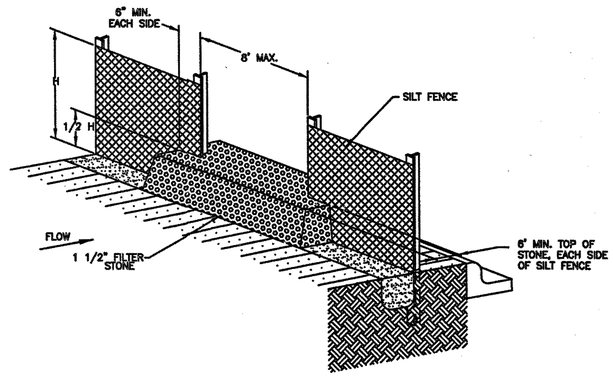


ISOMETRIC PLAN VIEW
N.T.S.

SILT FENCE GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. INSPECTION SHALL BE MADE EVERY TWO WEEKS AND AFTER EACH 1/2" RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

NOTE: STONE OVERFLOW STRUCTURES OF OTHER OUTLET CONTROL DEVICES SHALL BE INSTALLED AT ALL LOW POINTS ALONG THE FENCE OR EVERY 300 FEET IF THERE IS NO APPARENT LOW POINT



SILT FENCE
STONE OVERFLOW STRUCTURE
N.T.S.

CAD FILE PATH:
PLOT DATE:

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

EROSION CONTROL DETAILS – 1

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–34

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849–6681 FAX: (979) 849–4689
REG. NO. F–825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

EROSION CONTROL DETAILS – 1
SL–34

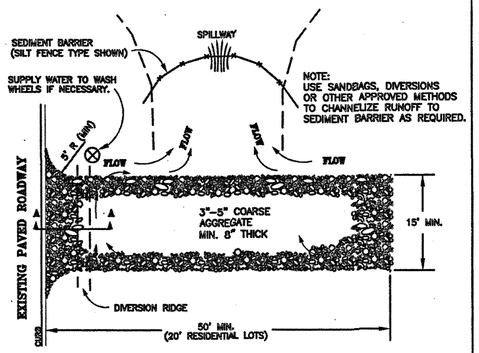
PROJECT NO. 13781

1 SHEET SET.DWG

PLOT TIME:

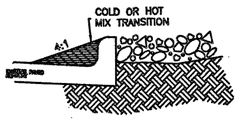
DIVERSION RIDGE REQUIRED WHERE GRADE EXCEEDS 2%

SECTION A – A



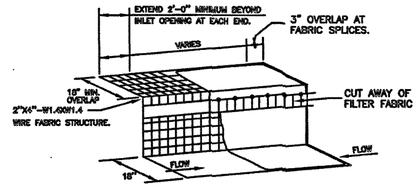
PLAN

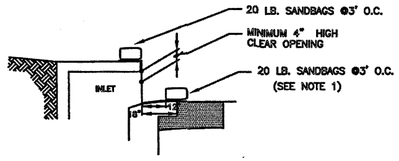
WHEN SEDIMENT HAS SUBSTANTIALLY CLOGGED THE VOID AREA BETWEEN THE ROCKS, THE AGGREGATE MAT MUST BE WASHED DOWN OR REPLACED. PERIODIC RE–GRADING AND TOP DRESSING WITH ADDITIONAL STONE MUST BE DONE TO KEEP THE EFFICIENCY OF THE ENTRANCE FROM DIMINISHING.

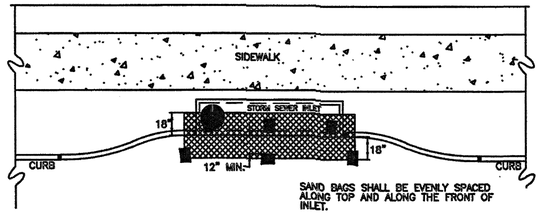


TRANSITION

TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIT
N.T.S.







SAND BAGS SHALL BE EVENLY SPACED ALONG TOP AND ALONG THE FRONT OF INLET.

CURB INLET PROTECTION DETAIL
N.T.S.

NOTES:

1. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL TO PROVIDE A 4" MINIMUM CLEAR OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION
2. INSPECTION SHALL BE MADE BY CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTION IF THE STORMWATER BEGINS TO OVERTOP THE CURB.
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INLET OPENING	MINIMUM NUMBER OF SAND BAGS	
	TOP	FRONT
5'	2	3
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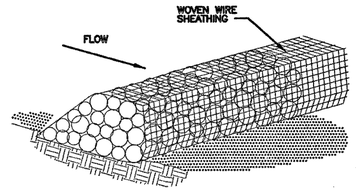
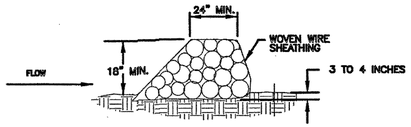
15'	3	4
20'	4	4

ROCK BERM DETAIL
N.T.S.



ISOMETRIC PLAN VIEW



CROSS SECTION
N.T.S.

ROCK BERM GENERAL NOTES

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3. THE ROCK BERM SHALL BE INSPECTED EVERY TWO WEEKS OR AFTER EACH 1/2" RAIN EVENT AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTEDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

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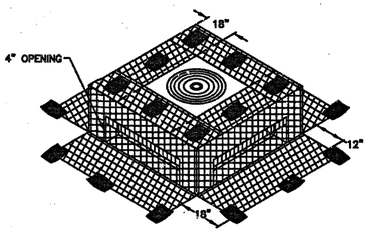
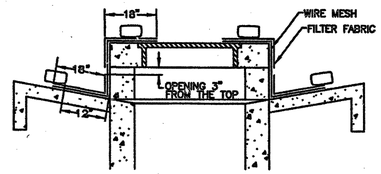
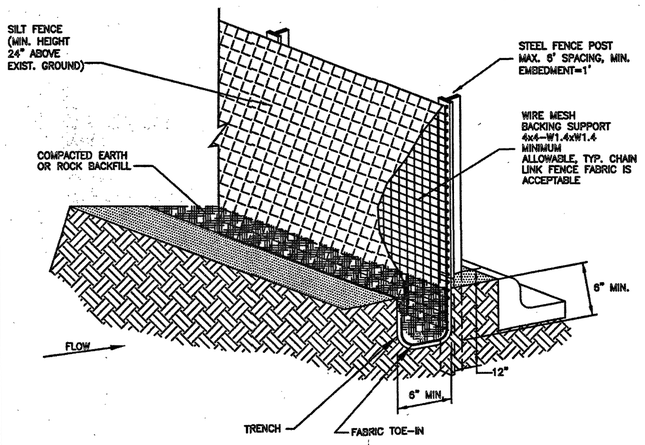


ISOMETRIC VIEW



SECTION

FILTER FABRIC WYE INLET PROTECTION
N.T.S.



ISOMETRIC PLAN VIEW
N.T.S.

SILT FENCE GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

5. INSPECTION SHALL BE MADE EVERY TWO WEEKS AND AFTER EACH 1/2" RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

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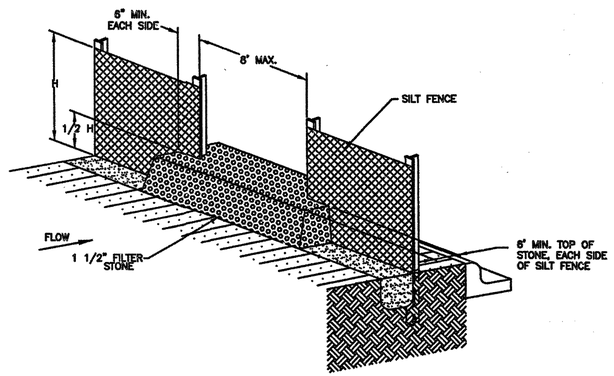
NOTE: STONE OVERFLOW STRUCTURES OF OTHER OUTLET CONTROL DEVICES SHALL BE INSTALLED AT ALL LOW POINTS ALONG THE FENCE OR EVERY 300 FEET IF THERE IS NO APPARENT LOW POINT



SILT FENCE
STONE OVERFLOW STRUCTURE
N.T.S.

CAD FILE PATH:
PLOT DATE:

No.	DATE	REVISION

SEAL:

DESIGN ENGINEER: _____ DATE _____

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

EROSION CONTROL DETAILS – 1

JOB No.:
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:

SL–34

SHEET OF

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN BT
CHECKED
DATE

B&L
BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515
PHONE: (979) 849–6681 FAX: (979) 849–4689
REG. NO. F–825

STATE OF TEXAS
DOUGLAS B. ROESLER
56739
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739

Date: 12-13-20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

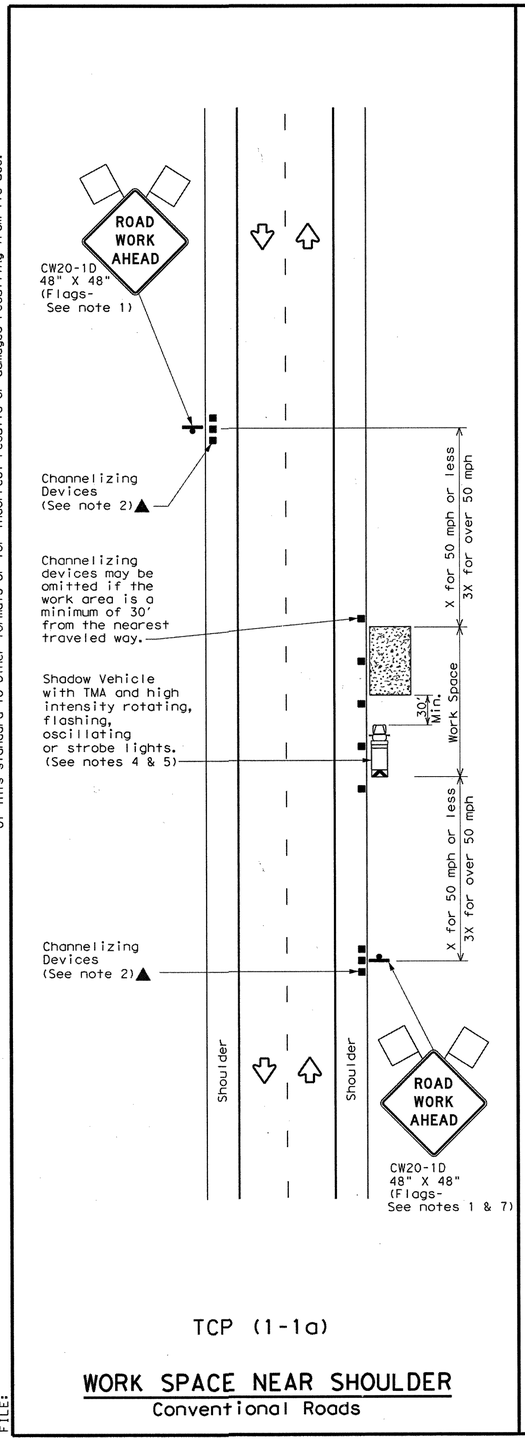
ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

EROSION CONTROL DETAILS – 2
SL–35

PROJECT NO. 13781

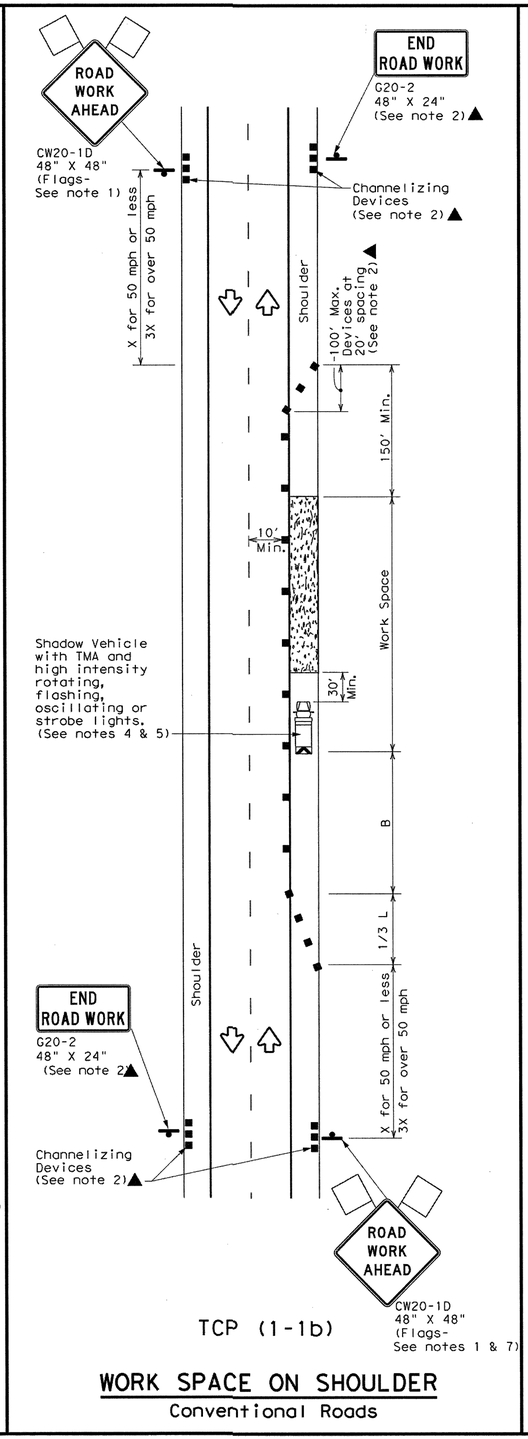
1 SHEET SET.DWG

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



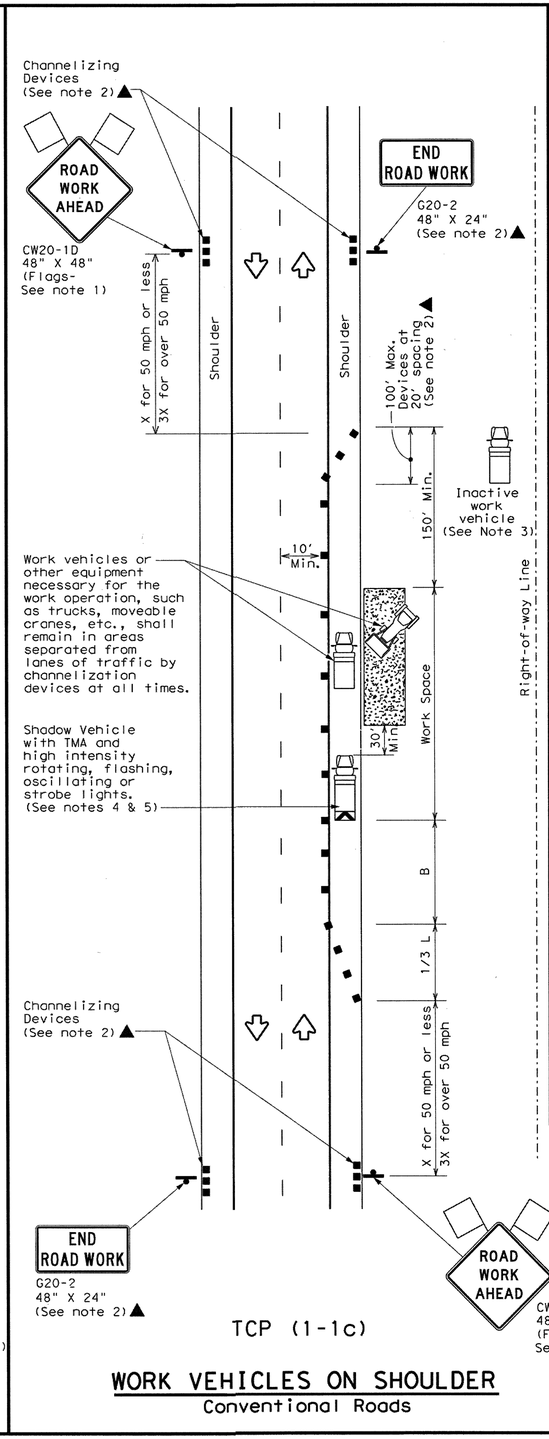
TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (1-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

DATE:
FILE:

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1)for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation — Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-18

FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-94 4-98 8-95 2-12 1-97 2-18	DIST	COUNTY		SHEET NO.

151

NO.	DATE	DESCRIPTION	APPROVED

REVISIONS

DESIGNED DR
DRAWN
CHECKED
DATE

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST, ANGLETON, TEXAS 77515
PHONE: (979) 849-6681 FAX: (979) 849-4689
REG. NO. F-825

STATE OF TEXAS · DOUGLAS B. ROESLER · 56739 · REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Douglas B. Roesler P.E. 56739
Date: 12/13/20

OWNER:
MR. BILL BROWN
BROWNSTONE GROUP, INC.
6517 MAPLERIDGE
HOUSTON, TEXAS 77081
713-545-0826

PLAN:
PROFILE:
HORIZONTAL:
VERTICAL:

ANGLETON VILLAGE APARTMENTS
14.571 ACRE TRACT ON HENDERSON RD.
1,800 FEET WEST OF SH 35
108 - 1BR, 2BR AND 3BR UNITS

TRAFFIC CONTROL PLAN
TCP (1-1) – 18

PROJECT NO. 13781

30

781 SHEET SET.DWG

Planning and Zoning Commission Meeting Calendar 2021

Thursday, January 7, 2021 at 12:00 pm

Thursday, February 4, 2021 at 12:00 pm

Thursday, March 4, 2021 at 12:00 pm

Thursday, April 1, 2021 at 12:00 pm

Thursday, May 6, 2021 at 12:00 pm

Thursday, June 3, 2021 at 12:00 pm

Thursday, July 1, 2021 at 12:00 pm

Thursday, August 5, 2021 at 12:00 pm

Thursday, September 2, 2021 at 12:00 pm

Thursday, October 7, 2021 at 12:00 pm

Thursday, November 4, 2021 at 12:00 pm

Thursday, December 2, 2021 at 12:00 pm