The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

SPECIAL PLATINUM ROADS PANEL MEETING (CITY HALL) June 01, 2023; 5:30 PM Woodcreek, Texas

MEETING NOTICE

The Platinum Roads Panel of the City of Woodcreek, Texas will conduct a Special Meeting at Woodcreek City Hall, 41 Champions Circle, Woodcreek, Texas. The meeting will be held on Thursday, June 01, 2023 at 5:30 PM.

All attendees are encouraged to wear face coverings when a minimum of six-foot social distancing cannot be maintained. Smoking is not allowed anywhere on the property of City Hall.

The public may watch this meeting live at the following link:

https://zoom.us/j/95319817327?pwd=d2VWUmVHeEdzdWN2OWd2S0FMVjhvQT09

Meeting ID: 953 1981 7327; Passcode: 529011

A recording of the meeting will be made and will be available to the public in accordance with the Texas Public Information Act upon written request. This notice, as amended, is posted pursuant to the Texas Open Meetings Act (Vernon's Texas Codes Ann. Gov. Code Chapter 551).

The City of Woodcreek is committed to compliance with the Americans with Disabilities Act. Reasonable modifications and equal access to communications will be provided upon request. Please call the City Secretary's Office at 512-847-9390 for information. Hearing-impaired or speech disabled persons equipped with telecommunications devices for the deaf may call 7-1-1 or may utilize the statewide Relay Texas program at 1-800-735-2988.

Pursuant to Section 30.07, Penal Code (trespass by license holder with an openly carried handgun), a person licensed under Subchapter H, Chapter 411, Government Code (handgun licensing law), may not enter this property with a handgun that is carried openly.

It is anticipated that members of other City Boards, Commissions, Panels and/or Committees may attend the meeting in numbers that may constitute a quorum of the other City Boards, Commissions, Panels and/or Committees. Notice is hereby given that this meeting, to the extent required by law, is also noticed as a meeting of the other City Boards, Commissions, Panels and/or Committees of the City, whose members may be in attendance. The members of the City Boards, Commissions, Panels and/or Committees may participate in discussions on the items listed on this agenda, which occur at this meeting, but no action will be taken by those in attendance unless such action item is specifically listed on an agenda during a regular or special meeting for the respective Board, Commission, Panel and/or Committee subject to the Texas Open Meetings Act.

The City Council may retire to Executive Session any time during this meeting, under Texas Government Code, Subchapter D. Action, if any, will be taken in open session.

This agenda has been reviewed and approved by the City's legal counsel and the presence of any subject in any Executive Session portion of the agenda constitutes a written interpretation of Texas Government Code Chapter 551 by legal counsel for the governmental body and constitutes an opinion by the attorney that the items discussed therein may be legally discussed in the closed portion of the meeting considering available opinions of a court of record and opinions of the Texas Attorney General known to the attorney. This provision has been added to this agenda with the intent to meet all elements necessary to satisfy Texas Government Code Chapter 551.144(c) and the meeting is conducted by all participants in reliance on this opinion.

Any citizen shall have a reasonable opportunity to be heard at any and all meetings of the Governing Body in regard to: (1) any and all matters to be considered at any such meeting, or (2) any matter a citizen may wish to bring to the Governing Body's attention. No member of the Governing Body may discuss or comment on any citizen public comment, except to make: (1) a statement of specific, factual information given in response to the inquiry, or (2) a recitation of existing policy in response to the inquiry. Any deliberation of or decision about the subject of the inquiry shall be limited to a proposal to place the subject on the agenda for a subsequent meeting per Texas Local Government code Sec. 551.042

*Citizen comments will be allowed at the beginning of every meeting, or alternatively, before an item on the agenda upon which the citizen wishes to speak is to be considered. All citizens will be allowed to comment for **three (3) minutes** per person and shall be allowed more time at the Mayor or Chair's discretion. In addition, citizens may pool their allotted speaking time. To pool time, a speaker must present the names individuals present in the audience who wish to yield their three(3) minutes. Citizens may present materials regarding any agenda item to the City Secretary at or before a meeting, citizens attending any meeting are requested to complete a form providing their name, address, and agenda item/concern, but are not required to do so before speaking and presenting it to the City Secretary prior to the beginning of such meeting. Comments may only be disallowed and/or limited as per Government Code § 551.007(e).*

*Submit written comments by email to woodcreek@woodcreektx.gov by **NOON,** the day prior to the meeting. Please include your full name, home or work address, and the agenda item number. Written comments will be part of the official written record only.*

AGENDA

CALL TO ORDER

ROLL CALL and ESTABLISH QUORUM

PUBLIC COMMENTS

REPORTS FROM OFFICERS AND COUNCIL LIAISONS

Report by Platinum Roads Panel Liaison.

Report by City Manager.

NEW BUSINESS

1. Discuss and Take Possible Action on the 2023 Woodcreek Roads Project RFP.

ANNOUNCEMENTS

ADJOURN

POSTING CERTIFICATION

I certify that the above notice was posted on the **26th day of May, 2023 at 3:45PM**

By: _____

Suzanne J. MacKenzie, City Secretary

City of Woodcreek, Texas

The City of Woodcreek

IN THE MIDST OF THE TEXAS HILL COUNTRY

RESIDENTIAL STREET MILL & OVERLAY PROJECT

Prepared By

K FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

K Friese & Associates, Inc.
1120 S. Capital of Texas Highway
CityView 2 Suite 100
Austin, Texas 78746

May 2023

CONTRACT DOCUMENTS
AND TECHNICAL SPECIFICATIONS
FOR

RESIDENTIAL STREET MILL & OVERLAY PROJECT

Prepared For:
City of Woodcreek

Prepared By:
K Friese & Associates, Inc.
Firm #6535
1120 S. Capital of Texas Highway
CityView 2 Suite 100
Austin, Texas 78746

May, 2023

CITY OF WOODCREEK
CONTRACT DOCUMENTS – TABLE OF CONTENTS

RESIDENTIAL STREET MILL & OVERLAY PROJECT

Document Number	Title
BIDDING REQUIREMENTS, CONTRACT FORMS, & CONDITIONS OF THE CONTRACT	
INTRODUCTORY INFORMATION	
	Title Page
	Table of Contents
DIVISION 0 – BIDDING AND CONTRACT DOCUMENTS	
C-001	Invitation to Bid
C-200	Instructions to Bidders
C-410	Bid Form
	CIQ Questionnaire
	Form 1295
C-430	Bid Bond
C-510	Notice of Award
C-520	Form of Agreement
C-550	Notice to Proceed
C-610	Performance Bond
C-615	Payment Bond
C-700	Standard General Conditions
C-800	Supplementary Conditions
SPECIAL SPECIFICATIONS	
01000	Governing Technical Specifications
01380	Construction Photographs
02000	Residential Street Mill & Overlay Project Plans, Details and Notes Index

Invitation to Bid – City of Woodcreek Residential Street Mill & Overlay

Sealed bids are invited for the **City of Woodcreek Residential Street Mill & Overlay**, defined in the Contract Documents. The Project is generally described as a Mill and Overlay of thirty (30) residential streets:

1. Augusta Drive
2. Augusta Lane
3. Brookmeadow Drive
4. Brookside Drive
5. Canyon Creek Circle
6. Champion Court
7. Champion Circle
8. Country Court
9. Country Lane
10. Cypress Point
11. Deerfield Drive
12. Doolittle Drive
13. Elmbrook Drive
14. Garrison Trail
15. Jack Miller Drive
16. McGregor Circle
17. Overbrook Court
18. Overlook Court
19. Palmer Lane
20. Par Circle
21. Par View Drive
22. Pebblebrook Lane
23. Shady Grove Lane
24. Spalding Circle
25. Stonehouse Circle
26. Tremont Trace
27. Westwood Drive
28. Wildwood Circle
29. Woodridge Circle
30. Woodview Court

All streets sum to approximately 9.0 miles in the City of Woodcreek.

Sealed bids in duplicate will be received at the City of Woodcreek at 41 Champions Circle, Woodcreek, TX 78676 Attn: City Secretary by **Time p.m. on Day, Month XX, 2023.**

Procedures for submitting bids, bidder qualifications, other pertinent information are contained in the Instructions to Bidders and corresponding Contract Documents. The owner reserves the right to reject any or all bids.

A non-mandatory pre-bid conference will be held at the City of Woodcreek at 41 Champions Circle, Woodcreek, TX 78676 at **Time p.m**., local prevailing time, on **Day, Month XX, 2023**. All questions should be submitted by **Time p.m. on Day, Month XX, 2023** via CivCast at https://www.civcastusa.com/project/63e51db6e5c396435c651c43/summary or to Ryan Thomas, P.E. at Rthomas@KFriese.com, (512) 338-1784 fax.

Project Manual documents are available online via CivCast at https://www.civcastusa.com/project/63e51db6e5c396435c651c43/summary or Ryan Thomas, P.E. at Rthomas@KFriese.com (512) 518-5853, or at the City of Woodcreek at 41 Champions Circle, Woodcreek, TX 78676.

INSTRUCTIONS TO BIDDERS

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ARTICLE 1 – DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

B. *Owner* - The word "Owner" in these Specifications shall be understood as referring to the City of Woodcreek, Hays County, Texas.

C. *Engineer* - The word "Engineer" in these Specifications shall be understood as referring to K Friese and Associates, Engineer of the Owner, or to such supervisor or representative as may be authorized by said Owner to act for Owner in any particular position.

D. *Inspection* – The word "inspection", or other forms of the work, as used in the Contract Documents for this Project, shall be understood as having reference to the Owner or his designated representative who will observe the construction on behalf of the Owner. The Owner's representative will observe and check the construction in sufficient detail to satisfy himself/herself that the work is proceeding in general accordance with the Contract Documents, but he will not be a guarantor of the Contractor's performance.

E. *Testing* – Testing and control of all materials used in the work shall be done by an approved commercial laboratory, employed and paid directly by the Owner. When the material tested does not meet Specification requirements, the cost of additional testing related to this material shall be borne by the Contractor. The Contractor shall furnish, at his own expense, all necessary specimens for testing of materials, as required by the Engineer. All test results shall be reported to the Owner or the Engineer by the laboratory.The Contractor and any subcontractor shall keep accurate records showing the names and occupations of all laborers, workmen and mechanics employed by him in connection with this Project which shall be available for inspection by the Owner; or Engineer.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Copies of the Contract Documents, Plans and Specifications are on file and may be obtained at no charge and are available online via CivCast at https://www.civcastusa.com/project/63e51db6e5c396435c651c43/summary

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

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ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, at Owner's request, the apparent Bidder may be asked to submit written evidence within 10 days. Bidder shall submit evidence as financial data, previous experience, present commitments, and such other data as may be called for below.

3.02 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 *Underground Facilities*

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.02 *Hazardous Environmental Condition*

A. The Supplementary Conditions identify any reports and drawings known to Owner relating to a Hazardous Environmental Condition identified at the Site.

B. Copies of reports and drawings referenced in Paragraph 4.03.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.06 of the General Conditions has been identified and established in Paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.03 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 4.06 of the General Conditions.

4.05 The Bidder will have access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such

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explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.06 A. Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of contract documents (other than portions thereof related to price) for such other work.

B. Paragraph 6.13.C of the General Conditions indicates that if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.07 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, and the other related data identified in the Bidding Documents;

B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;

D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Paragraph 4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in the Paragraph 4.06 of the Supplementary Conditions as containing reliable "technical data";

E. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder’s safety precautions and programs;

F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;

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G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and

I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

4.09 *Prevention of Accident and Damage to Work*

A. The Contractor shall at all times during the course of construction on this Project exercise such precautions as are necessary for the prevention of accidents. The safety provisions, as outlined in the "Manual of Accident Prevention in Construction", published by the Associated General Contractors of America, shall be observed to such extent that such provisions do not conflict with existing State Laws and City Ordinances.

B. No public road or entrance to residential lot shall be entirely closed. It shall be the responsibility of the Contractor to build and maintain all weather bypasses and detours, if necessary, and to properly light, barricade and mark all bypasses and detours that might be required on and across the roads in the work included in this contract.

C. Where the work is carried on in or adjacent to any street, alley or public place the Contractor shall at his own cost and expense, furnish and erect such barricades, fences, lights, and danger signals, shall provide such watchmen, and shall provide such other precautionary measures for the protection of persons or property and of the work as are necessary. Barricades shall conform to the latest edition of the Manual on Uniform Traffic Control Devices. Sufficient numbers of barricades shall be erected to keep vehicles from being driven on or into any work under construction. The Contractor shall furnish watchmen in sufficient number to protect the work.

D. The Contractor will be held responsible for all damage to the work due to failure of barricades, signs, lights and watchmen to protect it and whenever evidence is found of such damage, the Contractor shall immediately remove the damaged portion and replace it at his cost and expense. The Contractor's responsibility for the maintenance of barricades, signs, and lights, and for providing watchmen shall not cease until the Project shall have been accepted by the Owner.

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4.10 *Reference Specifications*

A. Where reference is made in the Specifications to specifications compiled by other agencies, organizations or departments, such reference is made for expediency and standardization, and such specifications referred to are hereby made a part of these Specifications.

4.11 *Used Material*

A. No material which has been used by the Contractor for any temporary purpose whatsoever is to be incorporated in the permanent structure without written consent of the Engineer.

4.12 *Guaranty Against Defective Work*

A. The Contractor shall indemnify the Owner against any repairs which may become necessary to any part of the work performed under the Contract, arising from defective workmanship or materials used therein, for a period of one (1) year from the date of final acceptance of the work required under this contract.

4.13 *Cleanup*

A. During Construction – The Contractor shall at all times keep the job site as free from excess material, debris, and rubbish as is practicable, and shall remove same from any portion of the job site, when it becomes objectionable or interferes with the progress of the Project.

B. Final – upon completion of the work, the Contractor shall remove from the site, all materials, tools and equipment belonging to him, and leave the site with an appearance acceptable to the Engineer.

4.14 *Implied Work*

A. Work specified in the Specifications but not shown on the Plans, and work drawn on the Plans but to specified are to be executed as if fully set out in both ways; and any work or material which is not directly or indirectly noted in the Specifications or Plans, but is necessary for the proper carrying out of the obvious intentions thereof, is to be understood as implied work and to be provided by the Contractor in his proposal as fully as if specifically described or delineated. Any discrepancies between Plans and Specifications must be reported to the Engineer for correction and interpretation before the work is executed.

4.15 *Safety Requirements*

A. The Contractor shall at all times conduct all phases of his operations in observance of the requirements of the Occupational Safety and Health Act of 1970, and the Texas Occupational Safety Law.

4.16 *Damage to Work (Losses from Natural Causes)*

A. All loss or damage to the Contractor arising out of the nature of the work to be done, or from the action of the elements, or from unforeseen circumstances in the prosecution of same, or

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from unusual obstructions or difficulties which may be encountered in the prosecution of the work, shall be sustained and borne by the Contractor at his own cost and expense.

ARTICLE 5 – PRE-BID CONFERENCE

5.01 A pre-Bid conference will be held at 1:00 p.m. local time on Day, Month XX, 2023 at City of Woodcreek at 41 Champions Circle, Woodcreek, TX 78676. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 6 – SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

6.02 The work is to be located within the City of Woodcreek as shown on the Project Location Map in the technical. Each person submitting a bid on the proposed work is required to inform himself/herself fully of the conditions relating to the construction and to the labor conditions under which the work will be performed.

6.03 Materials delivered to the site of the work in advance of their use shall be so stored as to cause the least inconvenience, and in a manner satisfactory to the Engineer.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

7.03 The proposal as submitted by the Contractor must be so constructed as to be responsive to or take into account any addendum or addenda issued by the Engineer and received by the Bidder.

ARTICLE 8 – BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price and in the form of a certified check, bank money order, or a Bid

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bond (on the form C-430) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.

8.02 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

9.01 The times for Substantial Completion and readiness for final payment are to be set forth by Bidder in the Bid and will be entered into the Agreement. Substantial Completion is desired within 60 calendar days. The times will be taken into consideration by Owner during the evaluation of Bids, and it will be necessary for the apparent Successful Bidder to satisfy Owner that it will be able to achieve Substantial Completion and be ready for final payment within the times designated in the Bid.

9.02 Work on the Project is to be fully completed within the number of consecutive calendar days set forth in the Proposal after written notice to proceed is issued. Time extensions will not be granted for rain, wind flood, or other natural phenomena of normal intensity for the locality where Work is performed. For purpose of determining the extent of a delay attributable to unusual rainfall, the number of rain days experienced during a month will be compared to the normal weather recorded and expected for Hays County, Texas. Normal rainfall compiled by the National Oceanic and Atmospheric Administration, is considered a part of the Calendar Day Contract, and is not a justification for an extension of time. Listed below as follows are the mean number of days in which there occurred 0.25 inch or more of precipitation:

January	4 days
February	2 days
March	4 days
April	2 days
May	3 days
June	2 days
July	1 days
August	5 days
September	5 days
October	2 days
November	1 days
December	4 days

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ARTICLE 10 – LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute,

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.

12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 13 – PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents.

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13.02 All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each [section, Bid item, alternative, adjustment unit price item, and unit price item] listed therein. In the case of optional alternatives the words "No Bid," "No Change," or "Not Applicable" may be entered.

13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.

13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.

13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.

13.06 A Bid by an individual shall show the Bidder's name and official address.

13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.

13.08 All names shall be printed in ink below the signatures**.**

13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

13.10 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS

14.01 *Unit Price*

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.

B. The total of all estimated prices will be the sum of the products of the estimated quantity to complete at each item's corresponding unit price up to ten (10) street projects outlined in the contract documents. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.

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C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 15 – SUBMITTAL OF BID

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the following documents:

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to City of Woodcreek Attn: City Secretary.

15.03 The bidder must have his proposal in the hands of the proper official before the advertised closing time. Bids received after the advertised closing time will not be considered and will be returned un-opened. The fact that a proposal was dispatched by mail, express, or otherwise, will not excuse failure to meet this requirement.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

16.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

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ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents.

19.06 If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.

19.07 The Owner, or the Engineer on the Owner's behalf, will notify the successful bidder in writing, within sixty (60) days after the date of receiving bids, of its acceptance of his proposal. The Contractor shall complete the execution of the required Bonds and Contract Documents within ten (10) days of such notice.

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ARTICLE 20 – SIGNING OF AGREEMENT

20.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

ARTICLE 21 – RETAINAGE

21.01 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

ARTICLE 22 – SUPERINTENDENCE OF CONSTRUCTION

22.01 The Contractor shall be personally in charge of all work and shall have on the job a competent construction superintendent. In the absence of the superintendent from the job site, an acting-superintendent shall be appointed to be in full charge of the work. The superintendent and acting superintendent shall be given full authority to follow any and all instructions given by the Owner or its representative.

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BID FORM

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Woodcreek at *41 Champions Cir, Woodcreek, TX 78676*

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

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

C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in SC-4.02 as containing reliable "technical data"

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the

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means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

1. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

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4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s). See the following sheet:

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Base Bid

Item No.	Description	Unit	Bid Unit Price
1006002	PREPARING ROW	STA	$
1646001	BROADCAST SEED (PERM) (RURAL) (SANDY)	SY	$
3406106	D-GR HMA(SQ) TY-D PG64-22	TON	$
3406272	FLEXIBLE PAVEMENT STRUCTURE REPAIR (8')	SY	$
3516004	PLAN & TEXT ASPH CONC PAV(0" TO 2")	SY	$
3546002	BIODEG EROSN CONT LOGS (INSTL)(12")	LF	$
6666048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	$
6666141	REFL PAV MRK TY I (Y)12"(SLD)(100MIL)	LF	$
6666147	REFL PAV MRK TY I (Y)24"(SLD)(100MIL)	LF	$
6726009	REFL PAV MRKR TY II-A-A	EA	$
5006001	MOBILIZATION	LSUM	$
5006001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	$
-	ENVIRONMENTAL & SWPP	LSUM	$

If the Total of All Bid Prices exceeds $3,500,000, the City may reduce the above quantities to provide a chipseal treatment instead of a mill and overlay for a minimum of one (1) centerline mile of streets and a maximum of three (3) centerline miles of streets, paid at the following bid unit prices:

Add Alternate

Item No.	Description	Unit	Bid Unit Price
3166224	AGGR(TY-PB GR-4 SAC-B)	CY	$
3166466	ASPH (CHFRS-2P OR CRS-2P)	GAL	$

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Unit Prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items and will be based on actual quantities authorized by the Owner as determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

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ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security in the form of 5% Bid Bond;

B. Form 1295

C. CIQ Questionnaire;

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

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A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____
Type (General Business, Professional, Service, Limited Liability):_____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____
(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in _Texas_ is ____/____/____.

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____(SEAL)

By: _____
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

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Bidder's Business Address _____

_____

Phone No. _____ Fax No. _____

E-mail _____ _____

SUBMITTED on _____, 20____.

State Contractor License No. _____. *[If applicable]*

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CONFLICT OF INTEREST QUESTIONNAIRE

For vendor doing business with local governmental entity

FORM CIQ

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

_____

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

_____ _____

Signature of vendor doing business with the governmental entity Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. ☐

6 UNSWORN DECLARATION

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Must file online at www.ethics.state.tx.us/File

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:

SURETY *(Name and Address of Principal Place of Business)*:

OWNER *(Name and Address)*:
City of Woodcreek
41 Champions Circle, Woodcreek, TX 78676

BID
Bid Due Date:
Description *(Project Name and Include Location)*:
Residential Street Mill & Overlay Project is a typical milling and overlay project, with select full depth repairs, of residential streets listed herein this contract for approximately 9.0 miles in the City of Woodcreek.

BOND
Bond Number:
Date *(Not earlier than Bid due date)*:
Penal sum _____ $ _____
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
_____ (Seal)	_____ (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

Notice of Award

Date: _____

Project: Residential Street Mill & Overlay	
Owner: City of Woodcreek	Owner's Contract No.:
Contract:	Engineer's Project No.: 0915
Bidder:	
Bidder's Address:	

You are notified that your Bid dated _____ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for _____

The Contract Price of your Contract is _____ Dollars ($_____).

_____ copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

_____ sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner [_____] fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20), General Conditions (Paragraph 5.01), and Supplementary Conditions (Paragraph SC-5.01).
3. Other conditions precedent:

   _____

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

_____
Owner

By:_____
Authorized Signature

_____
Title

Copy to Engineer

AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT

THIS AGREEMENT is by and between City of Woodcreek ("Owner") and

("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated upon streets identified in the Contract Documents. The Work is generally described as a Mill & Overlay of thirty (30) residential streets, and one (1) Add Alternate of asphalt level up and chip seal, for approximately 9.0 miles in the City of Woodcreek.

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: a Mill & Overlay of thirty (30) residential streets, and one (1) Add Alternate of asphalt level up and chip seal, for approximately 9.0 miles in the City of Woodcreek.

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by K Friese + Associates (Engineer), which is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.02 *Days to Achieve Substantial Completion and Final Payment*

A. The Work will be substantially completed within 90 calendar days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within 90 days after the date when the Contract Times commence to run.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and

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difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner $500 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner $500 for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A, 5.01.B, and 5.01.C below:

A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item.:

The Bid prices for Unit Price Work set forth as of the Effective Date of the Agreement are based on estimated quantities. As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions.

B. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 20th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously

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made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

a. 90 percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

b. 0 percent of cost of materials and equipment not incorporated in the Work (with the balance in retainage).

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

ARTICLE 7 – CONTRACTOR'S REPRESENTATIONS

7.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

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

C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph SC-4.06 of the Supplementary Conditions as containing reliable "technical data."

E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of

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construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

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

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 8 – CONTRACT DOCUMENTS

8.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement
2. Performance bond
3. Payment bond
4. Bid bond
5. General Conditions
6. Supplementary Conditions
7. Specifications as listed in the table of contents of the Project Manual.
8. Addenda
9. Exhibits to this Agreement (enumerated as follows):
    a. Contractor's Bid
    b. Documentation submitted by Contractor prior to Notice of Award
10. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

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a. Notice to Proceed

b. Work Change Directives.

c. Change Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 9 – MISCELLANEOUS

9.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

9.02 *Assignment of Contract*

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.03 *Successors and Assigns*

A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

9.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

9.05 *Contractor's Certifications*

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A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

This Agreement will be effective on _____).

OWNER:	CONTRACTOR
_____	_____
By: _____	By: _____
Title: _____	Title: _____
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest: _____	Attest: _____
Title: _____	Title: _____
Address for giving notices:	Address for giving notices:
_____	_____
_____	_____
_____	_____
	License No.: _____
(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)	Agent for service of process:
	_____

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Notice to Proceed

Date: _____

Project: Residential Street Mill & Overlay	
Owner: City of Woodcreek	Owner's Contract No.:
Contract:	Engineer's Project No.: 0915
Contractor:	
Contractor's Address:	

You are notified that the Contract Times under the above Contract will commence to run on_____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the number of calendar days to achieve Substantial Completion is 90 days, and the number of days to achieve readiness for final payment is 120 days.

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds and loss payees) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must:

_____

_____ _____

Owner

Given by:

_____ _____

Authorized Signature

_____ _____

Title

_____ _____

Date

Copy to Engineer

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

PERFORMANCE BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*: City of Woodcreek at 41 Champions Circle, Wimberly, TX 78676

CONSTRUCTION CONTRACT
Effective Date of the Agreement:
Amount:
Description *(name and location)*:

BOND
Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:
Amount:
Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____ *(seal)*	_____ *(seal)*
Contractor's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	**By:** _____
Signature	Signature *(attach power of attorney)*
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	**Attest:** _____
Signature	Signature
_____	_____
Title	Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within

two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*: City of Woodcreek at 41 Champions Circle, Wimberly, TX 78676

CONSTRUCTION CONTRACT
Effective Date of the Agreement:
Amount:
Description *(name and location)*:

BOND
Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:
Amount:
Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

_____ *(seal)*
Contractor's Name and Corporate Seal

By: _____
Signature

_____
Print Name

_____
Title

Attest: _____
Signature

_____
Title

SURETY

_____ *(seal)*
Surety's Name and Corporate Seal

By: _____
Signature *(attach power of attorney)*

_____
Print Name

_____
Title

Attest: _____
Signature

_____
Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond shall arise after the following:

   5.1 Claimants who do not have a direct contract with the Contractor,

      5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

      5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).

   5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

   7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

   7.2 Pay or arrange for payment of any undisputed amounts.

   7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or

(2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. **Definitions**

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default**: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*—The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

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12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*—See Paragraph 11.01 for definition.

17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*—The individual or entity named as such in the Agreement.

20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*—Sections of Division 1 of the Specifications.

22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.

23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

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27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*—Polychlorinated biphenyls.

31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.

37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

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40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.

46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.

47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.

48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work*—Work to be paid for on the basis of unit prices.

50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

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addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents; or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

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1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

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2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of

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the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

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1. *Contractor's Review of Contract Documents Before Starting Work*: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work*: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation , (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

   a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or

   b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or

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3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or

2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the

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Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and

2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

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4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

   a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

   b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

   a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

   b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

   c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

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4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

   a. reviewing and checking all such information and data;

   b. locating all Underground Facilities shown or indicated in the Contract Documents;

   c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and

   d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

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4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to

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permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

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ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

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C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.

E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

   a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

   b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners,

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employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

6. include completed operations coverage:

   a. Such insurance shall remain in effect for two years after final payment.

   b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of

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them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

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E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

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5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

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ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

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6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and

3) it has a proven record of performance and availability of responsive service.

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

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2. *Substitute Items:*

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,

b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services; and

4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

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B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. *Engineer's Cost Reimbursement*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or

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entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its

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use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner

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and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

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6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts

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any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

a. Submit number of Samples specified in the Specifications.

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b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the

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Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

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3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

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6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe

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access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

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ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws

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and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

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9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations

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on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of,

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and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of

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executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required*: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action*: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part;

2. approve the Claim; or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

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E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

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4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

   a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

   b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

   c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

   d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

   e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

   f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

   g. The cost of utilities, fuel, and sanitary facilities at the Site.

   h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.

   i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

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1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances:*

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in

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the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance:*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect to any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

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B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

   a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

   b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

   c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

   d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

   e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

   f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

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12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

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ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

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E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers,

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architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or

2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

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13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

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D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's

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review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

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a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due:*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

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14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

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1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;

   b. consent of the surety, if any, to final payment;

   c. a list of all Claims against Owner that Contractor believes are unsettled; and

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d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

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14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's repeated disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);

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2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other

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dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or

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2. agrees with the other party to submit the Claim to another dispute resolution process; or

3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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SUPPLEMENTARY CONDITIONS

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I. SUPPLEMENTARY CONDITIONS

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC C-700 (2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-4.02 *Subsurface and Physical Conditions*

A. No reports of adverse subsurface conditions are known by Owner.

SC-4.06 *Hazardous Environmental Conditions*

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

SC-5.04 *Contractor's Liability Insurance*

C. The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

a. State:	**Statutory**
b. Applicable Federal (e.g., Longshoreman's):	**Statutory**
c. Employer's Liability:	**$1,000,000**

2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

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eliminate the exclusion with respect to property under the care, custody and control of Contractor:

a. General Aggregate $2,000,000

b. Products - Completed Operations Aggregate $2,000,000

c. Personal and Advertising Injury $1,000,000

d. Each Occurrence (Bodily Injury and Property Damage) $1,000,000

e. Property Damage liability insurance will provide Explosion, Collapse, and Under-ground coverages where applicable.

f. Excess or Umbrella Liability

- **General Aggregate $5,000,000**
- **Each Occurrence $5,000,000**

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

a. Combined Single Limit of $1,000,000

4. The Contractual Liability coverage required by Paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:

a. Bodily Injury: Each Accident $1,000,000

b. Property Damage: Each Accident $1,000,000

SC-5.06 *Property Insurance*

SC-5.06

B. Contractor shall purchase and maintain *Builders Risk Insurance*, and any other additional property insurance required by Laws and Regulations, which insurance will include the interest of Owner, Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and

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subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

SC-6.10 *Taxes*

SC-6.10

B. Owner is exempt from payment of sales and compensating use taxes of the State of Texas and of cities and counties thereof on all materials to be incorporated into the Work.

1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.

2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

SC-6.17 *Shop Drawings and Samples*

F. Contractor shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing subsequent submittals of Shop Drawings, samples, or other items requiring approval and Contractor shall reimburse Owner for Engineer's charges for such time.

G. In the event that Contractor requests a change of a previously approved item, Contractor shall reimburse Owner for Engineer's charges for its review time unless the need for such change is beyond the control of Contractor.

SC-11.01 *Cost of the Work*

SC-11.01.A.5.c

c. *Construction Equipment and Machinery:*

1) Rentals of all construction equipment and machinery, and the parts thereof in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in

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accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment provided by the contractor. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than $1,000 will be considered small tools.

SC-11.03 *Unit Price Work*

The following SC is typically called a variation in estimated quantities clause and facilitates administrative resolution of situations where actual quantities differ materially from estimated quantities. Typically, the clause applies where the Bid price of an item of the Unit Price Work is more than 5 percent of the Contract Price and the actual quantity of the units of work performed varies by 15 to 25 percent.

SC-11.03.D

D. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:

1. The projected project work includes up to ten (10) projects at the shown estimated quantities.

SC-12.01 *Change of Contract Price*

SC-12.01.C ***Contractor's Fee.*** **Delete the semicolon at the end of GC 12.01.C.2.c, and add the following language:**

, provided, however, that on any subcontracted work the total maximum fee to be paid by Owner under this subparagraph shall be no greater than 27 percent of the costs incurred by the Subcontractor who actually performs the work;

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A. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include: (i) a concise breakdown of the award; (ii) a written explanation of the award specifically citing the Contract Document provisions deemed applicable and relied on in making the award.

B. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Controlling Law relating to vacating or modifying an arbitral award.

C. The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.

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SECTION 02000

RESIDENTIAL STREET MILL & OVERLAY PLANS, DETAILS AND NOTES INDEX

1. Project Location Map (1 page)
2. Roadway Details and Quantity Breakdown (2 page)
3. Quantity Summary (3 page)
4. General Notes (4 - 7 page)

Roadway Plan set provided separately, to include Roadway Standards, Pavement Standards, and Traffic Control Standards.

Issued for construction with the following:

The General Notes listed above and included herein have been prepared by me and are applicable to this project.

_____ _____

Jeremiah Davis, P.E. Date

STREET SUMMARY TABLE

STREET NAME	STATIONS	100 6002 PREPARING ROW	316 XXXX SEAL COAT	341 6040 D-GR HMA TY-D PG64-22	351 6004 FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")	354 6002 PLAN & TEXT ASPH CONC PAV(0" TO 2")	506 6041 BIODEG EROSN CONT LOGS (INSTL)(12")	666 6048 REFL PAV MRK TY I (W)24"(SLD)(100MIL)	666 6141 REFL PAV MRK TY I (Y)12"(SLD)(100MIL)	666 6147 REFL PAV MRK TY I (Y)24"(SLD)(100MIL)	672 6009 REFL PAV MRKR TY II-A-A
		STA	GAL	TON	SY	SY	LF	LF	LF	LF	EA
Augusta Ln	1+00.00 - 15+22.39	14.22	242.00	274.00		2416.23		16			
Augusta Dr	1+00.00 - 61+00.00	60.00	1138.00	1286.00	2.63	11378.81		32	97	17	
Country Ct	1+00.00 - 2+04.33	1.04	42.00	47.00		412.01					
Country Ln	1+00.00 - 14+84.34	13.84	361.00	408.00		3609.96		11			
Wildwood	1+00.00 - 9+92.68	8.93	167.00	188.00		1662.07					
Doolittle Dr	0+00.00 - 26+00.00	26.00	884.00	999.00	42.44	8836.39		13			
Jack Miller	1+00.00 - 7+33.40	6.33	157.00	177.00	11.39	1562.72		14	96		
Cypress Pt	1+00.00 - 16+98.55 0+00.00 - 8+03.85 1+00.00 - 7+45.87	30.48	778.00	879.00	0.44	7772.47					
Par Cir	1+00.00 - 4+22.82	3.23	84.00	95.00	307.17	839.40		14			32
Overbrook	0+00.00 -8+00.62	8.01	163.00	184.00		1623.50		14			
Westwood Dr	1+00.00 - 11+74.68	10.75	220.00	249.00	8.11	2195.85		17			
Pebblebrook Ln	1+00.00 - 21+78.96	20.79	378.00	427.00	500.31	3771.65					
Stonehouse Cir	0+00.00 - 7+94.67	7.95	226.00	255.00	16.90	2255.40	24	14			
Shady Grove	1+00.00 - 14+33.26	13.33	270.00	305.00	69.56	2690.59		22			16
Brookmeadow Dr	1+00.00 - 42+62.26	41.62	827.00	935.00	15.11	8266.90		24			80
Brookside Dr	1+00.00 - 12+. 02.72	11.03	72.00	81.00	393.12	710.29					
Elmbrook	1+00.00 - 4+81.40	3.81	87.00	98.00	312.32	863.61		14			32
Deerfield	0+48.04 - 70+04.02 1+00.00 - 7+18.85	75.75	93.00	105.00	1794.49	922.89		8			
Champion Cir	1+00.00 - 64+00.00	63.00	1329.00	1502.00	85.77	13285.99		23			64
Parview	1+00.00 - 13+26.21	12.26	1224.00	1383.00	14.67	12238.86		8			16
Overlook	1+00.00 - 4+98.10	12.26	245.00	277.00	0.22	2444.13		32			
Palmer Ln	1+00.00 - 18+77.18	17.77	398.00	450.00	24.67	3976.78					16
Wilson Cir	1+00.00 - 11+00.00	10.00	154.00	174.00	443.97	1534.43		9	61	14	
Spalding Cir	1+00.00 - 5+7.48	4.07	122.00	138.00		1215.79		10			16
Mcgregor	1+00.00 - 4+00.00	4.00	50.00	56.00		491.63					16
Canyon Creek Dr	1+00.00 - 20+83.54	19.84	418.00	472.00	568.10	4173.11		12			
Garrison Trail	1+00.00 - 2+80.35	1.80	32.00	36.00	307.06	317.68					
Woodview	1+00.00 - 4+12.28	3.12	58.00	65.00	468.39	571.76					
Woodridge	1+00.00 - 3+79.92	3.80	54.00	61.00	352.36	534.06					
Canyon Crk Cir	1+00.00 - 3+30.90	2.31	43.00	48.00	501.93	423.59					
Champion Ct	1+00.00 - 3+38.94	2.39	140.00	158.00		1395.86		14			32
Tremont Trace	1+00.00 - 6+95.93	5.95	103.00	116.00	238.60	1020.84		7			0
TOTALS		**519.69**	**10559.00**	**11928.00**	**6479.77**	**105415.25**	**24.00**	**328.00**	**254.00**	**31.00**	**320.00**

Item 1.

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

SUMMARY OF QUANTITIES

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING

(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	
DATE	5/11/2023
SHEET NUMBER	7 121

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2023 Residential Street Mill & Overlay Project Quantity Summary List

Base Bid

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
1006002	PREPARING ROW	STA	520
1646001	BROADCAST SEED (PERM) (RURAL) (SANDY)	CY	500
3406106	D-GR HMA(SQ) TY-D PG64-22	GAL	11,928
3406272	FLEXIBLE PAVEMENT STRUCTURE REPAIR (8”)	TON	6,480
3516004	PLAN & TEXT ASPH CONC PAV(0” TO 2”)	SY	105,415
3546002	BIODEG EROSN CONT LOGS (INSTL)(12”)	LF	24
6666048	REFL PAV MRK TY 1 (W)24”(SLD)(100MIL)	LF	328
6666141	REFL PAV MRK TY 1 (Y)12"(SLD)(100MIL)	LF	254
6666147	REFL PAV MRK TY 1 (Y)12"(SLD)(100MIL)	LF	31
6726009	REFL PAV MRKR TY II-C-R*	LF	320
5006001	MOBILIZATION	LSUM	1
5026001	BARRICADES, SIGNS AND TRAFFIC HOLDING	MO	1
-	ENVIRONMENTAL & SWPP	LSUM	6

Add Alternate

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
3166224	AGGR(TY-PB GR-4 SAC-B)	CY	TBD
3166466	ASPH (CHFRS-2P OR CRS-2P)	GAL	TBD

Residential Street Mill & Overlay

GENERAL NOTES

1. All construction shall be in accordance with the TxDOT Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges (STANDARD SPECIFICATIONS) dated November 1, 2014 included in "Plans, Details and Notes". The governing STANDARD SPECIFICATIONS may be accessed at the web address:

   https://www.txdot.gov/business/resources/txdot-specifications.html

2. The streets and their general limits that are the subject of the Work are shown on the Project Location Map in "Plans, Details and Notes".

3. Approximate data utilized to develop most of the repair quantities shown in the Bid Form are indicated on the Repair List in "Plans, Details and Notes". However, the Contractor is alerted to the fact that the Repair List is only intended to provide general scope and scale, and the actual quantities to be furnished under the contract or areas to be repaired shall be as determined by existing conditions and/or determined and/or laid out by the Engineer or Owner's representative. Some of the quantities in the Bid Form may be in excess of the Repair List quantities in anticipation of variances that can typically occur in a street maintenance project. Actual quantities may differ from the quantities shown in the Repair List or Bid Form, may be increased, or decreased, or additional areas may be identified for repair as determined by the Engineer or Owner's representative. Actual quantities provided by the Contractor shall be paid for at the unit price shown in the Bid Form for each item unless other provisions in the contract apply.

4. Prior to any construction, the Contractor shall convene a preconstruction conference between the City of Woodcreek, their self, the Engineer, any affected parties, and any other entity the City or Engineer may require.

5. Any existing utilities, pavement, curbs, sidewalks, structures, trees, lawns, etc., not intended to be disturbed, removed, or repaired under the contract and damaged by the Contractor, shall be restored, repaired, or replaced by the Contractor to the satisfaction of the Engineer or the Owner at the Contractor's sole expense.

6. The Contractor shall verify all depths and locations of existing utilities prior to any construction. Any conflict between existing utilities (other than typical irrigation system components as discussed herein) and any portion of the Work shall be brought to the attention of the Engineer for resolution prior to proceeding with the portion of the Work in conflict. No separate measurement or payment shall be made for existing utilities verification and this work shall be subsidiary to each bid item in the contract for which such verification is required by law or the contract provisions prior to performing the work prescribed by the bid item. The Contractor shall temporarily remove irrigation system components that are required to be removed to perform any portion of the Work; and shall reinstall said components as part of the completion of such portion of the Work. Irrigation pipes left disconnected in-place by the temporary removal shall be temporarily capped to prevent soil/debris from entering the system until the aforementioned reinstallation necessitates the removal of the temporary capping. The completed reinstallation shall comply with applicable City Code and shall be subject to the approval of the Engineer or Owner. Unless the pipes exceed two- inch (2") diameter, no separate measurement and payment shall be made for temporarily removing and reinstalling irrigation system components conflicting with any portion of the Work; and such temporary removal and subsequent reinstallation shall be subsidiary to each bid item in the contract for which such removal is required to perform the work prescribed by the bid item.

7. AII unpaved areas disturbed or damaged during construction of the Work shall be restored and re-vegetated as soon as practicable upon completion of activities causing the disturbance or damage. Restoration and re-vegetation of all disturbed or damaged areas shall be in accordance with section G7 of the Standard Specifications to appropriate lines and grades that preclude ponding of water and uneven terrain. The species of seed shall match the generally prevailing species in the vicinity of the area being restored; however the Contractor shall consult with the abutting lot(s) owner(s) and the Engineer or Owner's representative to determine the species of seed to be installed before ordering or placement. Finished restored and re-vegetated areas shall be subject to the approval of the Engineer or Owner's representative prior to final acceptance. Unless the Engineer determines that through no fault of the Contractor the limits of restoration and re-vegetation for the entire Work must exceed the total of an area fivefeet (5') in width along all construction areas, no separate measurement or payment shall be made for restoration and re-vegetation and this work shall be subsidiary to each bid item in the contract for which the work prescribed by the bid item causes restoration and re-vegetation to be required.

8. The Contractor shall keep accurate records of all construction that deviates from the Work described in the Project Manual documents. The Contractor shall furnish the City of Woodcreek accurate "As-Built" drawings and/or data following completion of all construction. These “As-Built” drawings and/or data shall meet with the satisfaction of the Engineer or Owner prior to final acceptance. No separate

measurement or payment shall be made for this item and this item shall be subsidiary to the various bid items in the contract.

9. Trash and debris generated by the Contractor shall be removed from rights-of-way, and easements by the Contractor. Trash and debris must be always kept off private property. Clean up shall be to the satisfaction of the Engineer or Owner prior to final acceptance. When construction is being carried out within easements, the Contractor shall confine his work to within the permanent and any temporary easements.

10. After each of the following operations and roadway: pavement improvements or other repairs; and the Contractor shall sweep all surfaces with a vacuum broom to remove fines and other residual waste material generated and Clean all concrete curbs, islands, medians, etc. that get coated with asphalt during construction. As approved, by the Engineer or Owner and where inaccessible for a vacuum broom, the Contractor shall use other appropriate means to adequately remove fines and residual waste. The Contractor shall also clean construction areas when directed by the Owner or Engineer. All property impacted by the Contractor, whether public or private, shall be cleaned to the satisfaction of the Owner or Engineer. No separate measurement or payment shall be made for this work and this work shall be subsidiary to the various bid items in the contract.

11. All excavation associated with the various bid items is unclassified and without regard to material encountered. No extra compensation shall be provided for encountering material that adversely impacts excavation.

12. Unless otherwise approved by the Engineer, all open excavations in excess of two inches (2”) in depth shall be filled at the end of each day. In all cases, it is the Contractor's responsibility to provide proper warning devices, barricades, etc. for the protection of pedestrians and traffic in the area of excavations, regardless of depth, until the excavation is completely filled. Subject to the approval of the Engineer, where an excavation to be left open overnight creates a drop-off in excess of two inches (2") abutting the edge of a roadway lane, CW-8-17 "Shoulder Drop Off' signs and vertical panel delineators shall be provided for the excavated area; where an excavation to be left open overnight creates a drop-off in excess of one-inch (1") but less than two inches (2") abutting the edge of a roadway lane, CW-8-17 "Shoulder Drop Off' signs shall be provided for the excavated area. No extra compensation shall be provided for this item and it shall be subsidiary to the bid item "BARRICADES, SIGNS, AND TRAFFIC HANDLING".

13. Where a bid item is measured by the ton or gallon, the Contractor shall provide documentation (i.e. daily run tickets, invoices, etc.) to the Owner to verify quantities in conjunction with any application for payment for such bid item. No extra compensation shall be made for providing this documentation and it shall be subsidiary to the various bid items in the contract.

14. The asphalt plant shall have truck scales as defined in Item 520. Give three weight tickets bearing the date, ticket number, the truck number, the gross, net & tare weights to the truck driver for the State inspector at the spreading and finishing operation. Trucks may be required to weigh on public scales or portable platform scales to verify the weight of the ticket.

15. The Contractor shall be responsible for determining and implementing measures necessary to protect the City and adhere to applicable State and City's environmental regulations as part of the Stormwater Pollution Prevention Plan (SW3P) submitted to the City prior to construction. For the entire Work, tack or prime coats shall not be applied when a rainfall event is imminent and shall be covered as soon as practicable. Any long term (more than a day) spoils or materials storage areas and, Contractor staging sites, shall be protected with physical erosion/sedimentation, filter, or other appropriate controls. Hazardous materials shall be kept in proper containment. All measures implemented shall be subject to the approval of the Engineer and the Contractor shall provide additional measures immediately upon direction by the Engineer. The Contractor shall immediately report to the City any spills of hazardous materials or pollutants and shall forthwith provide remediation of any such spill. No separate payment shall be made for complying with the foregoing requirements and such compliance shall be subsidiary to the various bid items in the contract.

19. Ensure that the asphalt for precoating the aggregate and the asphalt used for the surface treatment will not result in a reaction that may adversely affect the bonding of the aggregate and asphalt during the surface treatment operation.

20. Do not add bag house fines in the production of precoated material.

21. No material stockpiling on project is allowed.

22. Contractor retains ownership of salvaged materials from millings.

PREPARED FOR:

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT

PROJECT LENGTH
9.17 MILES

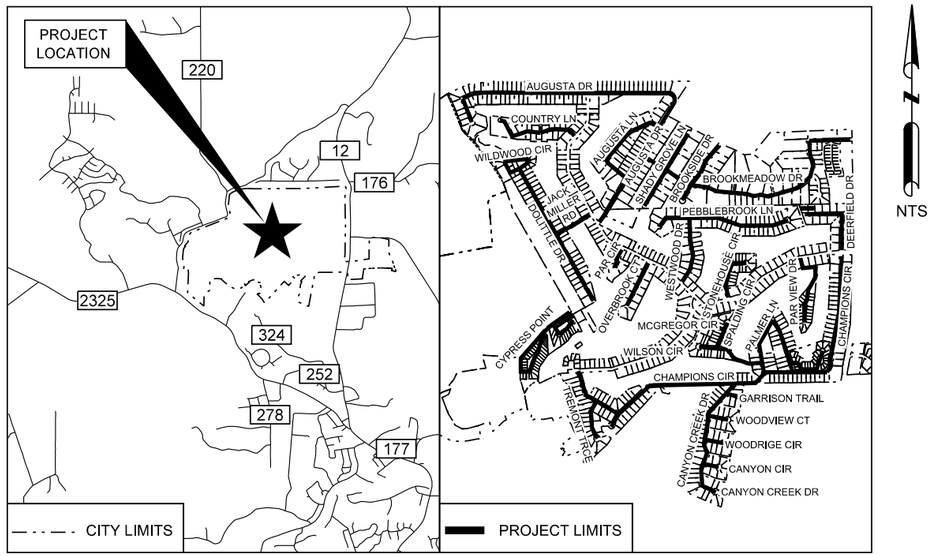
TYPICAL POSTED SPEED = 35 MPH

90% SUBMITTAL

MAY 2023

INDEX OF SHEETS

1	COVER SHEET
2-3	PROJECT LAYOUT SHEETS
4	GENERAL NOTES
5	SUMMARY OF QUANTITIES
6	TRAFFIC CONTROL NARRATIVE
7	TRAFFIC CONTROL DETAIL
8-14	BARRICADE AND CONSTRUCTION NOTES
15-75	ROADWAY PLAN SHEETS
76-103	PAVEMENT MARKING PLAN SHEETS
104-107	PAVEMENT MARKING STANDARDS
108	PAVEMENT DETAIL
109-112	EROSION, SEDIMENT, AND WATER POLLUTION STANDARDS



LOCATION MAP
NOT TO SCALE

PREPARED BY:

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

40 NE LOOP 410
MERCANTILE BUILDING SUITE 545
SAN ANTONIO, TEXAS 78216
P: 210-491-2391 F: 512-338-1784
TBPE Firm #6535
www.kfriese.com

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NOTES:

1) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF WOODCREEK, OR TXDOT STANDARD SPECIFICATIONS, AS INDICATED IN THESE PLANS. TXDOT STANDARDS SHALL BE USED UNLESS OTHERWISE NOTED.

2) REQUIRED SIGNS SHALL BE PLACED IN ACCORDANCE WITH TXDOT STANDARD DETAILS AND THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

JEREMIAH DAVIS, P.E.
PROJECT MANAGER

5/19/2023
DATE

ACCEPTED FOR CONSTRUCTION:

KEVIN, RULE
CITY OF WOODCREEK, TEXAS

DATE

THIS PLAN SET IS FULL SIZE AT 11" X 17"

CITY OF WOODCREEK - RESIDENTIAL STREET MILL & OVERLAY PROJECT

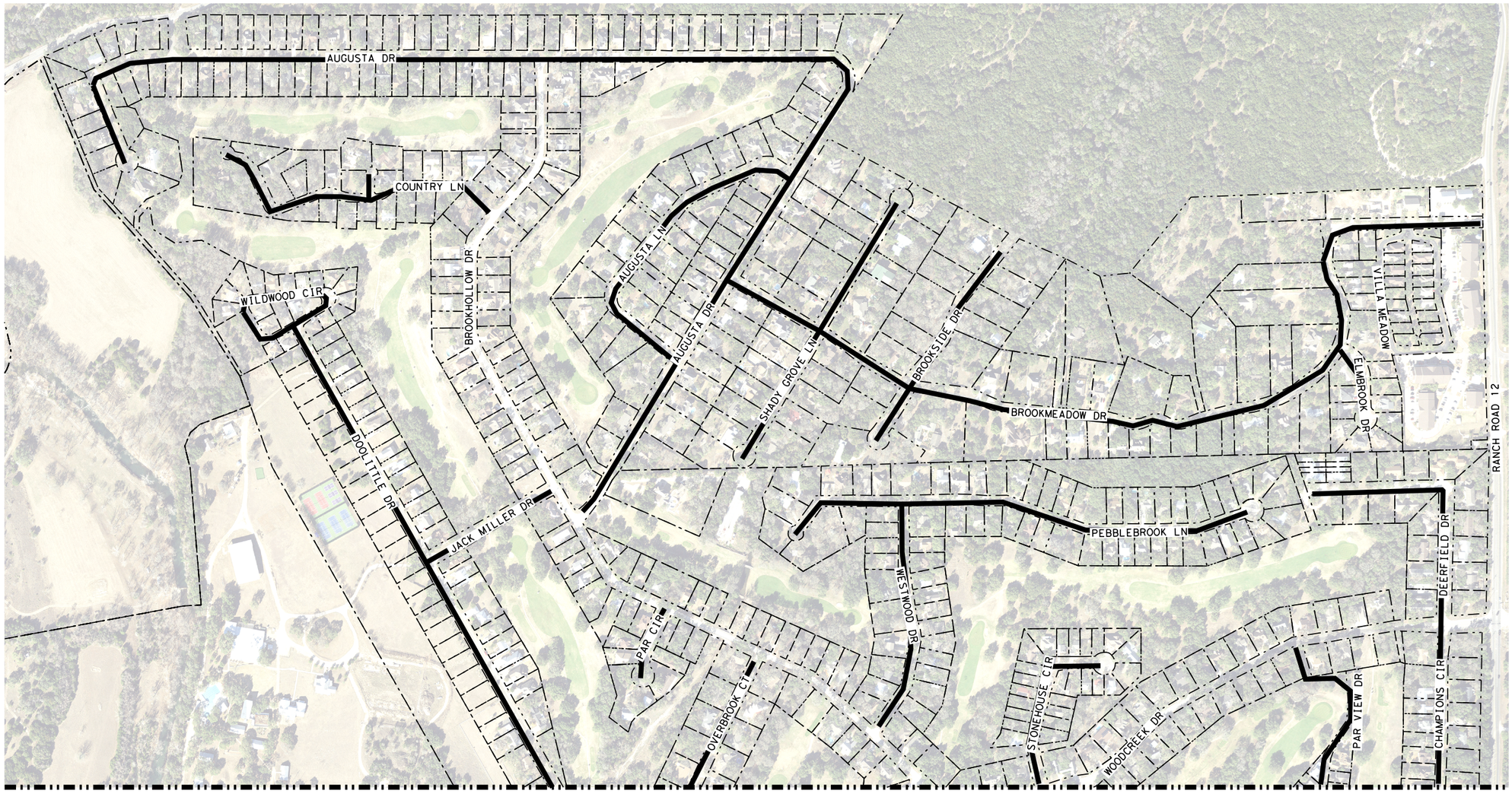
0915SntGNrtitle.dgn

0 250' 500'

LEGEND

PROJECT LIMITS

PARCELS



MATCH LINE STA A-A

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PROJECT LAYOUT

SHEET 1 OF 2

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING

(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	2

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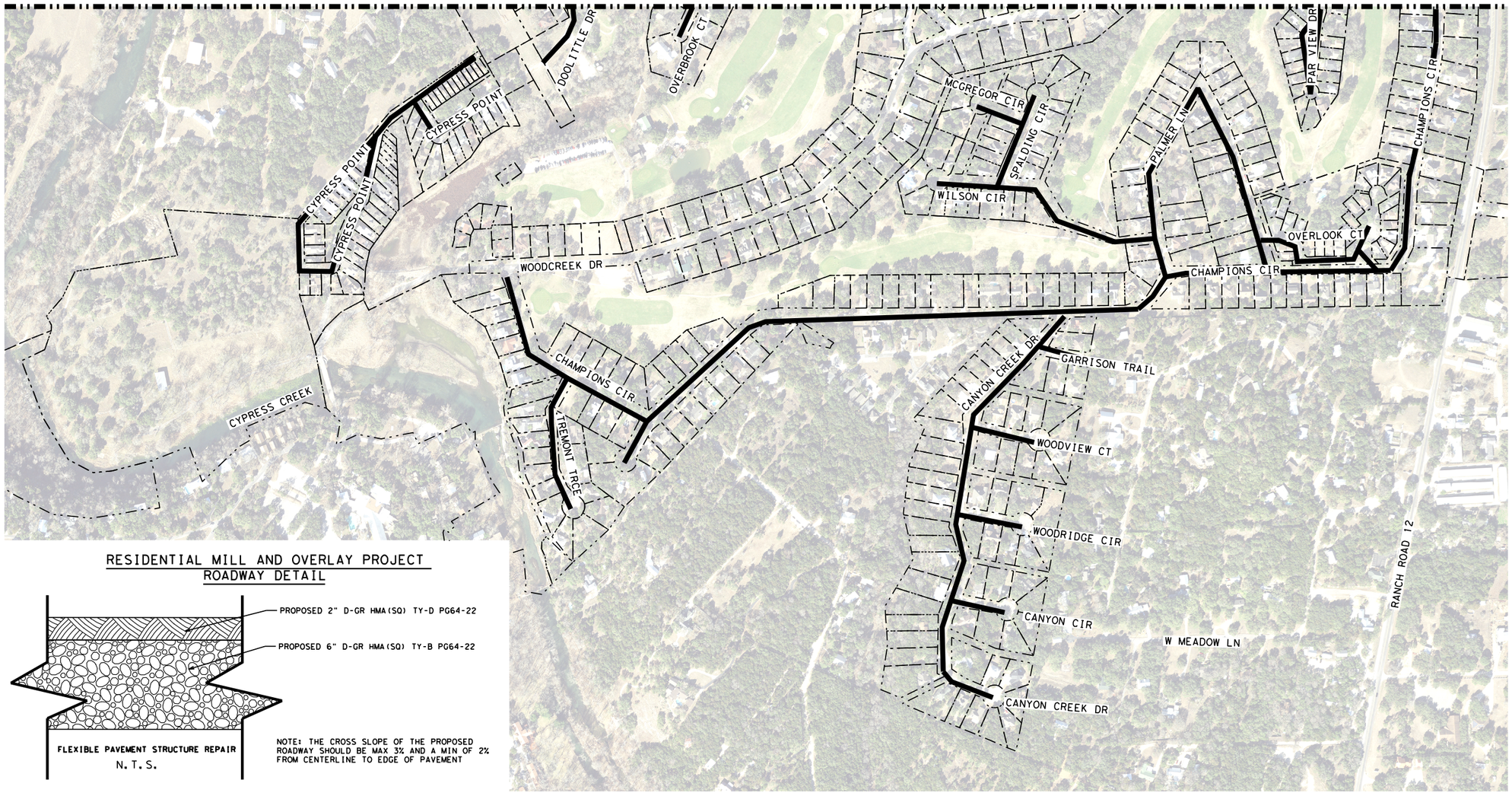
0 250' 500'

LEGEND

PROJECT LIMITS

PARCELS

MATCH LINE STA A-A



RESIDENTIAL MILL AND OVERLAY PROJECT
ROADWAY DETAIL

FLEXIBLE PAVEMENT STRUCTURE REPAIR
N.T.S.

NOTE: THE CROSS SLOPE OF THE PROPOSED ROADWAY SHOULD BE MAX 3% AND A MIN OF 2% FROM CENTERLINE TO EDGE OF PAVEMENT

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PROJECT LAYOUT
SHEET 2 OF 2

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	3 of 129

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GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL VIDEO TAPE ALL ROADWAYS PRIOR TO ANY CONSTRUCTION. A BACKUP COPY SHALL BE SUBMITTED TO THE CITY OR ENGINEER BEFORE THE PROJECT COMMENCES.
2. ALL CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS, SPECIAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS LISTED IN THE GOVERNING SPECIFICATIONS.
3. THE CONTRACTOR SHALL PROVIDE ACCESS FOR RESIDENTS, BUSINESSES, AND OR THE DELIVERY MAIL BY THE U.S. POSTAL SERVICE AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF WOODCREEK WASTE MANAGEMENT DEPARTMENT AT 855-809-2783 TO AVOID DISRUPTION TO EXISTING TRASH/RECYLCE COLLECTION.
   RECYCLE CARTS- PICKUP EVERY OTHER TUESDAY
   GREEN TRASH CARTS- EVERY TUESDAY
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO THE ORIGINAL OR BETTER CONDITION FOR ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES, DRIVEWAYS, OR ANY OTHER EXISTING ITEM (NO SEPERATE PAY ITEM).
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO PRESERVE ALL CONSTRUCTION STAKES OR MARKS, ETC. IF ANY ARE DESTROYED BY THE CONTRACTOR OR THEIR EMPLOYEES, THEY SHALL BE REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.
6. DO NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOODPLAIN OR DRAINAGE WAY WITHOUT FIRST OBTAINING AN APPROVED FLOODPLAIN PERMIT. ALL WASTE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE THEIR RESPONSIBILITY TO DISPOSE OF THESE MATERIALS OFF THE LIMITS OF THE PROJECT AND RIGHT OF WAY. NO WASTE MATERIAL SHALL BE PLACED IN DESIGNATED FLOODPLAINS OR IN LOW AREAS THAT WILL BLOCK OR ALTER FLOW OF EXISTING NATURAL OR ENGINEERING DRAINAGE.
7. THE CONTRACTOR SHALL CONDUCT CONSTRUCTION OPERATIONS IN A MANNER SUCH THAT TRUCKS AND OTHER VEHICLES DO NOT CREATE A DIRT NUSIANCE OR SAFETY HAZARD IN ANY STREETS, PUBLIC OR PRIVATE. CLEAN UP OF STREETS SHALL BE ONE DAILY AT A MINIMUM.
8. UPON CITY OR ENGINEER APPROVAL, CONTRACTOR MAY APPLY FINAL ASPHALT LATER THAN TWO (2) DAYS AFTER MILLING OF BASE REPAIRS, BUT NO LATER THAN FOURTEEN (14) DAYS.
9. CARE SHOULD BE TAKEN TO PREVENT MILLINGS FROM ENTERING CURB INLETS, STORM SEWER AND DRAINAGE OUTFALLS. ALL MATERIAL ENTERING DRAINAGE FACILITIES SHALL BE REMOVED BY THE CONTRACTOR (NSPI).
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXISTENCE, DEPTH, AND LOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY DAMAGE THAT MIGHT OCCUR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
11. MANHOLES, VALVE BOXES, METER BOXES, GRATES, ETC. SHALL BE PROTECTED BY CONSTRUCTION BUILDING PAPER (FELT PAPER) FROM ASPHALT MATERIALS AND SHALL OTHERWISE REMAIN VISIBLE AND ACCESIBLE THROUGHOUT THE DURATION OF THE PROJECT.
12. TEXAS LAW REQUIRES EXCAVATORS TO CONTACT 811 (800-344-8377)TWO-BUSINESS DAYS (EXCLUDING WEEKENDS AND HOLIDAYS) BEFORE EXCAVATING.

Texas 811
Know what's below.
Call before you dig.

Item 1.

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540 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

GENERAL NOTES

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	
DATE	5/19/2023
SHEET NUMBER	4 / 130

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STREET SUMMARY TABLE

STREET NAME	STATIONS	100 6002 PREPARING ROW	316 XXXX SEAL COAT	341 6040 D-GR HMA TY-D PG64-22	351 6004 FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")	354 6002 PLAN & TEXT ASPH CONC PAV(0" TO 2")	506 6041 BIODEG EROSN CONT LOGS (INSTL)(12")	666 6048 REFL PAV MRK TY I (W)24"(SLD)(100MIL)	666 6141 REFL PAV MRK TY I (Y)12"(SLD)(100MIL)	666 6147 REFL PAV MRK TY I (Y)24"(SLD)(100MIL)	672 6009 REFL PAV MRKR TY II-A-A
		STA	GAL	TON	SY	SY	LF	LF	LF	LF	EA
Augusta Ln	1+00.00 - 15+22.39	14.22	242.00	274.00		2416.23		16			
Augusta Dr	1+00.00 - 61+00.00	60.00	1138.00	1286.00	2.63	11378.81		32	97	17	
Country Ct	1+00.00 - 2+04.33	1.04	42.00	47.00		412.01					
Country Ln	1+00.00 - 14+84.34	13.84	361.00	408.00		3609.96		11			
Wildwood	1+00.00 - 9+92.68	8.93	167.00	188.00		1662.07					
Doolittle Dr	0+00.00 - 26+00.00	26.00	884.00	999.00	42.44	8836.39		13			
Jack Miller	1+00.00 - 7+33.40	6.33	157.00	177.00	11.39	1562.72		14	96		
Cypress Pt	1+00.00 - 16+98.55 0+00.00 - 8+03.85 1+00.00 - 7+45.87	30.48	778.00	879.00	0.44	7772.47					
Par Cir	1+00.00 - 4+22.82	3.23	84.00	95.00	307.17	839.40		14			32
Overbrook	0+00.00 -8+00.62	8.01	163.00	184.00		1623.50		14			
Westwood Dr	1+00.00 - 11+74.68	10.75	220.00	249.00	8.11	2195.85		17			
Pebblebrook Ln	1+00.00 - 21+78.96	20.79	378.00	427.00	500.31	3771.65					
Stonehouse Cir	0+00.00 - 7+94.67	7.95	226.00	255.00	16.90	2255.40	24	14			
Shady Grove	1+00.00 - 14+33.26	13.33	270.00	305.00	69.56	2690.59		22			16
Brookmeadow Dr	1+00.00 - 42+62.26	41.62	827.00	935.00	15.11	8266.90		24			80
Brookside Dr	1+00.00 - 12+. 02.72	11.03	72.00	81.00	393.12	710.29					
Elmbrook	1+00.00 - 4+81.40	3.81	87.00	98.00	312.32	863.61		14			32
Deerfield	0+48.04 - 70+04.02 1+00.00 - 7+18.85	75.75	93.00	105.00	1794.49	922.89		8			
Champion Cir	1+00.00 - 64+00.00	63.00	1329.00	1502.00	85.77	13285.99		23			64
Parview	1+00.00 - 13+26.21	12.26	1224.00	1383.00	14.67	12238.86		8			16
Overlook	1+00.00 - 4+98.10	12.26	245.00	277.00	0.22	2444.13		32			
Palmer Ln	1+00.00 - 18+77.18	17.77	398.00	450.00	24.67	3976.78					16
Wilson Cir	1+00.00 - 11+00.00	10.00	154.00	174.00	443.97	1534.43		9	61	14	
Spalding Cir	1+00.00 - 5+7.48	4.07	122.00	138.00		1215.79		10			16
Mcgregor	1+00.00 - 4+00.00	4.00	50.00	56.00		491.63					16
Canyon Creek Dr	1+00.00 - 20+83.54	19.84	418.00	472.00	568.10	4173.11		12			
Garrison Trail	1+00.00 - 2+80.35	1.80	32.00	36.00	307.06	317.68					
Woodview	1+00.00 - 4+12.28	3.12	58.00	65.00	468.39	571.76					
Woodridge	1+00.00 - 3+79.92	3.80	54.00	61.00	352.36	534.06					
Canyon Crk Cir	1+00.00 - 3+30.90	2.31	43.00	48.00	501.93	423.59					
Champion Ct	1+00.00 - 3+38.94	2.39	140.00	158.00		1395.86		14			32
Tremont Trace	1+00.00 - 6+95.93	5.95	103.00	116.00	238.60	1020.84		7			0
TOTALS		**519.69**	**10559.00**	**11928.00**	**6479.77**	**105415.25**	**24.00**	**328.00**	**254.00**	**31.00**	**320.00**

Item 1.

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
SUMMARY OF QUANTITIES

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	
DATE	5/19/2023
SHEET NUMBER	6 131

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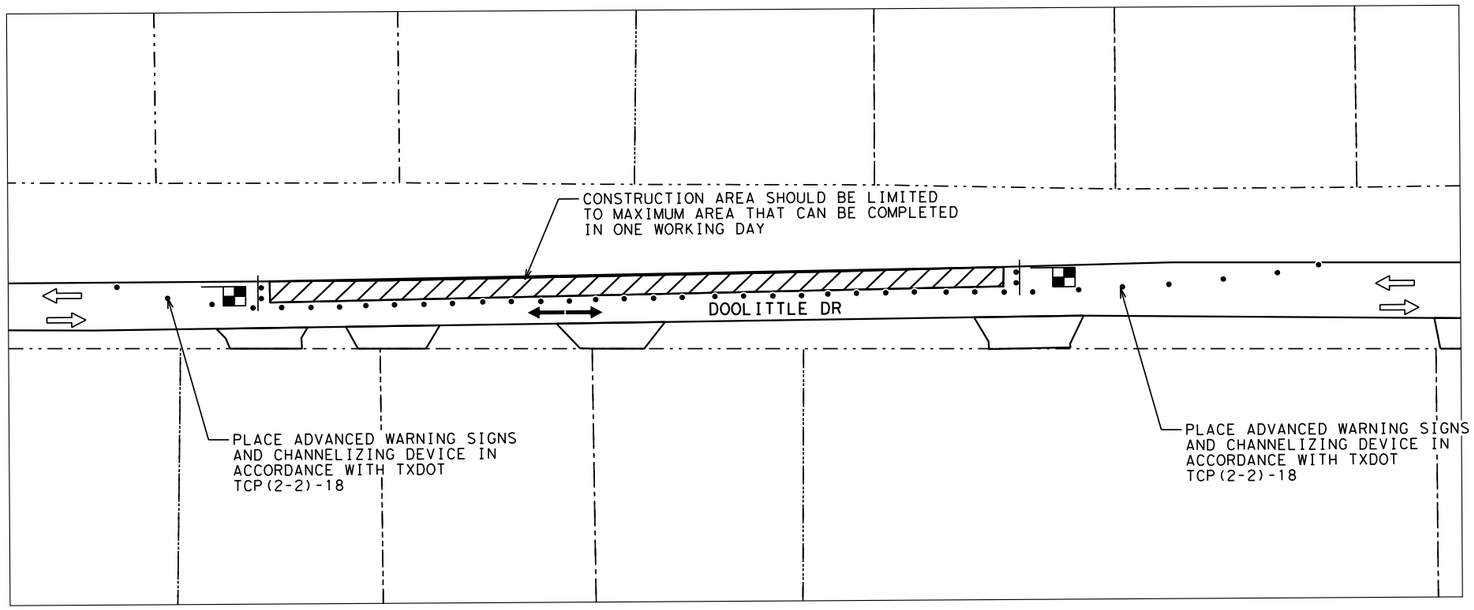
TRAFFIC CONTROL PHASING NARRATIVE AND NOTES

1. CONSTRUCT ONE SIDE OF THE ROAD AT A TIME ONLY AND MAINTAIN TWO-WAY TRAFFIC ON THE OTHER, IN ACCORDANCE WITH TXDOT TCP(2-2)-18.
2. ONLY CLOSE DOWN THE MAXIMUM AREA THAT CAN BE CONSTRUCTED DURING THE DAY AND BE REOPENED TO TRAFFIC AT NIGHT.
3. ALL DRIVEWAYS IN THE CONSTRUCTION AREA ARE TO REMAIN OPEN FOR ACCESS BY LOCAL TRAFFIC DURING CONSTRUCTION.
4. PLACE ALL ADVANCED WARNING SIGNS AND BARRICADES IN ACCORDANCE WITH TXDOT STANDARDS BC(2)-21 AND TMUTCD.

LEGEND

- EXISTING TRAFFIC PATTERN
- EXISTING TRAFFIC PATTERN
- CONSTRUCTION AREA
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- FLAG PERSON



TRAFFIC CONTROL PLAN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
TRAFFIC CONTROL NARRATIVE

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	
DATE	5/19/2023
SHEET NUMBER	7

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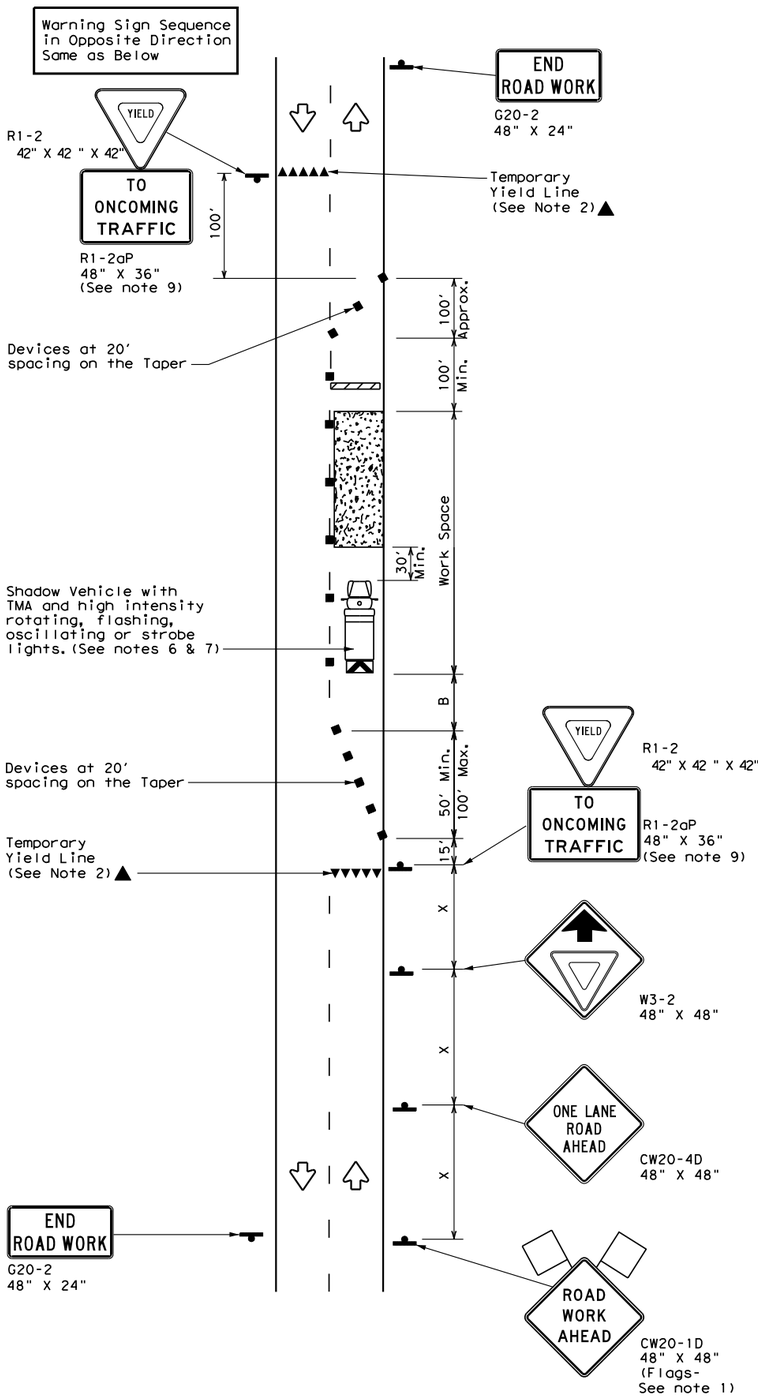


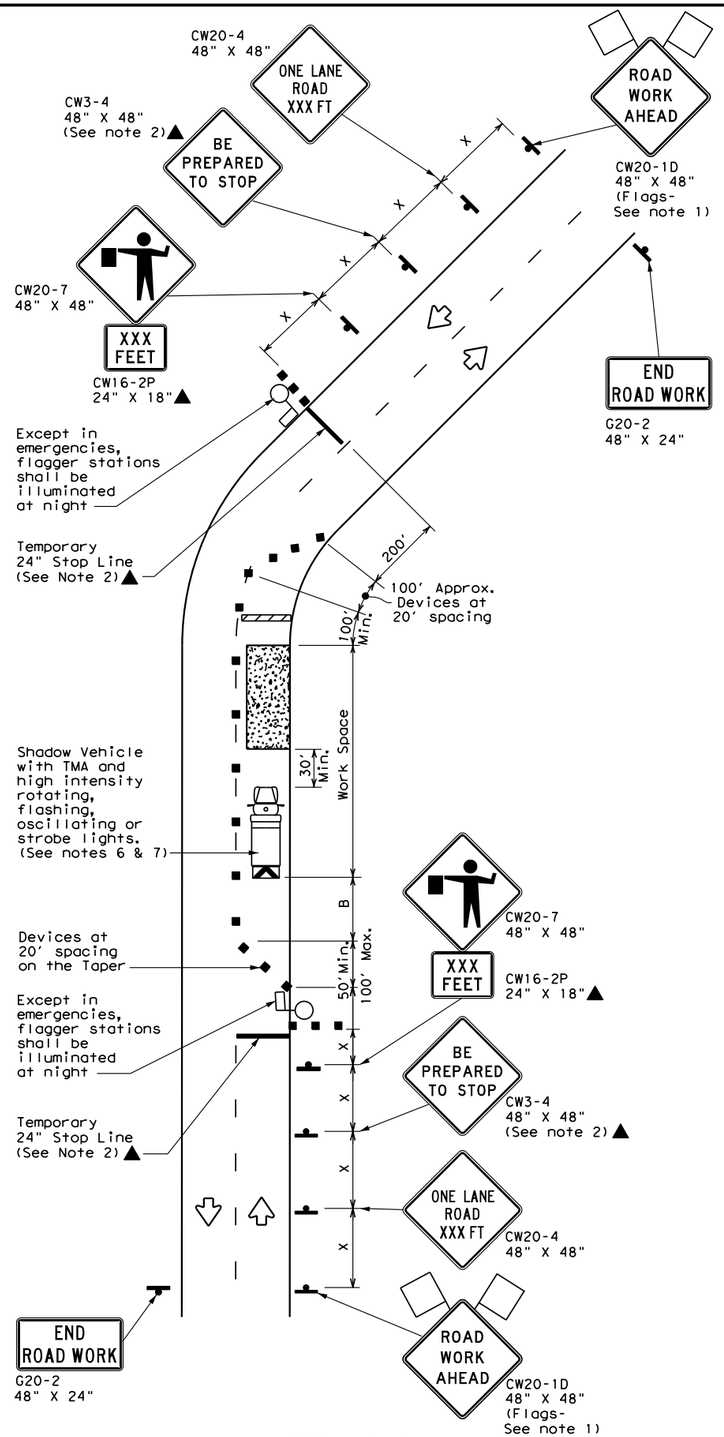
TCP (2-2a)

2-LANE ROADWAY WITHOUT PAVED SHOULDERS

ONE LANE TWO-WAY

CONTROL WITH YIELD SIGNS

(Less than 2000 ADT - See Note 9)



TCP (2-2b)

2-LANE ROADWAY WITHOUT PAVED SHOULDERS

ONE LANE TWO-WAY

CONTROL WITH FLAGGERS

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"	Stopping Sight Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L=WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* 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. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4 "ONE LANE ROAD XXX FT" sign, but proper sign spacing shall be maintained.
4. Flaggers should use two-way radios or other methods of communication to control traffic.
5. Length of work space should be based on the ability of flaggers to communicate.
6. 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.
7. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.

TCP (2-2a)

8. The R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work space should be no longer than one half city block. In rural areas, roadways with less than 2000 ADT, work space should be no longer than 400 feet.
9. The R1-2aP "YIELD TO ONCOMING TRAFFIC" sign shall be placed on a support at a 7 foot minimum mounting height.

TCP (2-2b)

10. Channelizing devices on the center line may be omitted when a pilot car is leading traffic and approved by the Engineer.
11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain stopping sight distance to the flagger and a queue of stopped vehicles. (See table above).
12. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situtations.

Item 1.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
ONE-LANE TWO-WAY
TRAFFIC CONTROL

TCP(2-2)-18

FILE: tcp2-2-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 8-95 3-03	DIST	COUNTY		133
1-97 2-12				
4-98 2-18				

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BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).

2. The development and design of the Traffic Control Plan (TCP)is the responsibility of the Engineer.

3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.

4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.

5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.

6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.

7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.

8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.

9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.

10. Where highway construction or maintenance work is being undertaken, other than mobile operations as defined by the Texas Manual on Uniform Traffic Control Devices, CSJ limit signs are required. CSJ limit signs are shown on BC(2). The OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits. For mobile operations, CSJ limit signs are not required.

11. Traffic control devices should be in place only while work is actually in progress or a definite need exists.

12. The Engineer has the final decision on the location of all traffic control devices.

13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY NOTES:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.

2. Except in emergency situations, flagger stations shall be illuminated when flagging is used at night.

COMPLIANT WORKZONE TRAFFIC CONTROL DEVICES

1. Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources.

2. Work zone traffic control devices shall be compliant with the Manual for Assessing safety Hardware (MASH).

THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT http://www.txdot.gov
COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD)
DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS)
MATERIAL PRODUCER LIST (MPL)
ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)"
STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD)
TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)
TRAFFIC ENGINEERING STANDARD SHEETS

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-03 7-13	NA	NA	NA	134
9-07 8-14	DIST	COUNTY		
5-10 5-21	NA			9

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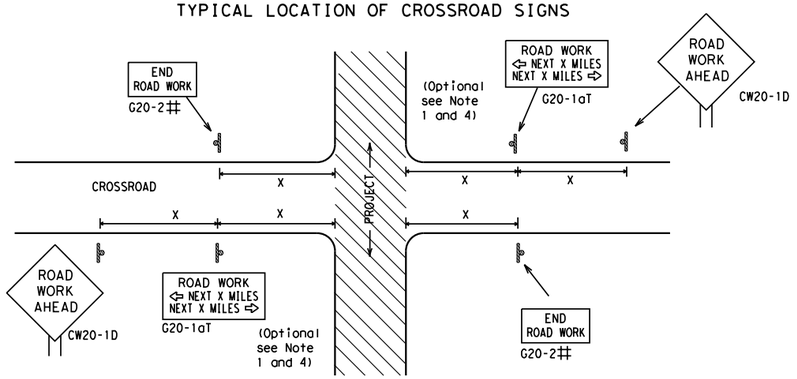
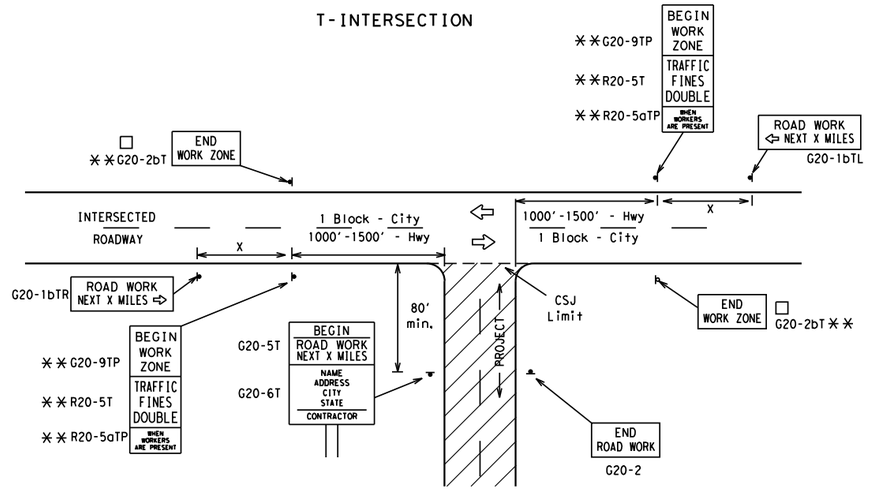
TYPICAL LOCATION OF CROSSROAD SIGNS



May be mounted on back of "ROAD WORK AHEAD"(CW20-1D) sign with approval of Engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D)sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK"(G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume as per TMUTCD Part 5. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The "ROAD WORK NEXT X MILES"(G20-1aT)sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection, the Contractor shall place the "CONTRACTOR NAME"(G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow(G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR)" signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING

1-5-6

Item 1.

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20[4] CW21 CW22 CW23 CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

Posted Speed	Sign △ Spacing "X"
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500[2]
60	600[2]
65	700[2]
70	800[2]
75	900[2]
80	1000[2]
✳	✳[3]

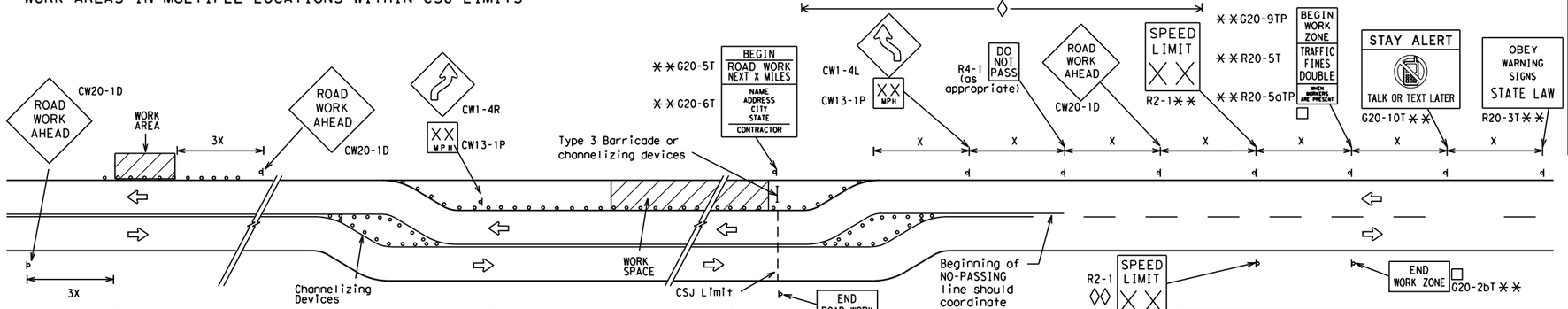
✳ For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D)signs may be used on low volume crossroads at the discretion of the Engineer as per TMUTCD Part 5. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD"(CW20-1D)signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS

NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES"(G20-5T)sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

☐ The "BEGIN WORK ZONE"(G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.

✳✳ CSJ limit signing is required for highway construction and maintenance work, with the exception of mobile operations.

◊ Area for placement of "ROAD WORK AHEAD" (CW20-1D)sign and other signs or devices as called for on the Traffic Control Plan.

◊◊ Contractor will install a regulatory speed limit sign at the end of the work zone.

LEGEND

⊢⊣	Type 3 Barricade
○ ○ ○	Channelizing Devices
▬	Sign
X	See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	NA	NA	NA	135
9-07 8-14	DIST	COUNTY		
7-13 5-21	NA			

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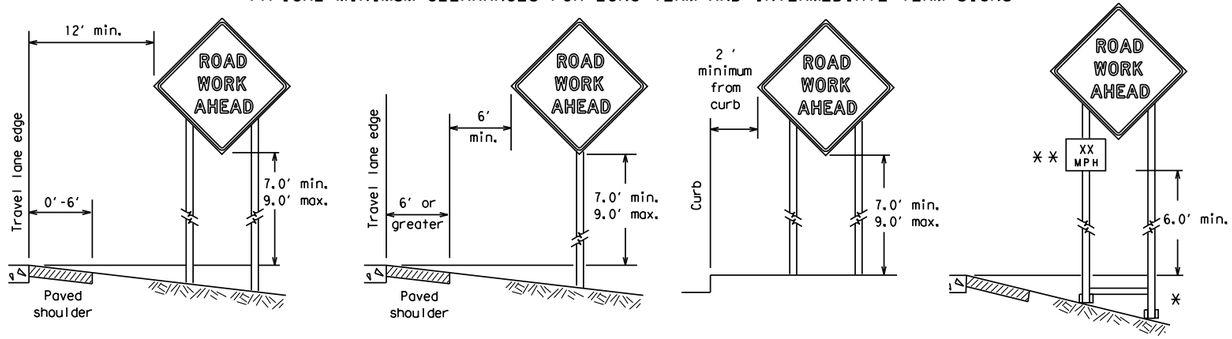
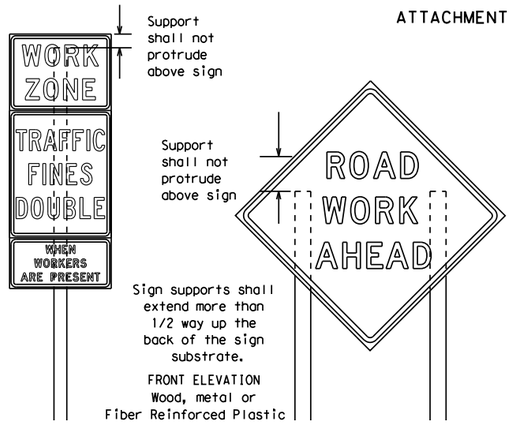
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS

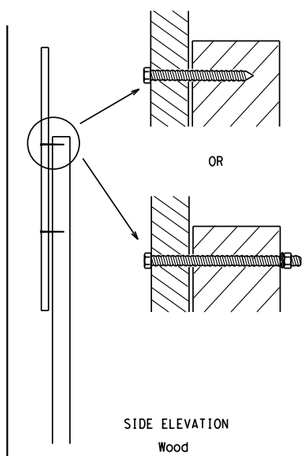


* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS





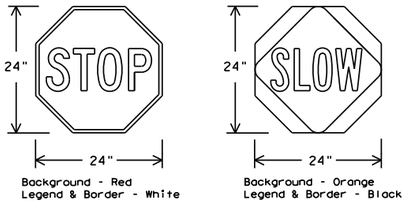
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the spice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24".
2. STOP/SLOW paddles shall be retroreflectorized when used at night.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



SHEETING REQUIREMENTS (WHEN USED AT NIGHT)		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	RED	TYPE B OR C SHEETING
BACKGROUND	ORANGE	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND & BORDER	WHITE	TYPE B OR C SHEETING
LEGEND & BORDER	BLACK	ACRYLIC NON-REFLECTIVE FILM

CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, specific service (LOGO), or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition. For details for covering large guide signs see the TS-CD standard.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC standard sheets, TLRS standard sheets or the CWZTCD list. The signs shall meet the required mounting heights shown on the BC, or the SMD standard sheets during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

GENERAL NOTES FOR WORK ZONE SIGNS

Item 1.

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
5. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
6. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD) for small roadside signs. Supports for temporary large roadside signs shall meet the requirements detailed on the Temporary Large Roadside Signs (TLRS) standard sheets. The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
7. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
8. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
9. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
   a. Long-term stationary - work that occupies a location more than 3 days.
   b. Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
   c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration - work that occupies a location up to 1 hour.
   e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

1. The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type B_{FL} or Type C_{FL}, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

FLAGS ON SIGNS

1. Flags may be used to draw attention to warning signs. When used, the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-21

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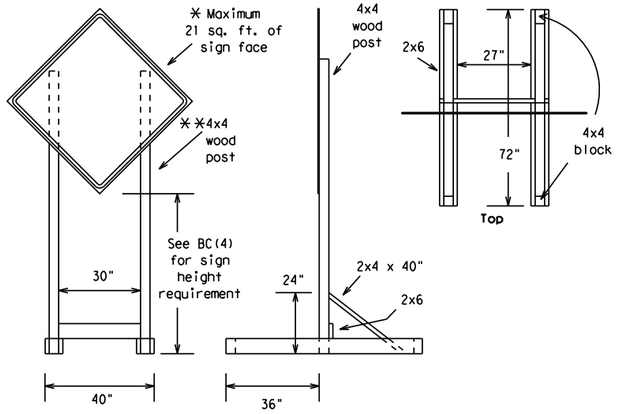
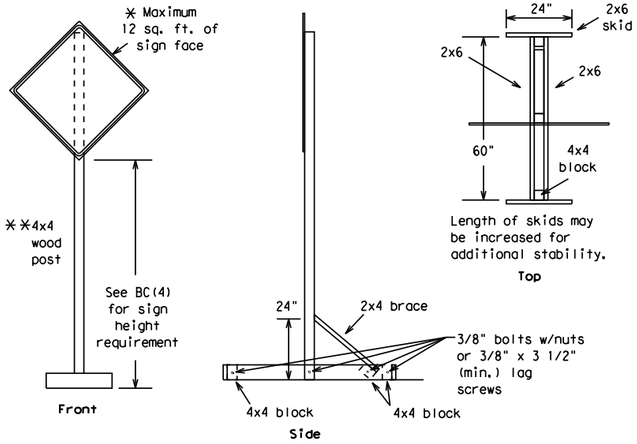
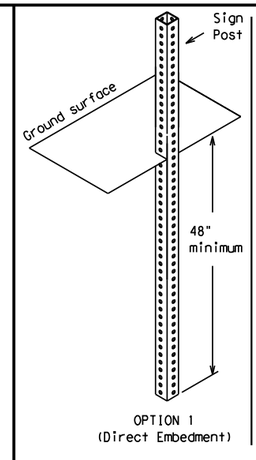
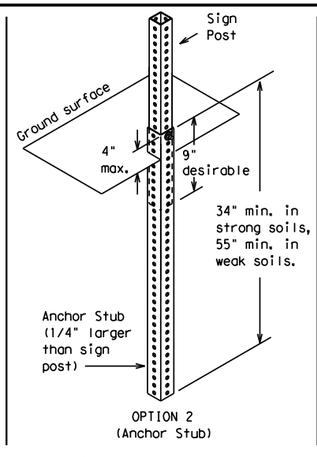


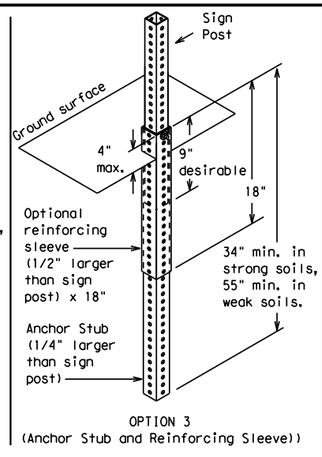


SKID MOUNTED WOOD SIGN SUPPORTS

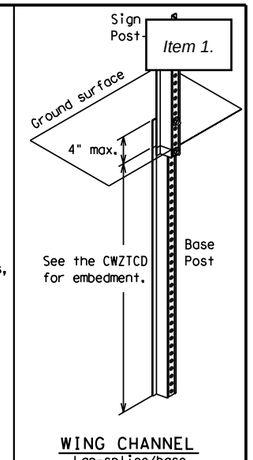
* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS







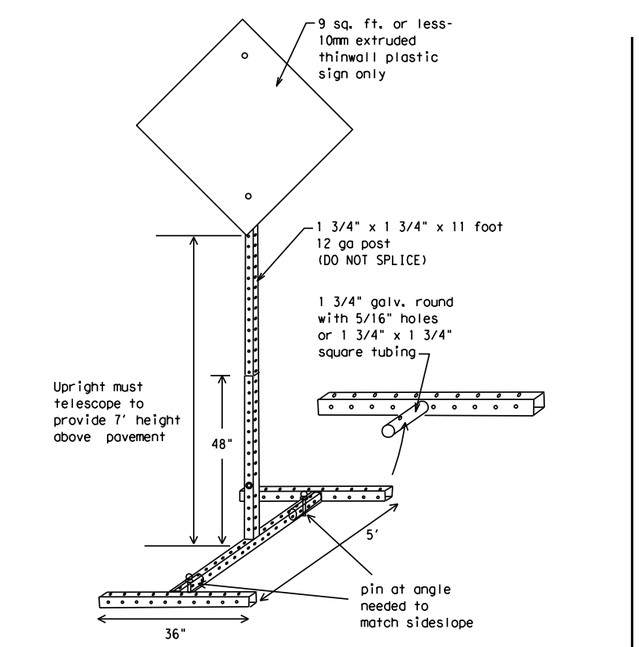
PERFORATED SQUARE METAL TUBING

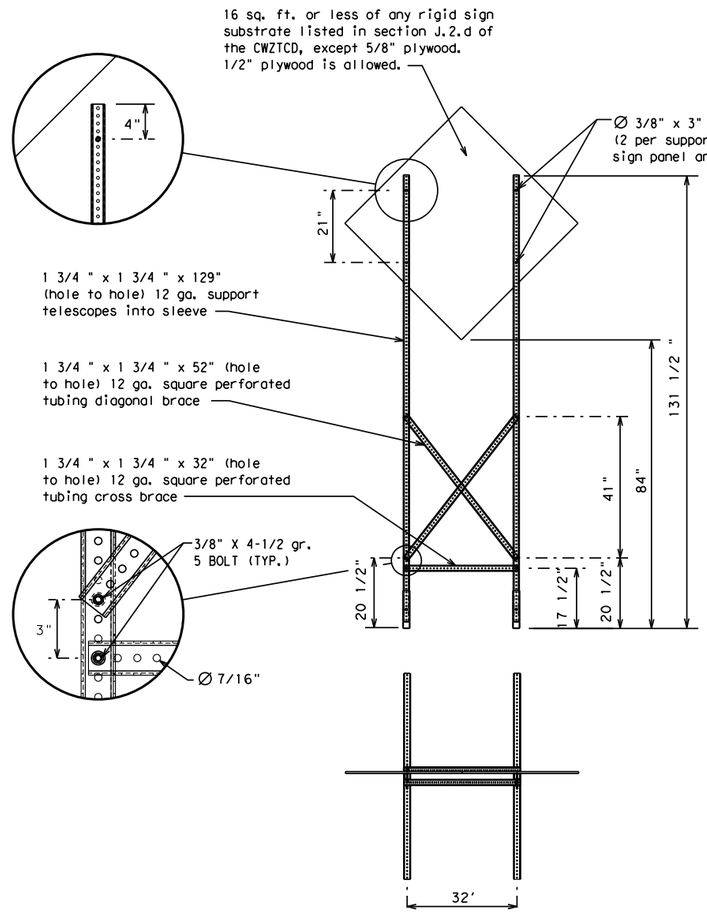


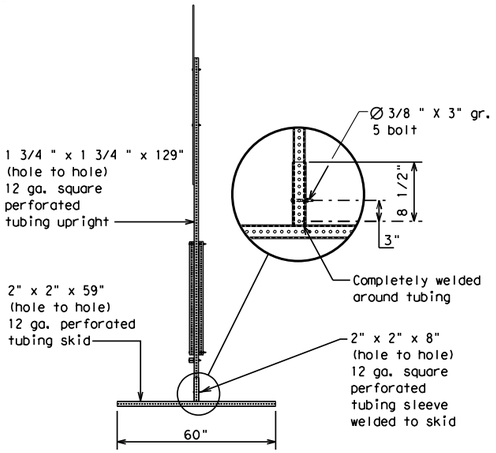
WING CHANNEL
Lap-splice/base bolted anchor

GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support.
The maximum sign square footage shall adhere to the manufacturer's recommendation.
Two post installations can be used for larger signs.







SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS

* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).

OTHER DESIGNS

MORE DETAILS OF APPROVED LONG/INTERMEDIATE AND SHORT TERM SUPPORTS CAN BE FOUND ON THE CWZTCD LIST. SEE BC(1) FOR WEBSITE LOCATION.

GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
2. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
3. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

* See BC(4) for definition of "Work Duration."

** Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.

□ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-21__

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GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

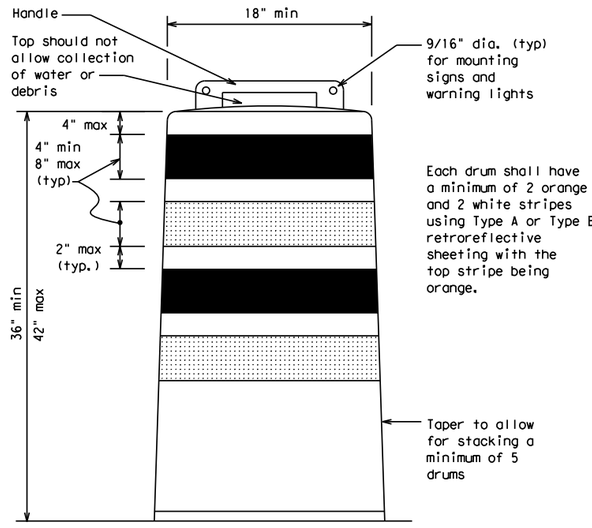
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

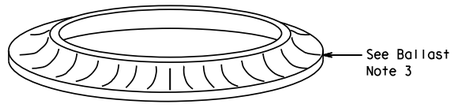
RETROREFLECTIVE SHEETING

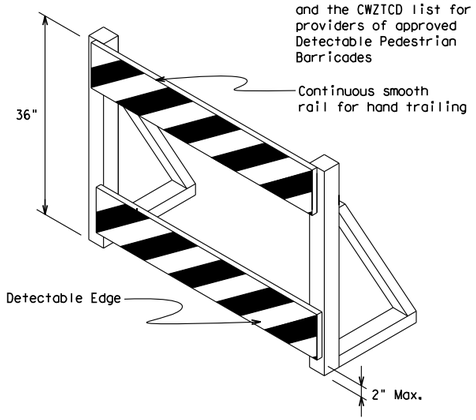
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials," Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.

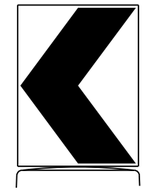




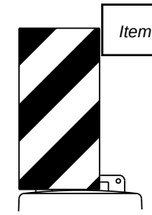


DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to WZ(BTS-2) for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

.

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

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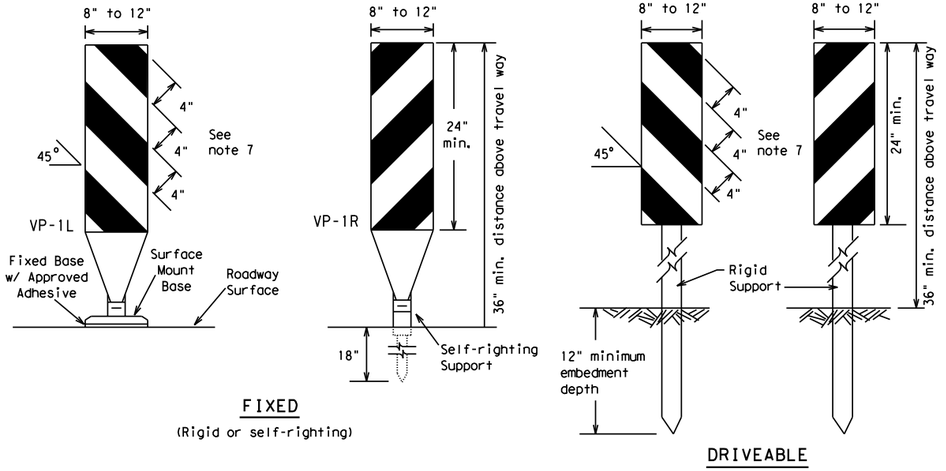
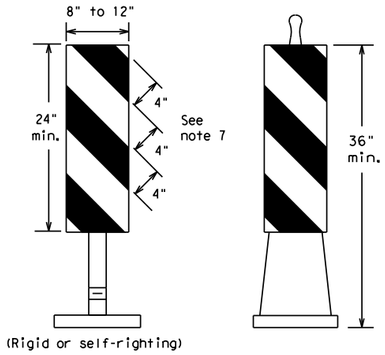


FIXED
(Rigid or self-righting)

DRIVEABLE

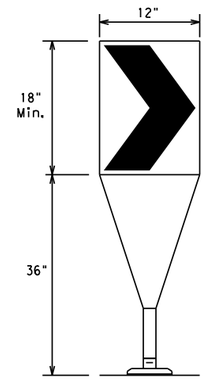


(Rigid or self-righting)

PORTABLE

1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual for additional requirements on the use VP's for drop-offs.
3. VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
4. VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.

VERTICAL PANELS (VPs)



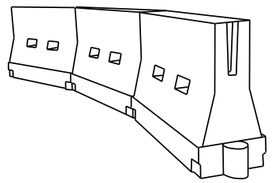
Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
3. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
4. To be effective, the chevron should be visible for at least 500 feet.
5. Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.
6. For Long Term Stationary use on tapers or transitions on freeways and divided highways, self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

CHEVRONS

GENERAL NOTES

1. Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
3. Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
4. The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
6. Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
7. The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.



LONGITUDINAL CHANNELIZING DEVICES (LCD)

1. LCDs are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
2. LCDs may be used instead of a line of cones or drums.
3. LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
5. LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
6. LCDs used as barricades placed perpendicular to traffic should have at least one row of reflective sheeting meeting the requirements for barricade rails as shown on BC(10). Place reflective sheeting near the top of the LCD along the full length of the device.

WATER BALLASTED SYSTEMS USED AS BARRIERS

1. Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate Manual for Assessing Safety Hardware (MASH) crashworthiness requirements based on roadway speed and barrier application.
2. Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
3. Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

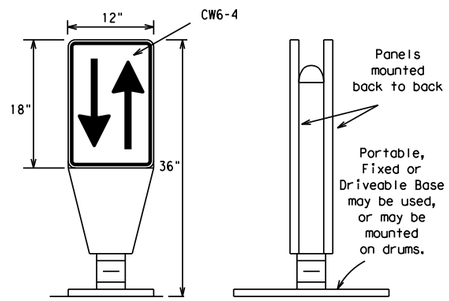
If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall not be less than 32 inches in height.

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS

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
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'
35		205'	225'	245'	35'	70'
40		265'	295'	320'	40'	80'
45	L = WS	450'	495'	540'	45'	90'
50		500'	550'	600'	50'	100'
55		550'	605'	660'	55'	110'
60		600'	660'	720'	60'	120'
65		650'	715'	780'	65'	130'
70		700'	770'	840'	70'	140'
75		750'	825'	900'	75'	150'
80		800'	880'	960'	80'	160'

** Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS



1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
2. The OTLD may be used in combination with 42" cones or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-21

FILE:	bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT	November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS					
9-07	8-14	DIST	COUNTY		139
7-13	5-21				

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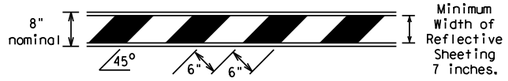
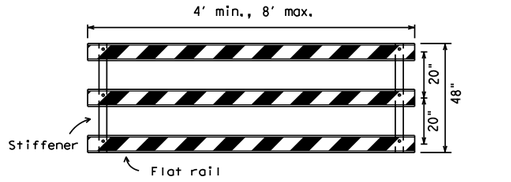
TYPE 3 BARRICADES

1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type 3 Barricades and a list of all materials used in the construction of Type 3 Barricades.
2. Type 3 Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road, striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.



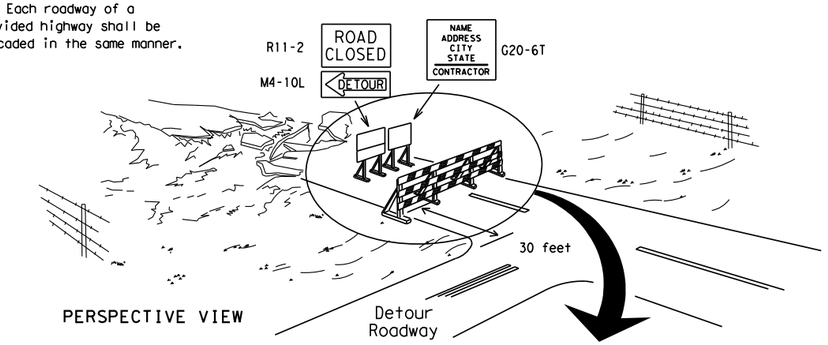
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

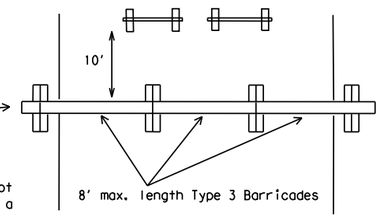
TYPICAL PANEL DETAIL
FOR SKID OR POST TYPE BARRICADES

Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

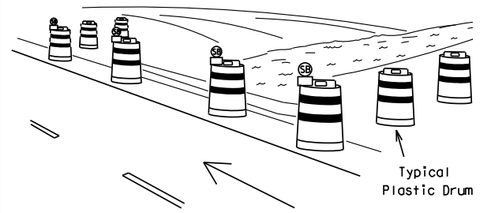
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

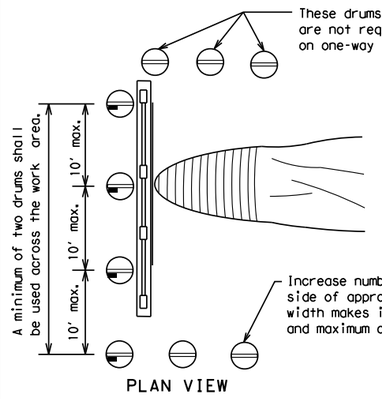
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

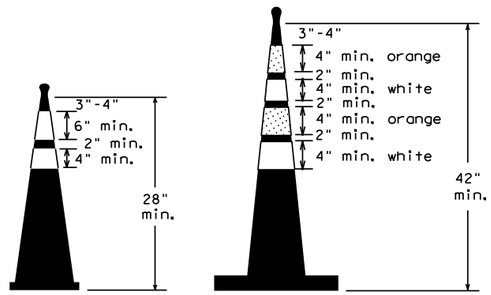
1. Where positive redirection capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.



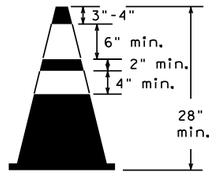
PLAN VIEW

LEGEND	
	Plastic drum
	Plastic drum with steady burn light or yellow warning reflector
SB	Steady burn warning light or yellow warning reflector

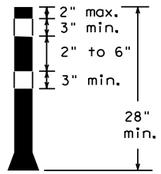
CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



Two-Piece cones



One-Piece cones

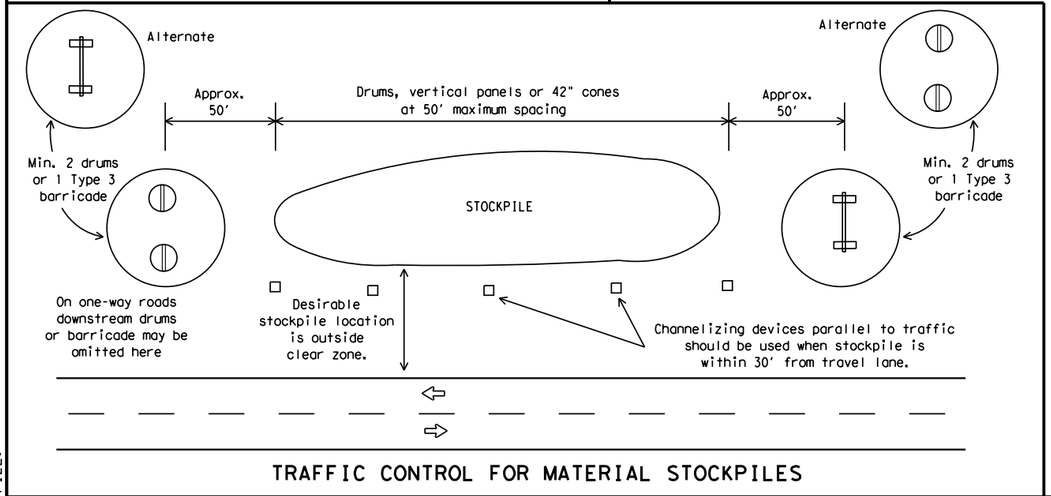


Tubular Marker

28" Cones shall have a minimum weight of 9 1/2 lbs.

42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

1. Traffic cones and tubular markers shall be predominantly orange, and meet the height and weight requirements shown above.
2. One-piece cones have the body and base of the cone molded in one consolidated unit. Two-piece cones have a cone shaped body and a separate rubber base, or ballast, that is added to keep the device upright and in place.
3. Two-piece cones may have a handle or loop extending up to 8" above the minimum height shown, in order to aid in retrieving the device.
4. Cones or tubular markers shall have white or white and orange reflective bands as shown above. The reflective bands shall have a smooth, sealed outer surface and meet the requirements of Departmental Material Specification DMS-8300 Type A or Type B.
5. 28" cones and tubular markers are generally suitable for short duration and short-term stationary work as defined on BC(4). These should not be used for intermediate-term or long-term stationary work unless personnel is on-site to maintain them in their proper upright position.
6. 42" two-piece cones, vertical panels or drums are suitable for all work zone durations.
7. Cones or tubular markers used on each project should be of the same size and shape.



TRAFFIC CONTROL FOR MATERIAL STOCKPILES

Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(10)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS 9-07 8-14 7-13 5-21	DIST	COUNTY		140

DATE:
FILE:

AUGUSTA LN
(APPROX. ROADWAY PAVEMENT 880 SY.)

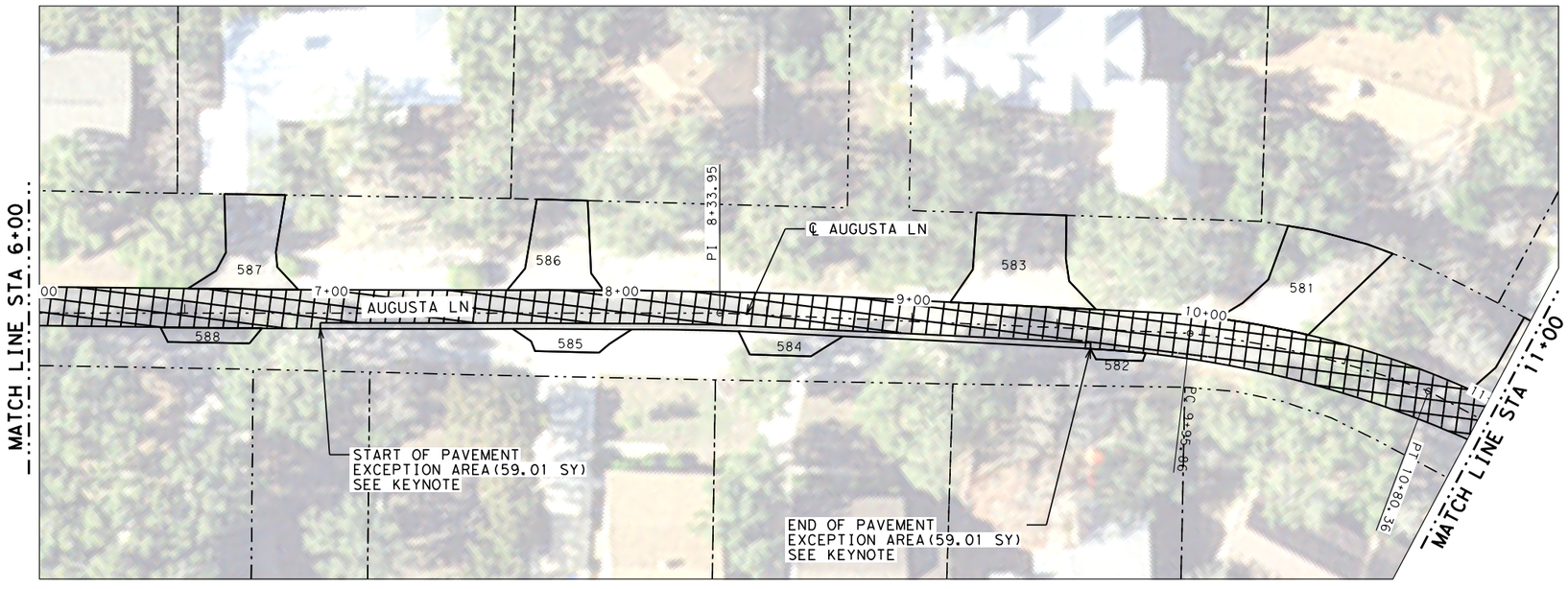
0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

SHEET NOTES

1. CONTRACTOR SHALL NOT DAMAGE EXISTING CONCRETE CURBS OR EXISTING DRIVEWAYS. REPAIR OF THIS INFRASTRUCTURE SHALL BE AT THE CONSTRACTOR'S EXPENSE.
2. CONTRACTOR SHALL NOT MILL AND OVERLAY A STREET BEYOND THE LONGITUDINAL LIMITS OF WHICH THEY CANNOT MILL OR OVERLAY FOR ITS FULL WIDTH THAT SAME DAY UNLESS APPROVED BY THE CITY.



AUGUSTA LN
(APPROX. ROADWAY PAVEMENT 719 SY.)

KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

REV. NO.	BY	DATE	REVISION DESCRIPTION

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K.FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN
AUGUSTA LN 1 OF 2

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	16 141

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AUGUSTA LN
(APPROX. ROADWAY PAVEMENT 758 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

SHEET NOTES

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Item 1.

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
AUGUSTA LN 2 OF 2

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PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
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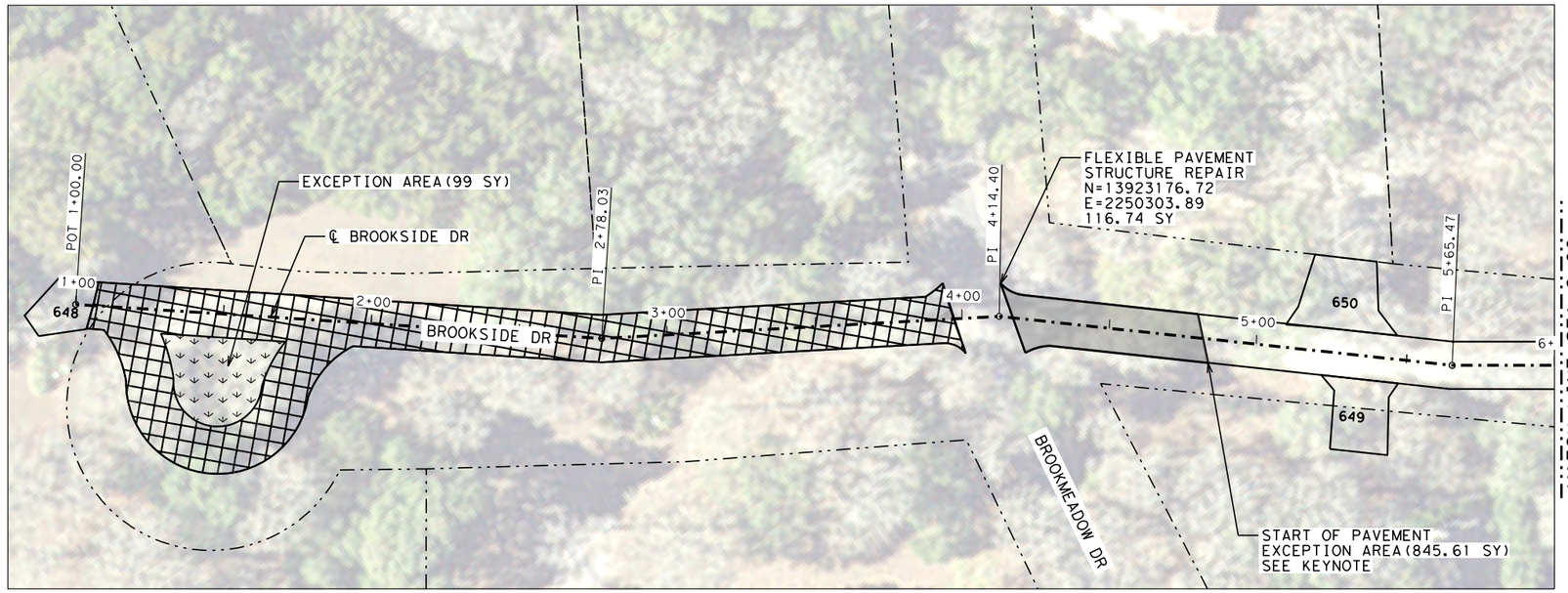

BROOKSIDE DR
(APPROX. ROADWAY PAVEMENT 709 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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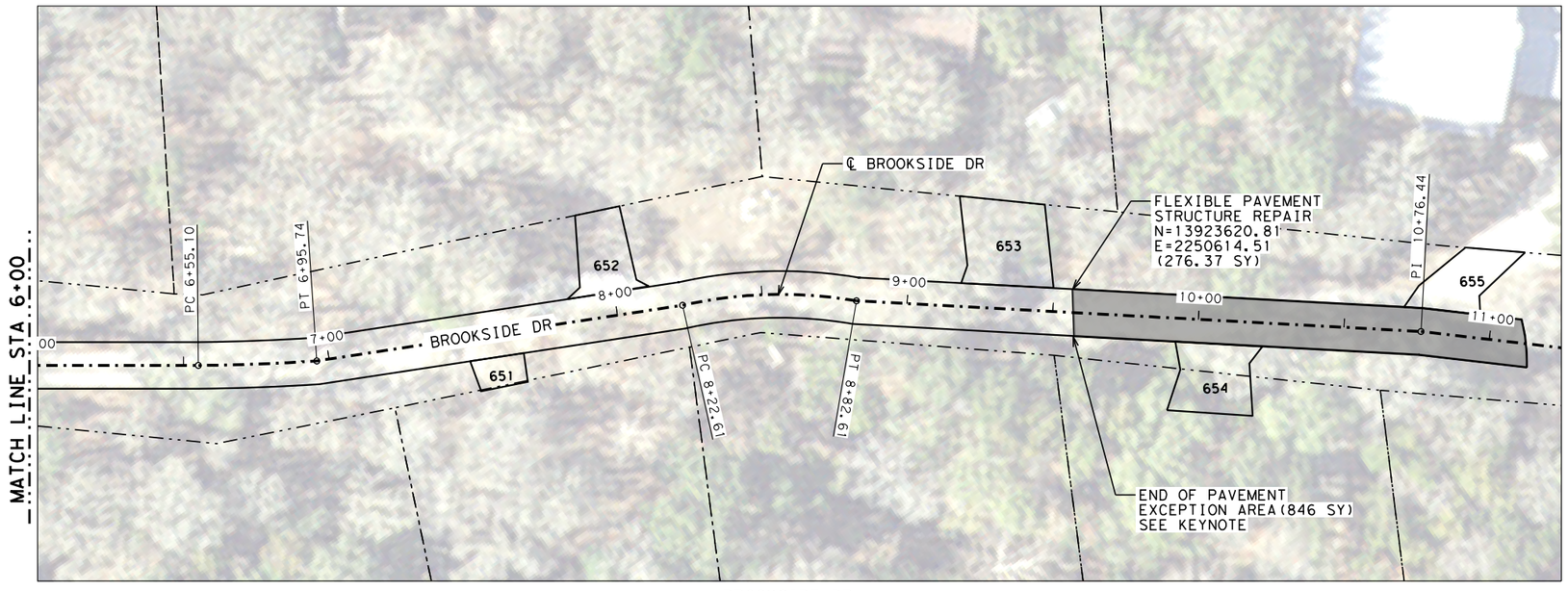
2. CONTRACTOR SHALL NOT MILL AND OVERLAY A STREET BEYOND THE LONGITUDINAL LIMITS OF WHICH THEY CANNOT MILL OR OVERLAY FOR ITS FULL WIDTH THAT SAME DAY UNLESS APPROVED BY THE CITY.



BROOKSIDE DR

KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

Item 1.

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLAN & PROFILE
BROOKSIDE DR 1 OF 1

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PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

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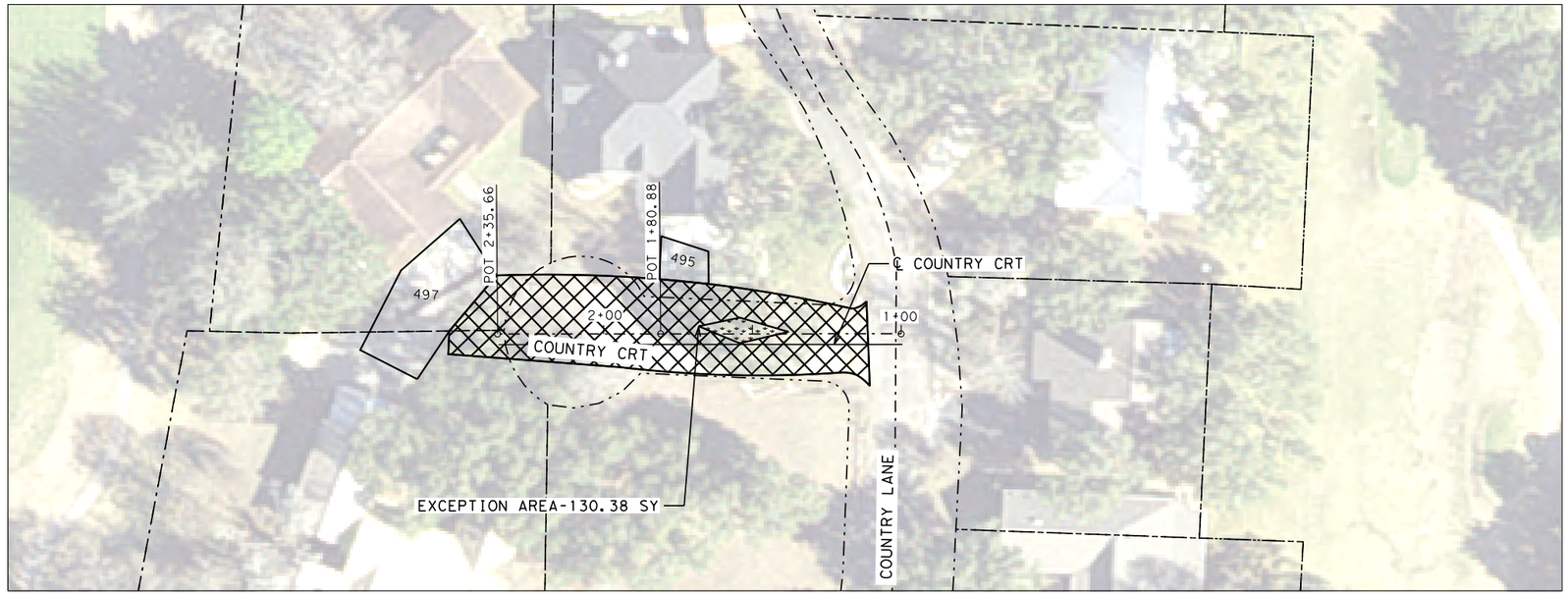

COUNTRY CRT
(APPROX. ROADWAY PAVEMENT 427 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

SHEET NOTES

1. CONTRACTOR SHALL NOT DAMAGE EXISTING CONCRETE CURBS OR EXISTING DRIVEWAYS. REPAIR OF THIS INFRASTRUCTURE SHALL BE AT THE CONSTRACTOR'S EXPENSE.
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KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

REV. NO.	BY	DATE	REVISION DESCRIPTION

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLANS
COUNTRY CRT 1 OF 1

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	19 144

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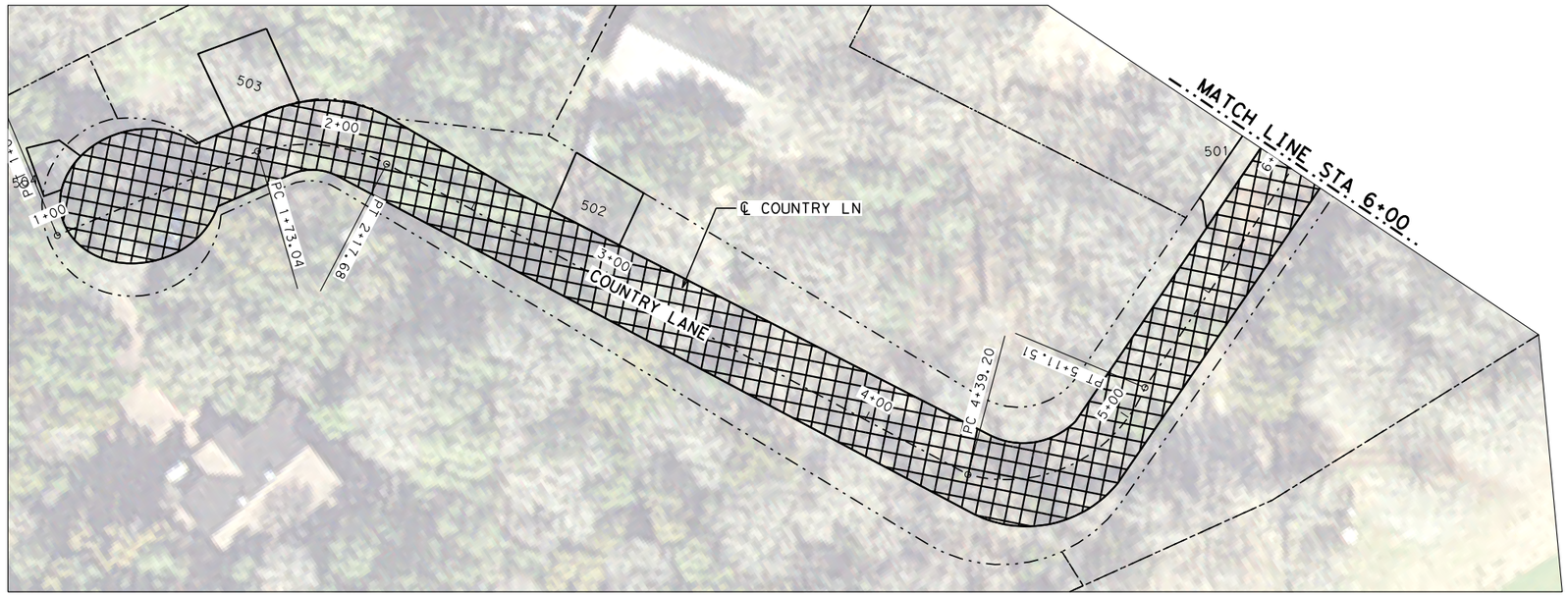

COUNTRY LANE
(APPROX. ROADWAY PAVEMENT 1487 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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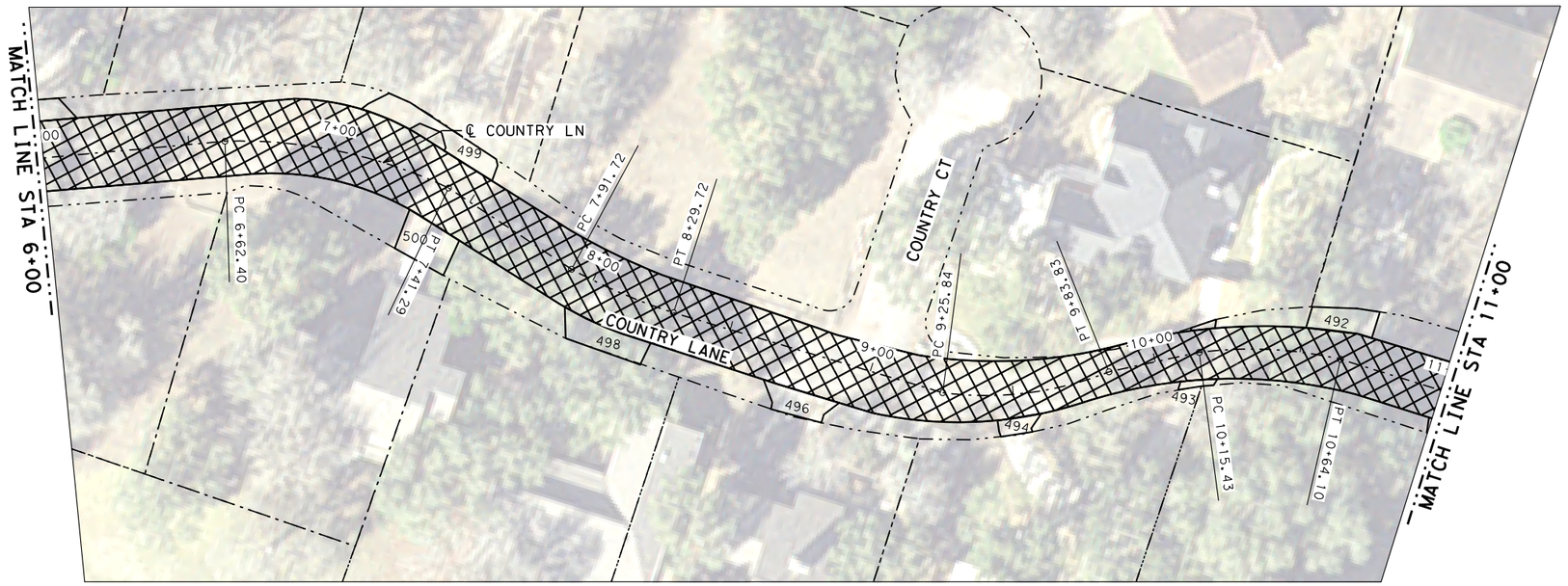

COUNTRY LANE
(APPROX. ROADWAY PAVEMENT 1215 SY)

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
COUNTRY LN 1 OF 2

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	20 / 145

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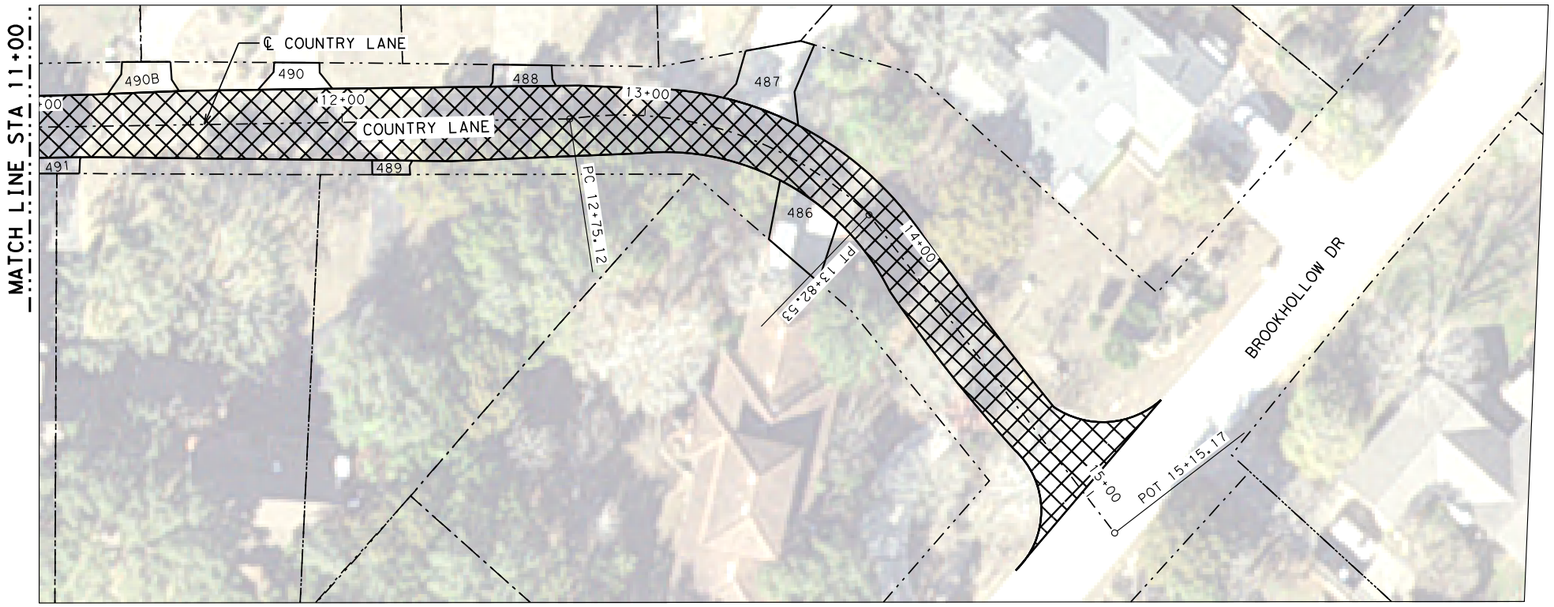

COUNTRY LN
(APPROX. ROADWAY PAVEMENT 908 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EC EROSION CONTROL LOG
- NON PAVED AREA

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
COUNTRY LN 2 OF 2

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	21 OF 114

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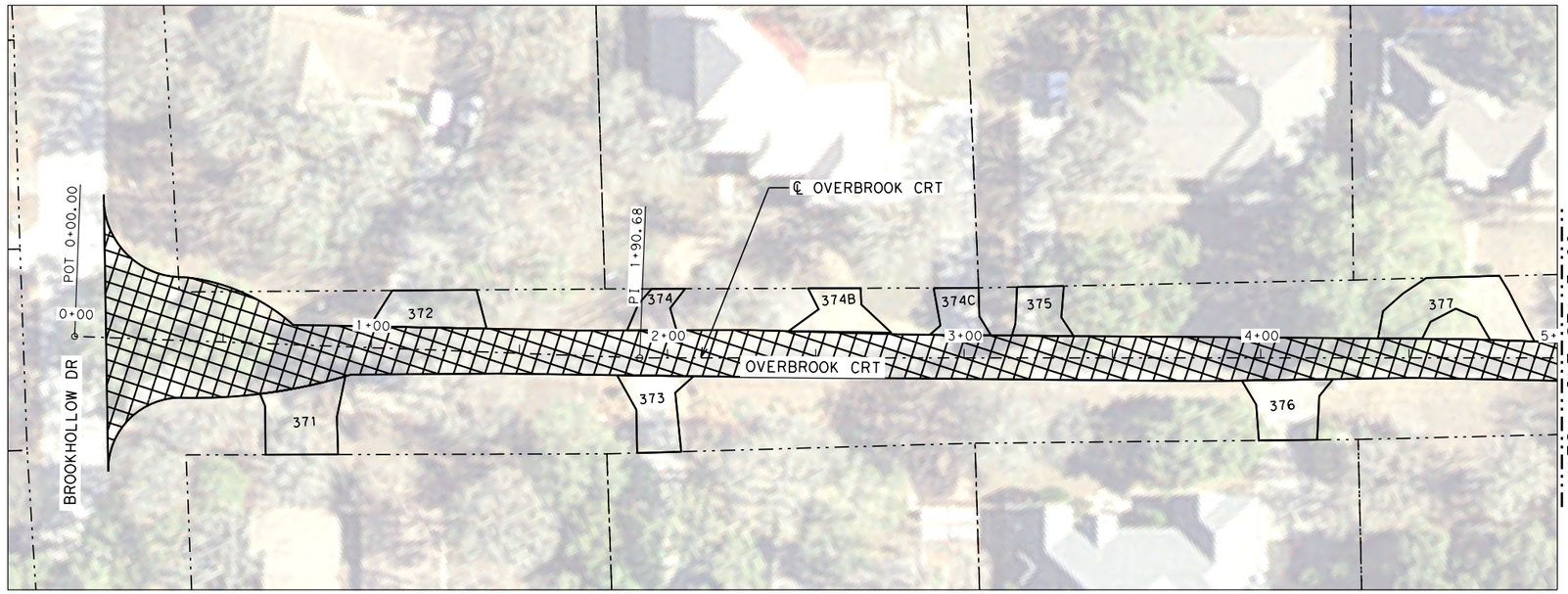

OVERBROOK CRT
(APPROX. ROADWAY PAVEMENT 997 SY)

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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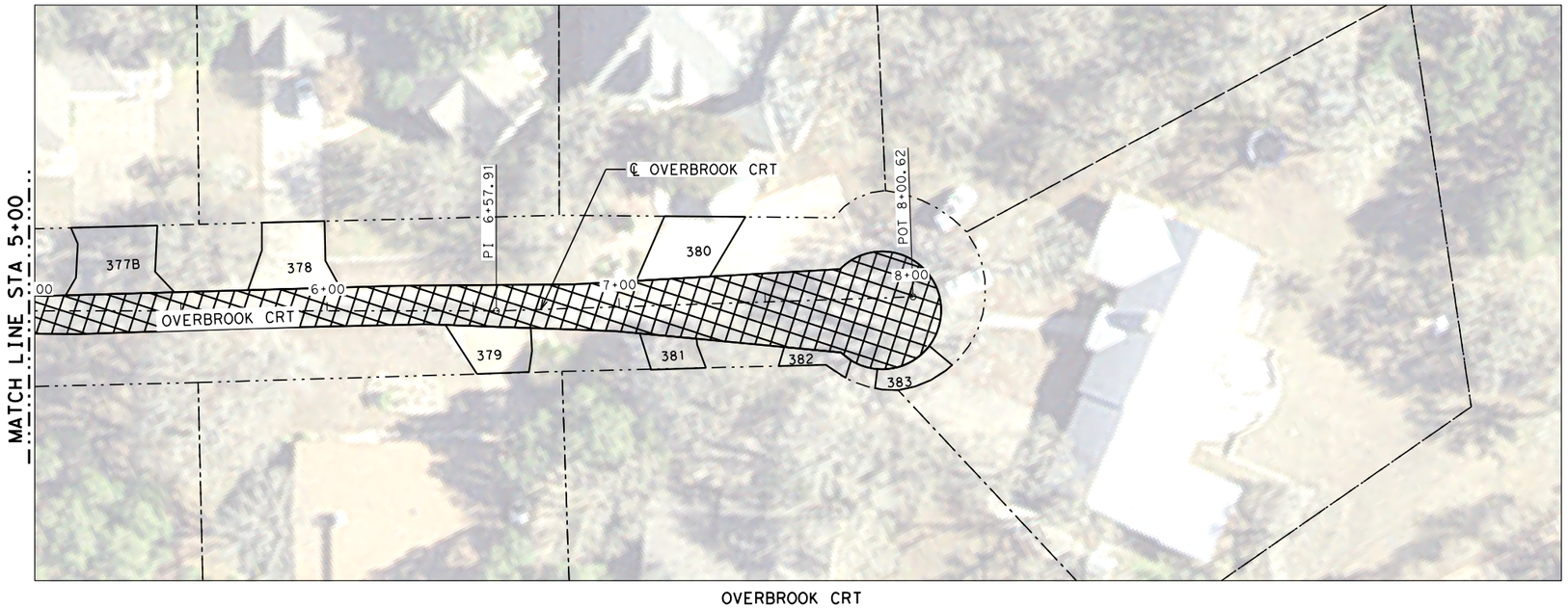

OVERBROOK CRT
(APPROX. ROADWAY PAVEMENT 626 SY)

REV. NO.	BY	DATE	REVISION DESCRIPTION

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
OVERBROOK CRT 1 OF 1

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	22 147

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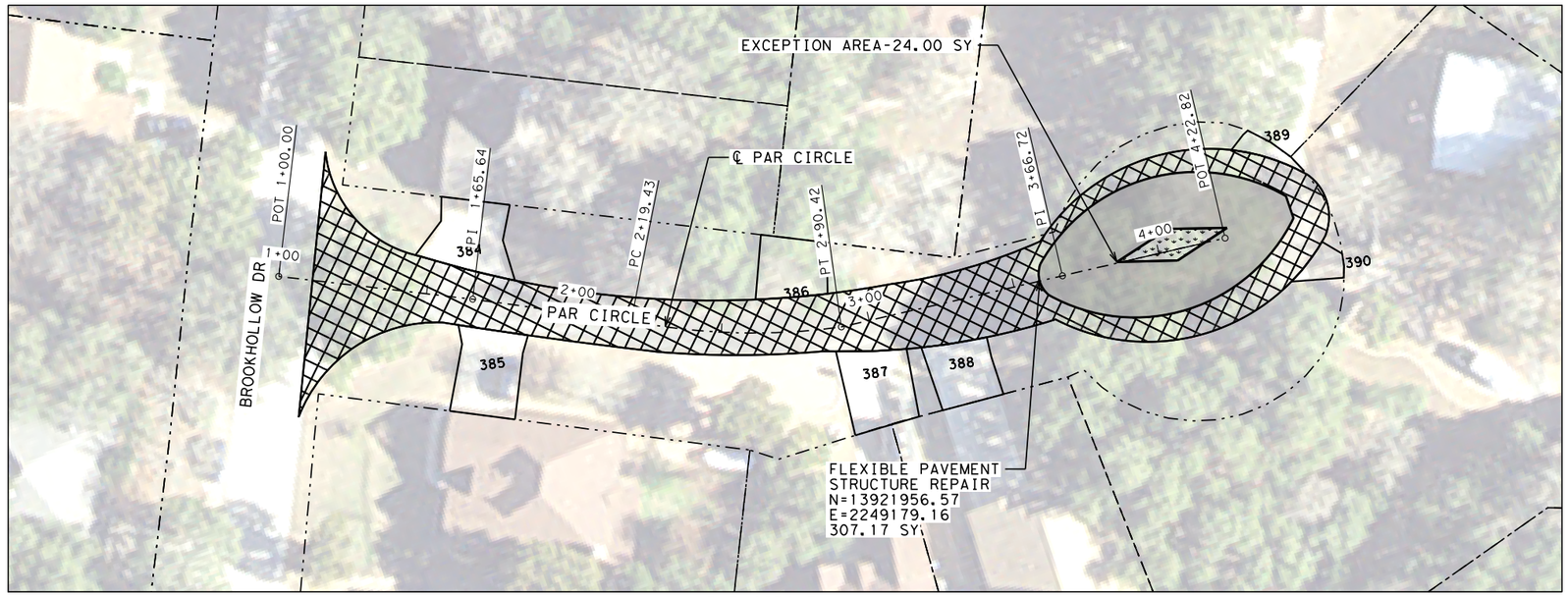

PAR CIRCLE
(APPROX. ROADWAY PAVEMENT 1146 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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KEYNOTES

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLANS
PAR CIR 1 OF 1

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	23 148

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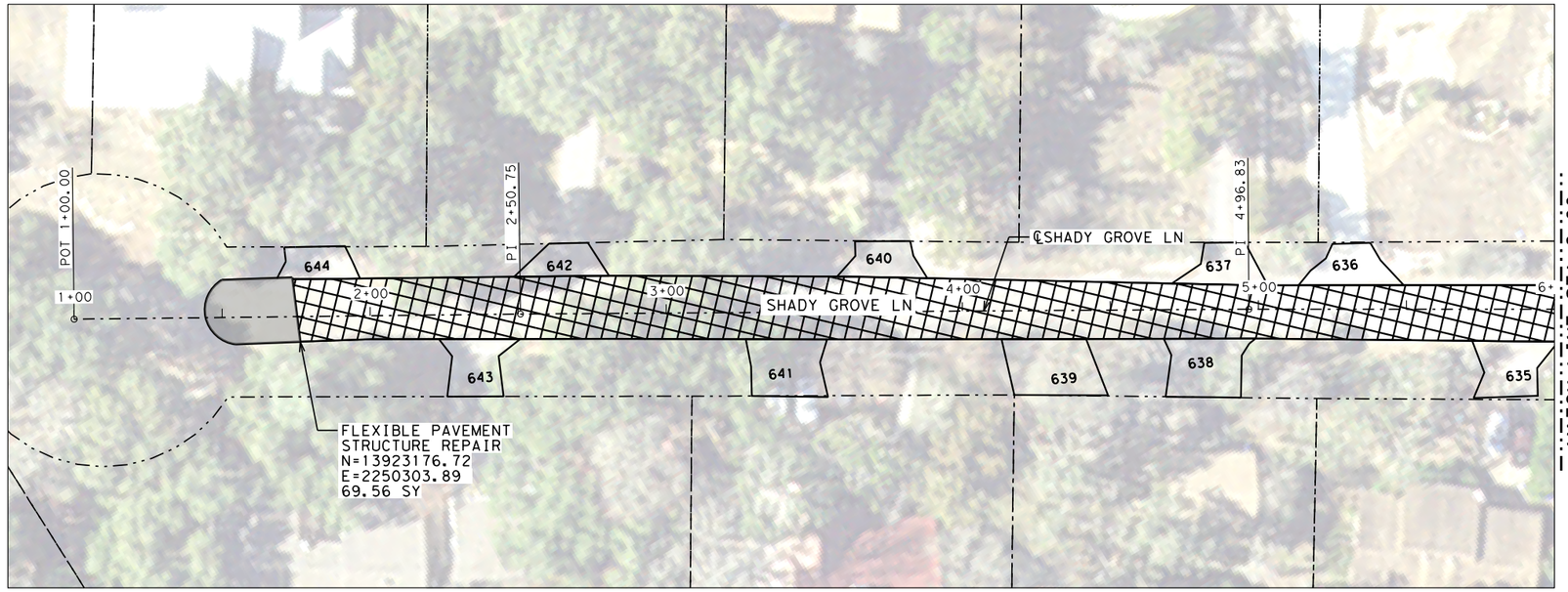
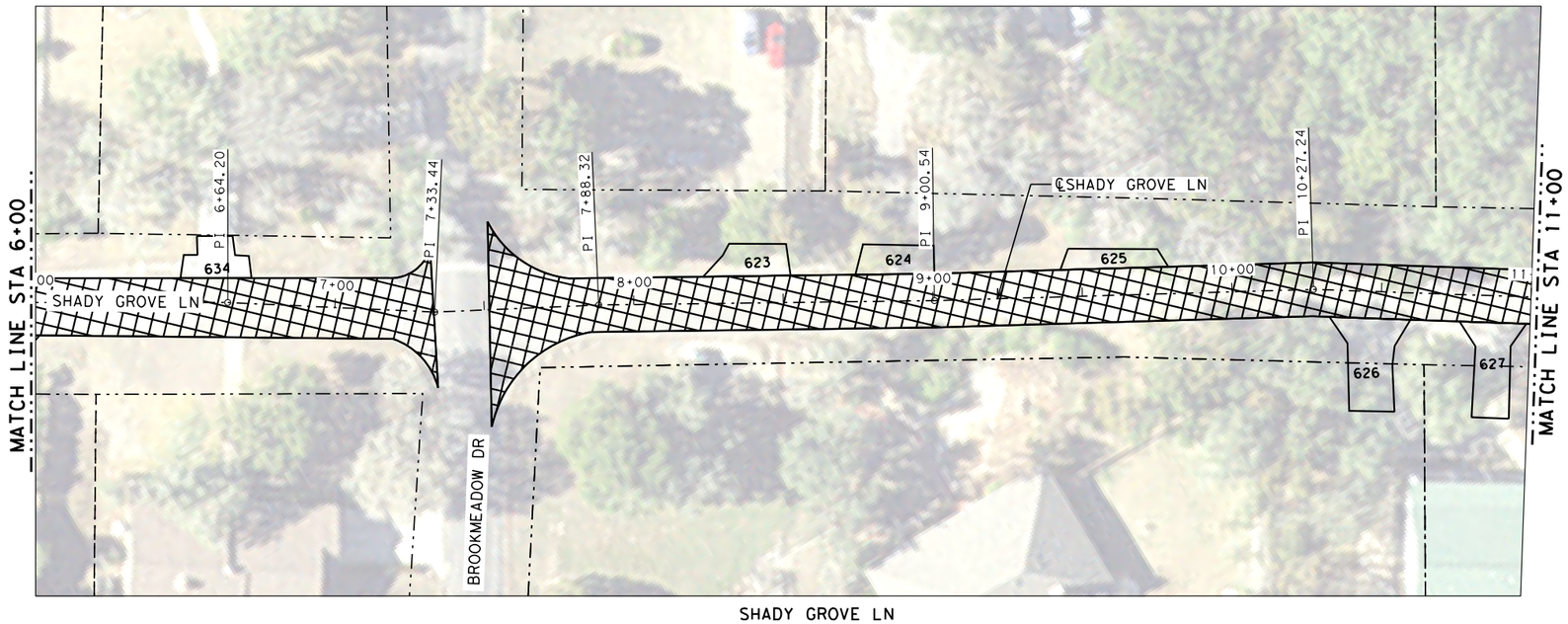


SHADY GROVE LN
(APPROX. ROADWAY PAVEMENT 945 SY)



SHADY GROVE LN
(APPROX. ROADWAY PAVEMENT 1054 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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- NON PAVED AREA

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Item 1.

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLAN & PROFILE
SHADY GROVE 1 OF 2

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	24 149

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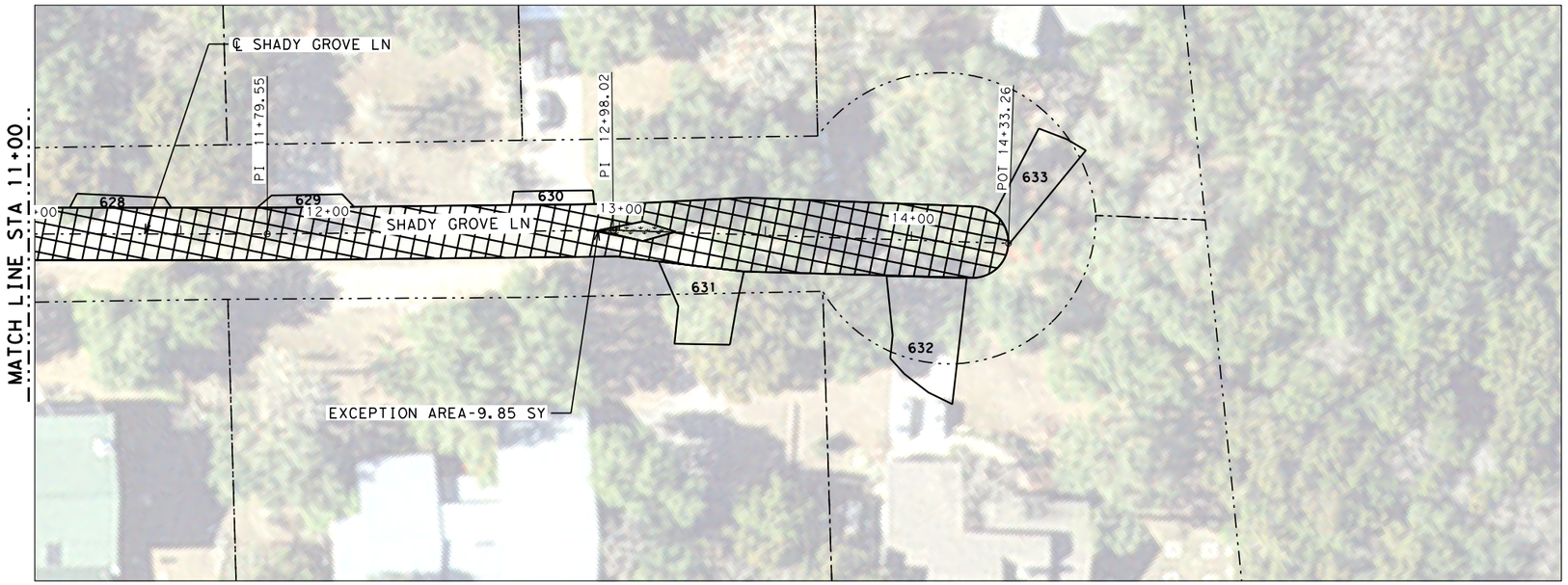

SHADY GROVE LN
(APPROX. ROADWAY PAVEMENT 735 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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- NON PAVED AREA

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40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN
SHADY GROVE 2 OF 2

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	25 / 150

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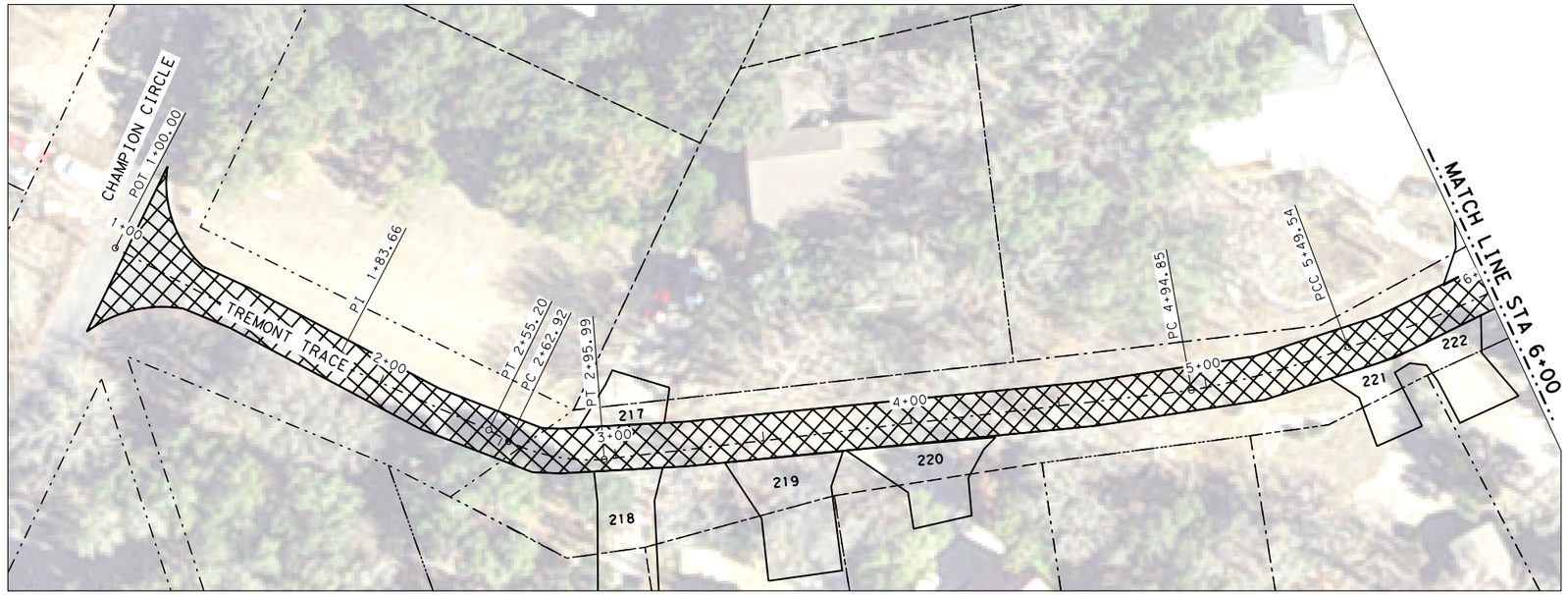

TREMONT TRACE
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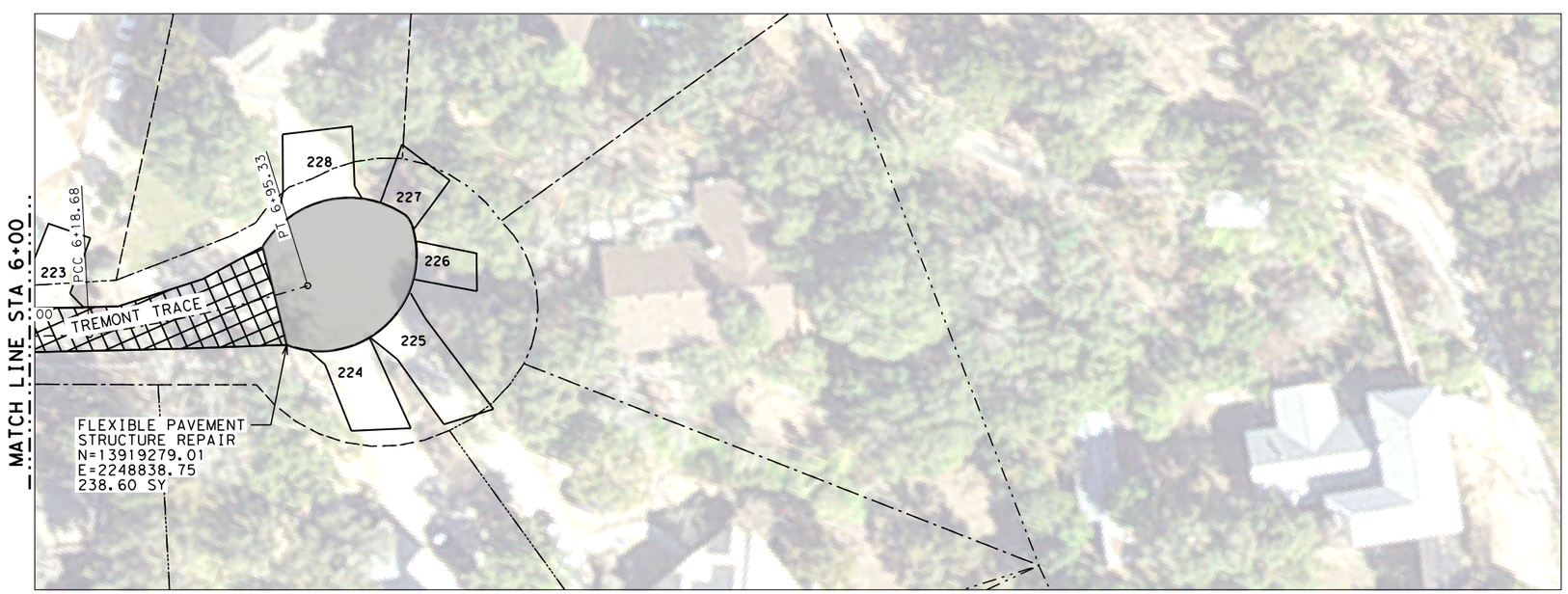

TREMONT TRACE
(APPROX. ROADWAY PAVEMENT 185 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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- EROSION CONTROL LOG
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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
TREMONT TRACE 1 OF 1

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	26 / 151

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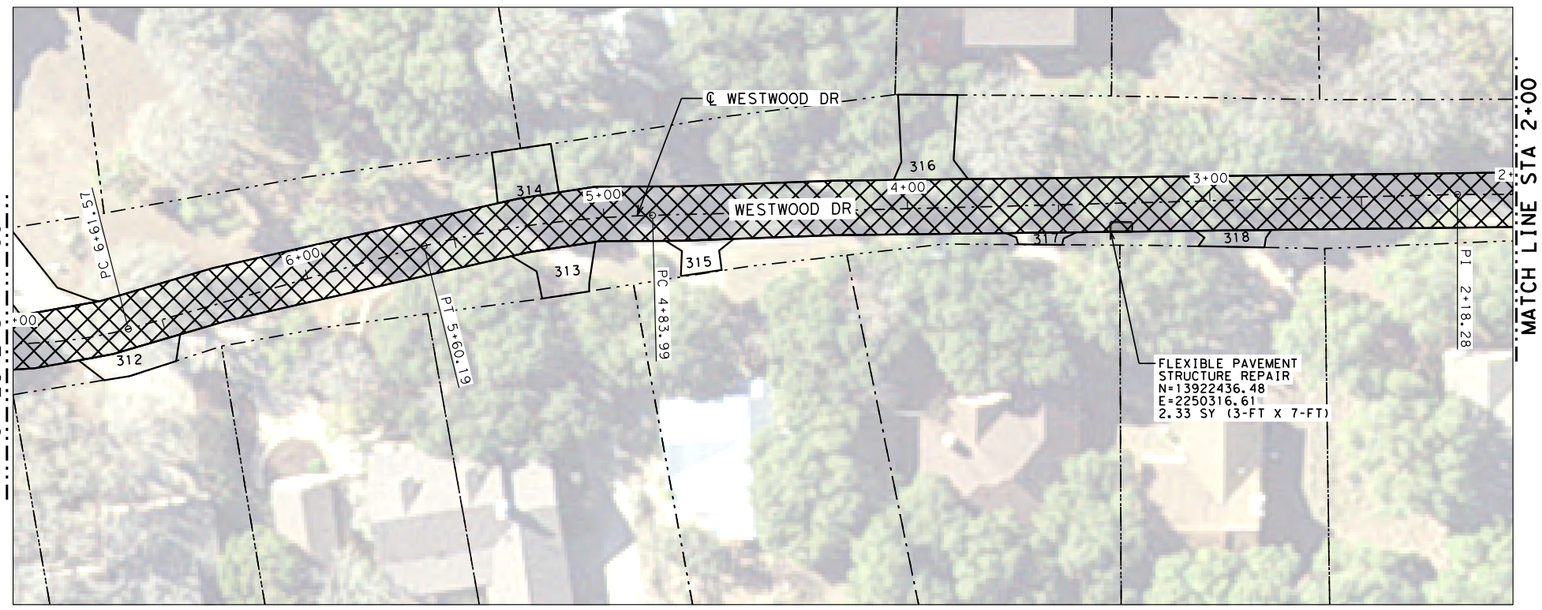
WESTWOOD DR
(APPROX. ROADWAY PAVEMENT 882 SY)



WESTWOOD DR
(APPROX. ROADWAY PAVEMENT 999 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
WESTWOOD DR 1 OF 2

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

	SHEET OF
SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	27 152

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WESTWOOD DR
(APPROX. ROADWAY PAVEMEMT 129 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
WESTWOOD DR 2 OF 2

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	28 153

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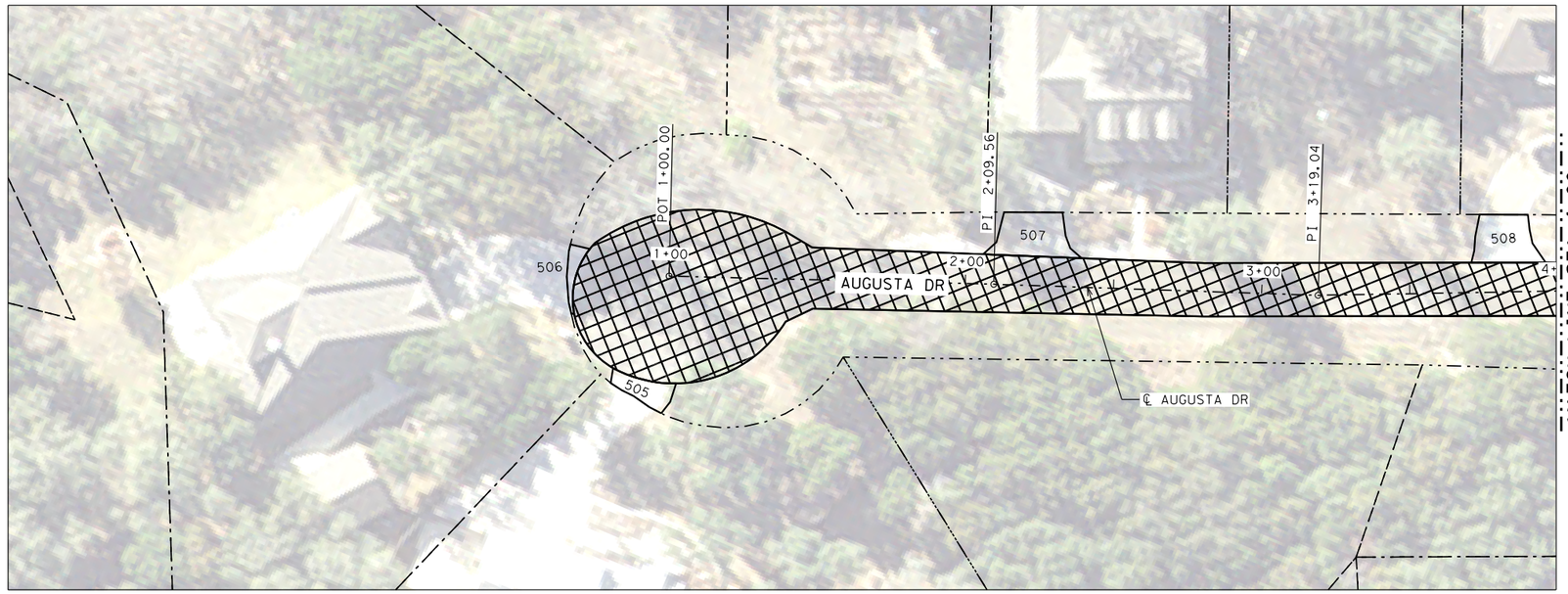
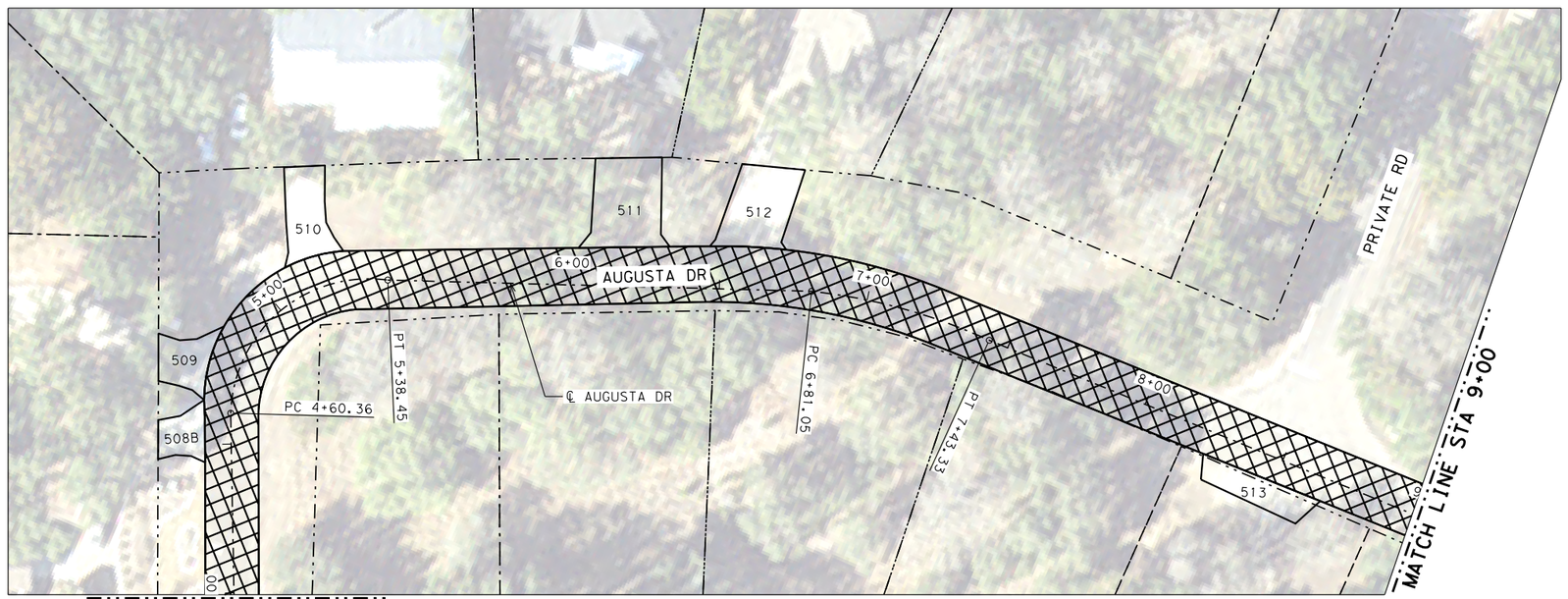


AUGUSTA DR
(APPROX. ROADWAY PAVEMENT 928 SY)



AUGUSTA DR
(APPROX. ROADWAY PAVEMENT 1044 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

SHEET NOTES

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Item 1.

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
AUGUSTA DR 1 OF 7

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	29 154

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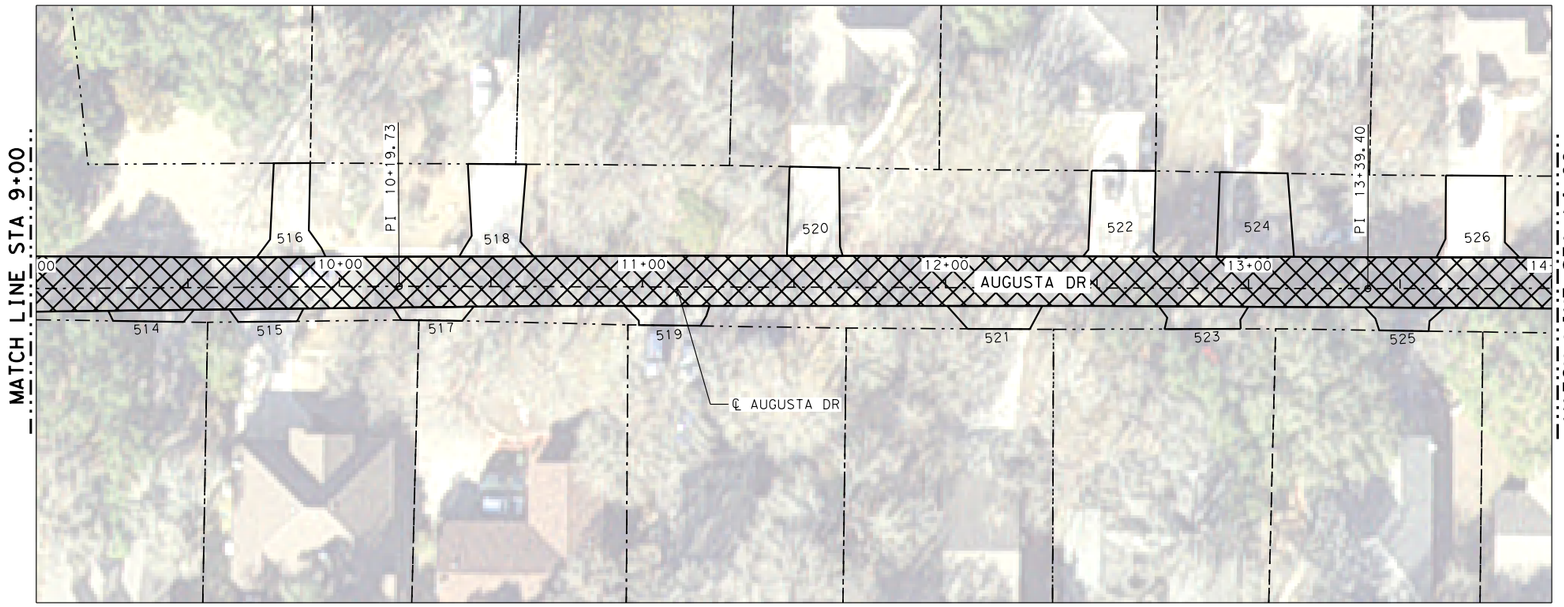
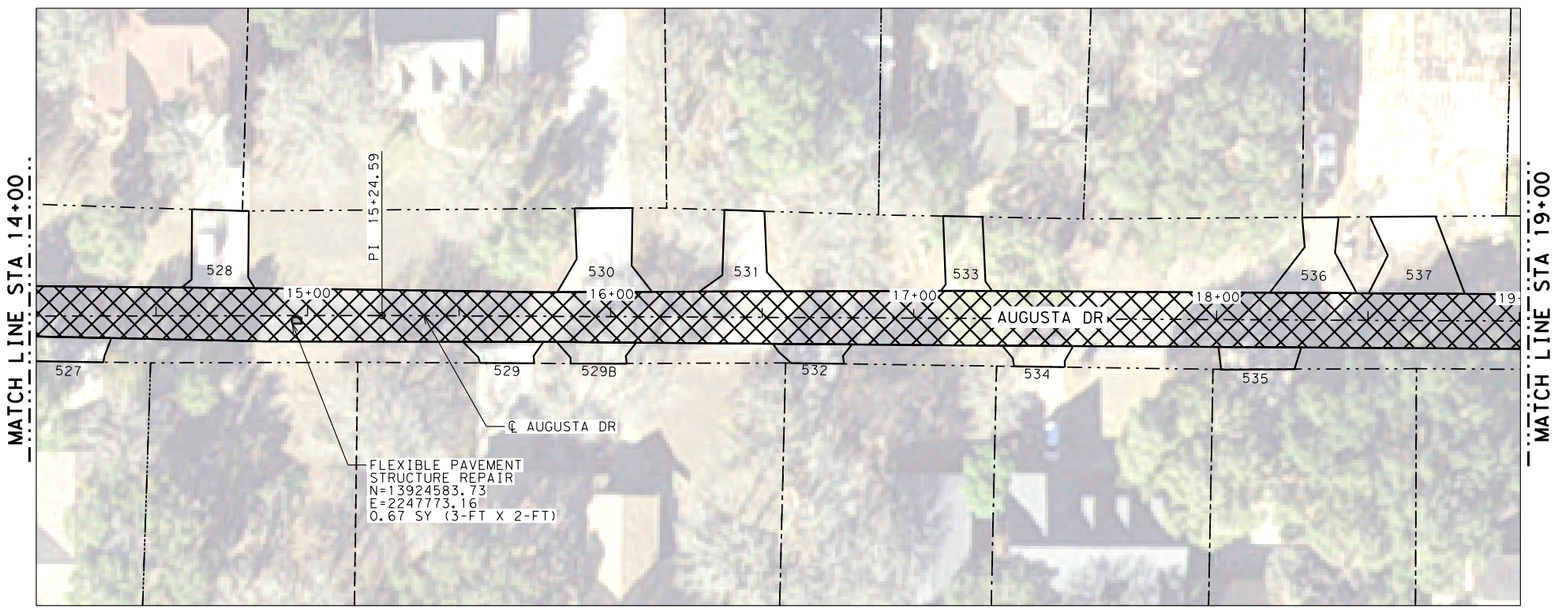


AUGUSTA DR
(APPROX. ROADWAY PAVEMENT 930 SY)



AUGUSTA DR
(APPROX. ROADWAY PAVEMENT 949 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
AUGUSTA DR 2 OF 7

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The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	30 155

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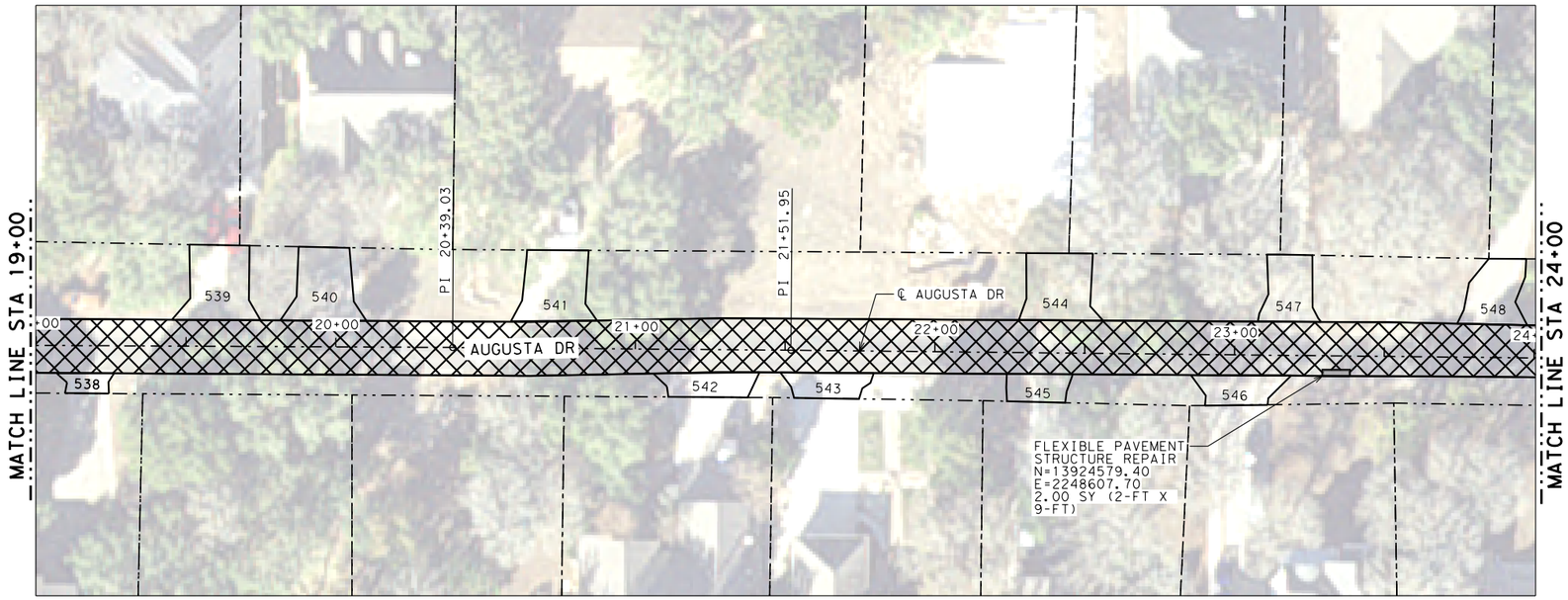

AUGUSTA DR
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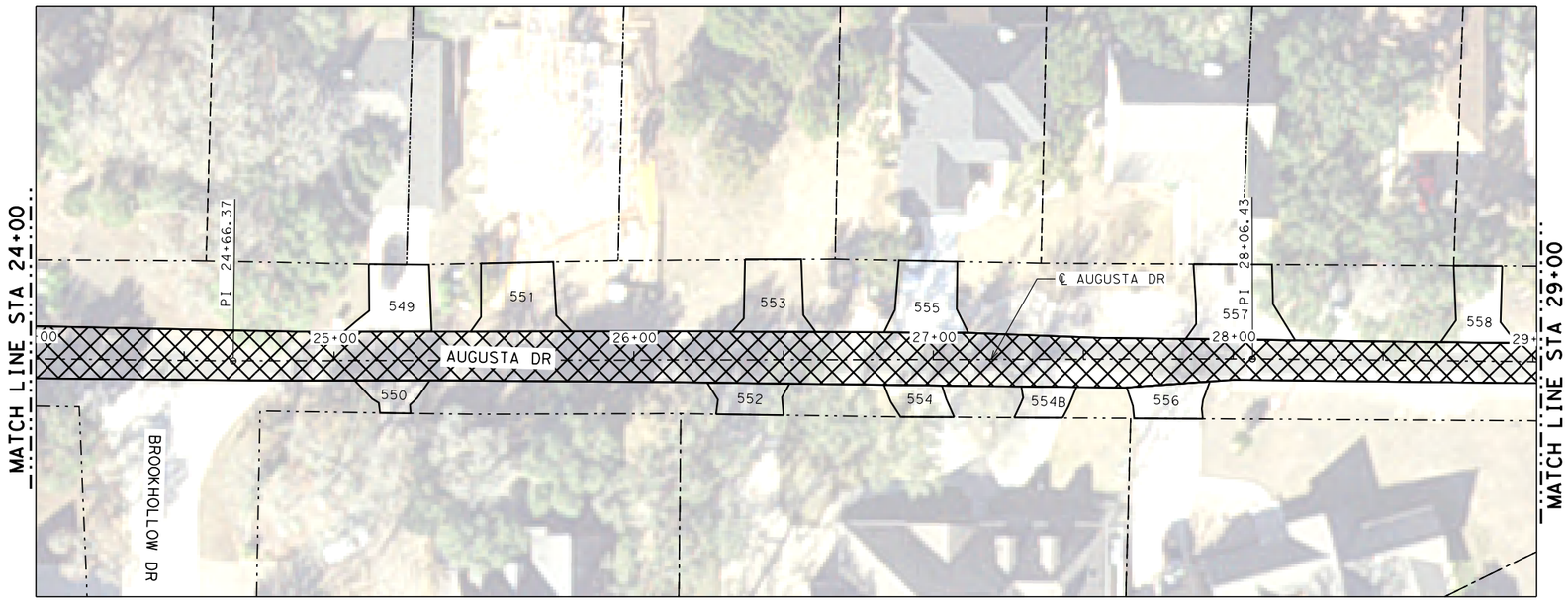

AUGUSTA DR
(APPROX. ROADWAY PAVEMENT 891 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
AUGUSTA DR 3 OF 7

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The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
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SHEET NUMBER	31 156

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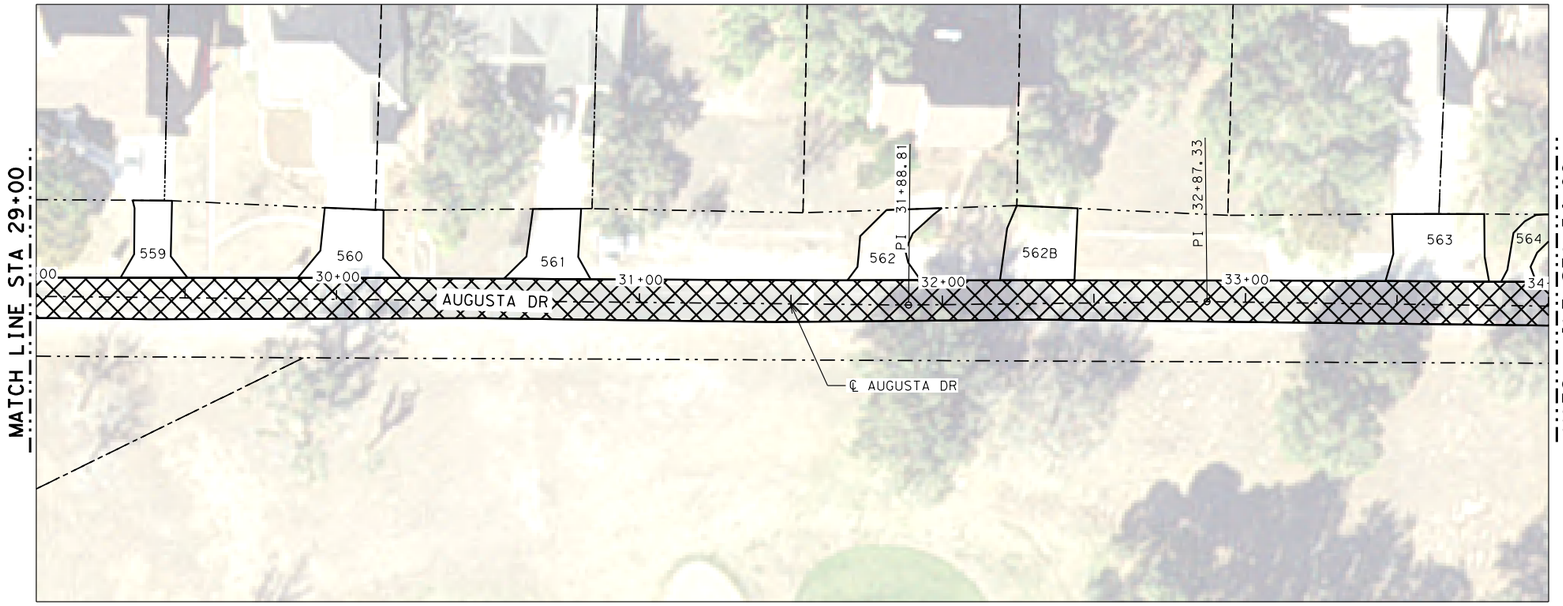

AUGUSTA DR
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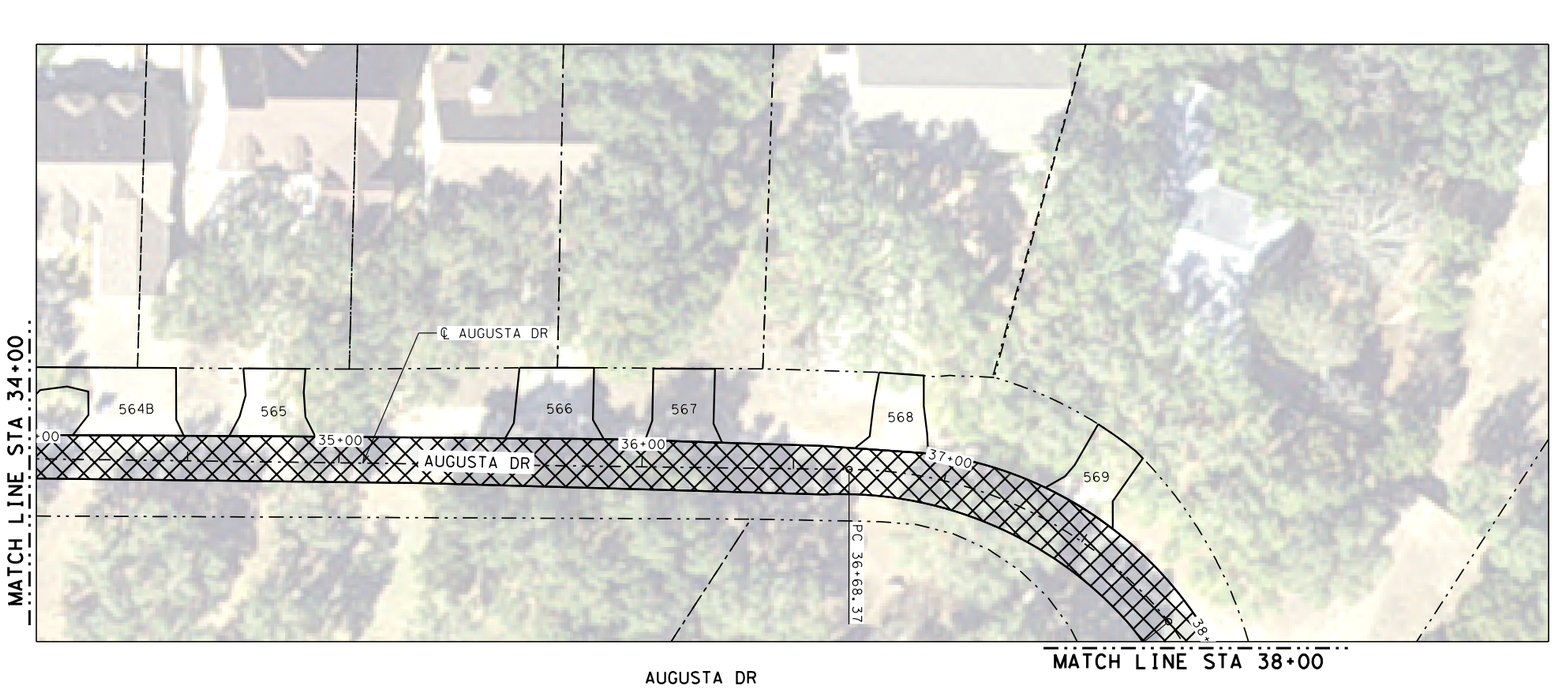

AUGUSTA DR
(APPROX. ROADWAY PAVEMENT 710 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLANS
AUGUSTA DR 4 OF 7

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(FIRM # 6535)

The City of Woodcreek
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CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	32 / 157

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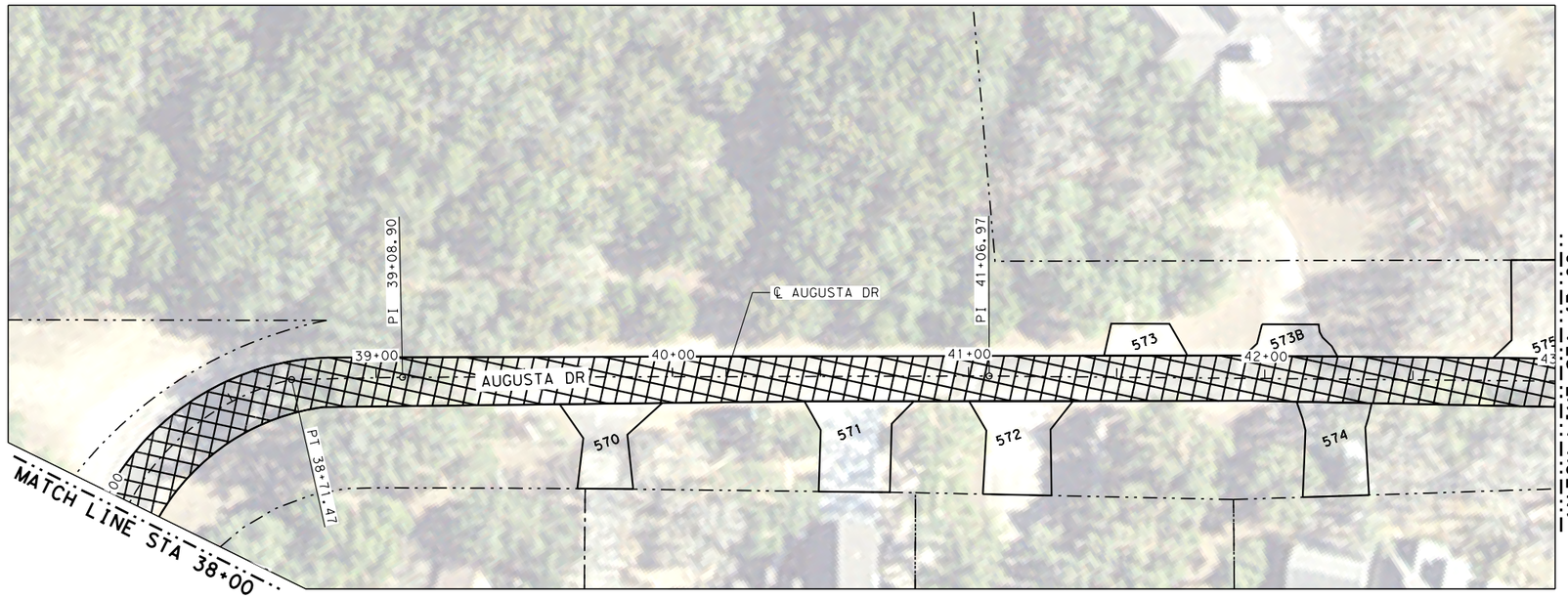

AUGUSTA DR
(APPROX. ROADWAY PAVEMENT 889 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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AUGUSTA DR
(APPROX. ROADWAY PAVEMENT 908 SY)

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLANS

AUGUSTA DR 5 OF 7

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(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	33 158

SHEET OF

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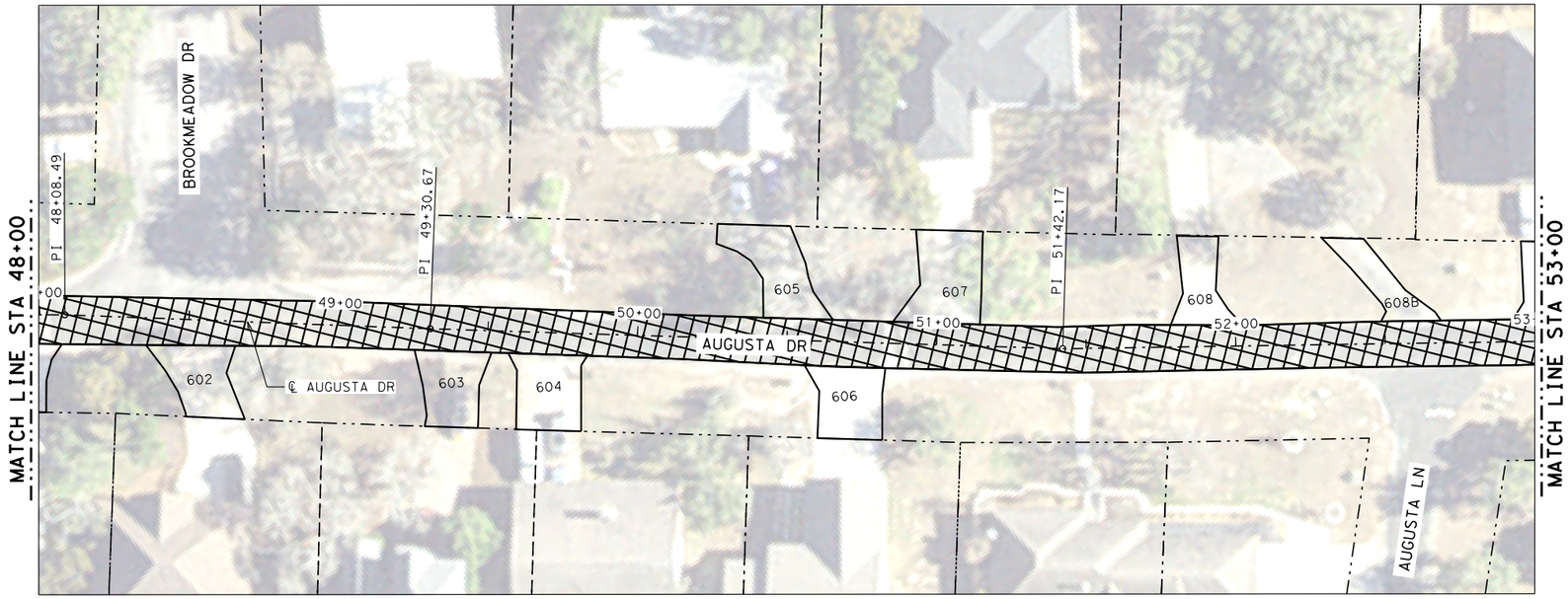

AUGUSTA DR
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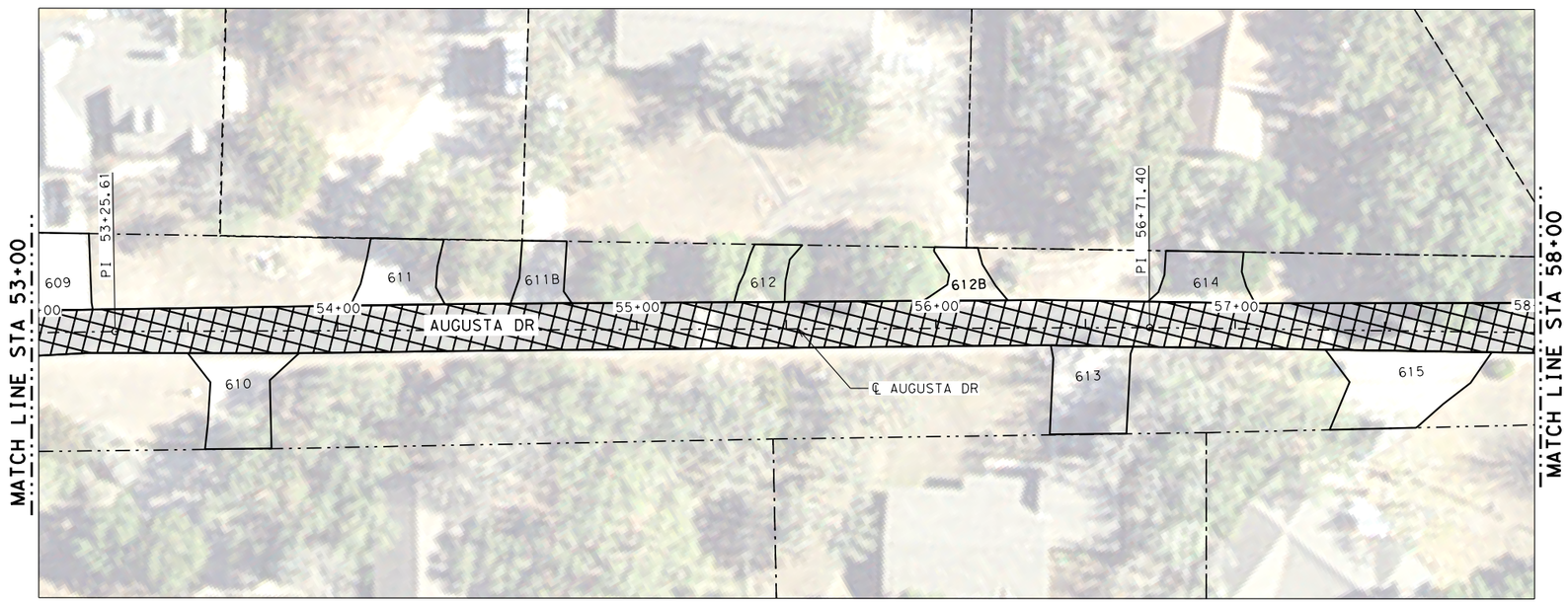

AUGUSTA DR
(APPROX. ROADWAY PAVEMENT 860 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
AUGUSTA DR 6 OF 7

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PUBLIC PROJECT ENGINEERING
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The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SHEET	OF
SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	34 159

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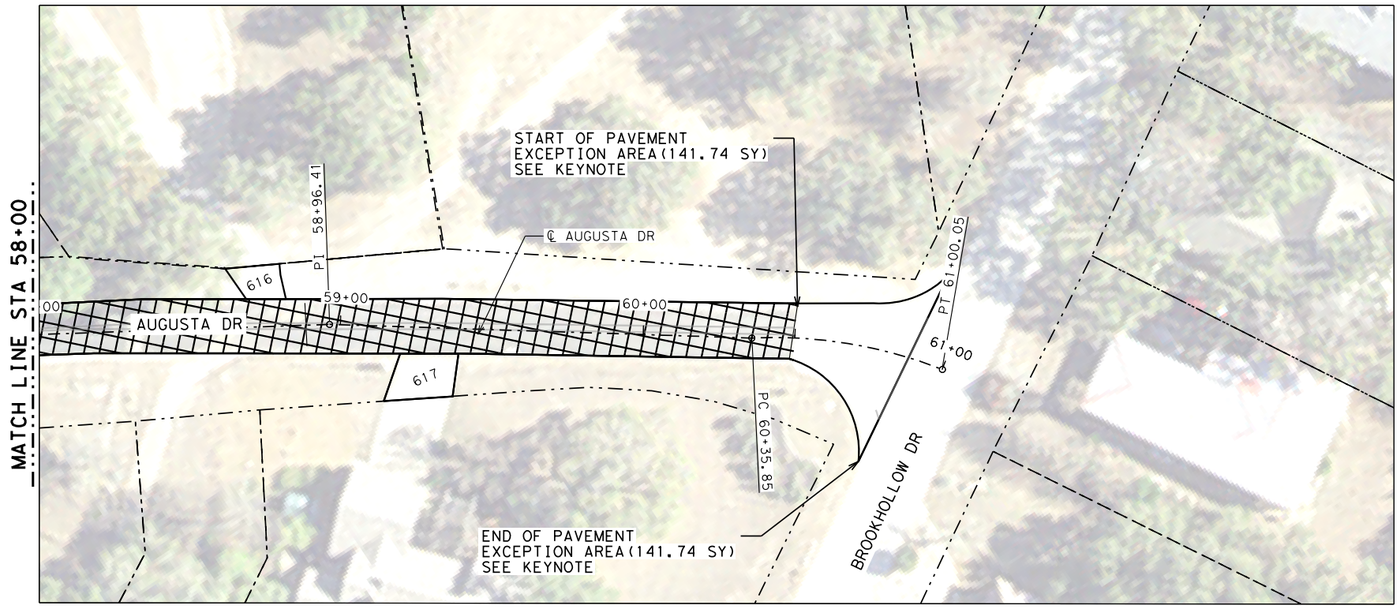

AUGUSTA DR
(APPROX. ROADWAY PAVEMENT 638 SY)

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LEGEND

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- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

Item 1.

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLANS
AUGUSTA DR 7 OF 7

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The City of Woodcreek
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CITY OF WOODCREEK

SHEET	OF
SCALE	AS NOTED
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SHEET NUMBER	35 160

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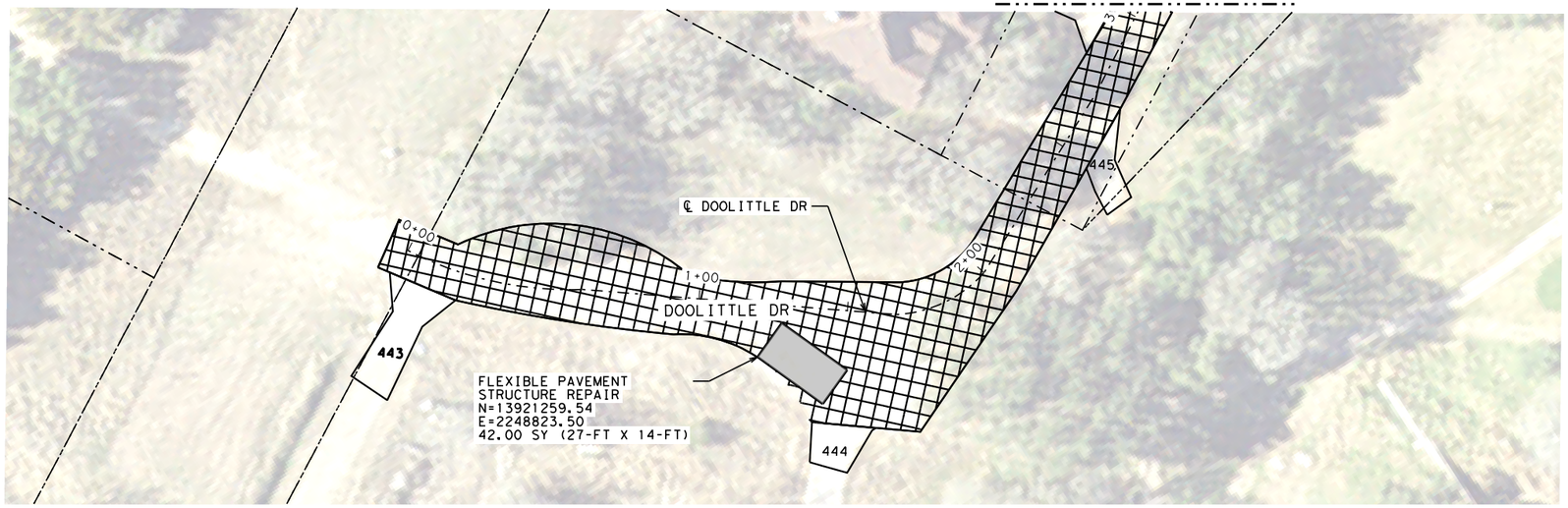

DOOLITTLE DR
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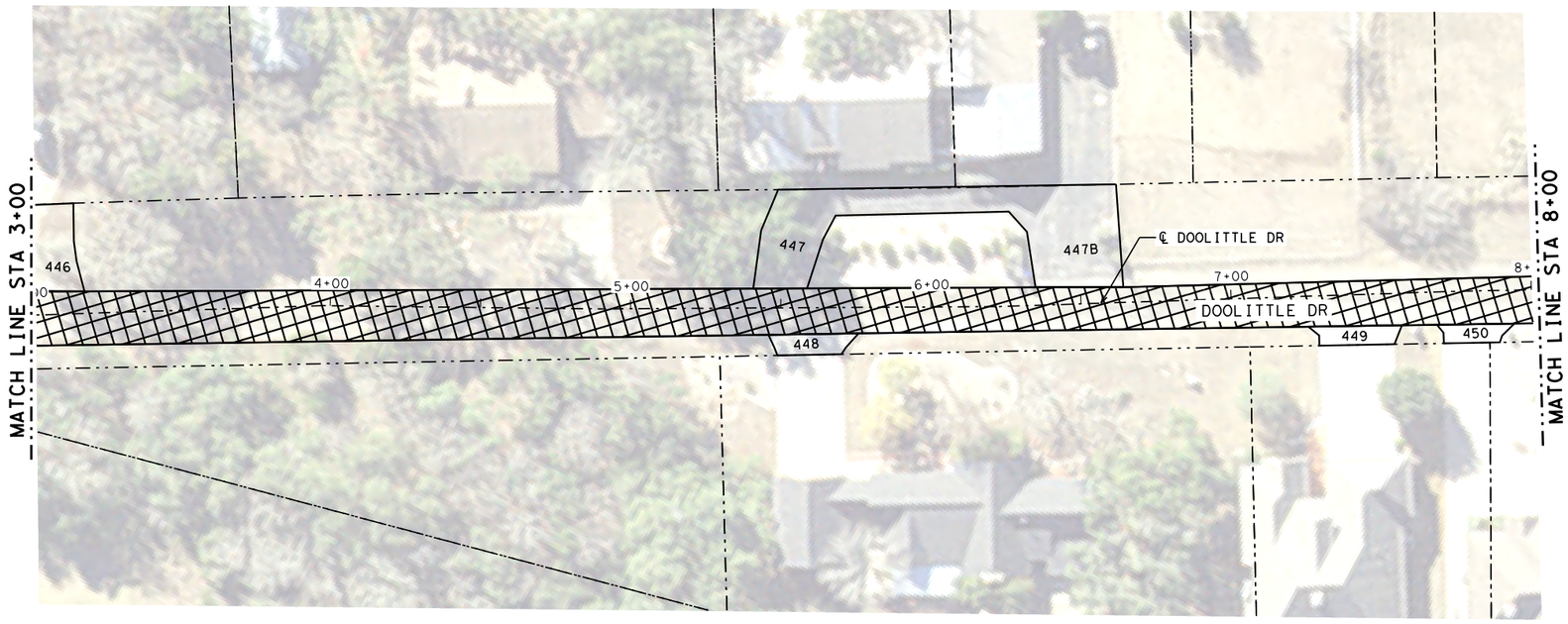

DOOLITTLE DR
(APPROX. ROADWAY PAVEMENT 870 SY)

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLANS

DOOLITTLE DR 1 OF 3

K·FRIESE + ASSOCIATES
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The City of Woodcreek
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CITY OF WOODCREEK

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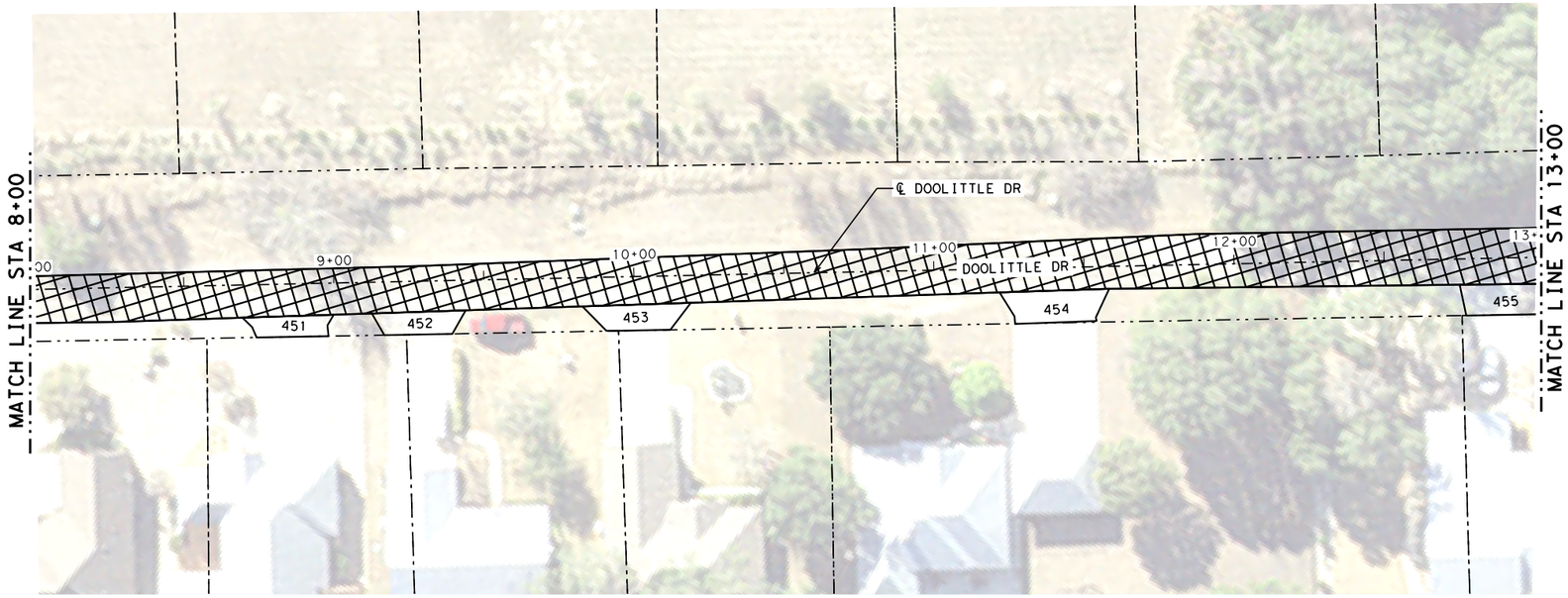

DOOLITTLE DR
(APPROX. ROADWAY PAVEMENT 915 SY)

DOOLITTLE DR
(APPROX. ROADWAY PAVEMENT 1031 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
DOOLITTLE DR 2 OF 3

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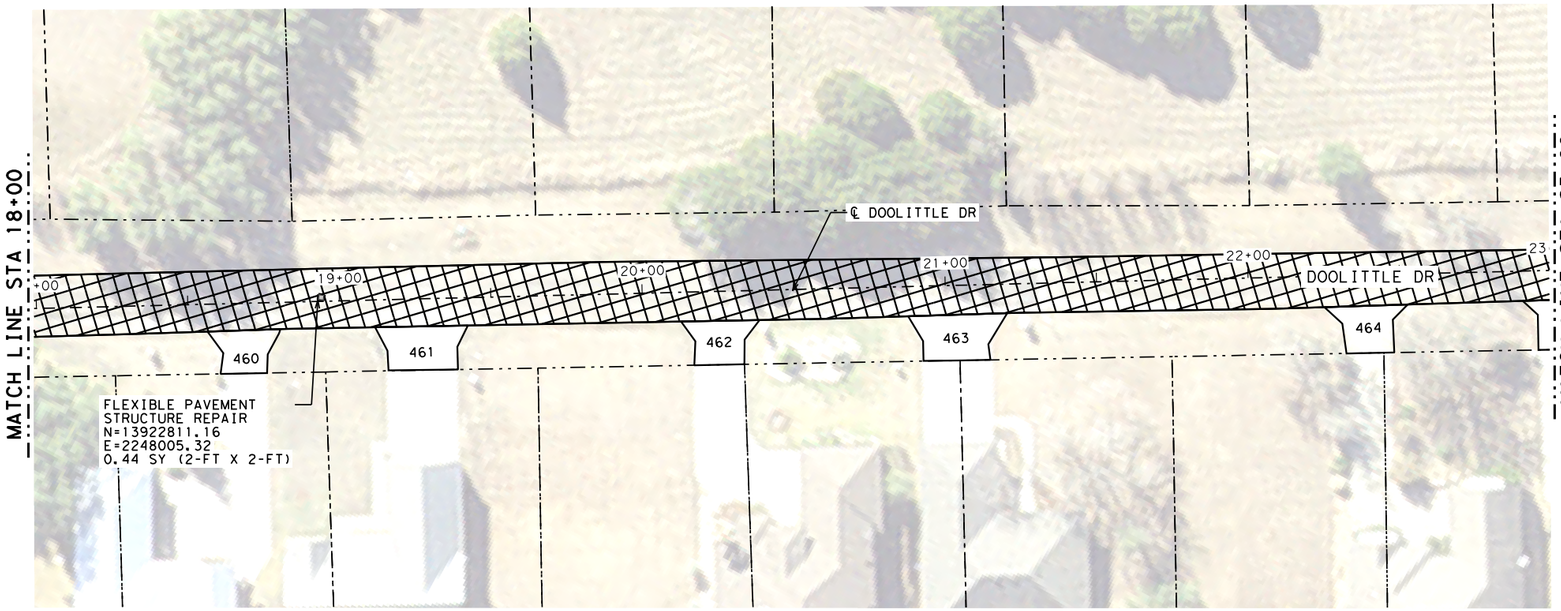

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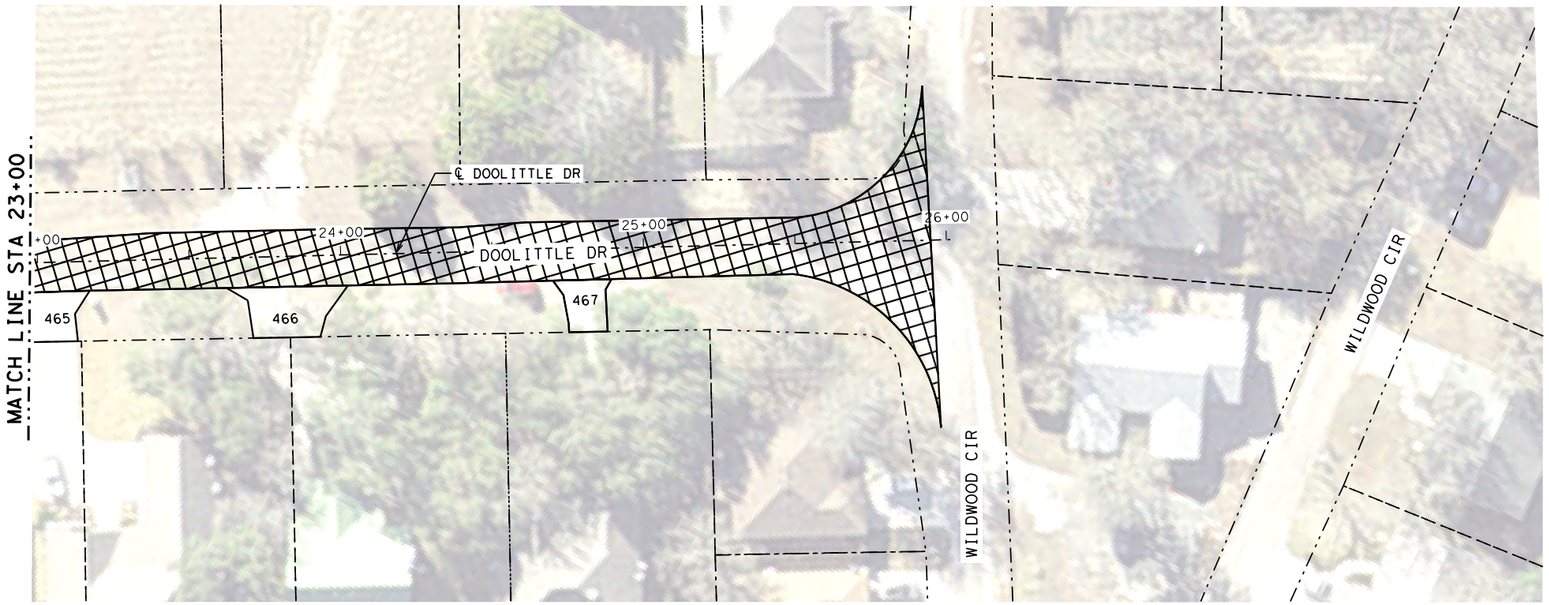

DOOLITTLE DR
(APPROX. ROADWAY PAVEMENT 729 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
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RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLANS

DOOLITTLE DR 3 OF 3

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DATE	5/19/2023
SHEET NUMBER	38 / 163

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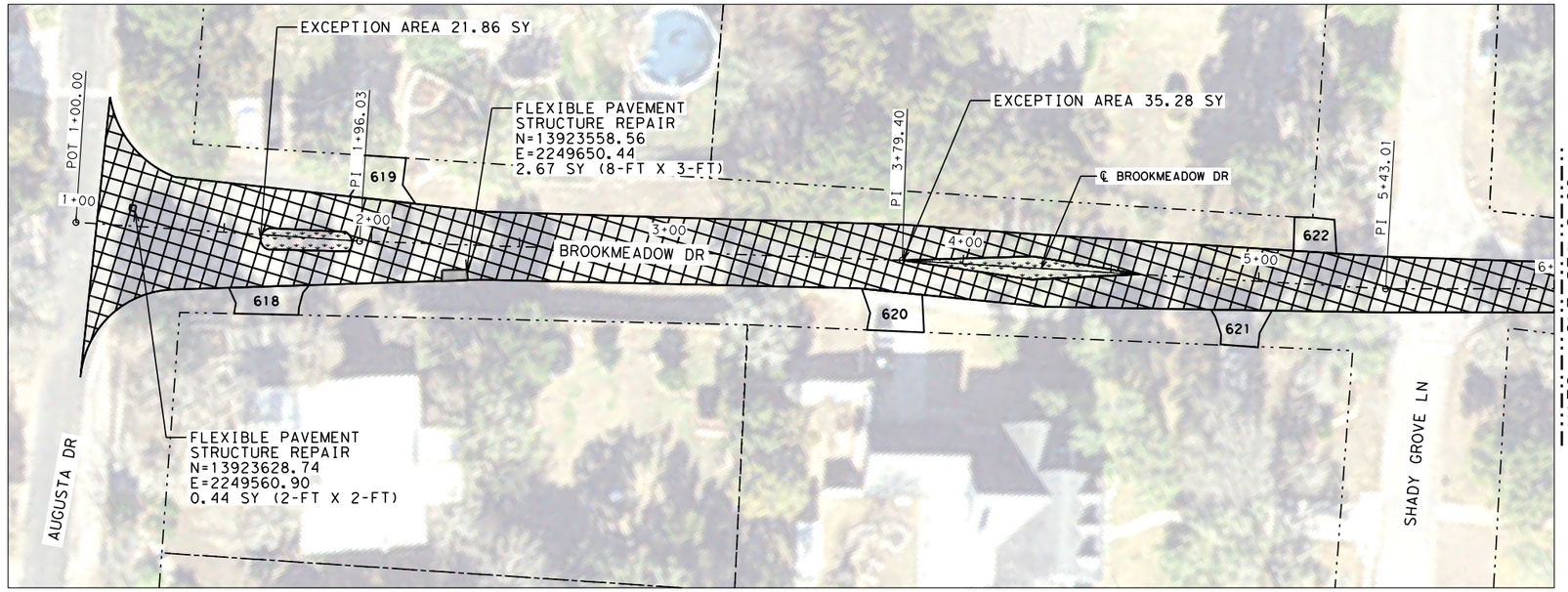

BROOKMEADOW DR
(APPROX. ROADWAY PAVEMENT 1323 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

SHEET NOTES

1. CONTRACTOR SHALL NOT DAMAGE EXISTING CONCRETE CURBS OR EXISTING DRIVEWAYS. REPAIR OF THIS INFRASTRUCTURE SHALL BE AT THE CONSTRACTOR'S EXPENSE.
2. CONTRACTOR SHALL NOT MILL AND OVERLAY A STREET BEYOND THE LONGITUDINAL LIMITS OF WHICH THEY CANNOT MILL OR OVERLAY FOR ITS FULL WIDTH THAT SAME DAY UNLESS APPROVED BY THE CITY.

BROOKMEADOW DR
(APPROX. ROADWAY PAVEMENT 930 SY)

KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

REV. NO.	BY	DATE	REVISION DESCRIPTION

Item 1.

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
BROOKMEADOW DR 1 OF 5

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING (FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	39 164

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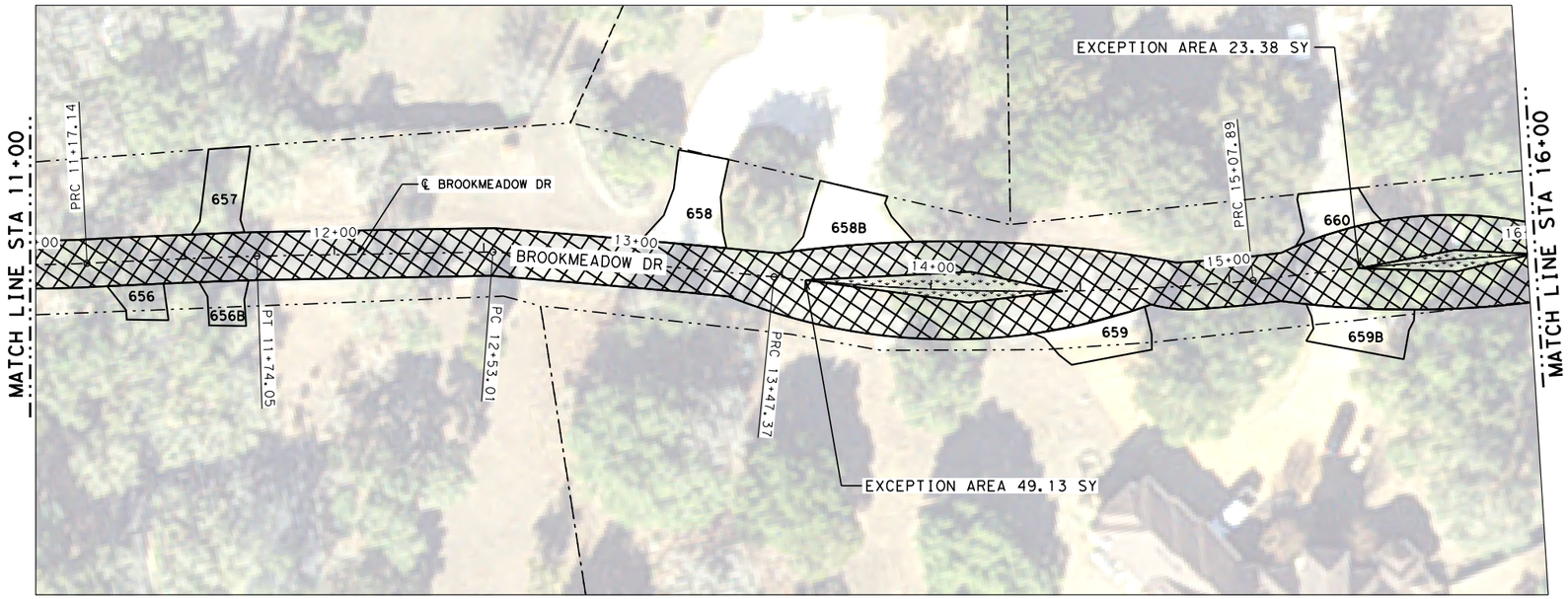
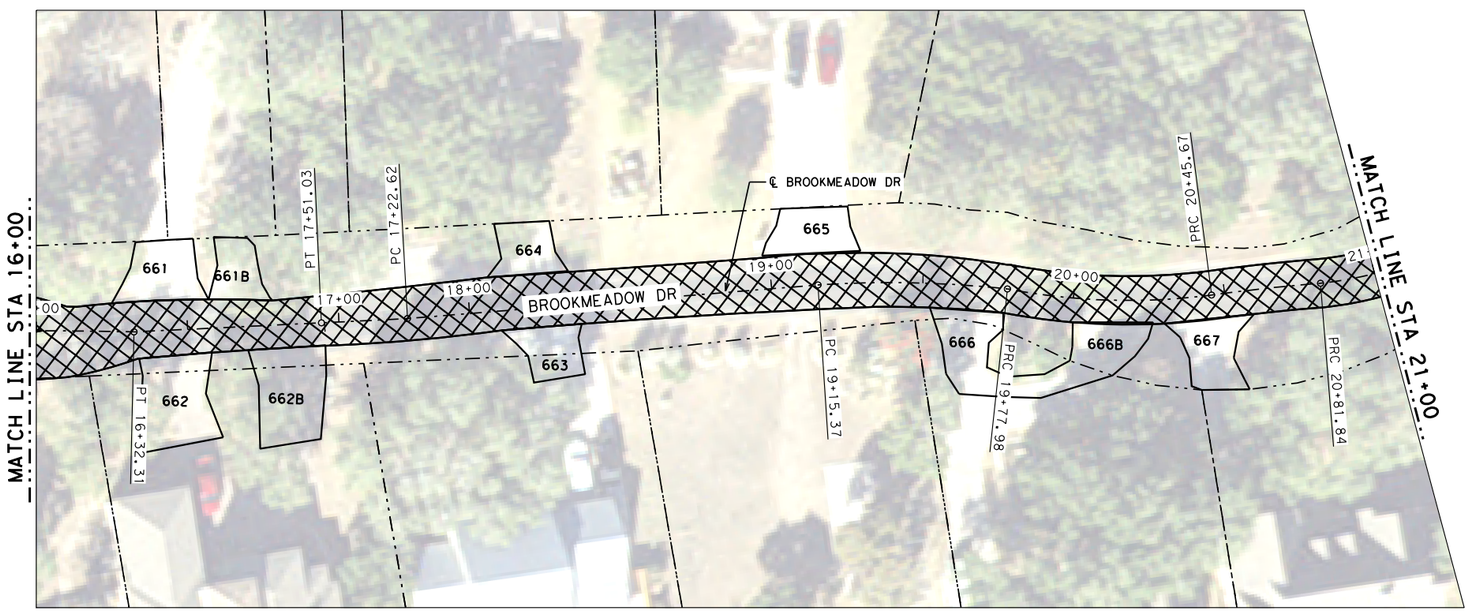


BROOKMEADOW DR
(APPROX. ROADWAY PAVEMENT 1089 SY)



BROOKMEADOW DR
(APPROX. ROADWAY PAVEMENT 858 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

Item 1.

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
BROOKMEADOW DR 2 OF 5

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	40 165

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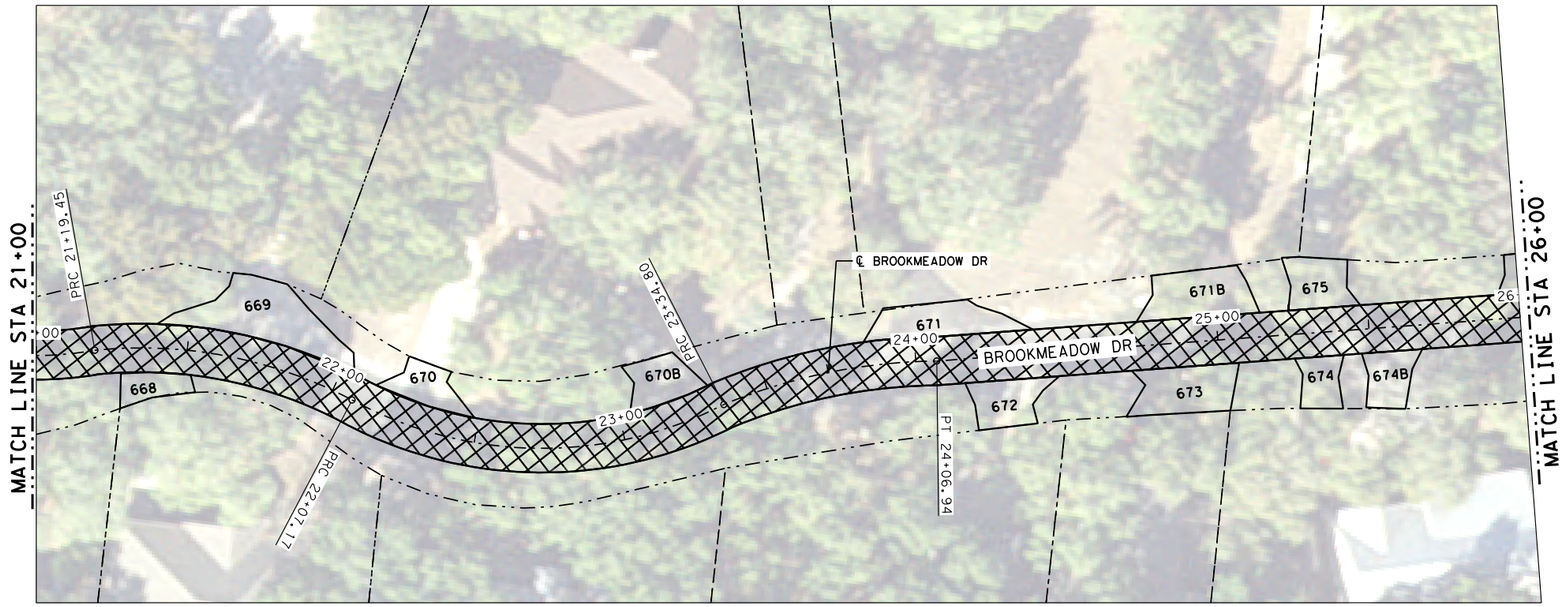

BROOKMEADOW DR
(APPROX. ROADWAY PAVEMENT 888 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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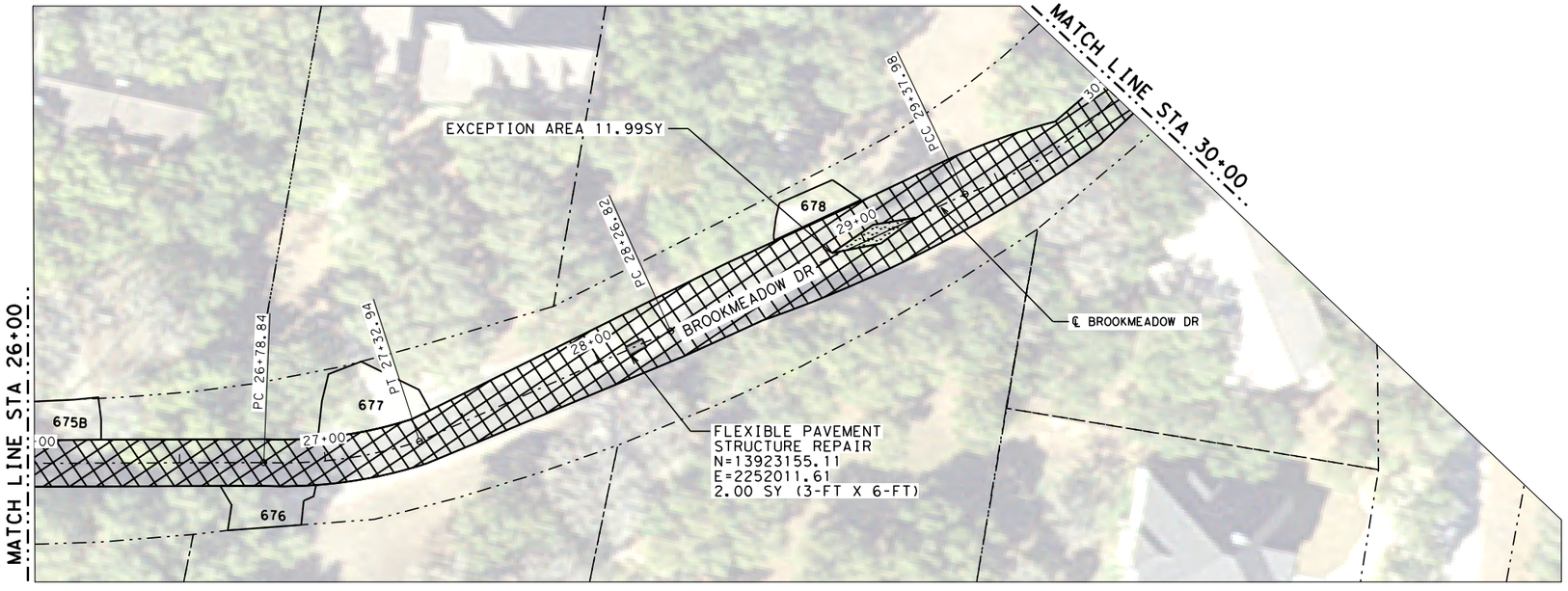

BROOKMEADOW DR
(APPROX. ROADWAY PAVEMENT 844 SY)

KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
BROOKMEADOW DR 3 OF 5

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	41 166

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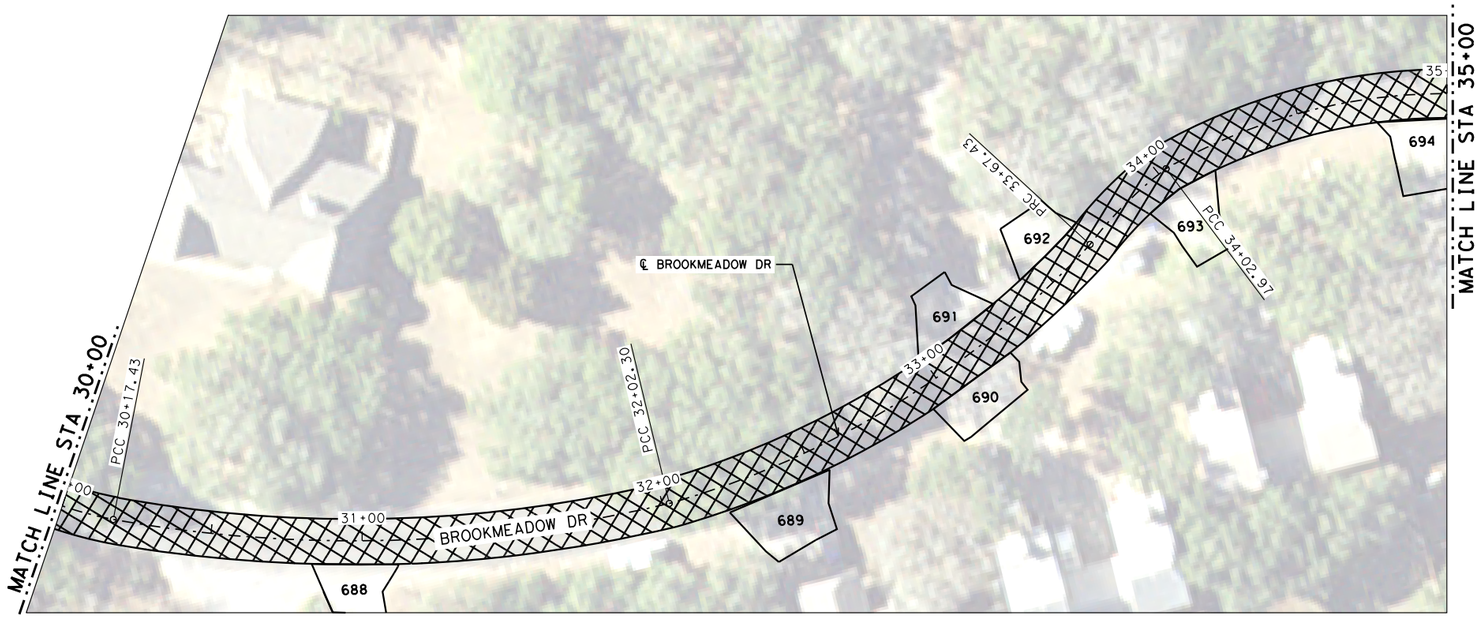

BROOKMEADOW DR
(APPROX. ROADWAY PAVEMENT 870 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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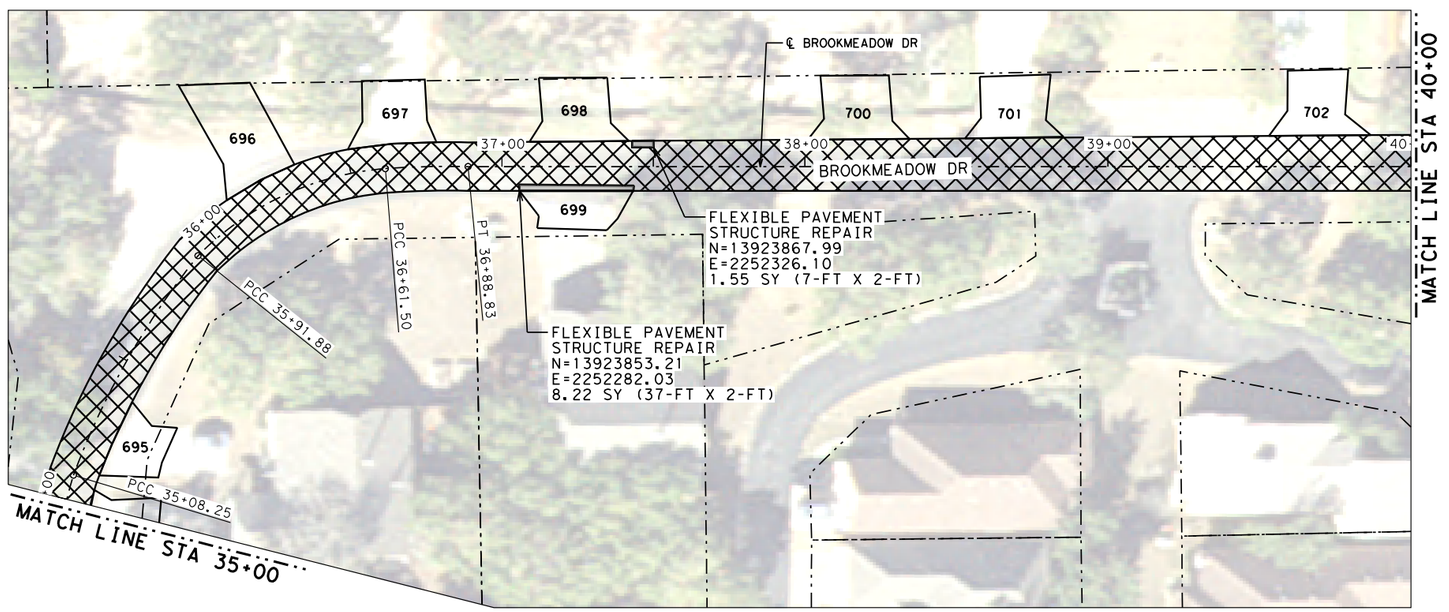

BROOKMEADOW DR
(APPROX. ROADWAY PAVEMENT 922 SY)

REV. NO.	BY	DATE	REVISION DESCRIPTION

Item 1.

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
BROOKMEADOW DR 4 OF 5

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	42 / 167

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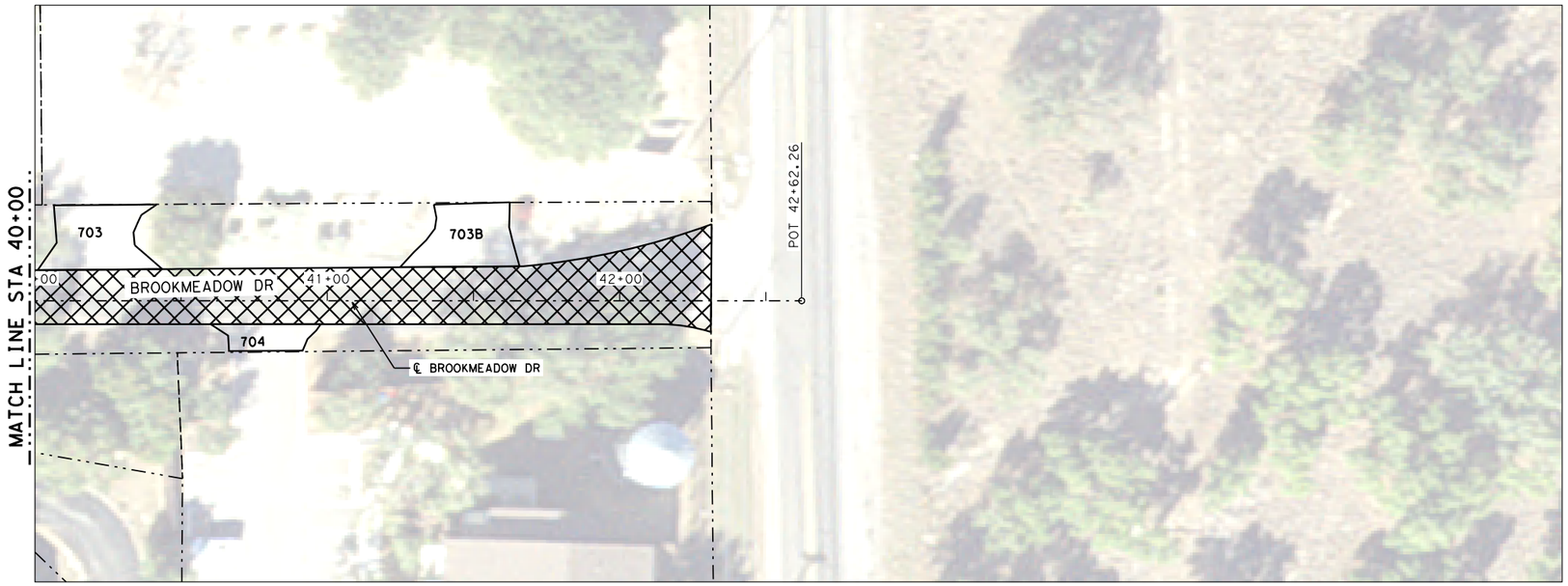

BROOKMEADOW DR
(APPROX. ROADWAY PAVEMENT 539 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLANS

BROOKMEADOW DR 5 OF 5

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	43 168

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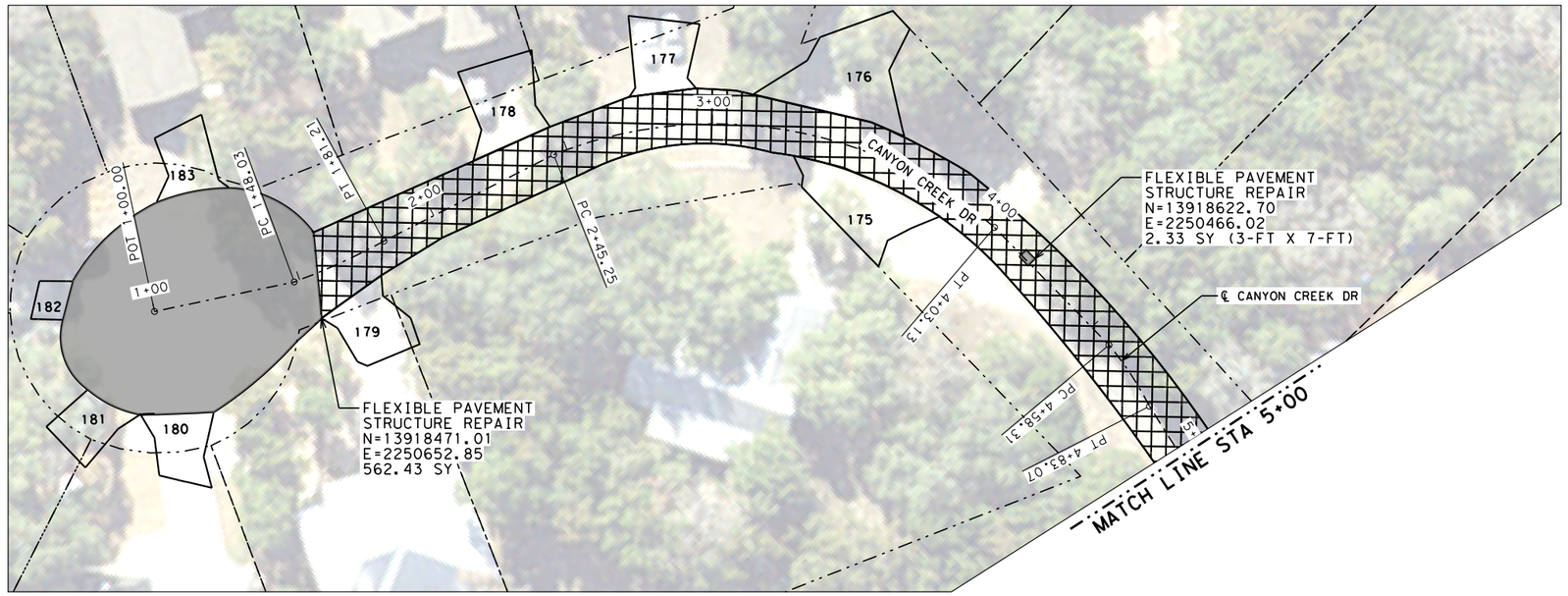

CANYON CREEK DR
(APPROX. ROADWAY PAVEMENT 733 SY)

CANYON CREEK DR
(APPROX. ROADWAY PAVEMENT 1031 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8") SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
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- NON PAVED AREA

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K FRIESE & ASSOCIATES, INC.
340 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
CANYON CREEK DR 1 OF 3

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	44 169

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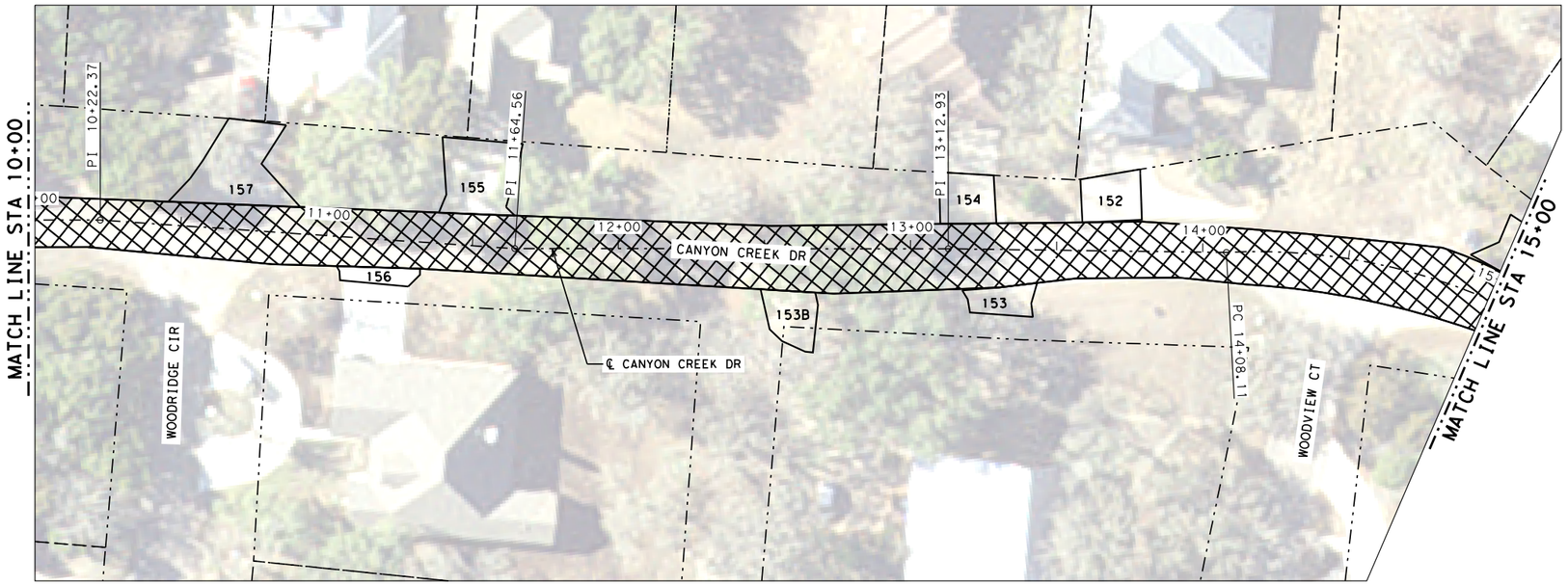

CANYON CREEK DR
(APPROX. ROADWAY PAVEMENT 1126 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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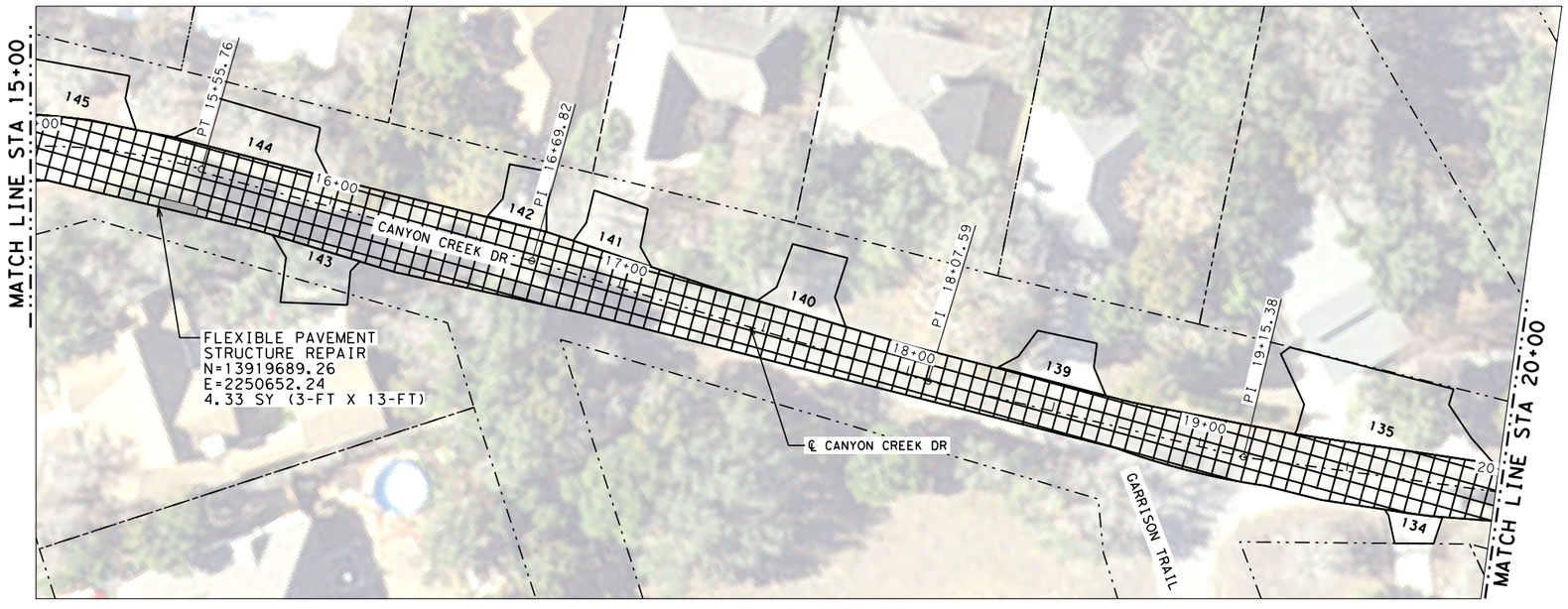

CANYON CREEK DR
(APPROX. ROADWAY PAVEMENT 1121 SY)

REV. NO.	BY	DATE	REVISION DESCRIPTION

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & OVERLAY PLANS
CANYON CREEK DR 2 OF 3

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING (FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	45 170

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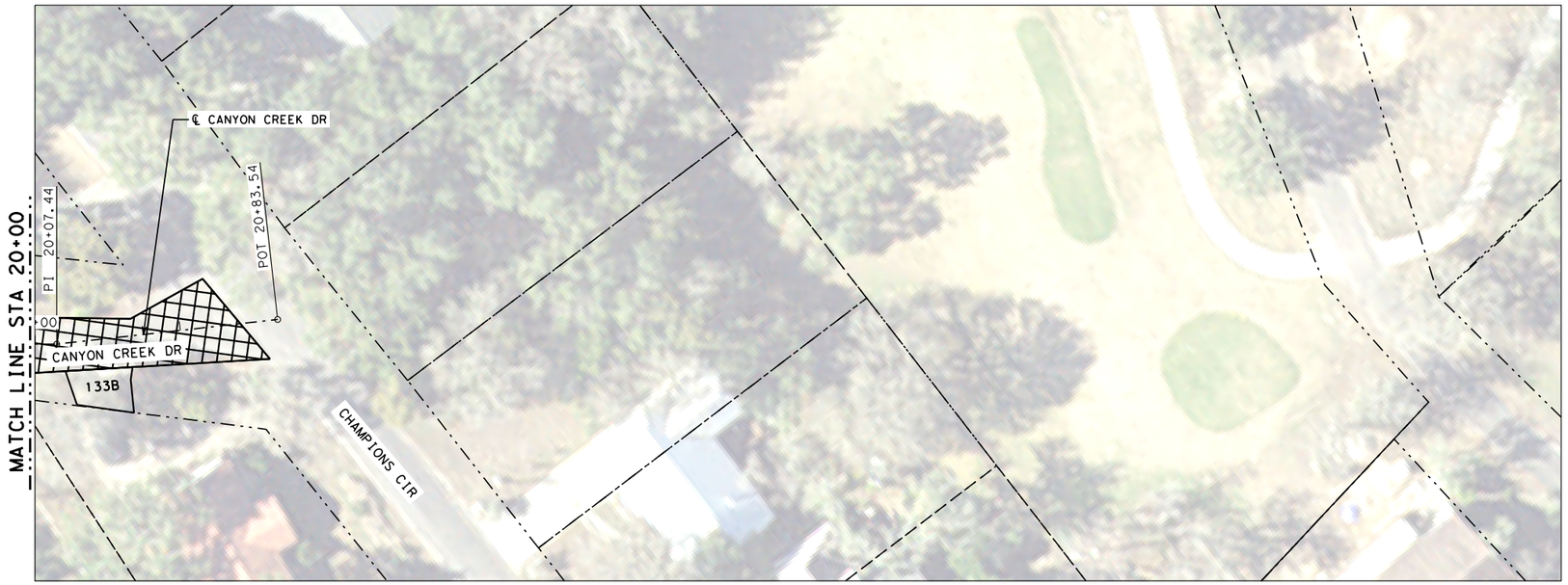

CANYON CREEK DR
(APPROX. ROADWAY PAVEMENT 164 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
CANYON CREEK DR 3 OF 3

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	46 171

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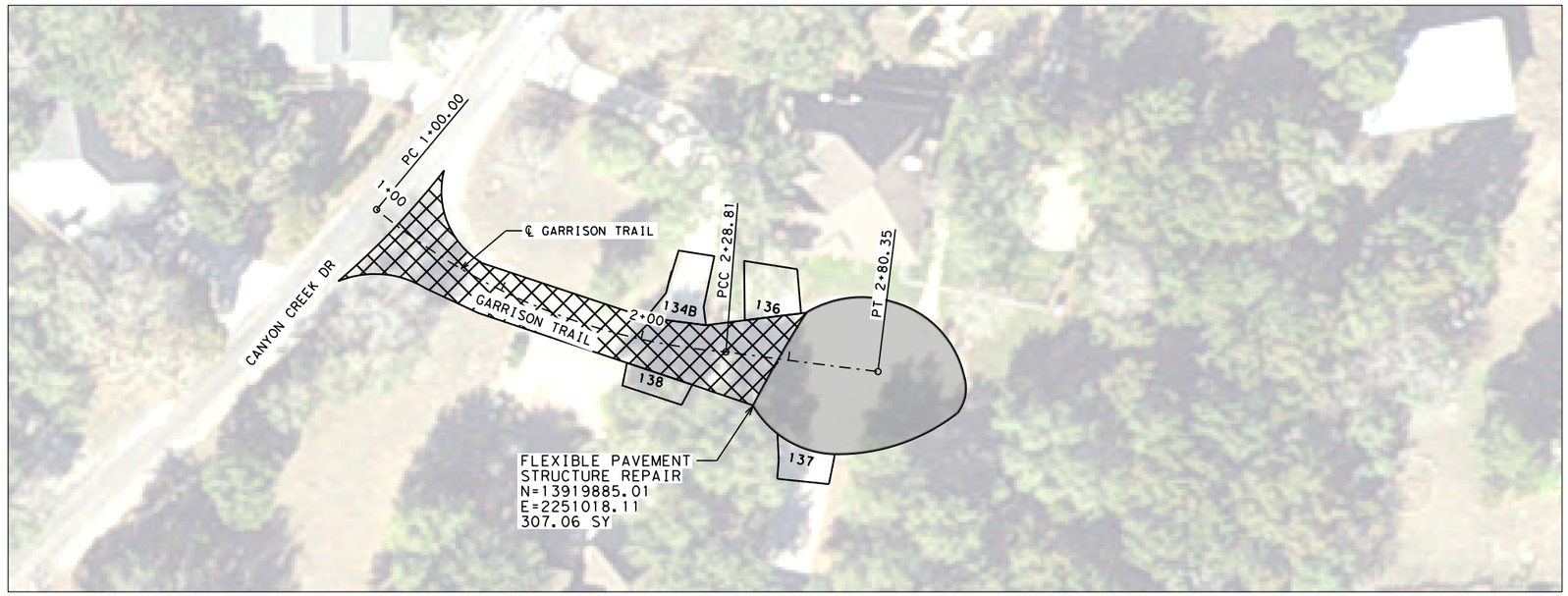
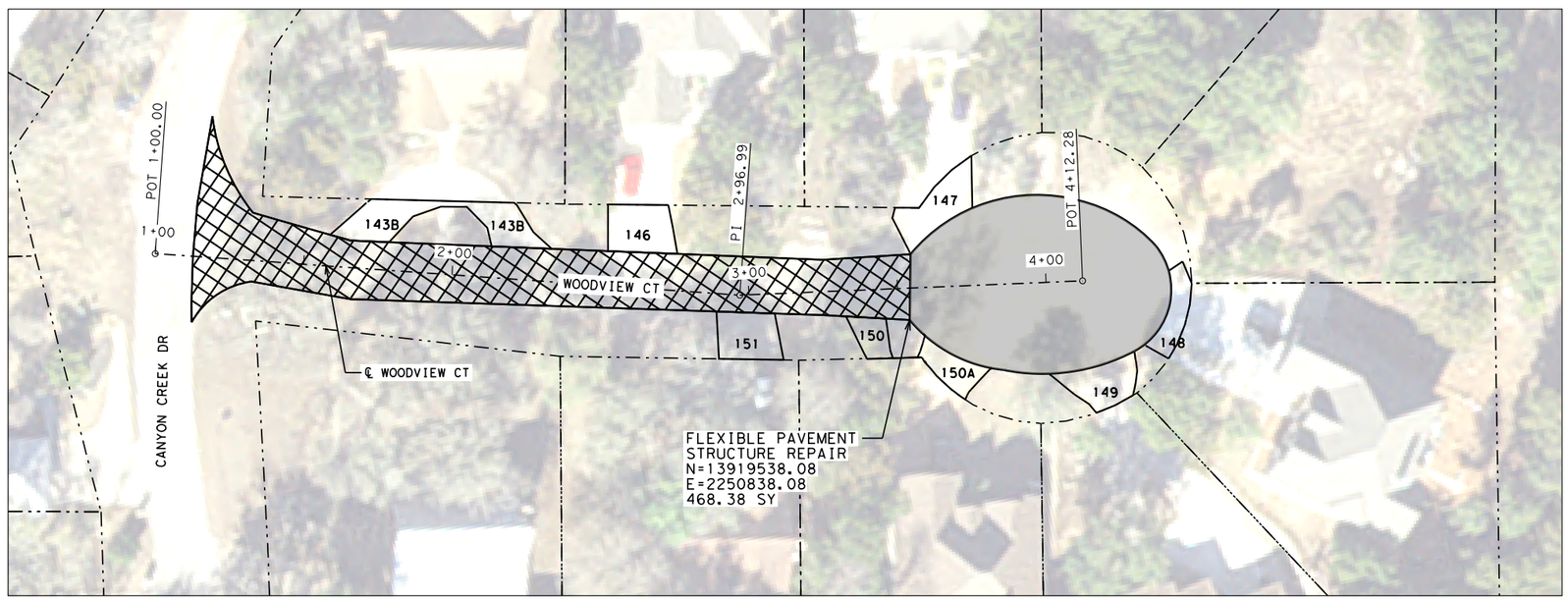


GARRISON TRAIL
(APPROX. ROADWAY PAVEMENT 318 SY)



WOODVIEW CT
(APPROX. ROADWAY PAVEMENT 571 SY

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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- NON PAVED AREA

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & OVERLAY PLANS
GARRISON TRAIL & WOODVIEW CT 1 OF 1

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	47 / 172

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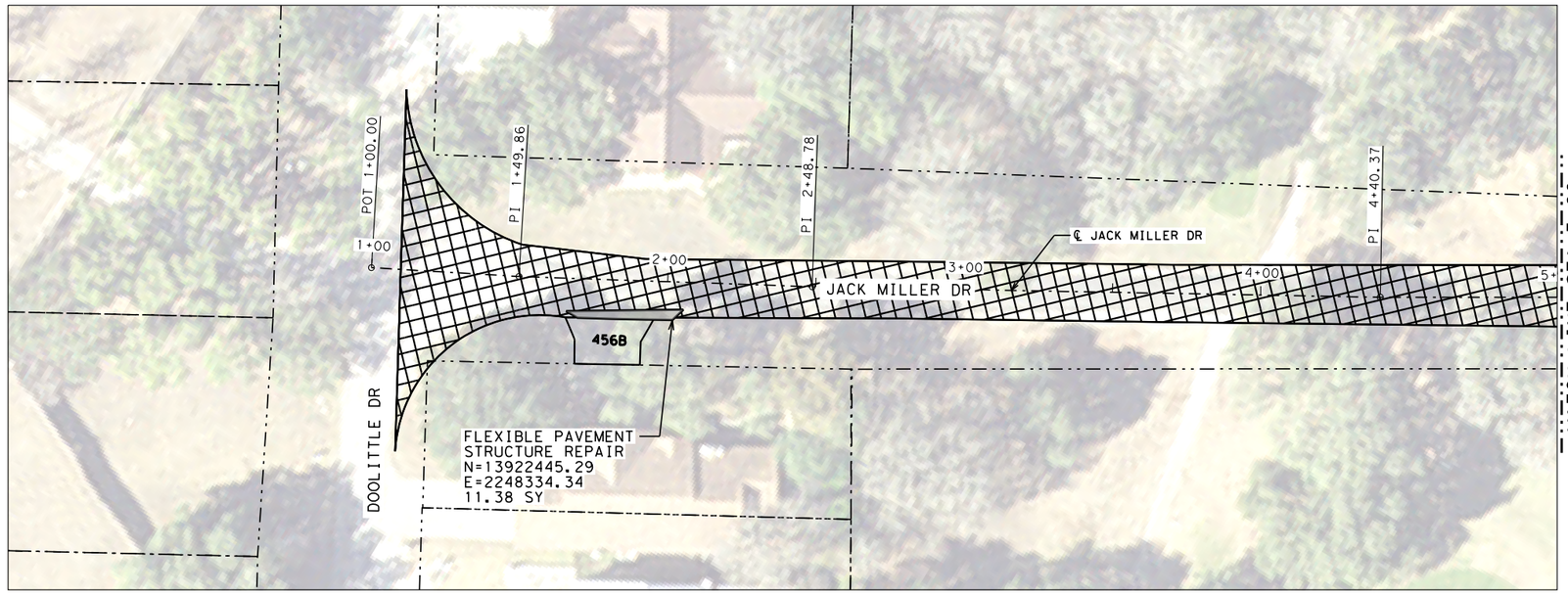

JACK MILLER DR
(APPROX. ROADWAY PAVEMENT 1000 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
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JACK MILLER DR
(APPROX. ROADWAY PAVEMENT 466 SY)

KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

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40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
JACK MILLER DR 1 OF 1

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SHEET	OF
SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	48 (173)

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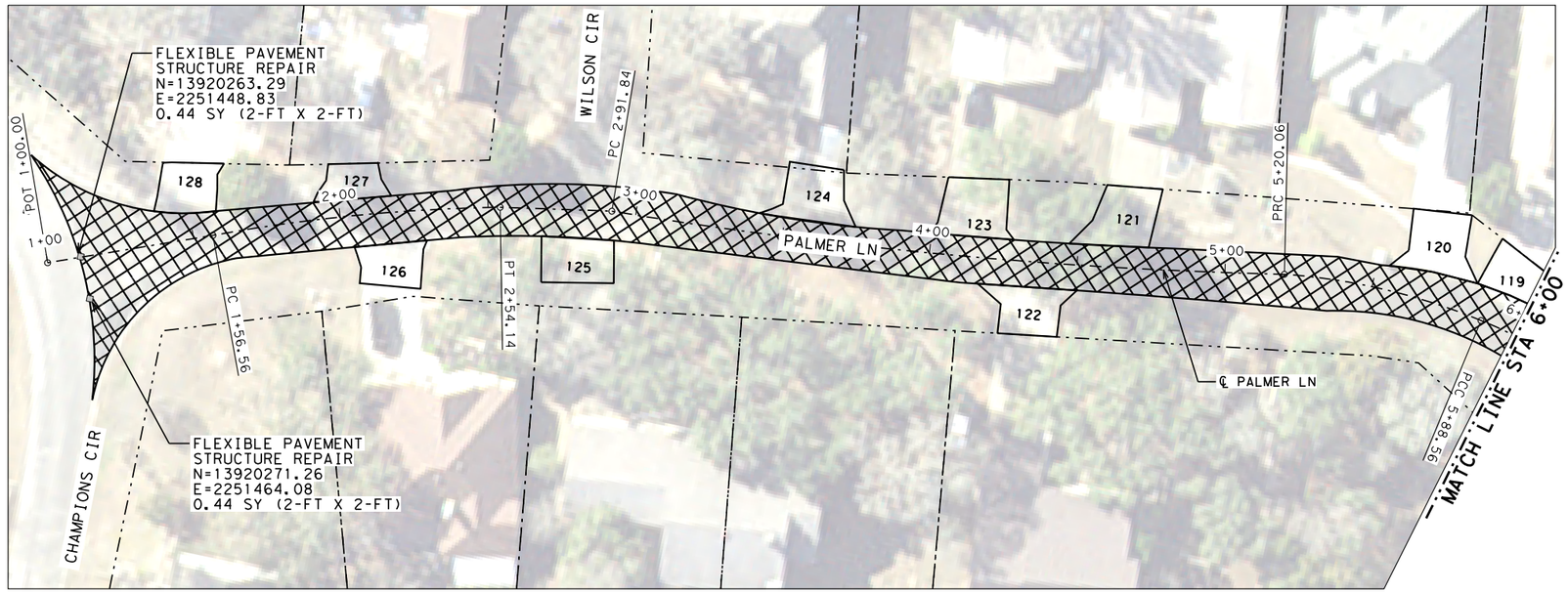
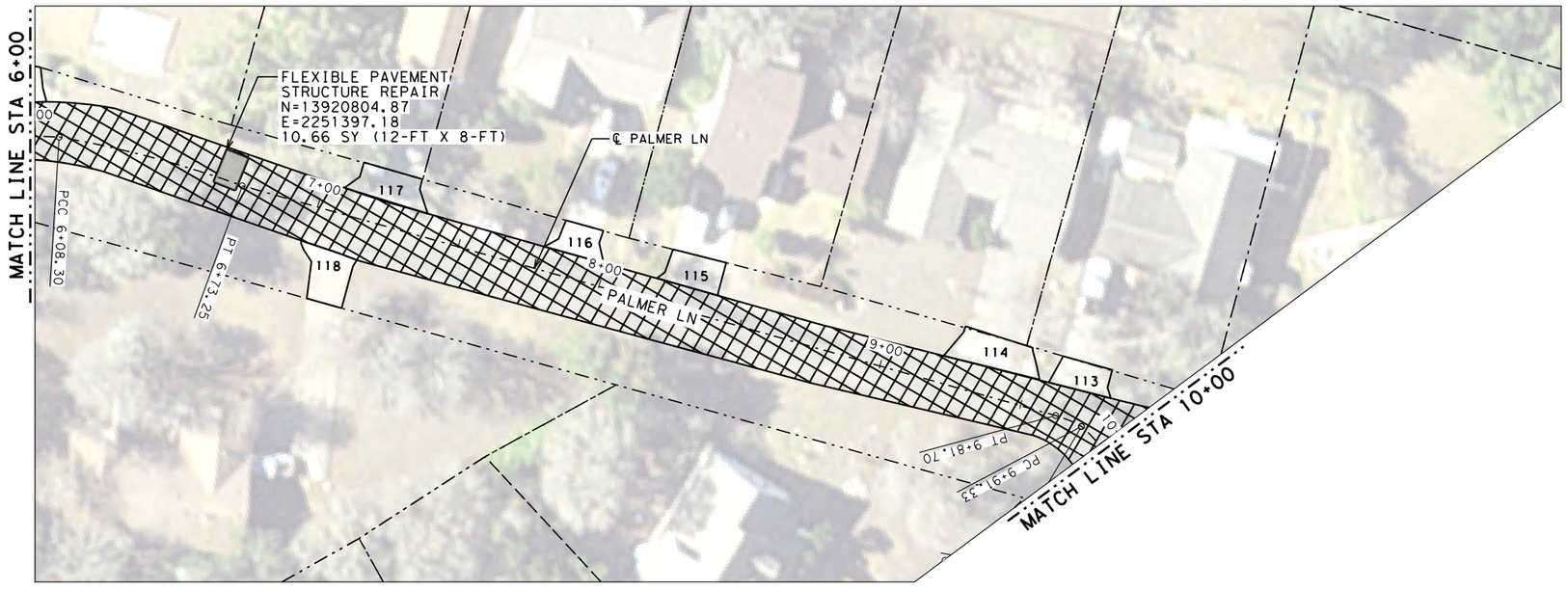


PALMER LN
(APPROX. ROADWAY PAVEMENT 994 SY)



PALMER LN
(APPROX. ROADWAY PAVEMENT 887 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

SHEET NOTES

1. CONTRACTOR SHALL NOT DAMAGE EXISTING CONCRETE CURBS OR EXISTING DRIVEWAYS. REPAIR OF THIS INFRASTRUCTURE SHALL BE AT THE CONSTRACTOR'S EXPENSE.
2. CONTRACTOR SHALL NOT MILL AND OVERLAY A STREET BEYOND THE LONGITUDINAL LIMITS OF WHICH THEY CANNOT MILL OR OVERLAY FOR ITS FULL WIDTH THAT SAME DAY UNLESS APPROVED BY THE CITY.

Item 1.

REV. NO.	BY	DATE	REVISION DESCRIPTION

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF JEREMIAH DAVIS,P.E. 144195 5/19/2023 THIS DOCUMENT IS NOT INTENDED FOR BIDDING,PERMITTING AND/OR CONSTRUCTION PURPOSES

K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
PALMER LN 1 OF 2

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SHEET	OF
SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	49 / 174

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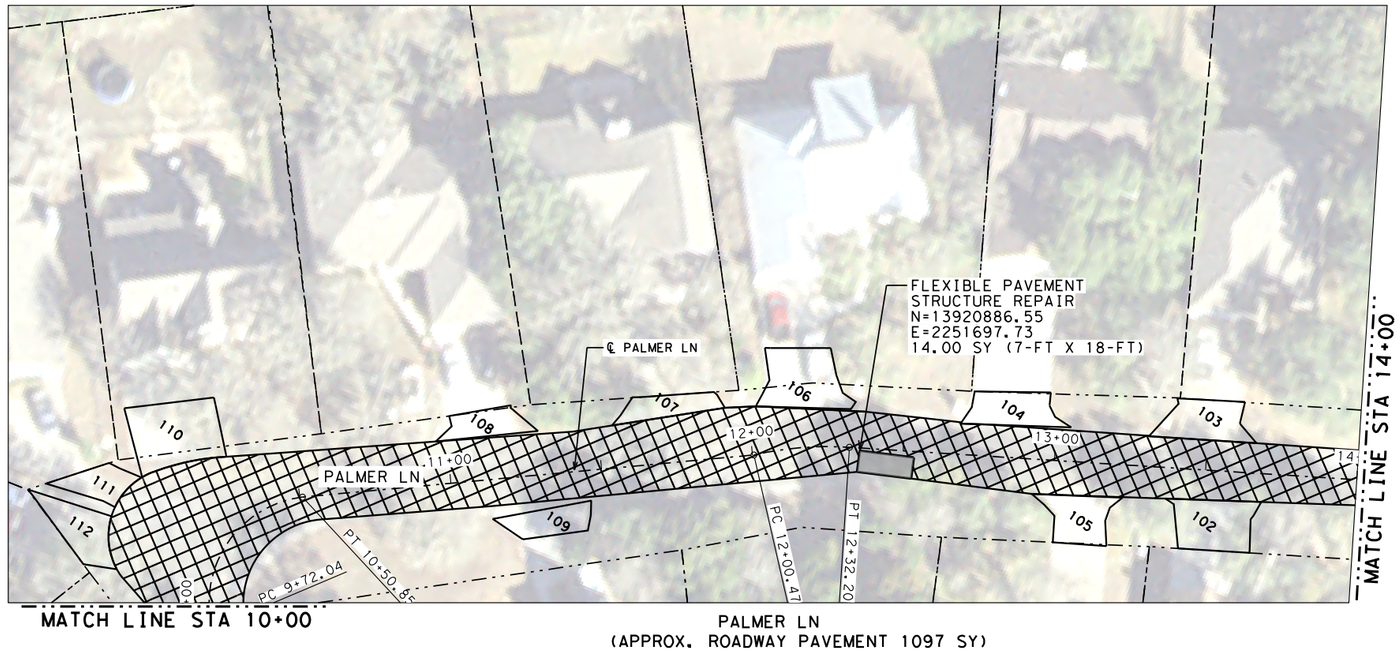

PALMER LN
(APPROX. ROADWAY PAVEMENT 1097 SY)

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
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- NON PAVED AREA

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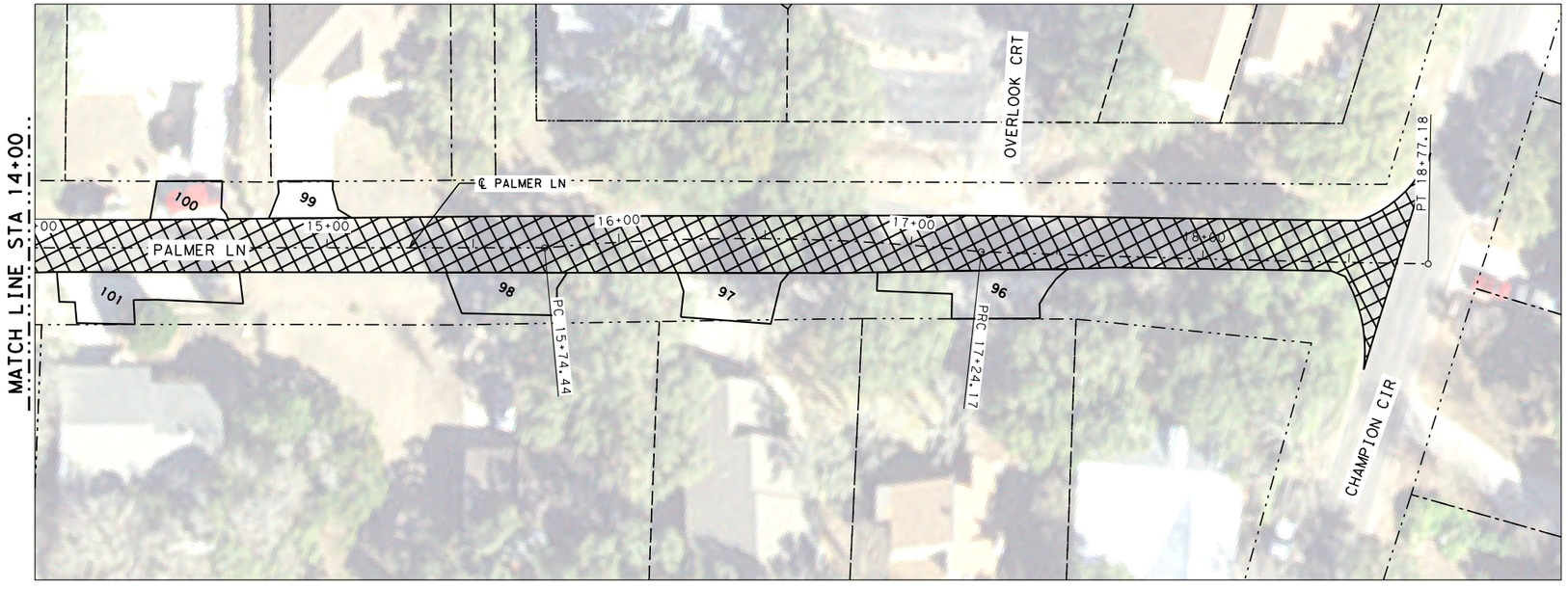

PALMER LN
(APPROX. ROADWAY PAVEMENT 999 SY)

REV. NO.	BY	DATE	REVISION DESCRIPTION

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
PALMER LN 2 OF 2

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	50 / 175

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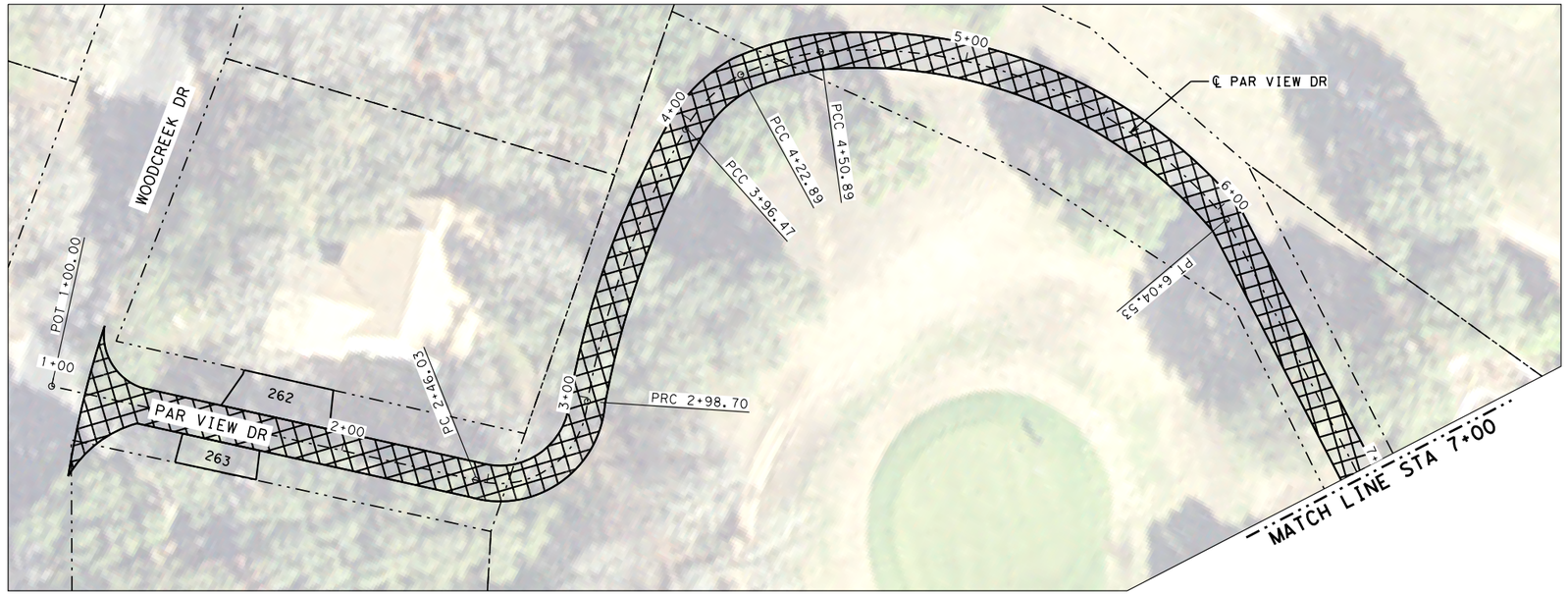

PAR VIEW DR
(APPROX. ROADWAY PAVEMENT 810 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
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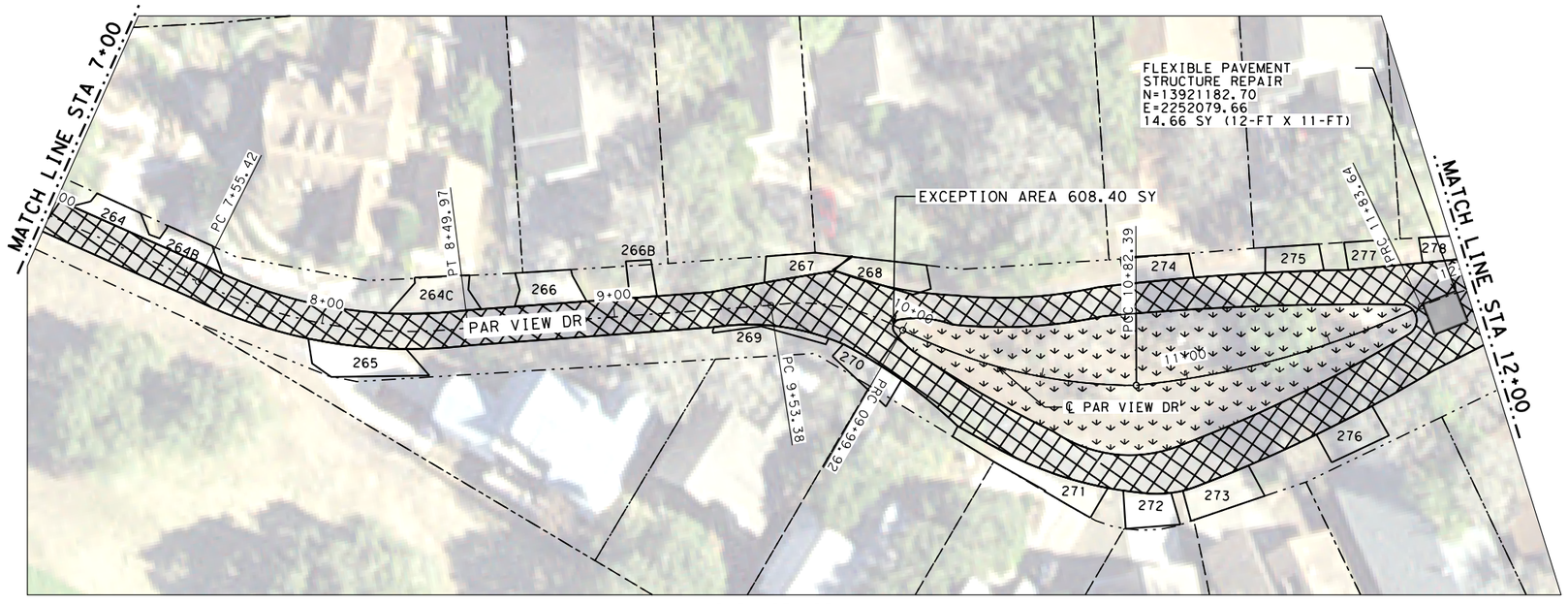

PAR VIEW DR
(APPROX. ROADWAY PAVEMENT 1014 SY)

KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

REV. NO.	BY	DATE	REVISION DESCRIPTION

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN
PAR VIEW DR 1 OF 2

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	51 176

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5/19/2023 4:00:45 PM

PAR VIEW DR
(APPROX. ROADWAY PAVEMENT 414 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
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- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN
PAR VIEW DR 2 OF 2

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	52 177

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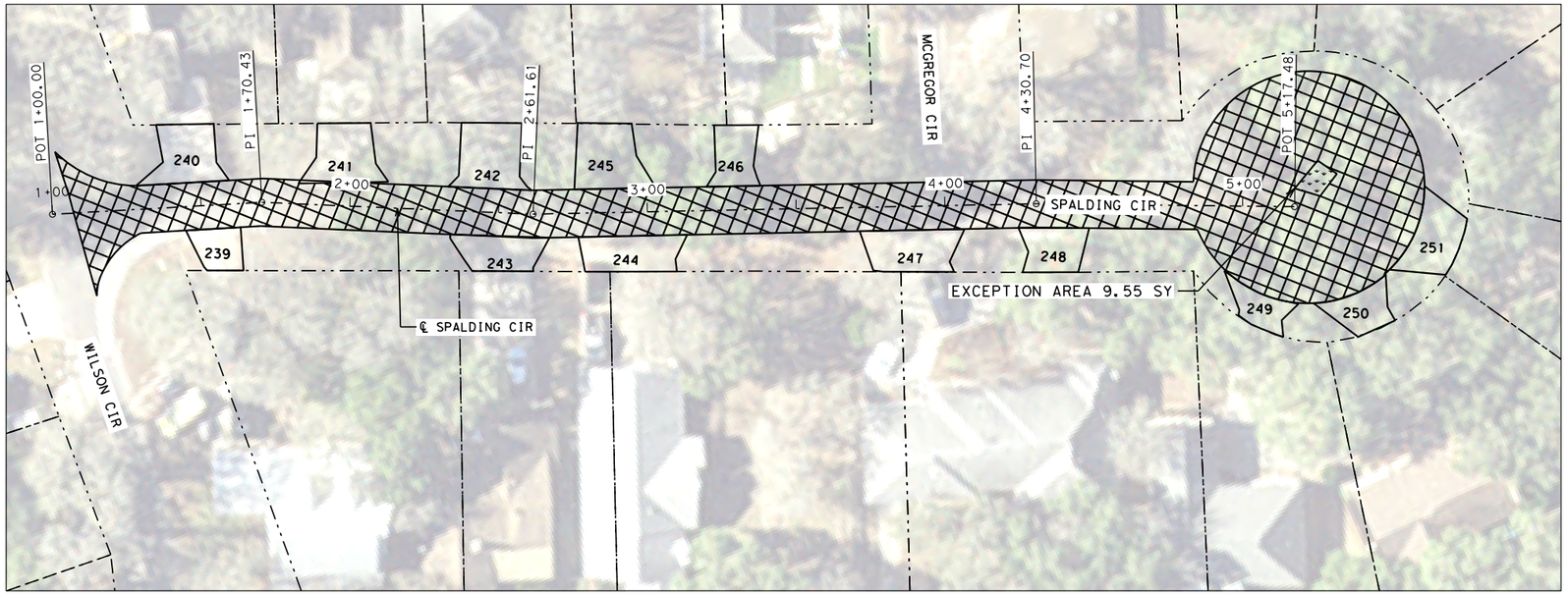
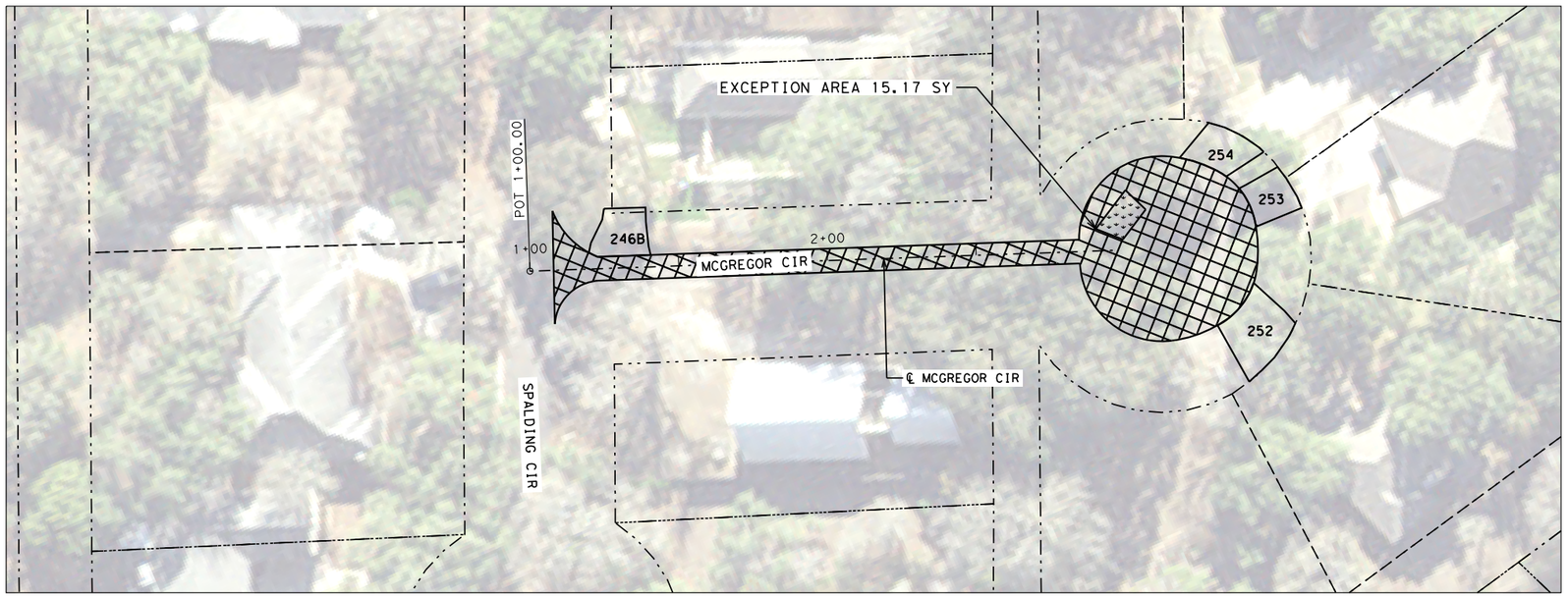


SPALDING CIR
(APPROX. ROADWAY PAVEMENT 1206 SY)



MCGREGOR CIR
(APPROX. ROADWAY PAVEMENT 476 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

Item 1.

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K FRIESE & ASSOCIATES, INC.
340 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLAY PLANS

SPALDING CIR & MCGREGOR 1 OF 1

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SHEET	OF
SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	53 / 178

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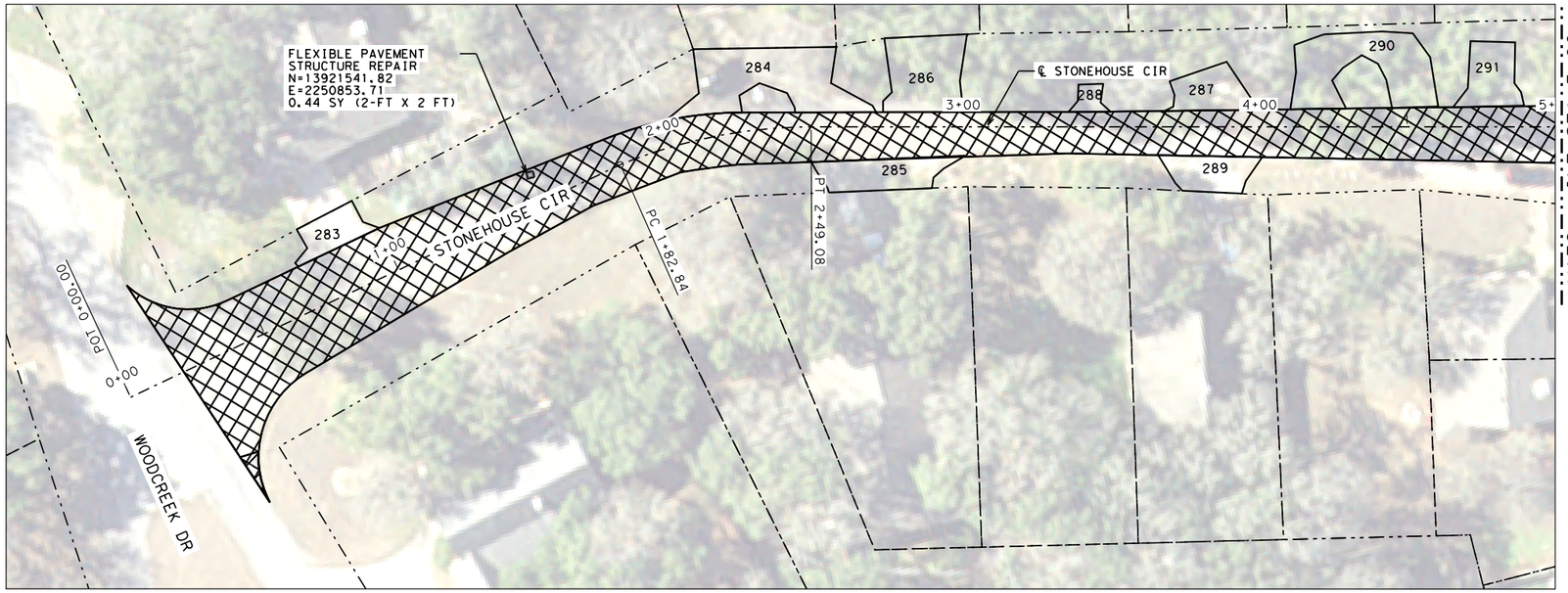

STONEHOUSE CIR
(APPROX. ROADWAY PAVEMENT 1133 SY)

STONEHOUSE CIR
(APPROX. ROADWAY PAVEMENT 1126 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & OVERLAY PLANS
STONEHOUSE CIR 1 OF 1

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	54 179

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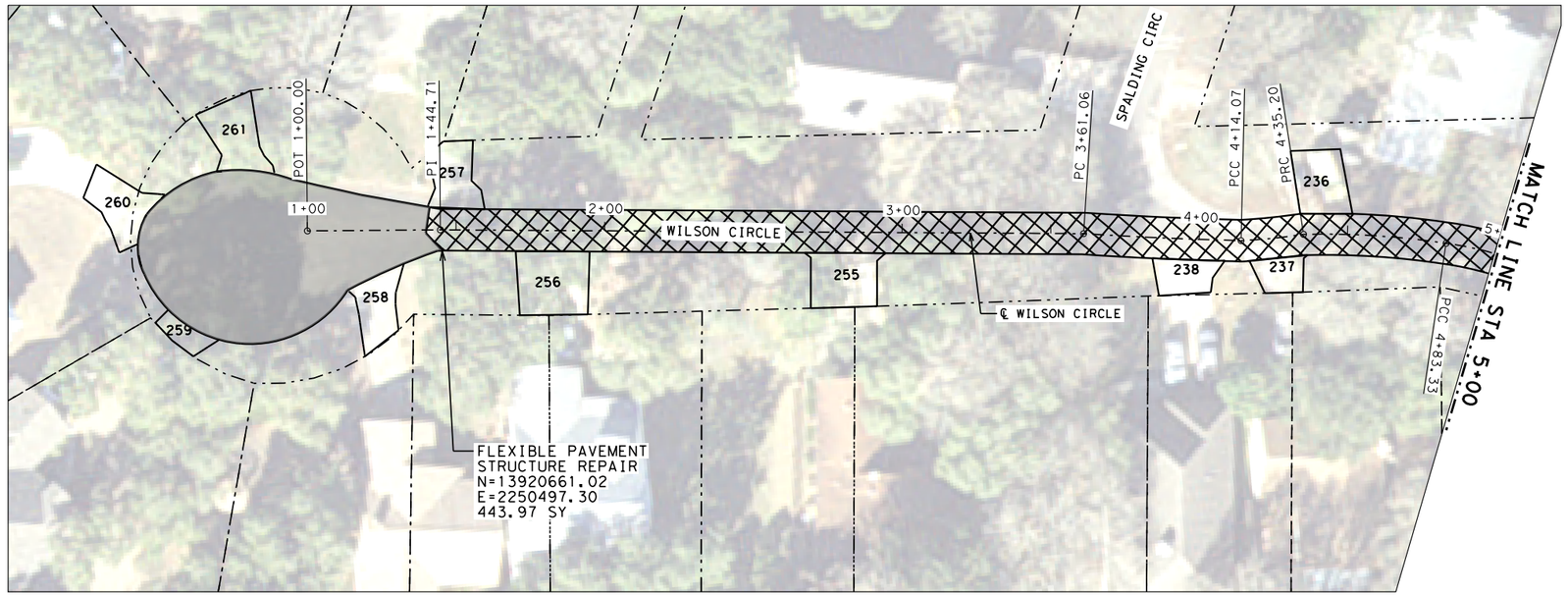

WILSON CIR
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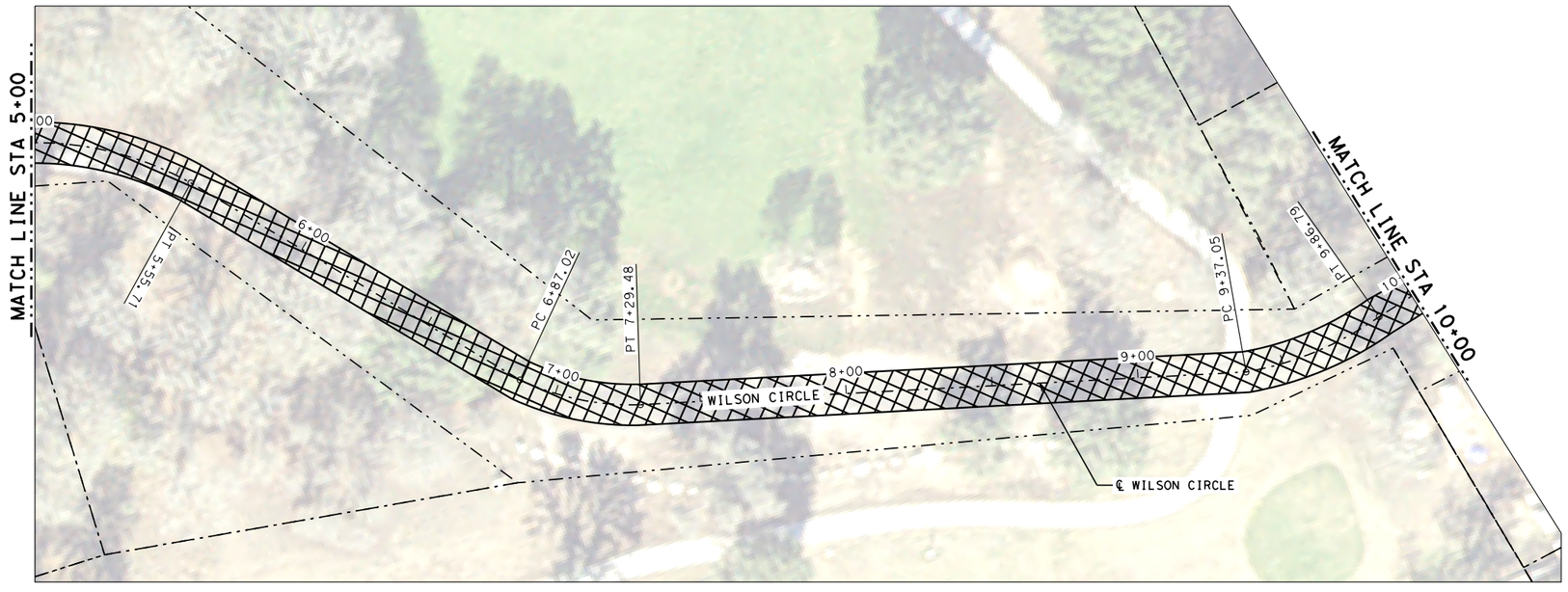

WILSON CIR
(APPROX. ROADWAY PAVEMENT 775 FT)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLAN & PROFILE
WILSON CIR 1 OF 2

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	55 / 180

X:\Projects\0915_City of Woodcreek Transportation Bond\300 Plans and Drawings\330 Plan Production\333 Plan Sheets\Lily\0915_PLAN01_WILSON_CIR.dgn

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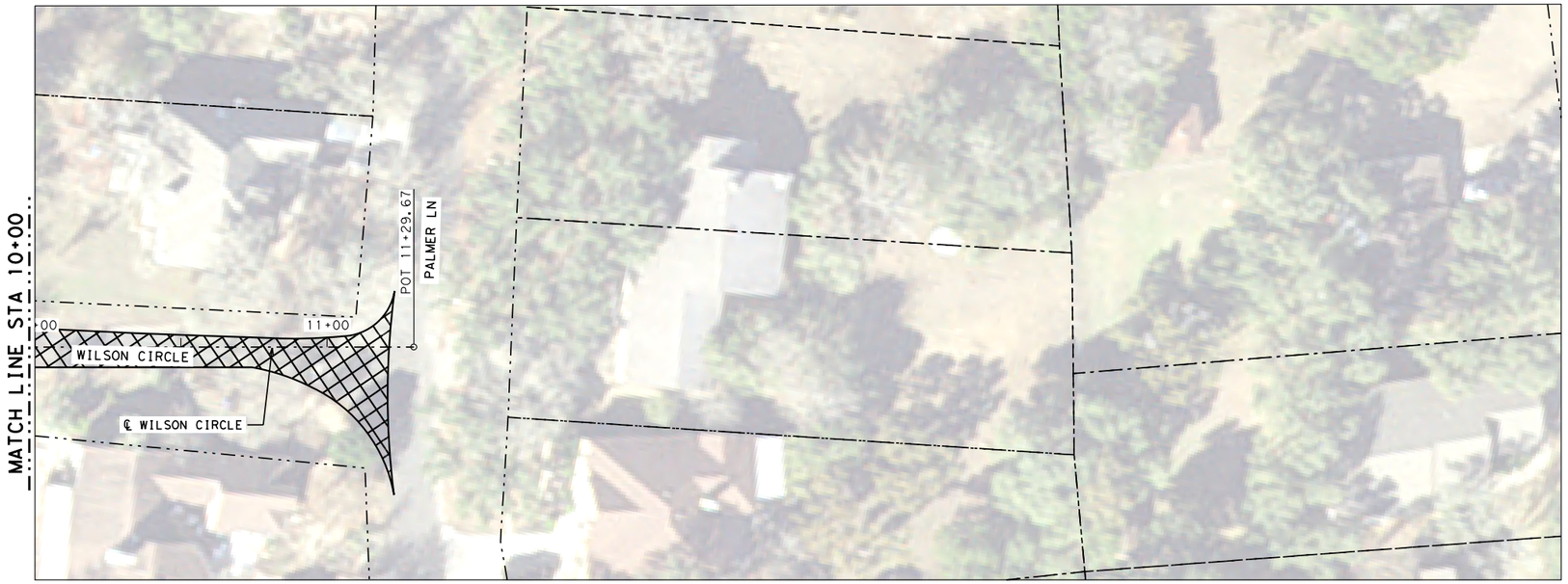

WILSON CIR
(APPROX. ROADWAY PAVEMENT 214 SY

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLAN
WILSON CIR 2 OF 2

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	56 181

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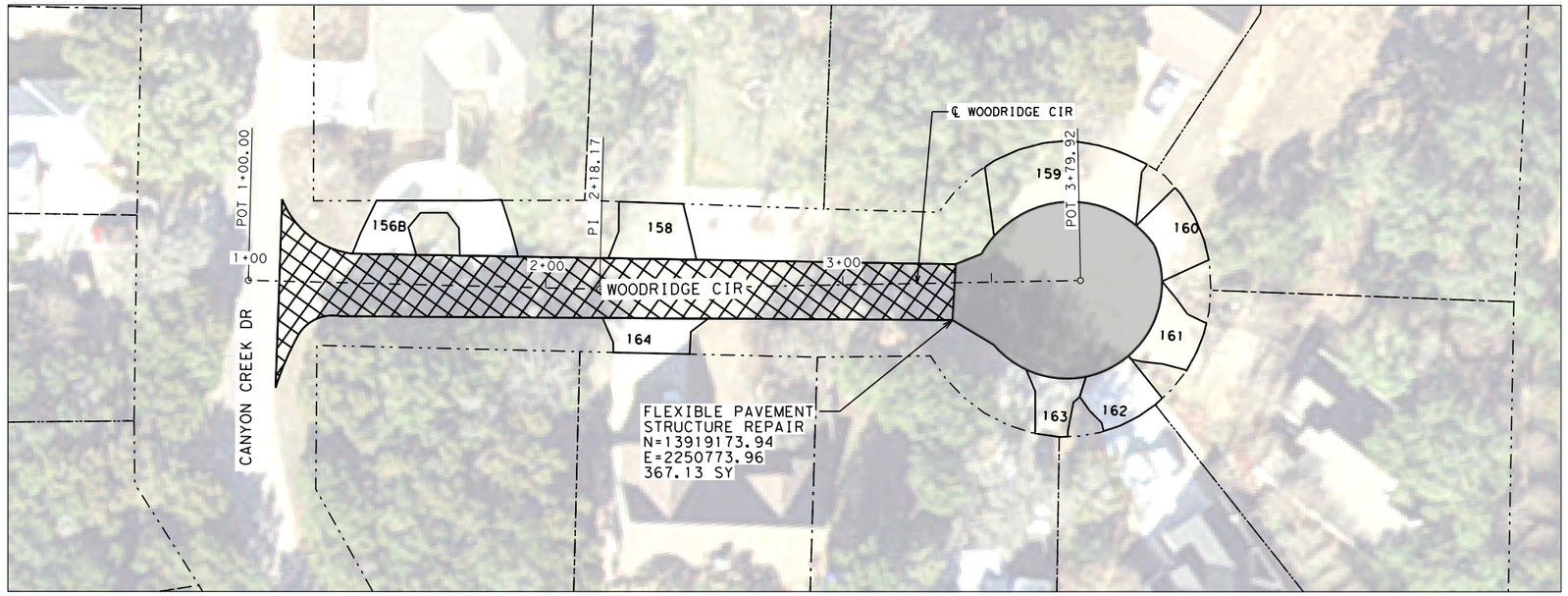
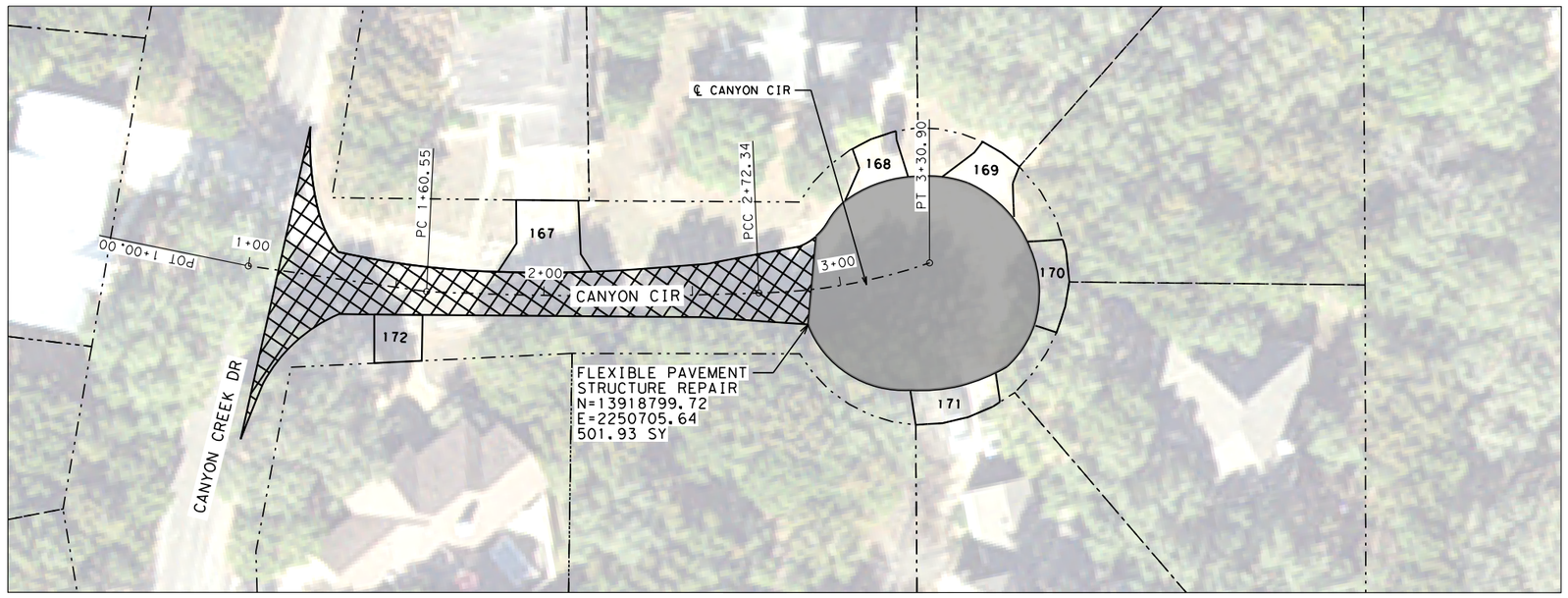


WOODRIDGE CIR
(APPROX. ROADWAY PAVEMENT 534 SY)



CANYON CIR
(APPROX. ROADWAY PAVEMENT 423 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
WOODRIDGE & CANYON CIR 1 OF 1

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
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SHEET NUMBER	57 182

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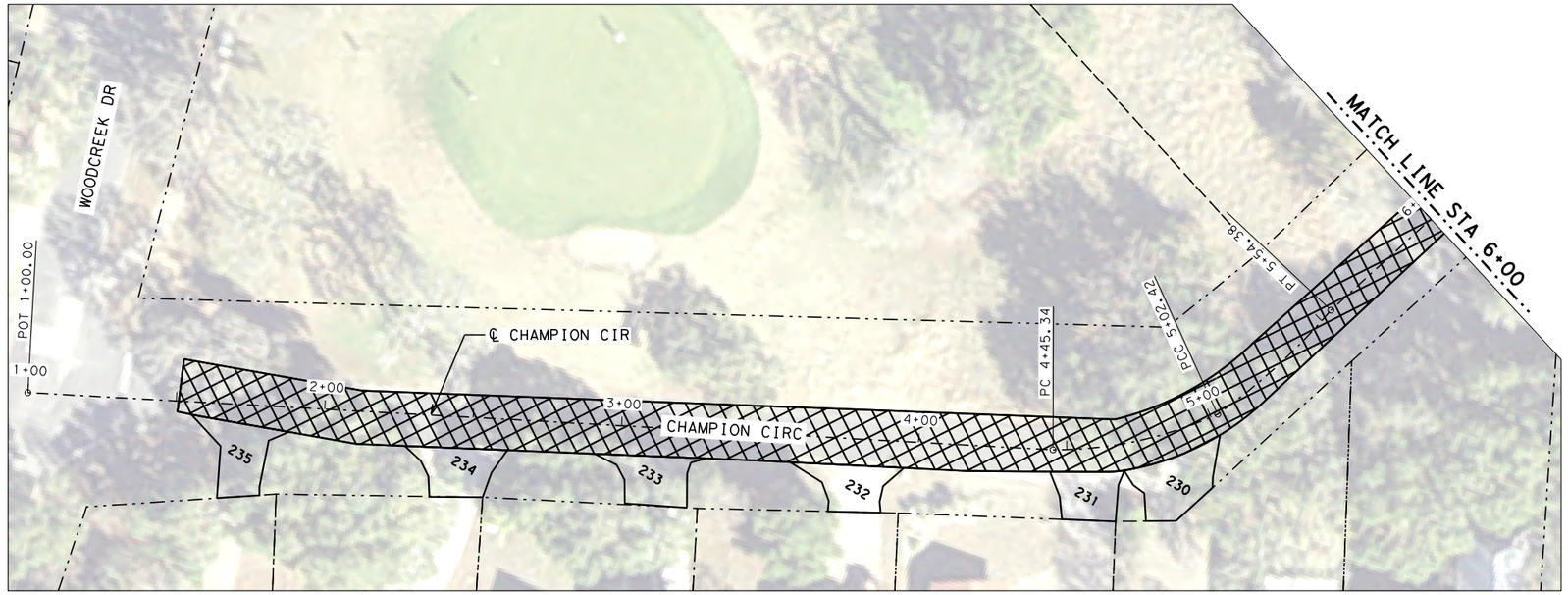
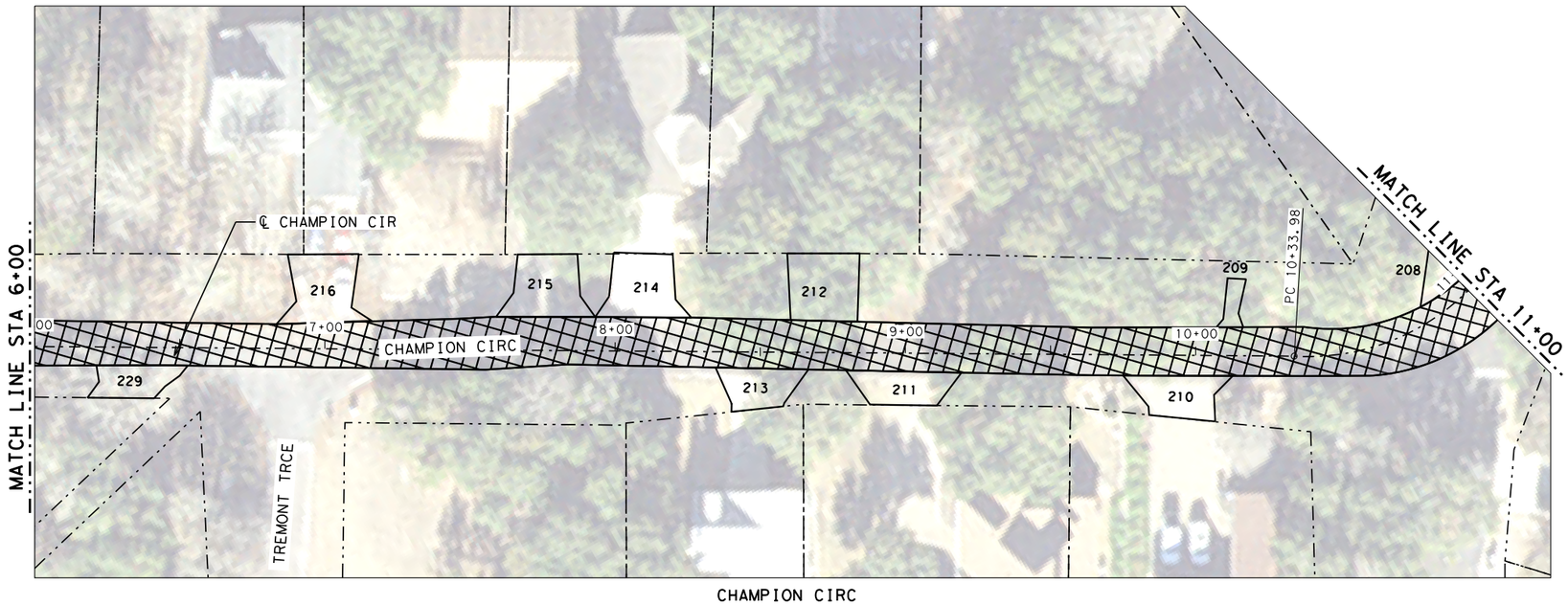


CHAMPION CIRC
(APPROX. ROADWAY PAVEMENT 892 SY)



CHAMPION CIRC
(APPROX. ROADWAY PAVEMENT 923 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
CHAMPIONS CIR 1 OF 7

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	58 / 183

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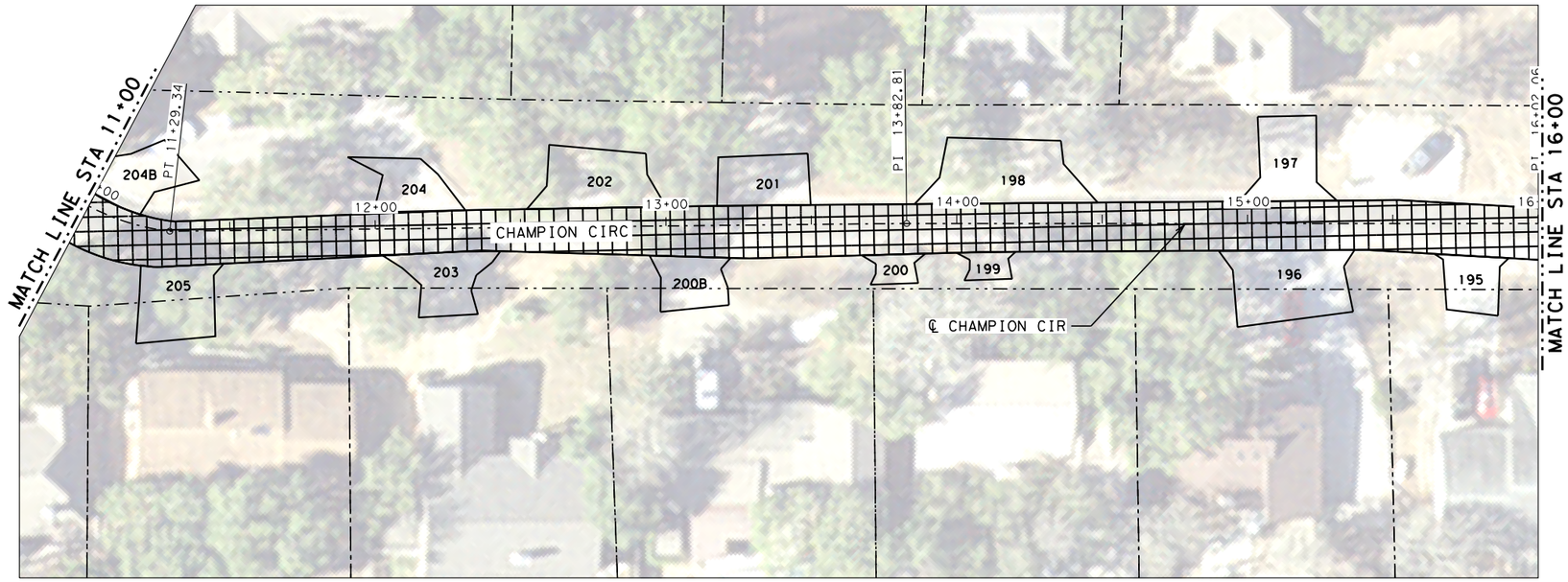
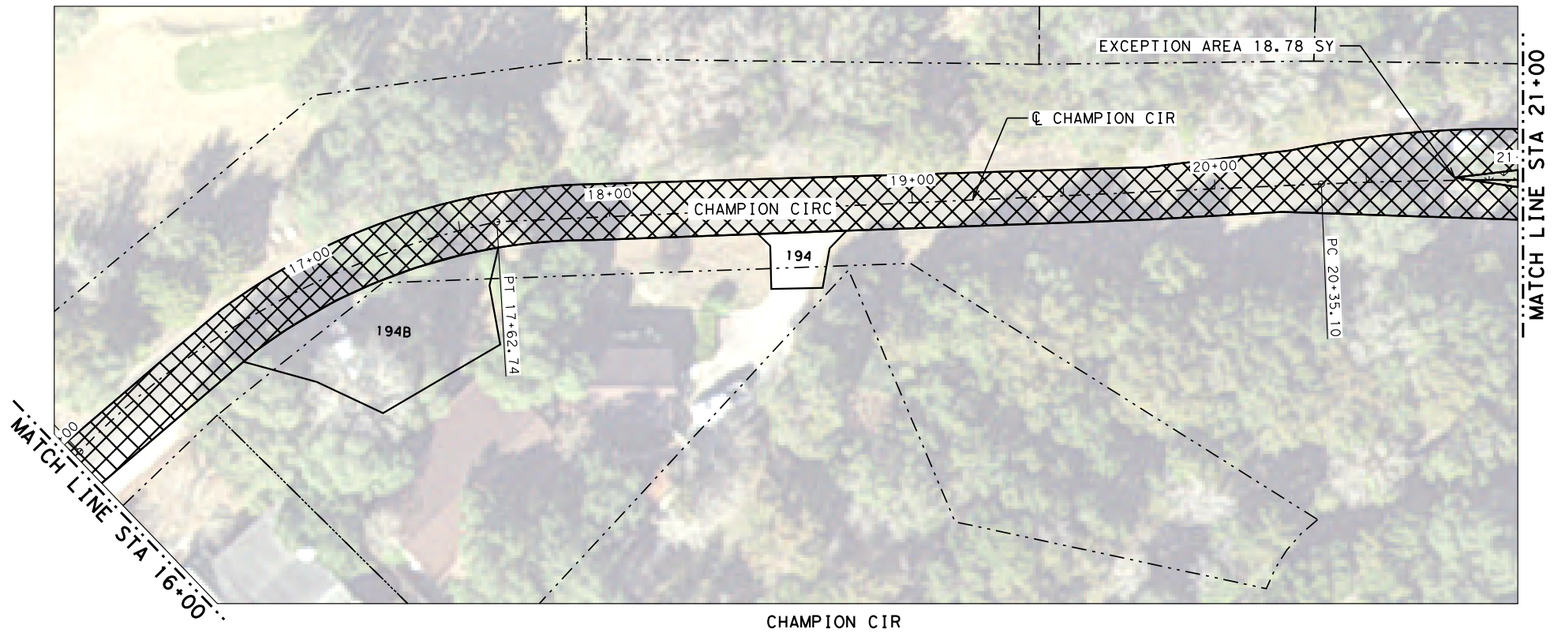


CHAMPION CIR
(APPROX. ROADWAY PAVEMENT 922 SY)



CHAMPION CIR
(APPROX. ROADWAY PAVEMENT 1058 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

SHEET NOTES

1. CONTRACTOR SHALL NOT DAMAGE EXISTING CONCRETE CURBS OR EXISTING DRIVEWAYS. REPAIR OF THIS INFRASTRUCTURE SHALL BE AT THE CONSTRACTOR'S EXPENSE.
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KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

Item 1.

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN
CHAMPIONS CIR 2 OF 7

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	59 184

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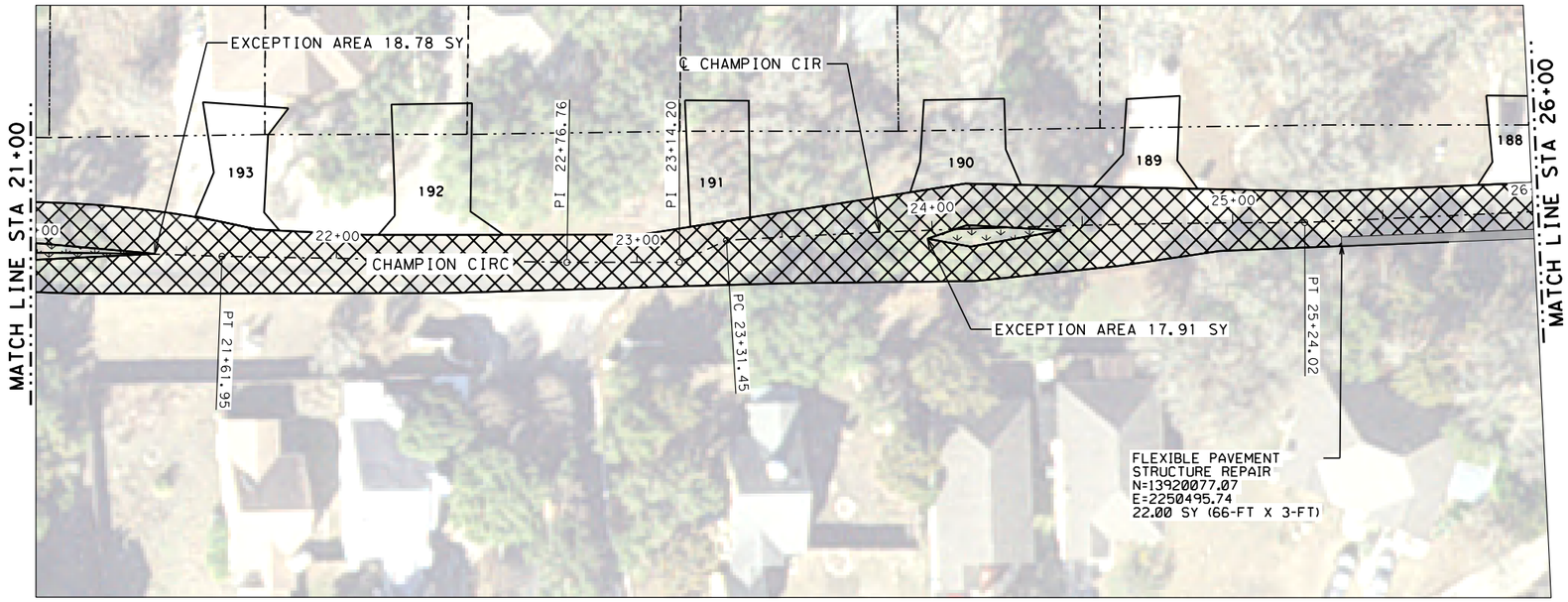

CHAMPIONS CIR
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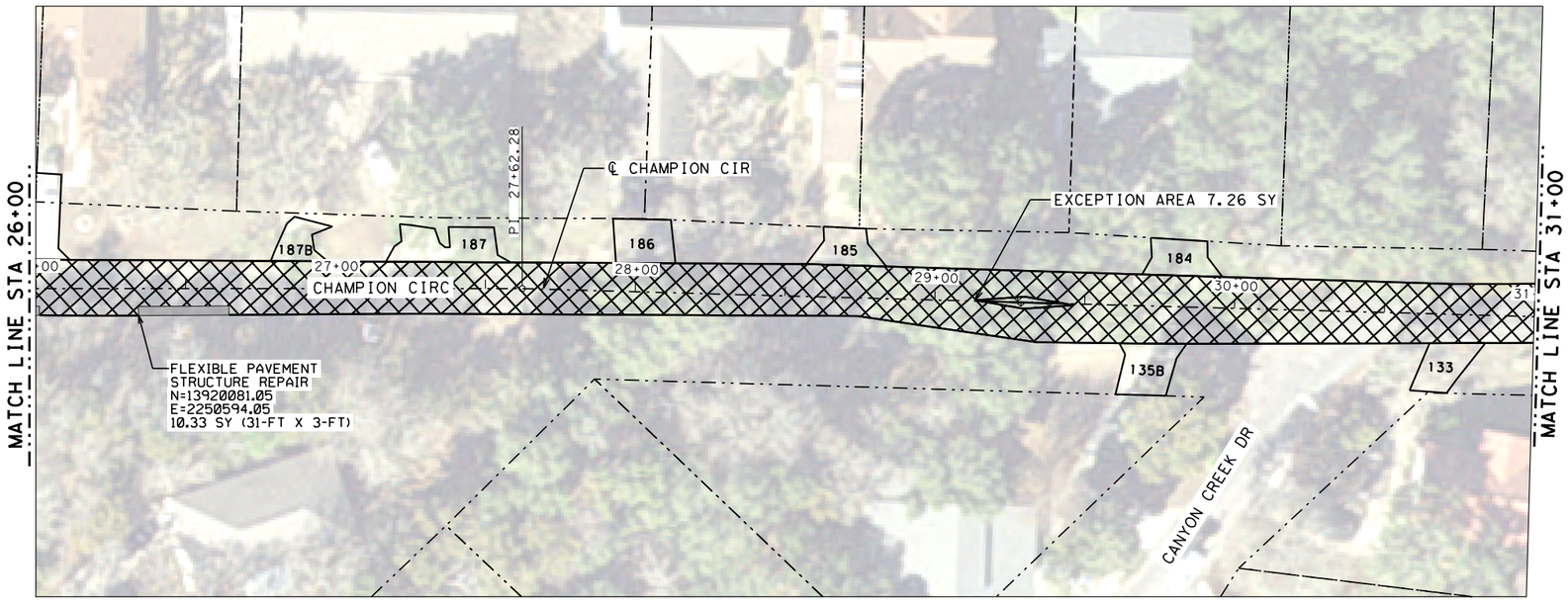

CHAMPIONS CIR
(APPROX. ROADWAY PAVEMENT 1063 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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Item 1.

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN
CHAMPIONS CIR 3 OF 7

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	60 185

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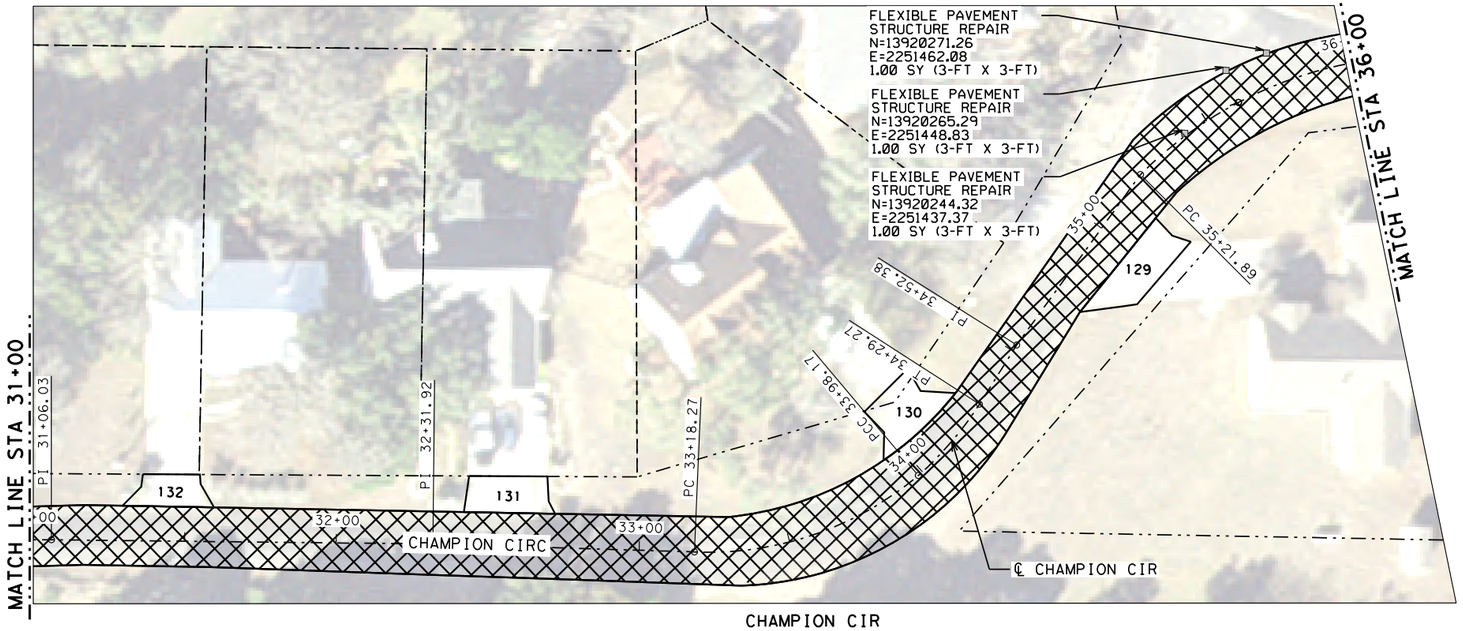

CHAMPION CIR
(APPROX. ROADWAY PAVEMENT 1190 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
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- NON PAVED AREA

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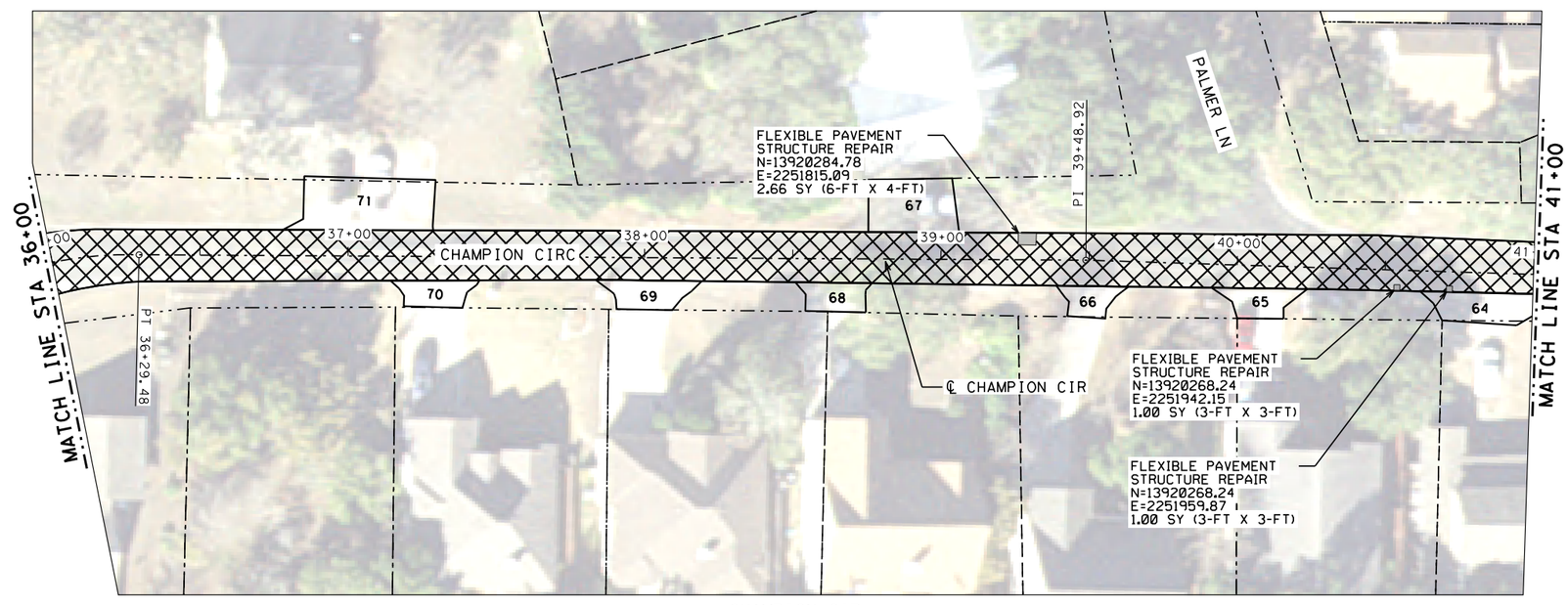

CHAMPION CIR
(APPROX. ROADWAY PAVEMENT 975 SY)

N

REV. NO.	BY	DATE	REVISION DESCRIPTION

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
CHAMPIONS CIR 4 OF 7

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	61 / 186

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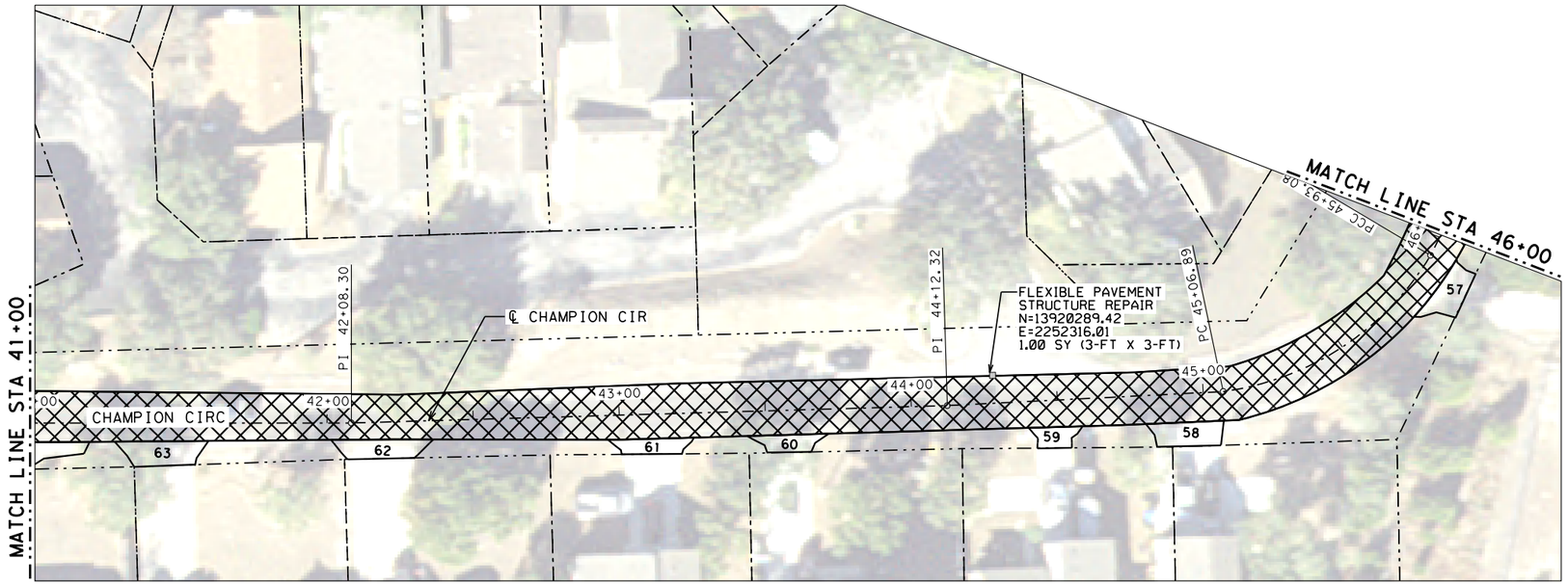

CHAMPIONS CIR
(APPROX. ROADWAY PAVEMENT 985 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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CHAMPIONS CIR
(APPROX. ROADWAY PAVEMENT 1072 SY)

N

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40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
CHAMPIONS CIR 5 OF 7

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	62 / 187

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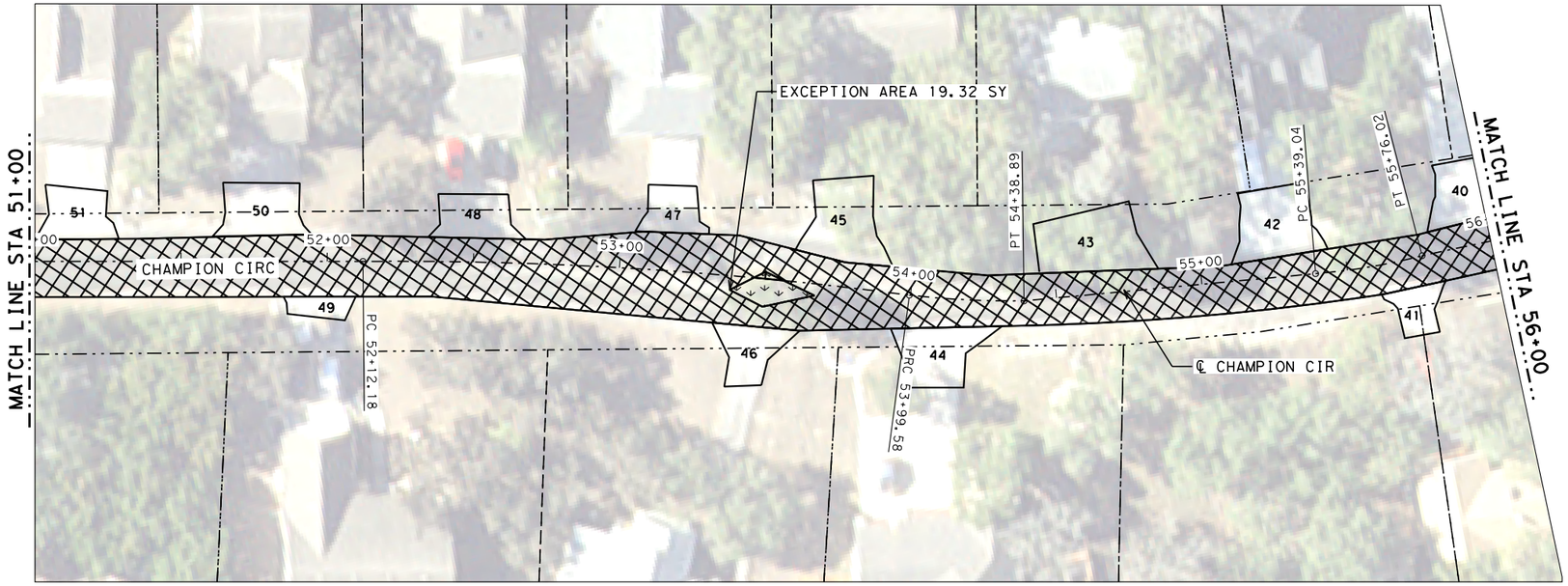
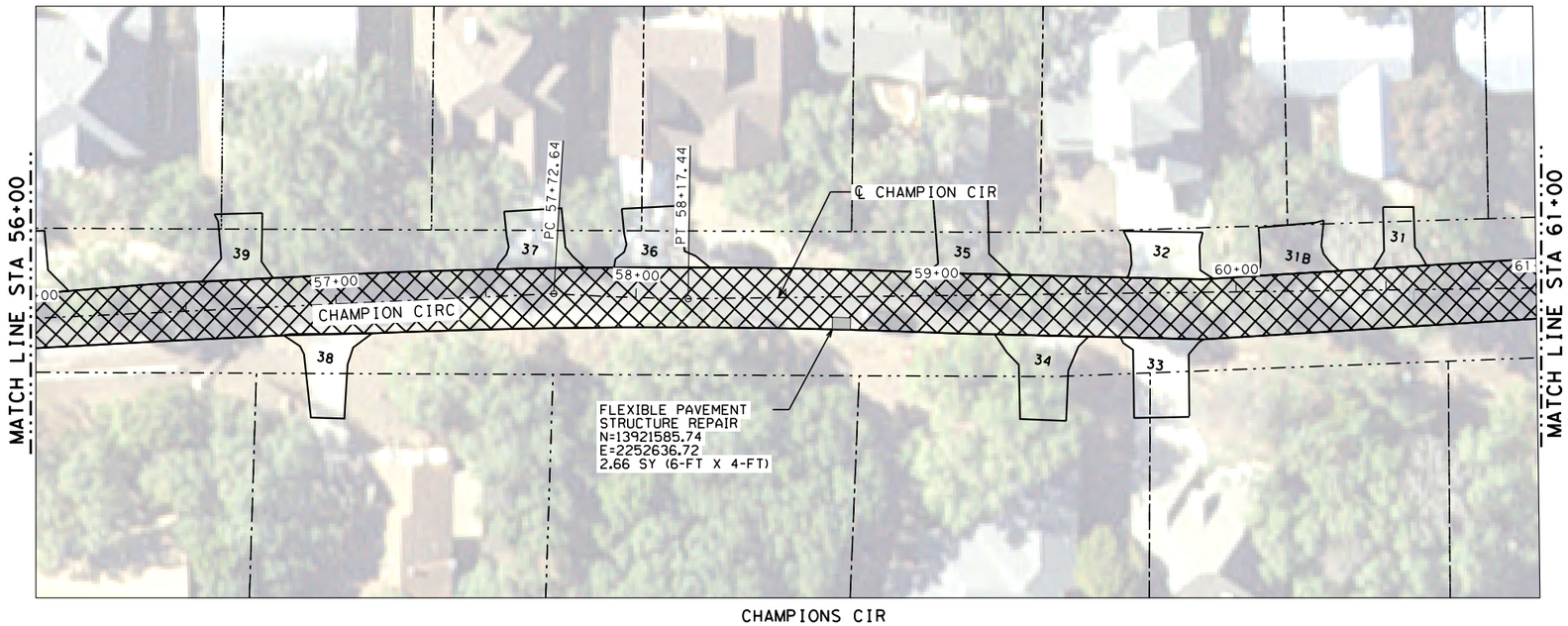


CHAMPIONS CIR
(APPROX. ROADWAY PAVEMENT 1146 SY)



CHAMPIONS CIR
(APPROX. ROADWAY PAVEMENT 1100 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

N

Item 1.

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
CHAMPIONS CIR 6 OF 7

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	63 / 188

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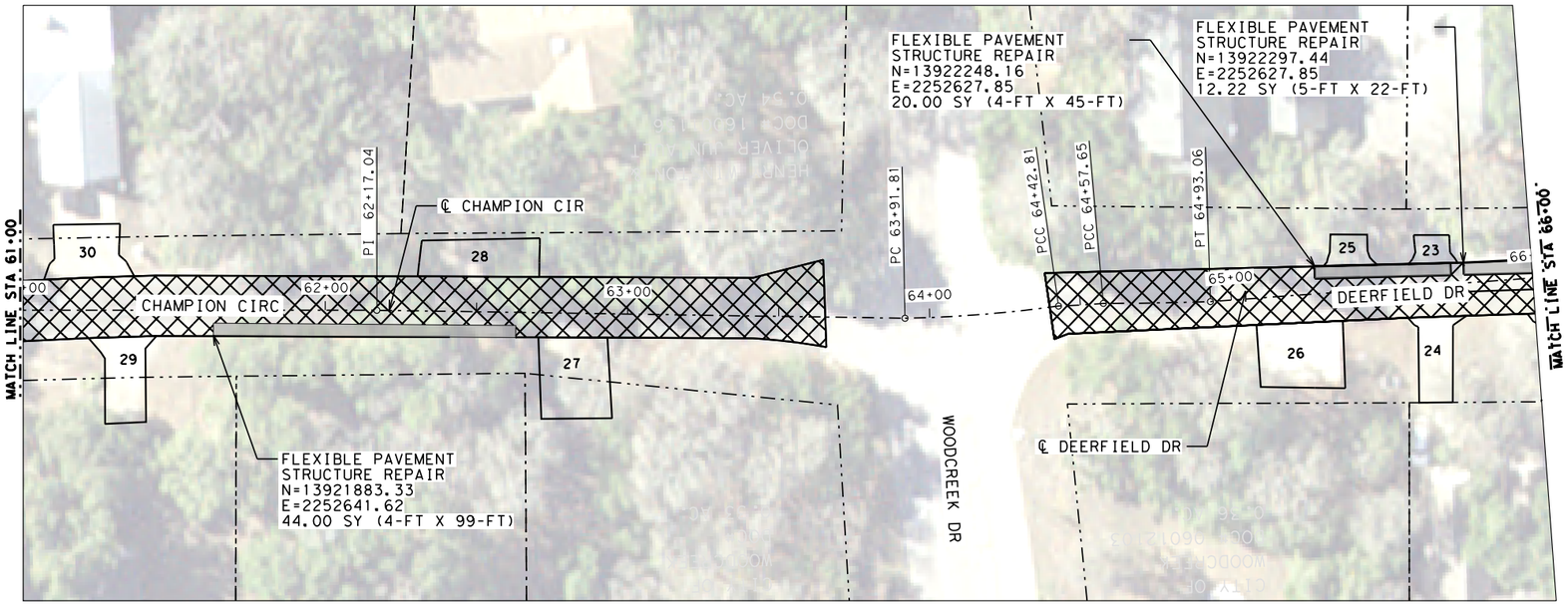

CHAMPION CIR
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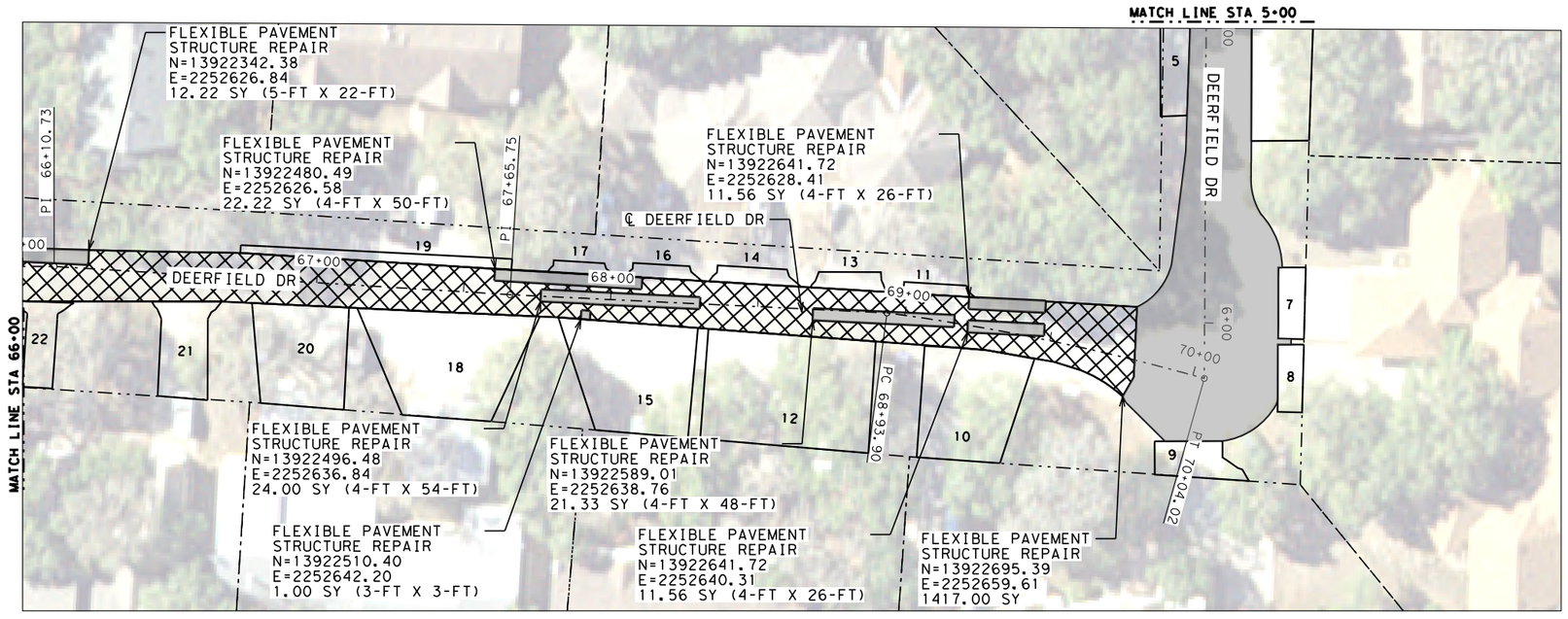

DEERFIELD DR
(APPROX. ROADWAY PAVEMENT 1057 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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K FRIESE & ASSOCIATES, INC.
340 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN
CHAMPIONS CIR & DEERFIELD DR 7 OF 7

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	64 189

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DEERFIELD DR
(APPROX. ROW XX FT)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EC EROSION CONTROL LOG
- NON PAVED AREA

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KEYNOTES

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLAN & PROFILE
DEERFIELD 1 OF 1

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	65 / 190

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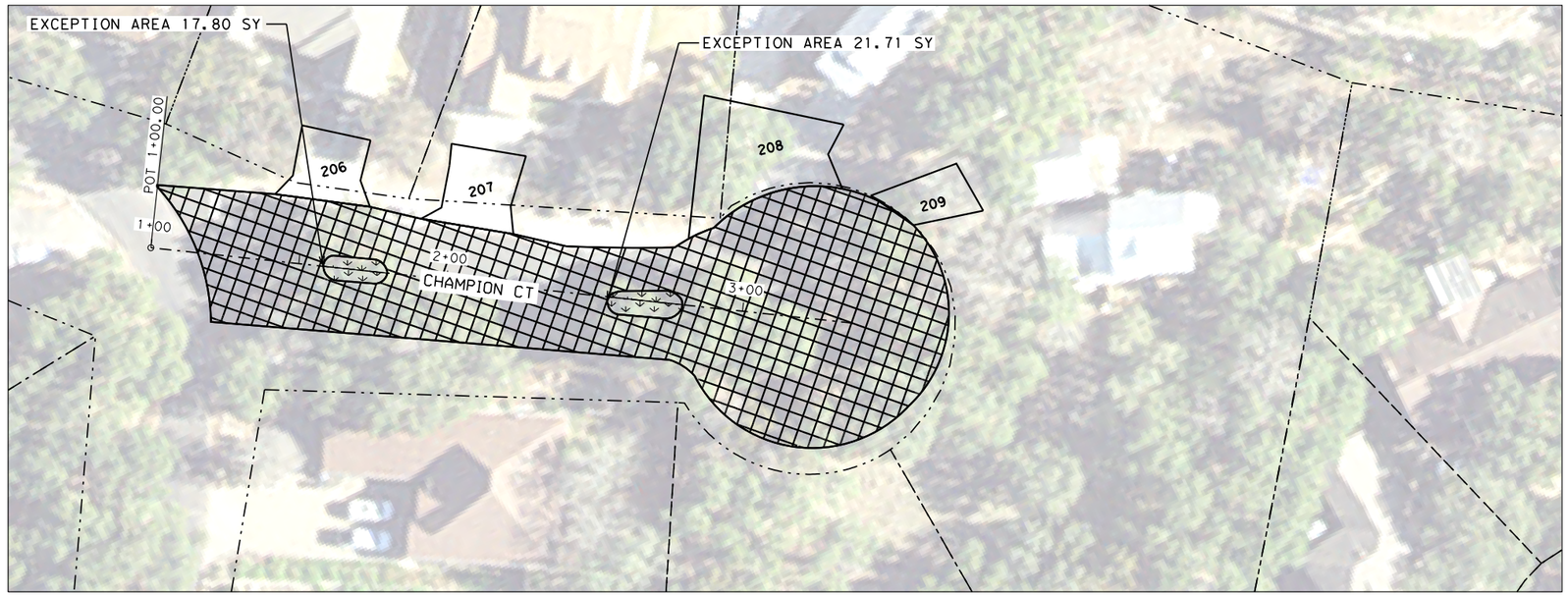

CHAMPION CT
(APPROX. ROADWAY PAVEMENT 1399 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
CHAMPION CT 1 OF 1

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	66 191

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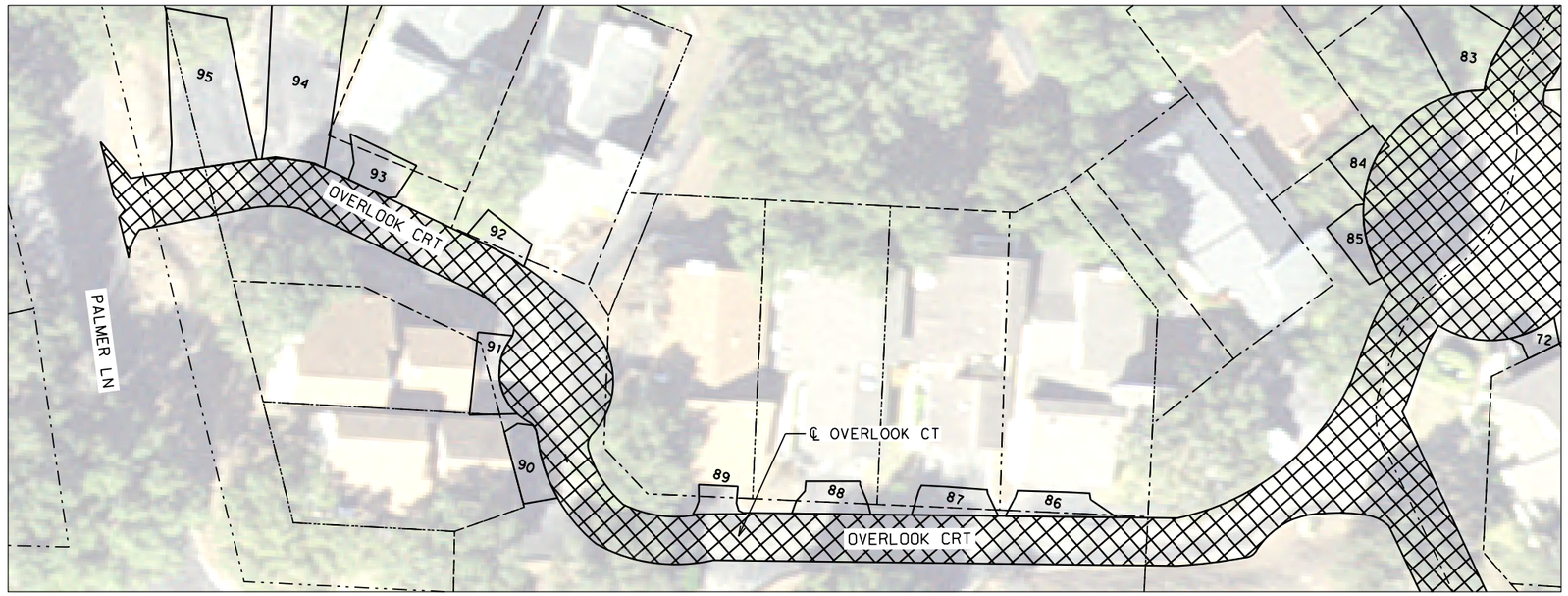
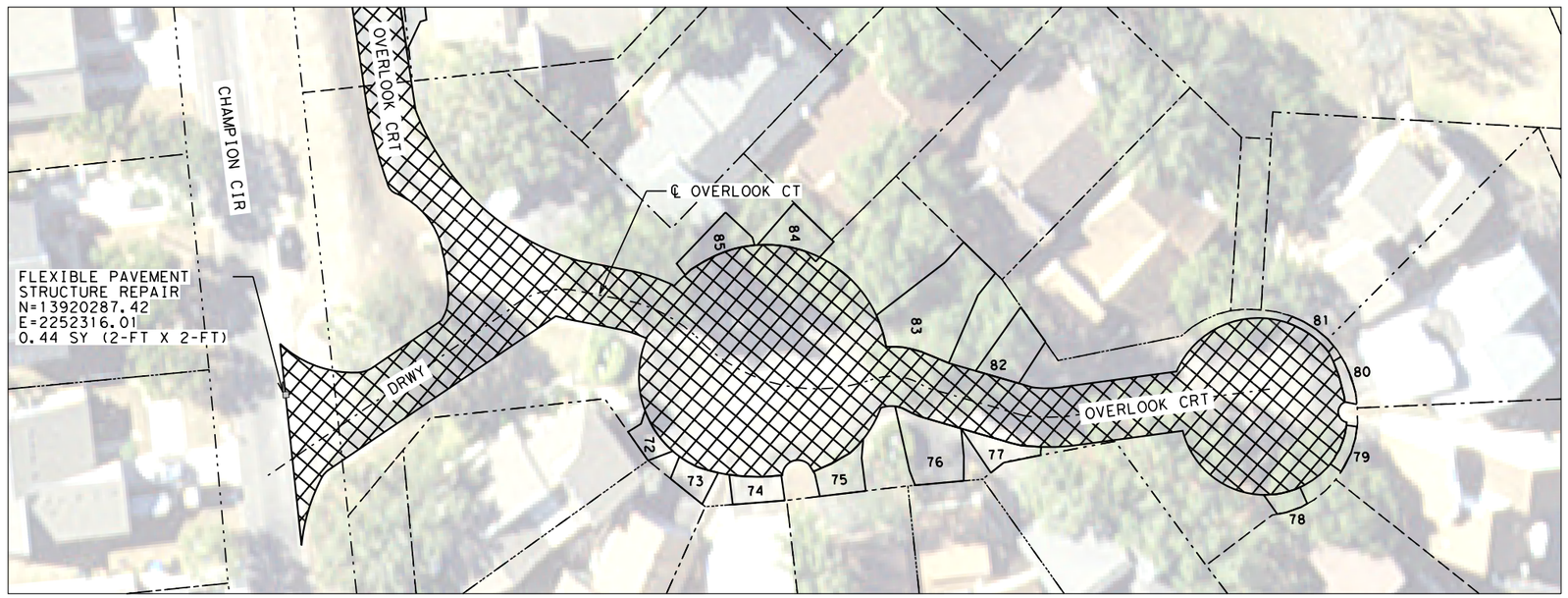


OVERLOOK CRT
(APPROX. ROADWAY PAVEMENT 1814 SY)



OVERLOOK CRT
(APPROX. ROADWAY PAVEMENT 642 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
OVERLOOK CT 1 OF 1

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	68 192

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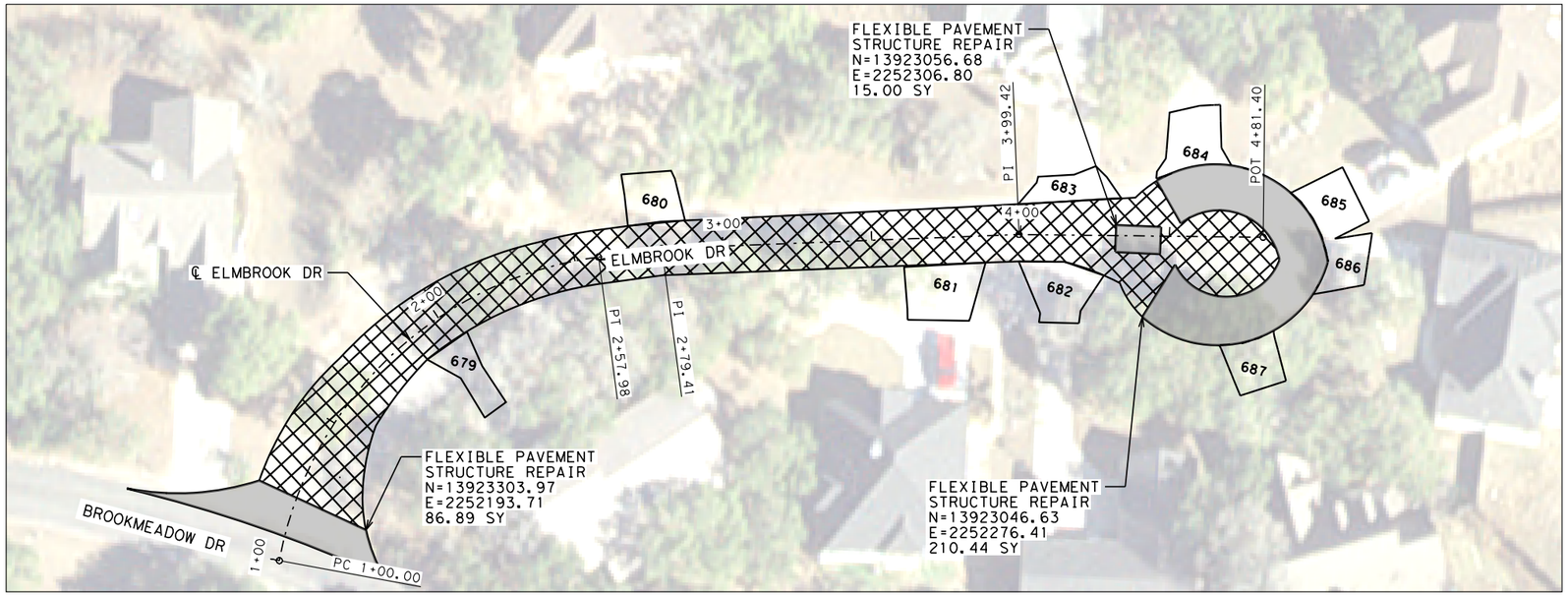

ELMBROOK DR
(APPROX. ROADWAY PAVEMENT 1175 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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2. CONTRACTOR SHALL NOT MILL AND OVERLAY A STREET BEYOND THE LONGITUDINAL LIMITS OF WHICH THEY CANNOT MILL OR OVERLAY FOR ITS FULL WIDTH THAT SAME DAY UNLESS APPROVED BY THE CITY.

REV. NO.	BY	DATE	REVISION DESCRIPTION

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLAN
ELM BROOK DR 1 OF 1

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	67 193

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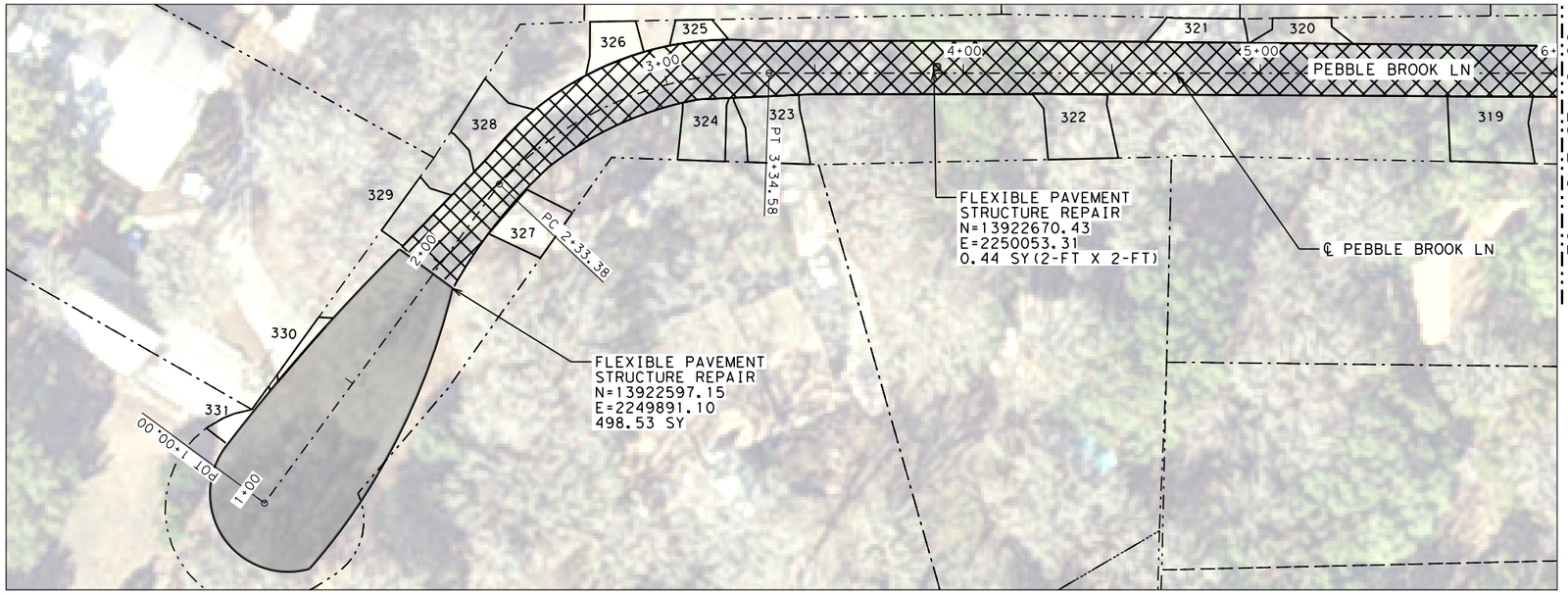

PEBBLE BROOK LN
(APPROX. ROADWAY PAVEMENT 1315 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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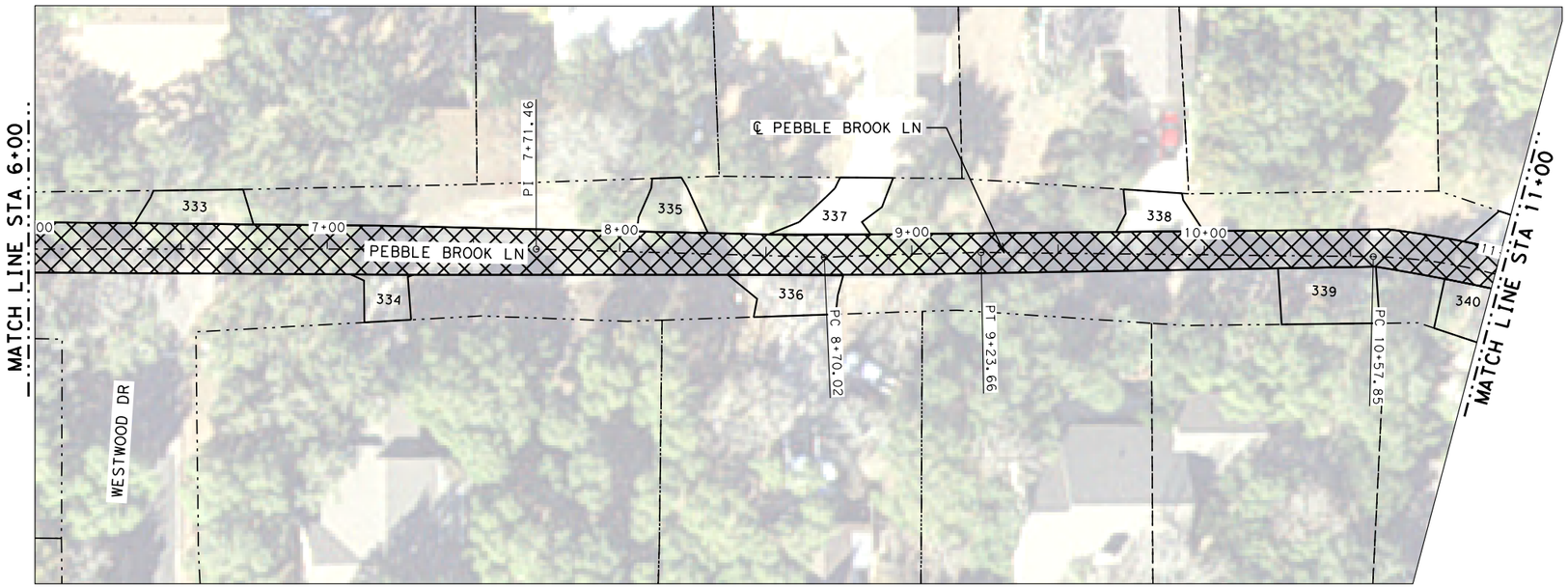

PEBBLE BROOK LN
(APPROX. ROADWAY PAVEMENT 820 SY)

N

REV. NO.	BY	DATE	REVISION DESCRIPTION

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K FRIESE & ASSOCIATES, INC.
410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
PEBBLE BROOK LN 1 OF 3

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	69 / 194

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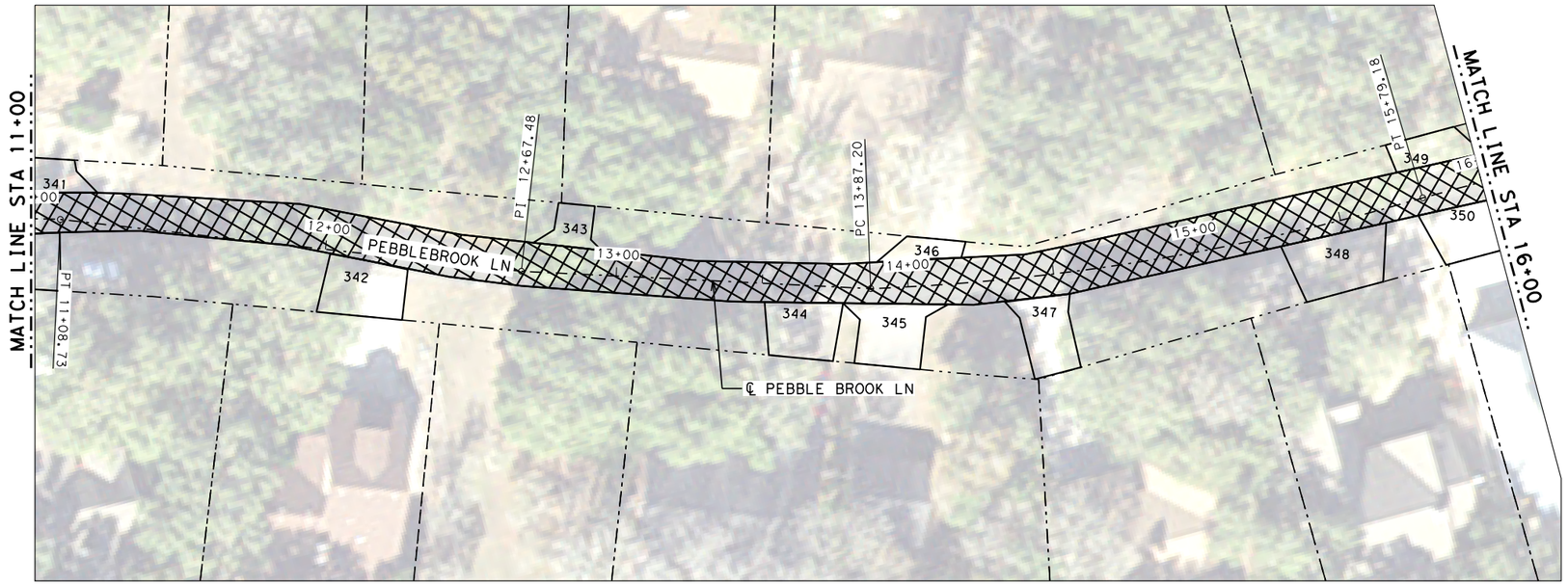

PEBBLEBROOK LN
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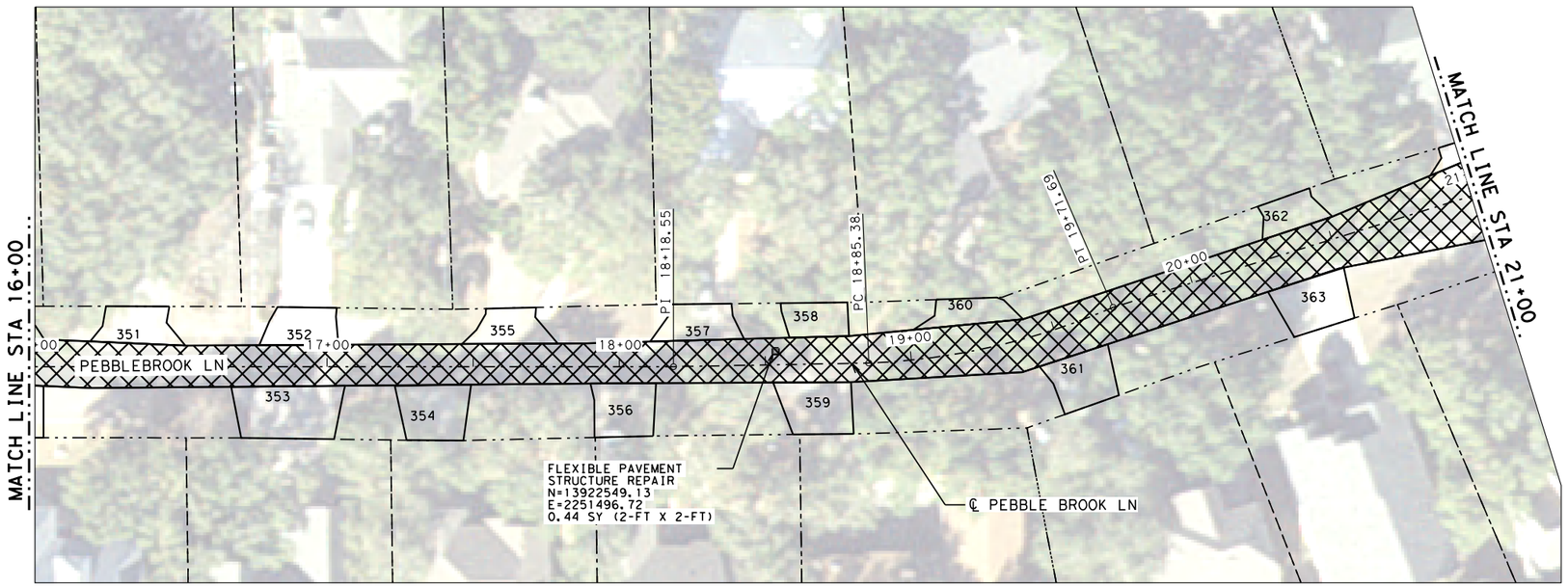

PEBBLEBROOK LN
(APPROX. ROADWAY PAVEMENT 907 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

SHEET NOTES

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410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
PEBBLE BROOK LN 2 OF 3

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	70 195

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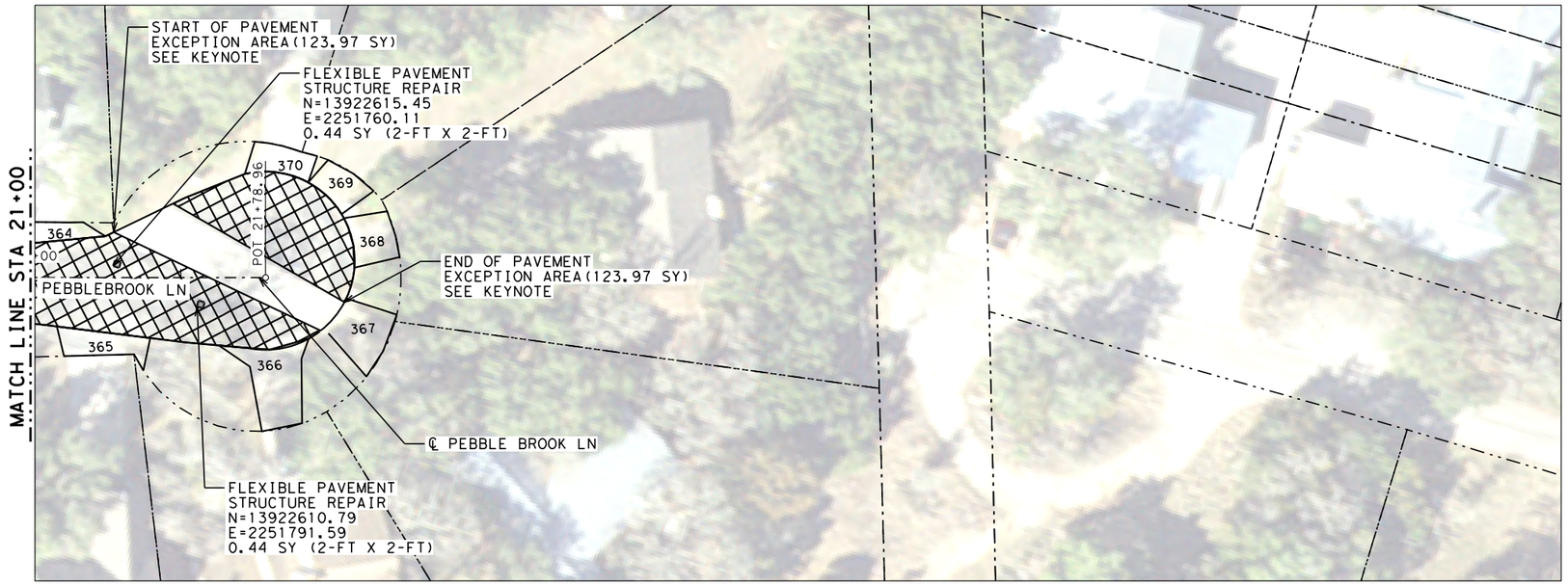

PEBBLEBROOK LN
(APPROX. ROADWAY PAVEMENT 415 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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KEYNOTES

1. CONTRACTOR TO END MILL AND OVERLAY OPERATIONS AT THE EXISTING CONCRETE ROADWAY EDGE.

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410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
PEBBLE BROOK LN 3 OF 3

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	71 196

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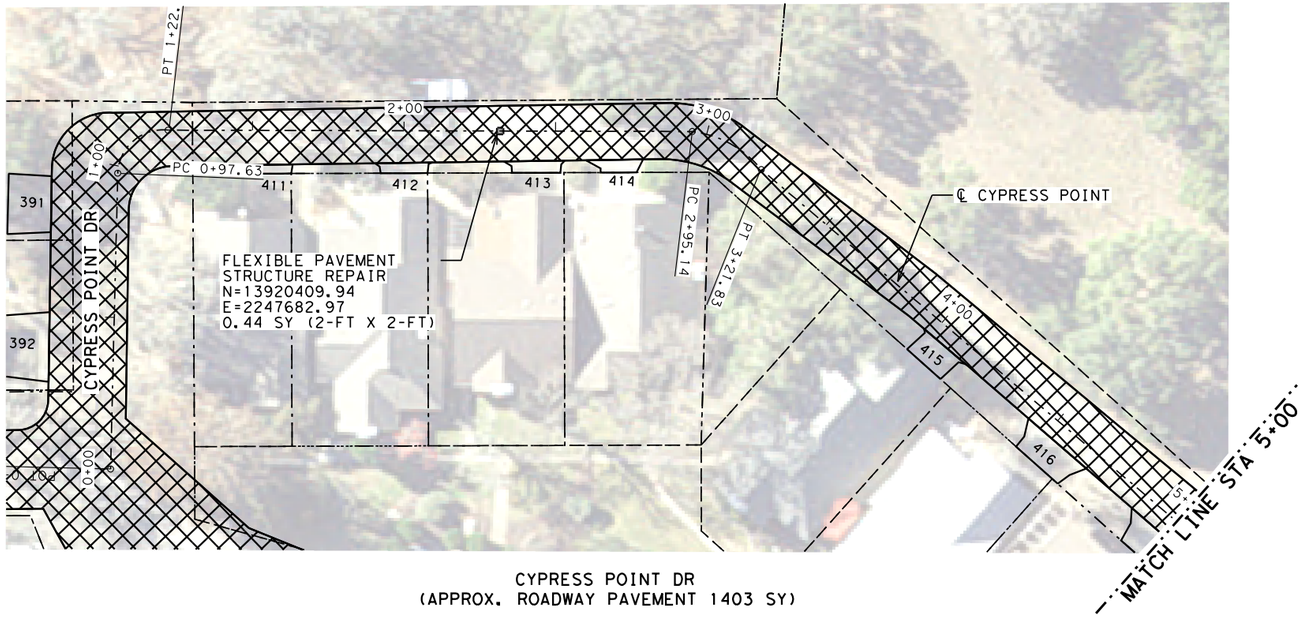

CYPRESS POINT DR
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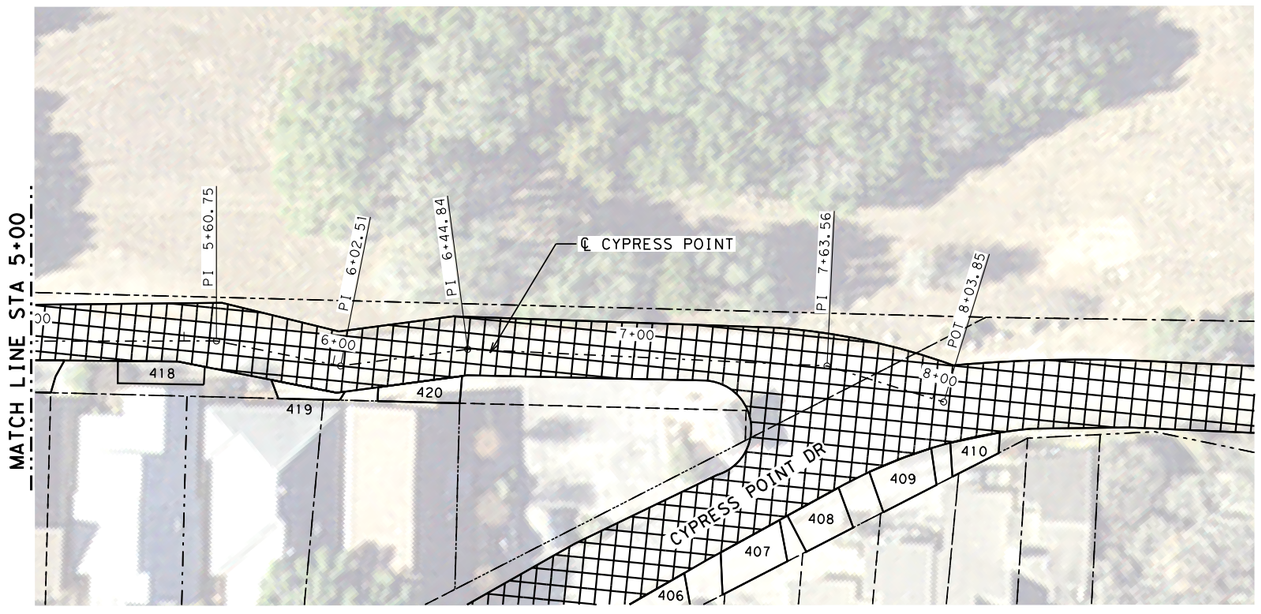

CYPRESS POINT DR
(APPROX. ROADWAY PAVEMENT 1329 SY)

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EQ EROSION CONTROL LOG
- NON PAVED AREA

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Item 1.

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLAN
CYPRESS POINT 1 OF 4

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	72 / 197

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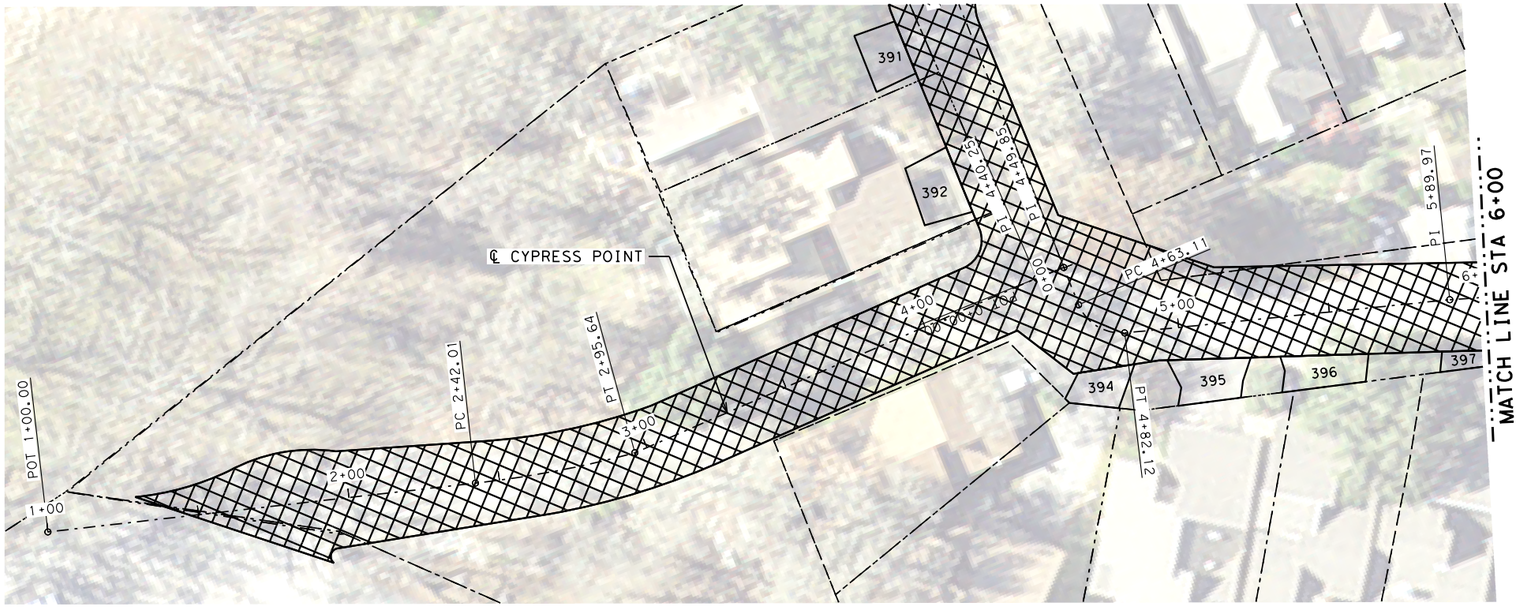
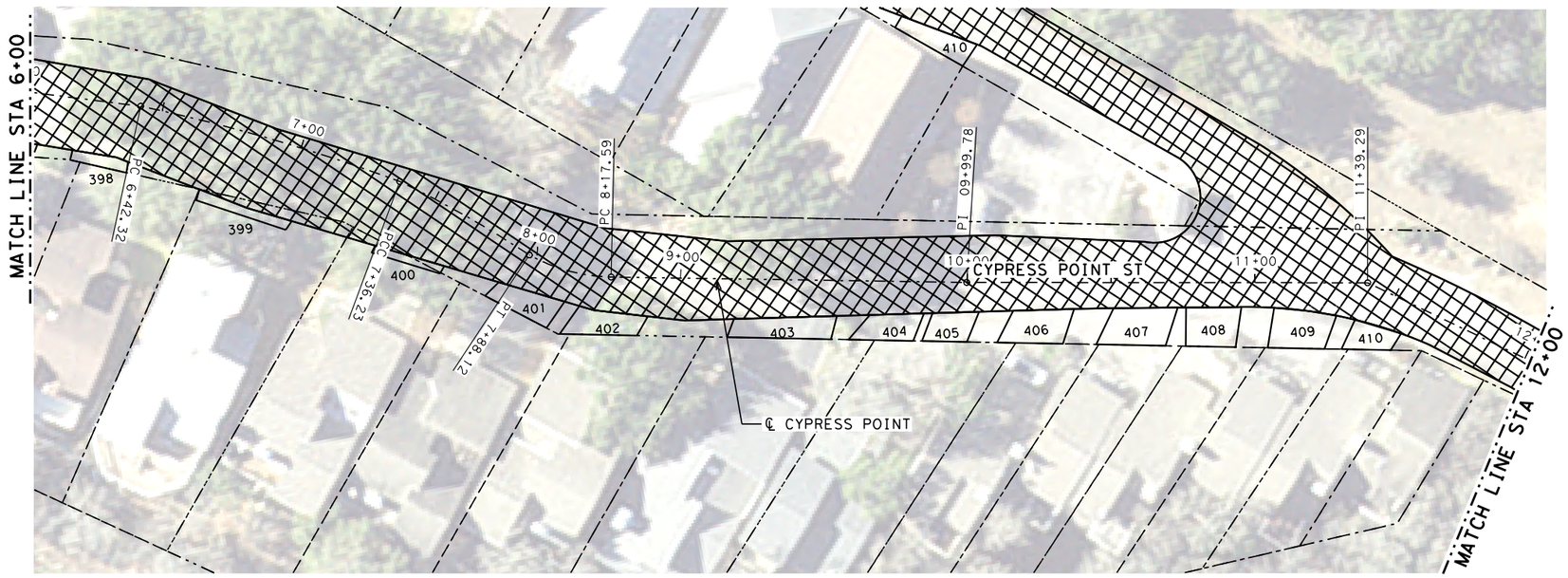


CYPRUS POINT
(APPROX. ROADWAY PAVEMENT 1674 SY)



CYPRUS POINT
(APPROX. ROADWAY PAVEMENT 1981 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLAN
CYPRESS POINT 2 OF 4

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	73 / 198

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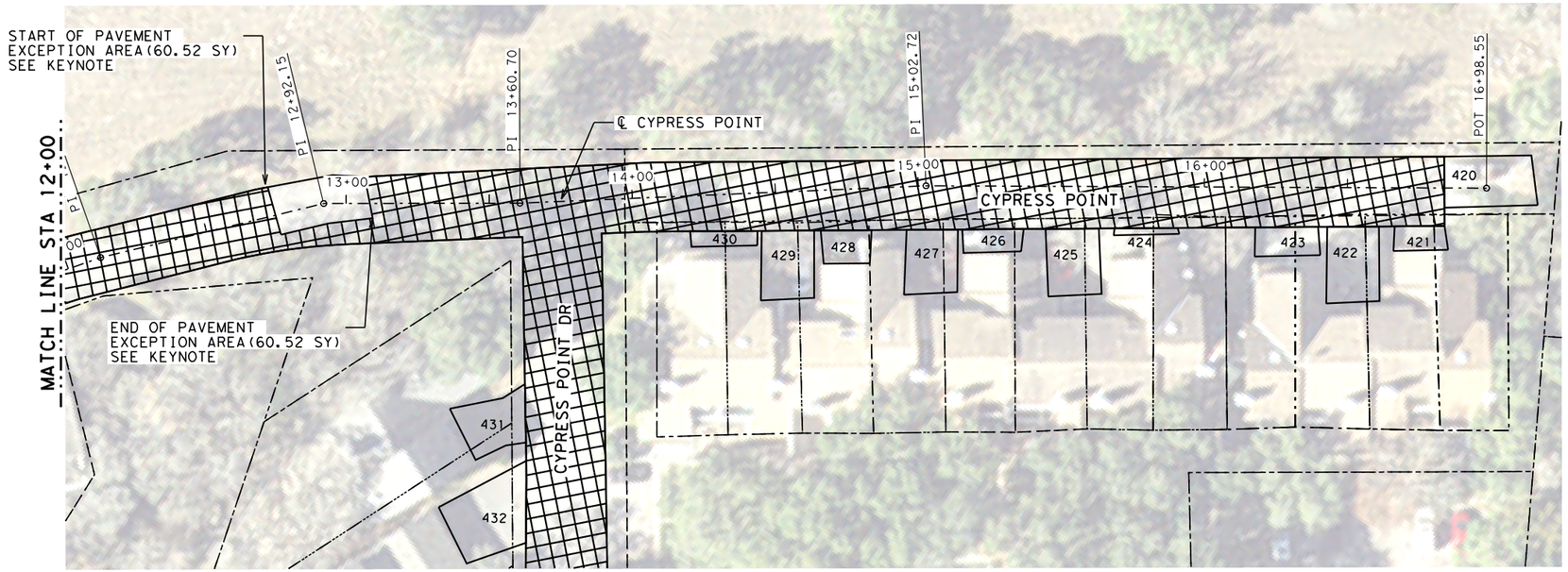

CYPRESS POINT
(APPROX. ROADWAY PAVEMENT 1636 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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KEYNOTE

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
CYPRESS POINT 3 OF 4

K·FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	74 OF 114

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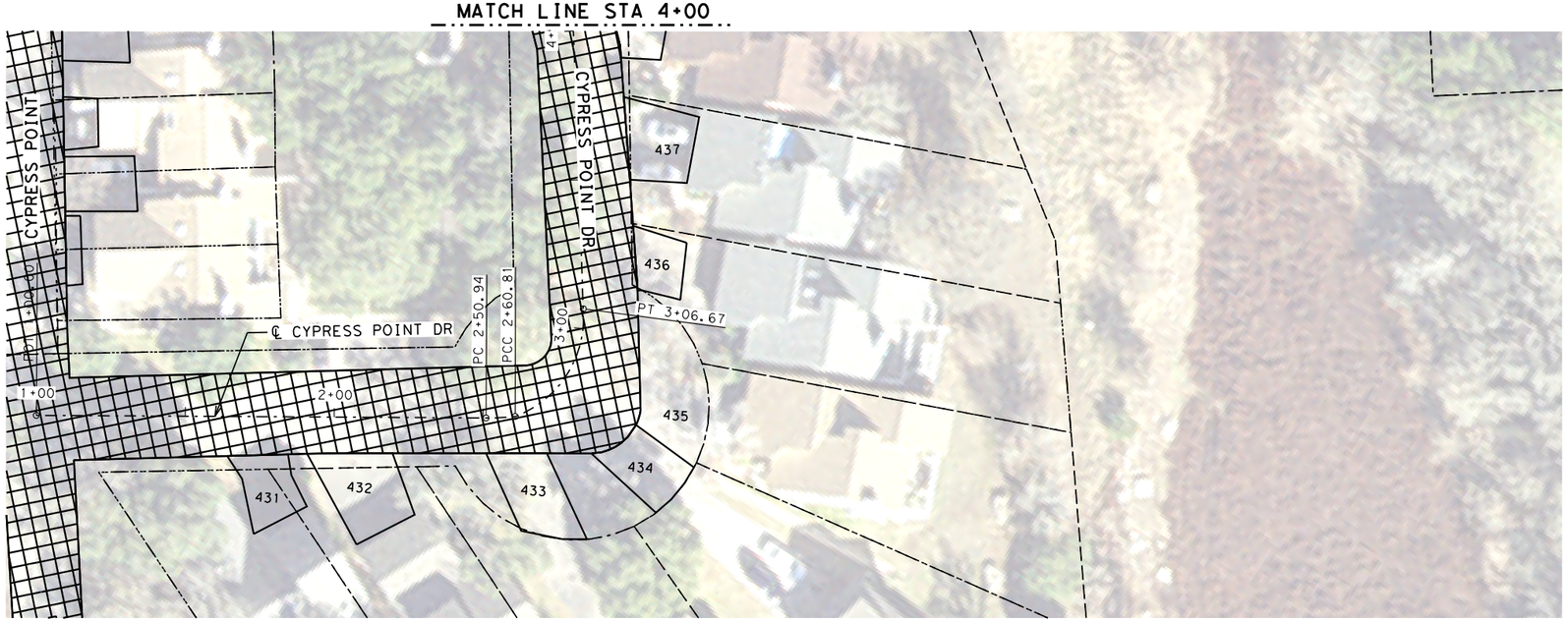

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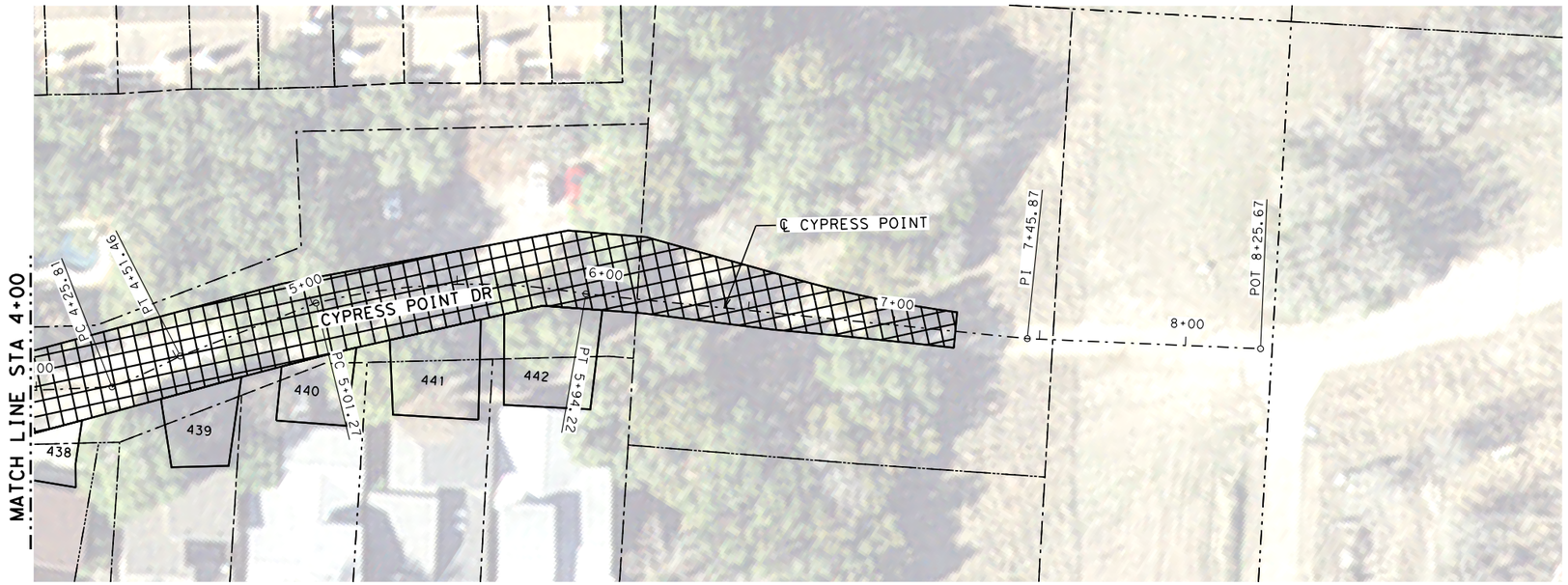

CYPRESS POINT DR
(APPROX. ROADWAY PAVEMENT 828 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
- XXXX PROPERTY ADDRESS
- EROSION CONTROL LOG
- NON PAVED AREA

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216
(FIRM # 6535)

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
ROADWAY PLANS
CYPRESS POINT 4 OF 4

CITY OF WOODCREEK

SCALE	200 NOTED
DATE	9/2023
SHEET NUMBER	75 OF 114

MATCH LINE STA 8+00

MATCH LINE STA 3+50

WILDWOOD CIRCLE
(APPROX. ROADWAY PAVEMENT 838 SY)

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- FLEXIBLE PAVEMENT STRUCTURE REPAIR (8")SEE PROJECT LAYOUT SHEET (2 OF 2)
- PLAN & TEXT ASPH CONC PAV (0" TO 2") W/ OVERLAY
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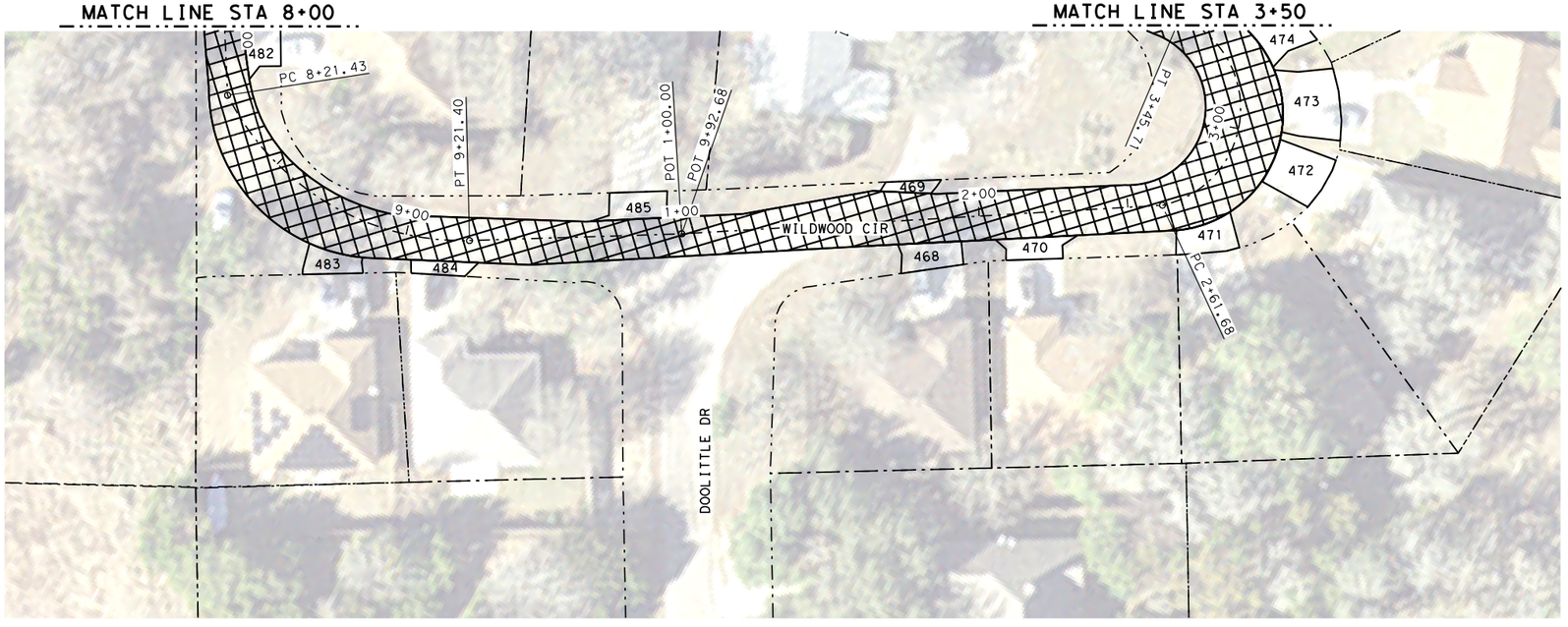

MATCH LINE STA 8+00

MATCH LINE STA 3+50

WILDWOOD CIRCLE
(APPROX. ROADWAY PAVEMENT 824 SY)

Item 1.

REV. NO.	BY	DATE	REVISION DESCRIPTION

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

ROADWAY PLAN & OVERLAY PLANS
WILDWOOD CIR 1 OF 1

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	76 201

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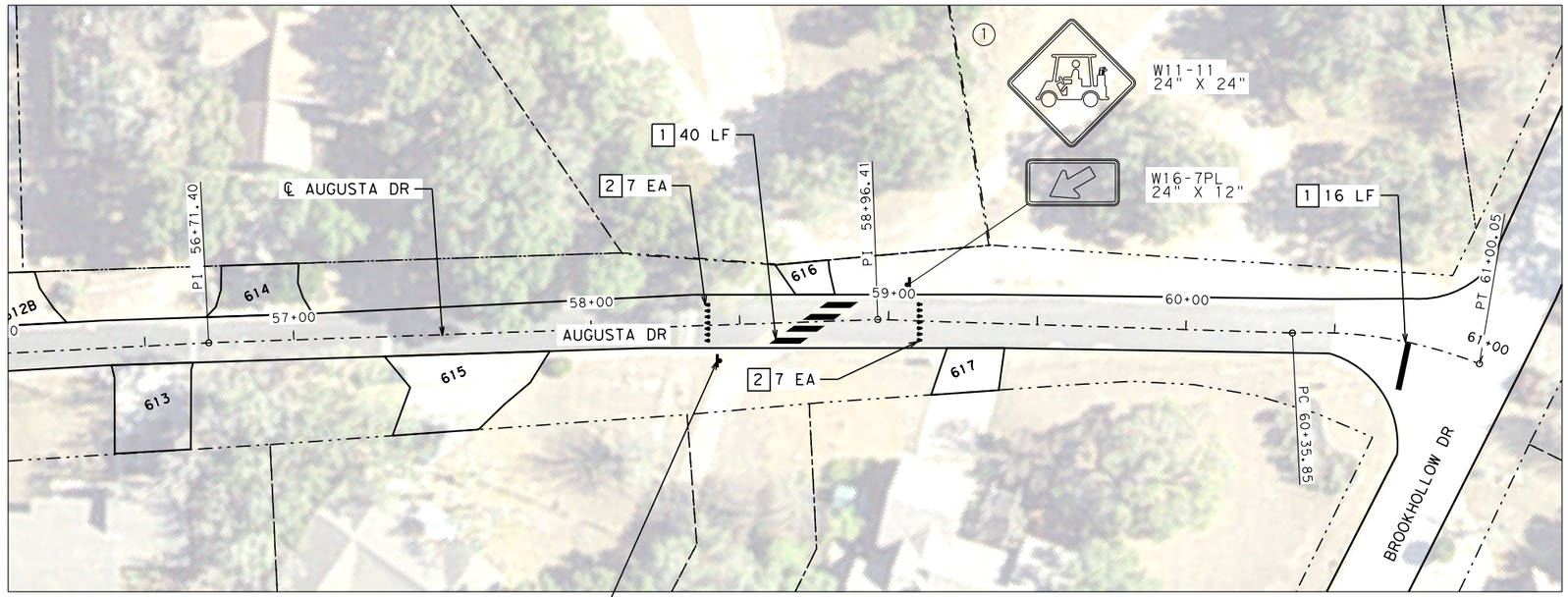

0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

REV. NO.	BY	DATE	REVISION DESCRIPTION

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410 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS AUGUSTA DR

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

	SHEET OF
SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	77 202

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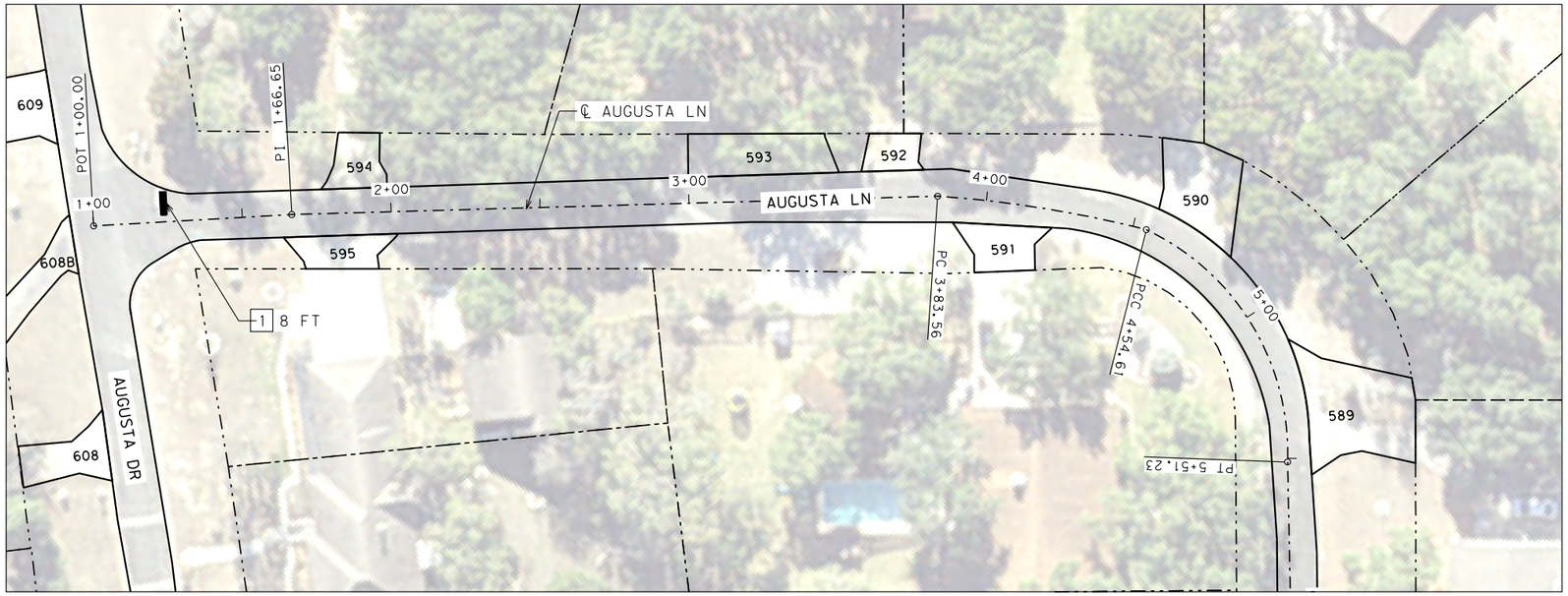

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

REV. NO.	BY	DATE	REVISION DESCRIPTION

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40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
AUGUSTA LN

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	78 (203)

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5/19/2023 4:02:53 PM

0 25 50

N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

REV. NO.	BY	DATE	REVISION DESCRIPTION

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40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
AUGUSTA LN

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	79

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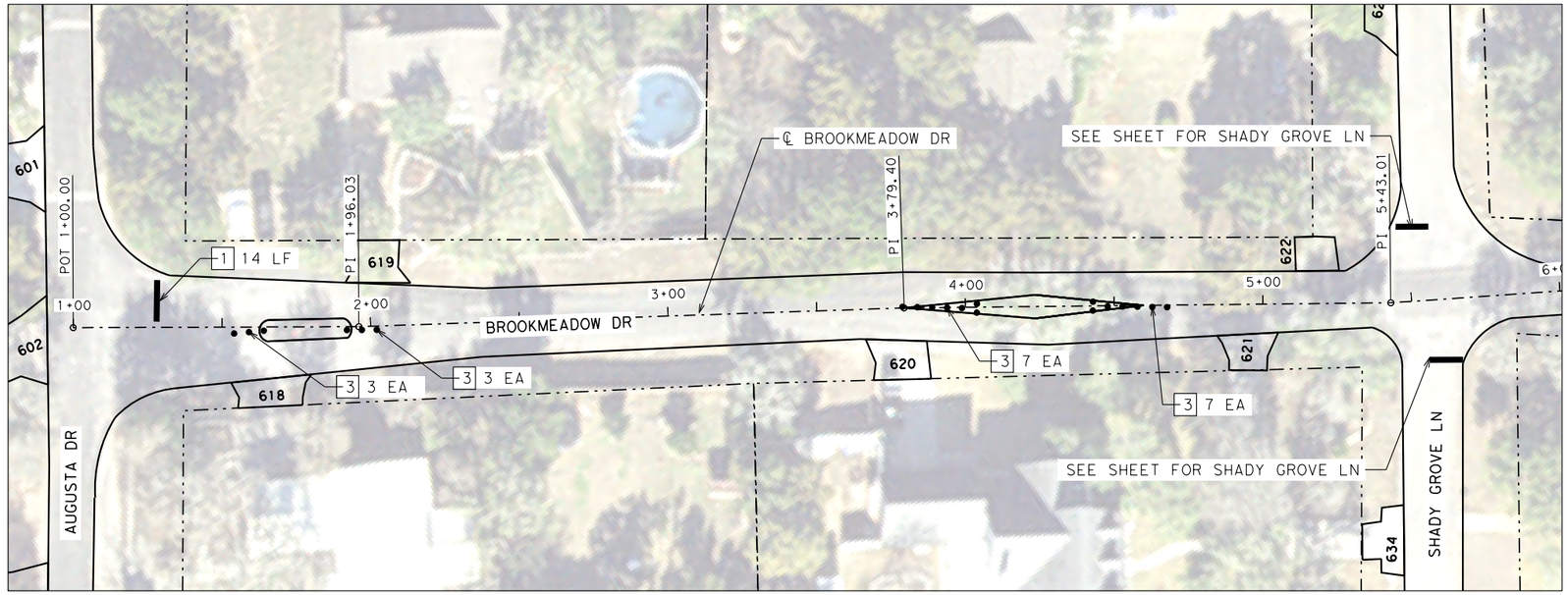

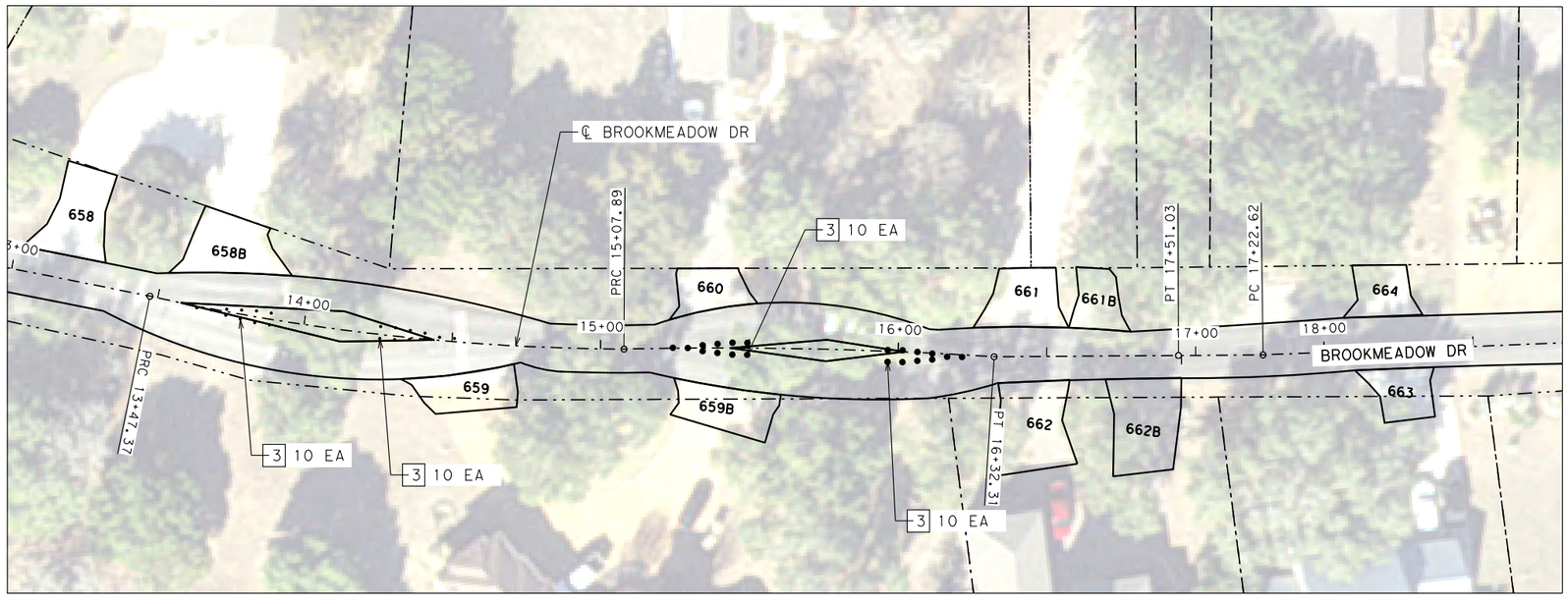

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- 1 REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- 2 YIELD LINE
- 3 TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

REV. NO.	BY	DATE	REVISION DESCRIPTION

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
BROOKMEADOW DR

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	80 / 205

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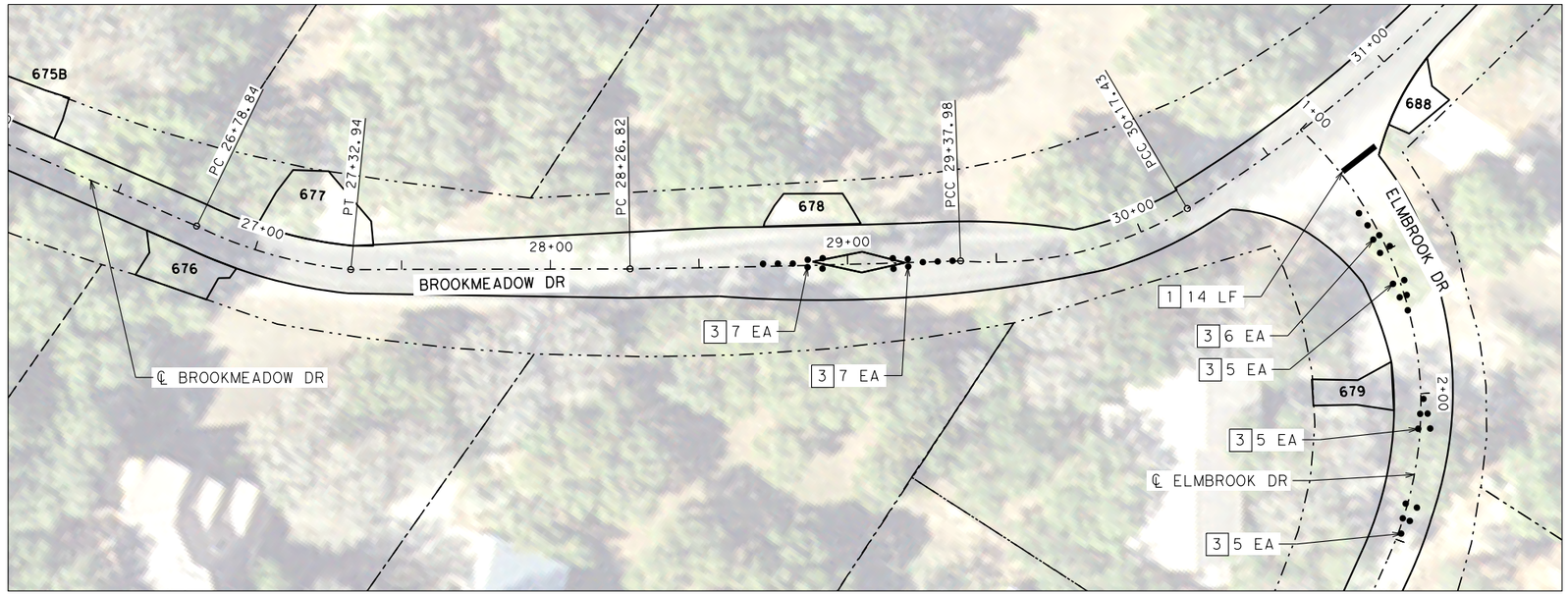

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
BROOKMEADOW DR & ELMBROOK

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	81 206

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0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS
CANYON CREEK DR

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	82 207

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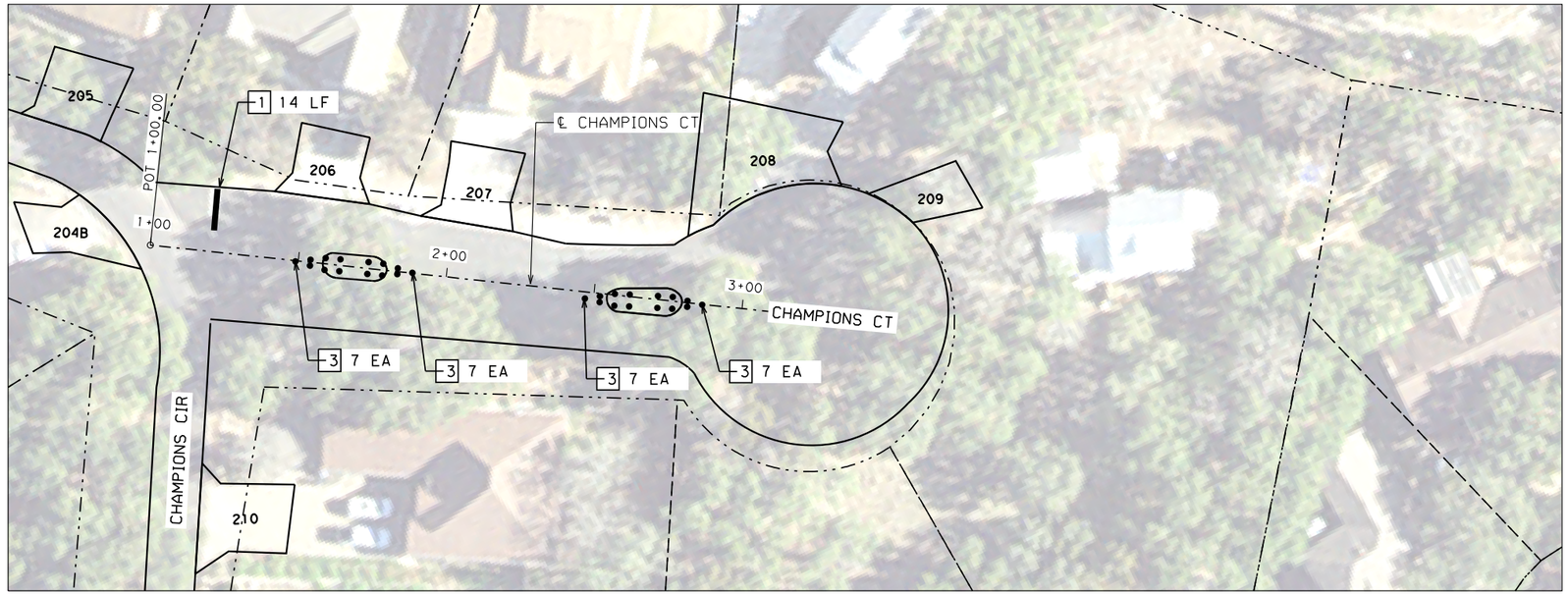

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
CHAMPION CT

CITY OF WOODCREEK

SHEET OF

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	83 (208)

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

Item 1.

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS
CHAMPIONS CIR

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	84 209

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N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
CHAMPIONS CIR

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	85 / 210

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0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
CHAMPIONS CIR & DEERFIELD DR

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	86 211

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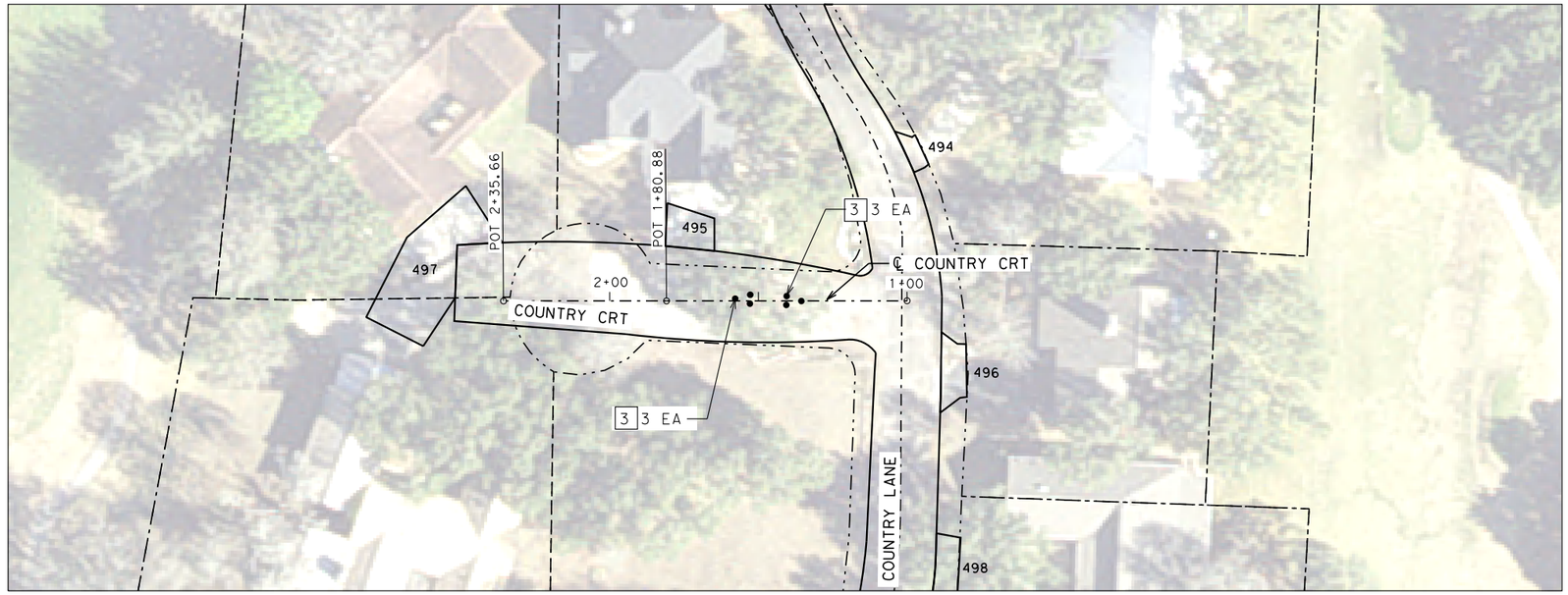

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
COUNTRY CRT

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	87 212

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N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS
COUNTRY LN

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	88 213

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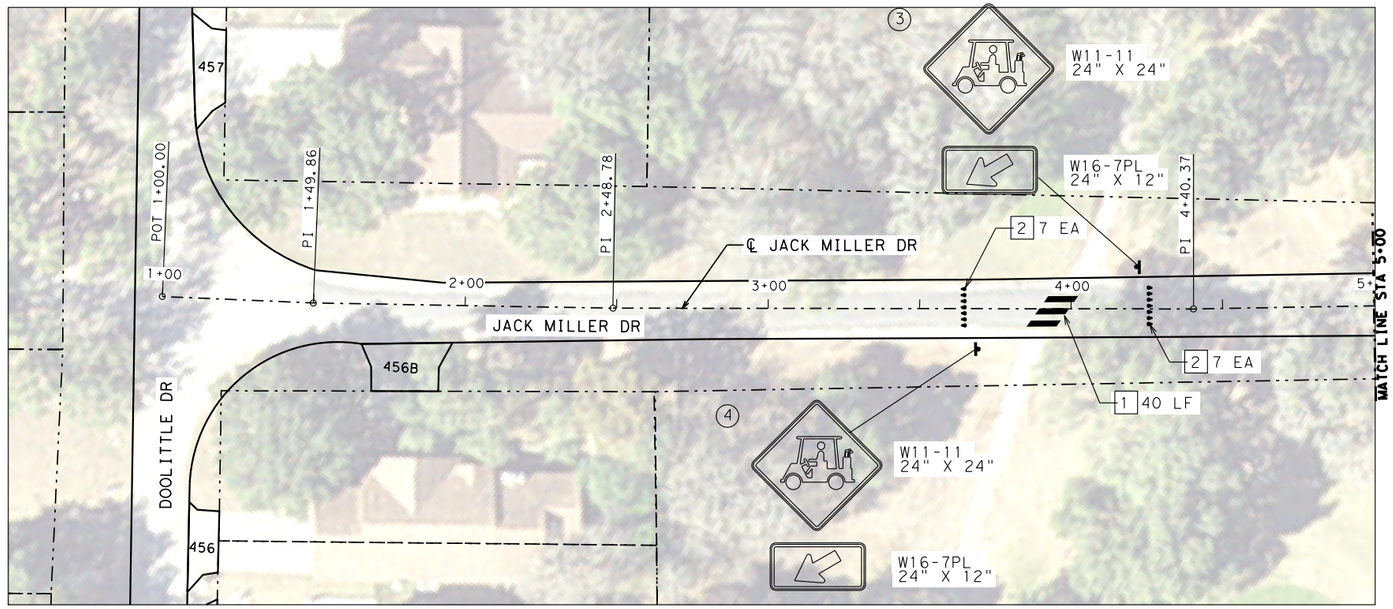

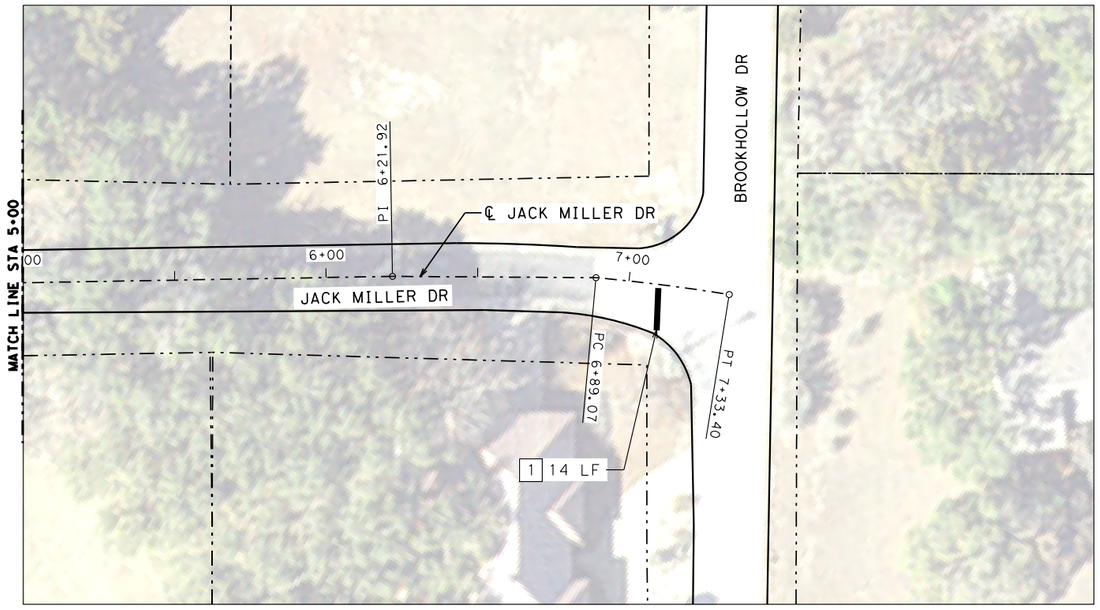

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS
JACKMILLER DR

CITY OF WOODCREEK

SHEET	OF
SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	89 214

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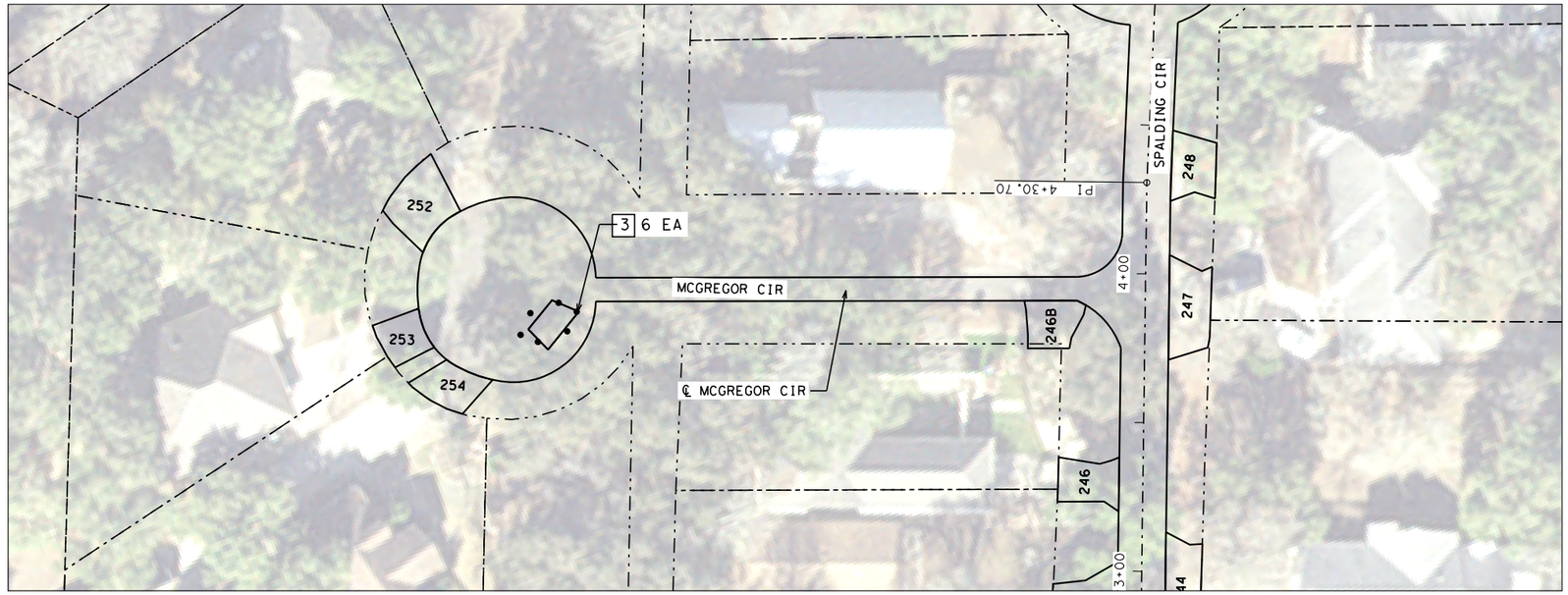

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
MCGREGOR

CITY OF WOODCREEK

SHEET OF

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	90 215

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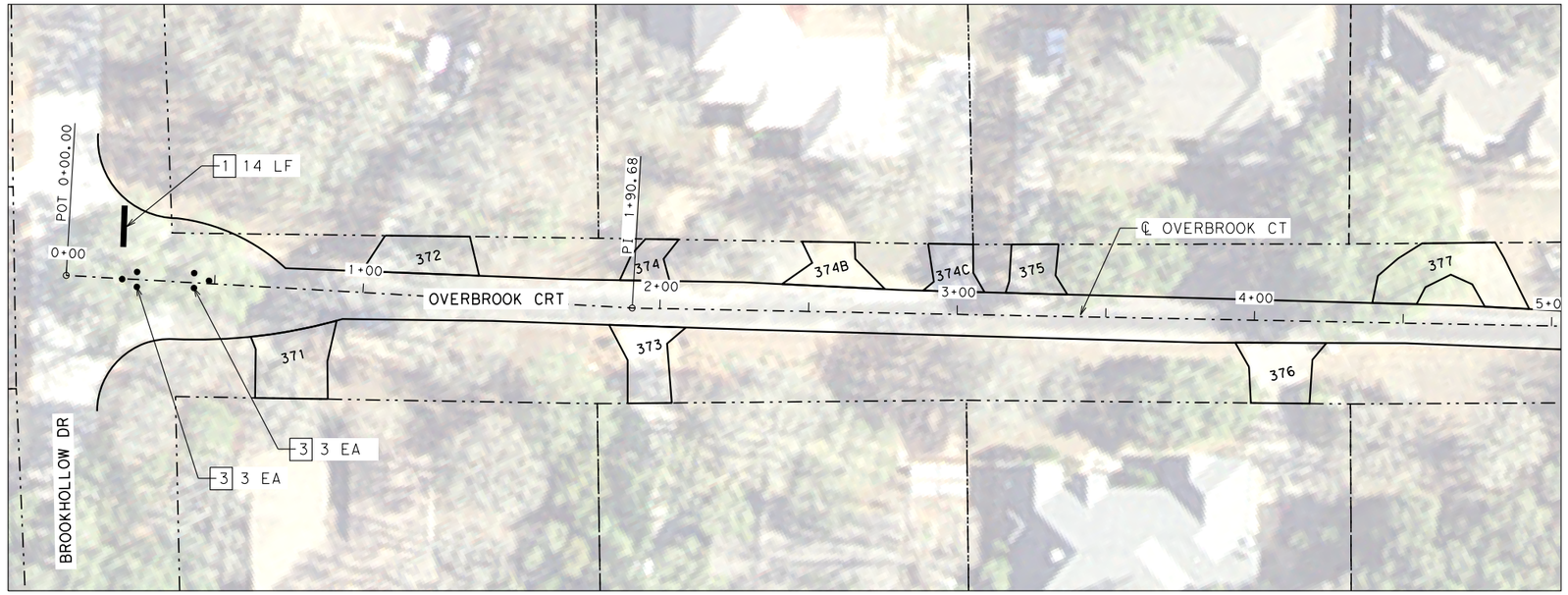

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
OVERBROOK CRT

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	91

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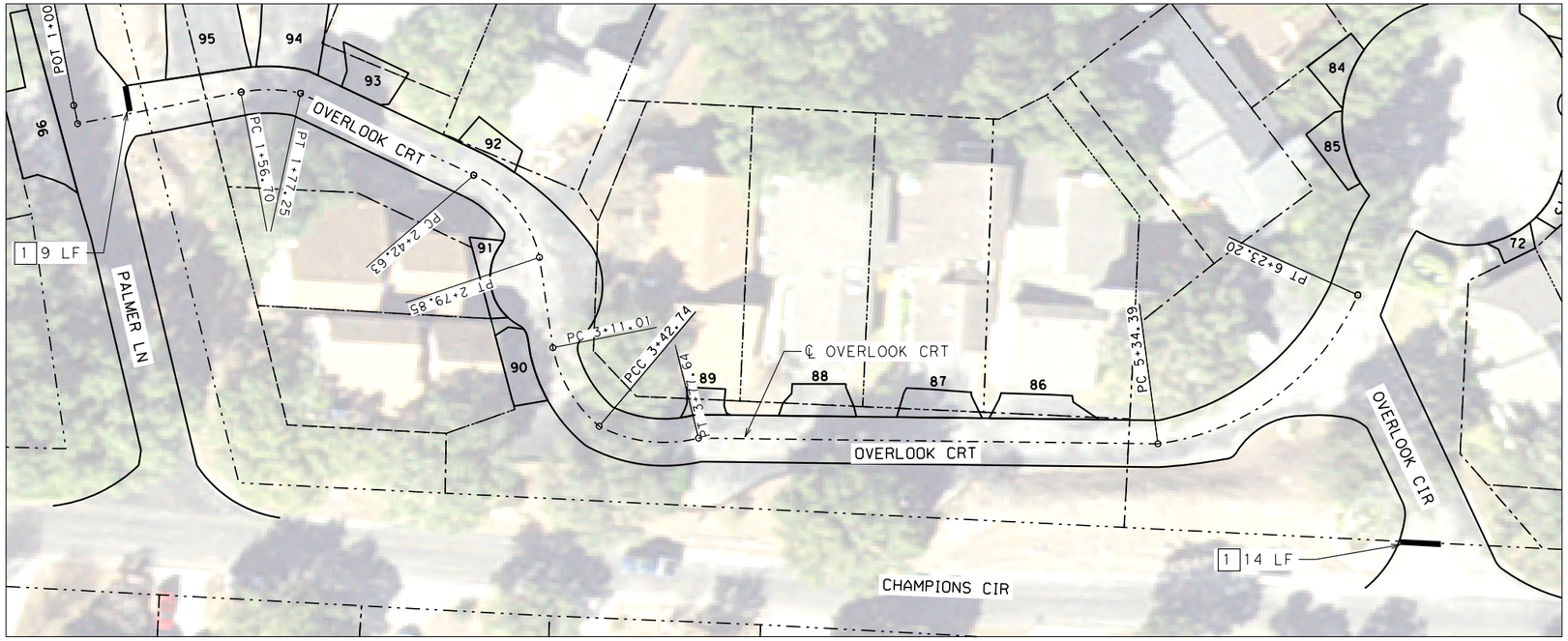

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS
OVERLOOK CT

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	92 217

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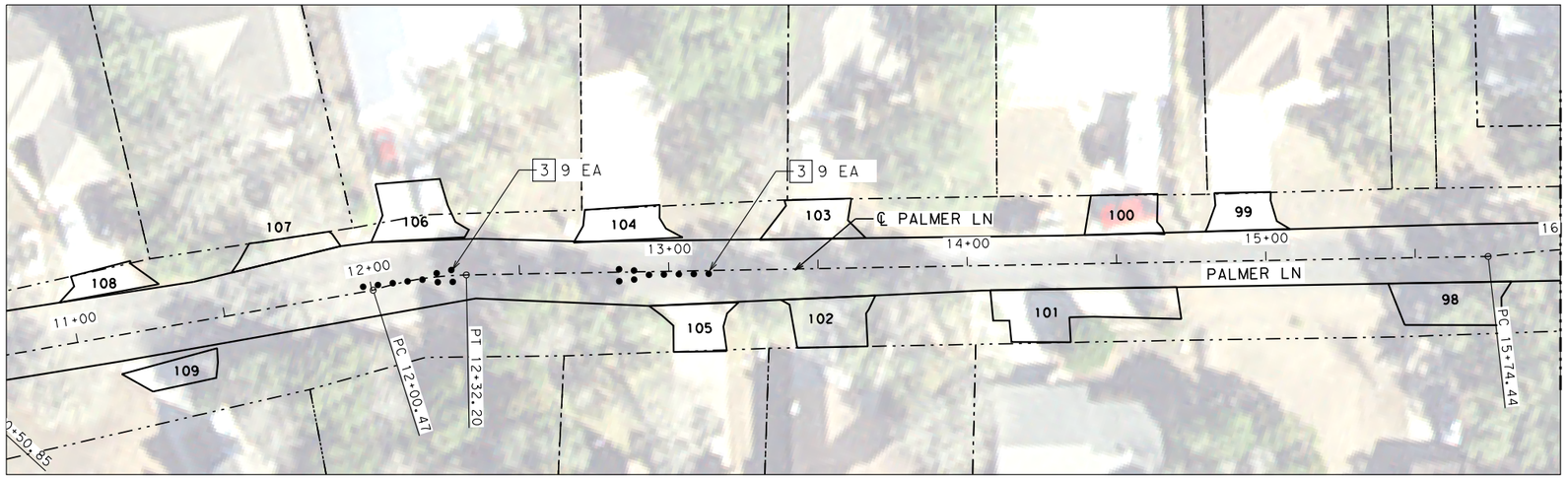

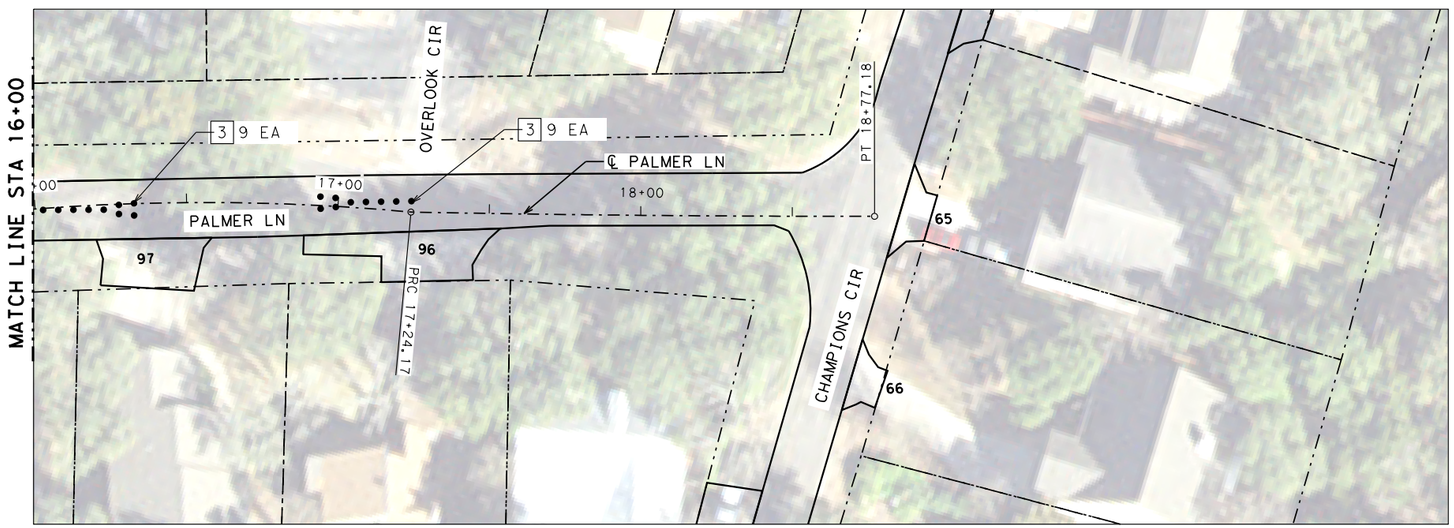

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
PALMER LN

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	93 218

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0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
PAR CIR & BROOKHOLLOW

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	94 / 219

X:\Projects\0915_City of Woodcreek Transportation Bond\300 Plans and Drawings\330 Plan Production\333 Plan Sheets\Pavement Markings\0915_RDpmkg_PAR_CIR_Brookhollow.dgn

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
PAR VIEW DR

REV. NO.	BY	DATE	REVISION DESCRIPTION

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CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	95 220

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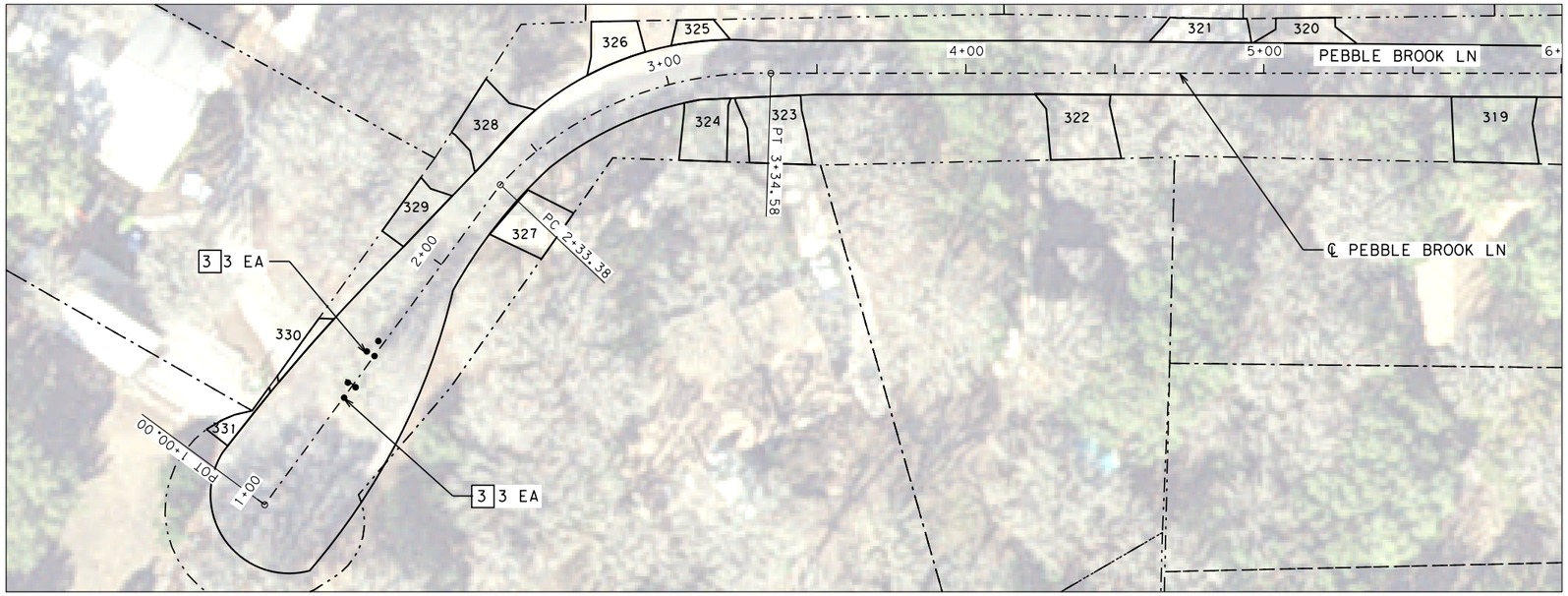

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N

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

REV. NO.	BY	DATE	REVISION DESCRIPTION

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K FRIESE & ASSOCIATES, INC.
40 NE LOOP 410 MERCANTILE BUILDING SUITE 545 SAN ANTONIO, TX 78216

CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS

PEBBLEBROOK LN

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	96 221

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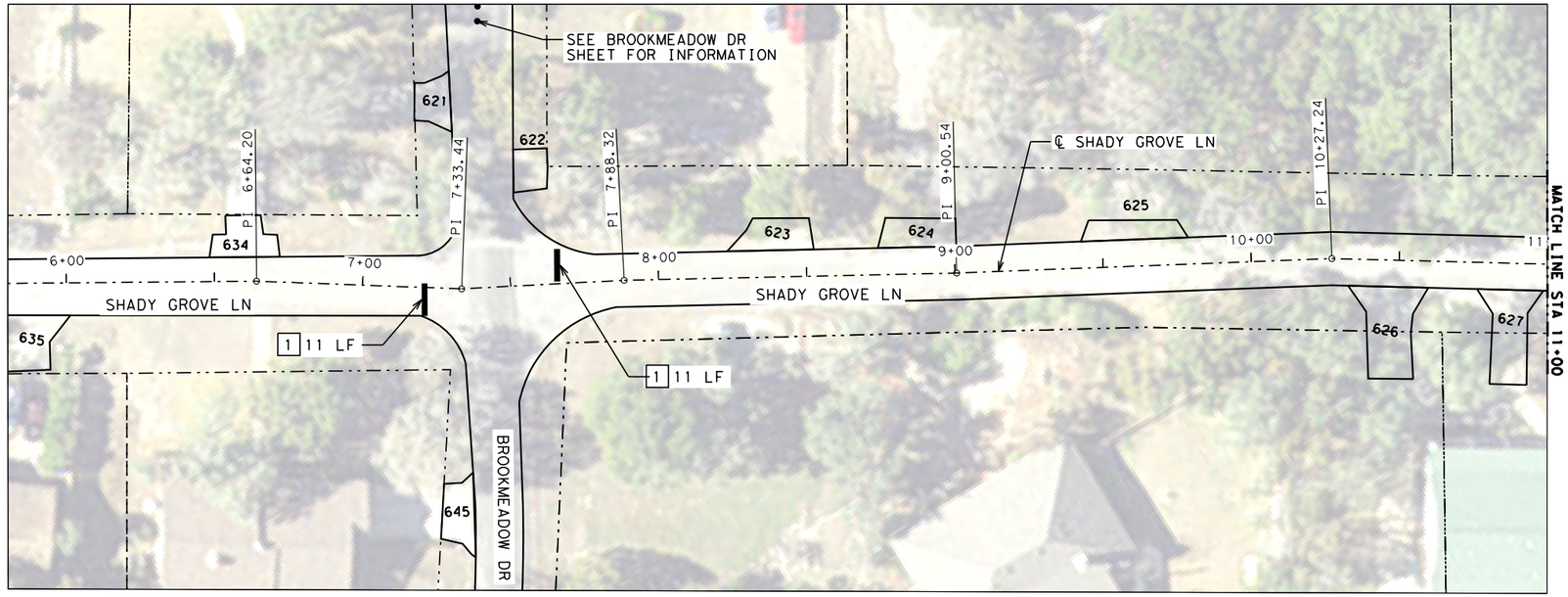

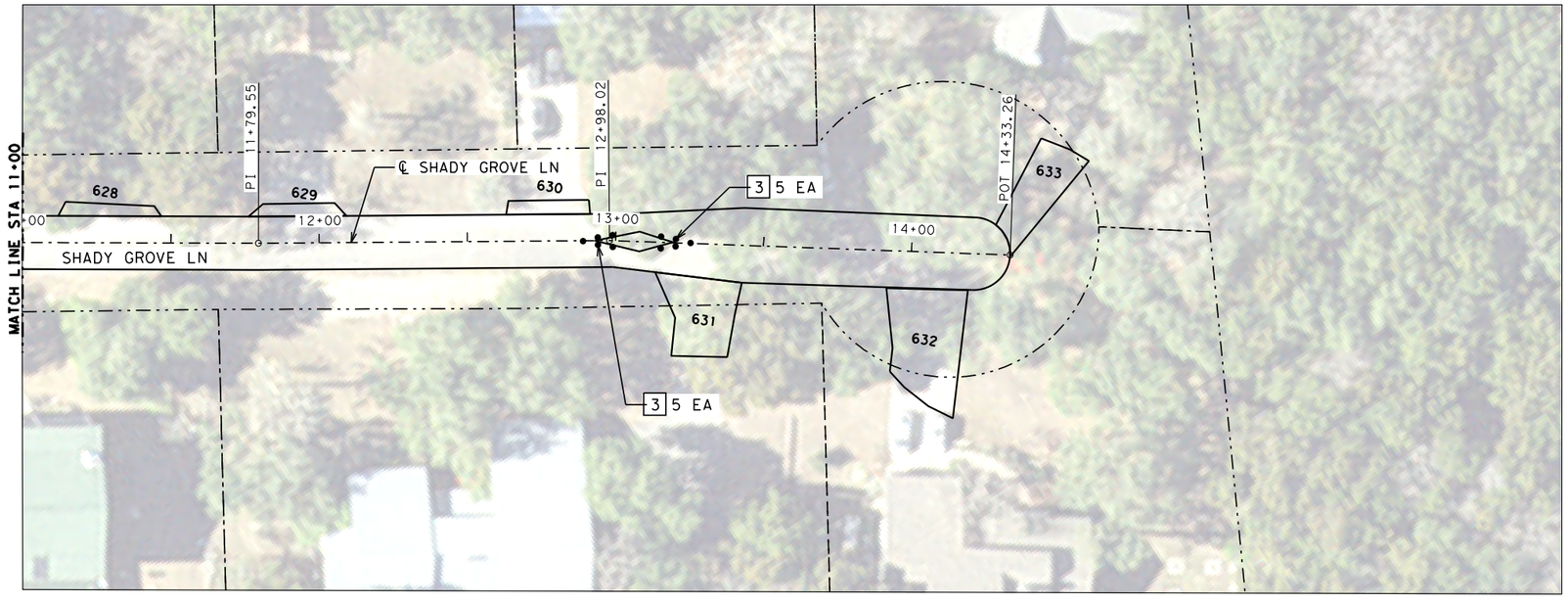

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS
SHADY GROVE

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	97 222

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

REV. NO.	BY	DATE	REVISION DESCRIPTION

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS
SPALDING CIR

CITY OF WOODCREEK

SHEET	OF
SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	98 223

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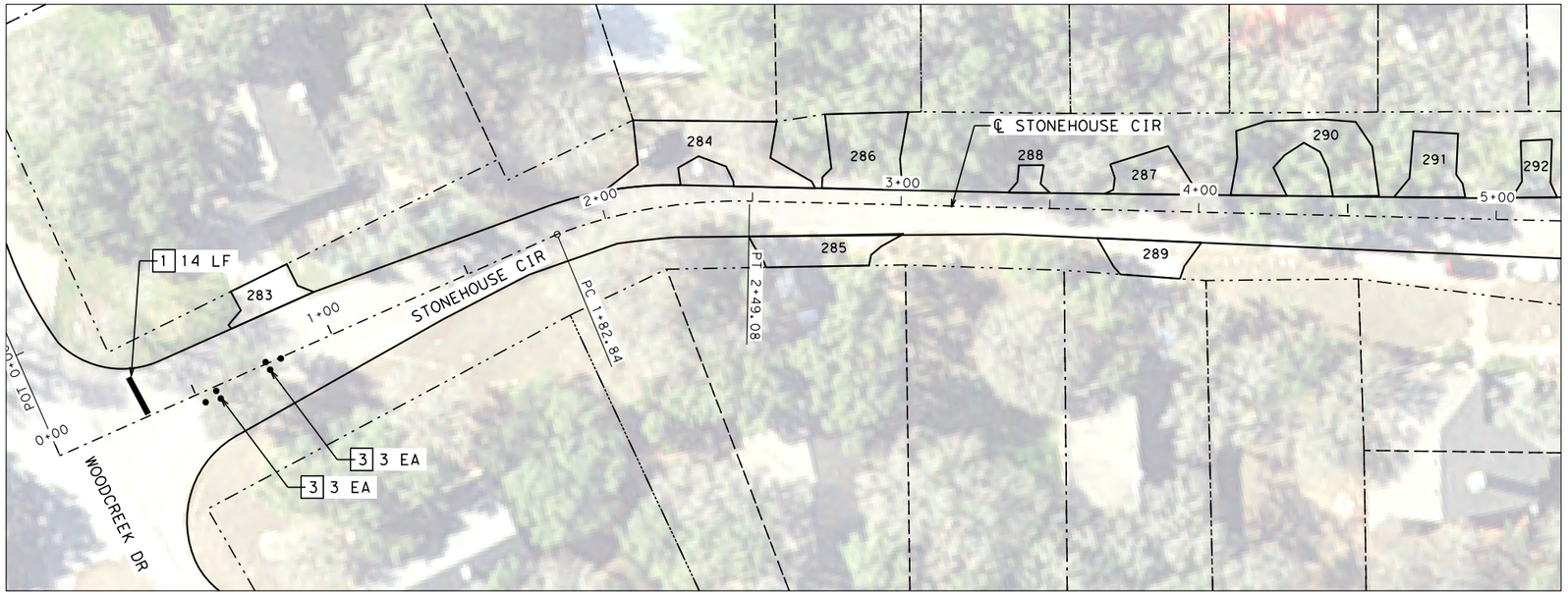

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS
STONEHOUSE CIR

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	99 224

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LEGEND

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- PROPERTY LINE
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- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS
TREMONT TRACE

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	100 225

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
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- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK

RESIDENTIAL STREET MILL & OVERLAY PROJECT

PAVEMENT MARKINGS
WESTWOOD DR

CITY OF WOODCREEK

SHEET OF

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	101

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
WESTWOOD DR

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	102

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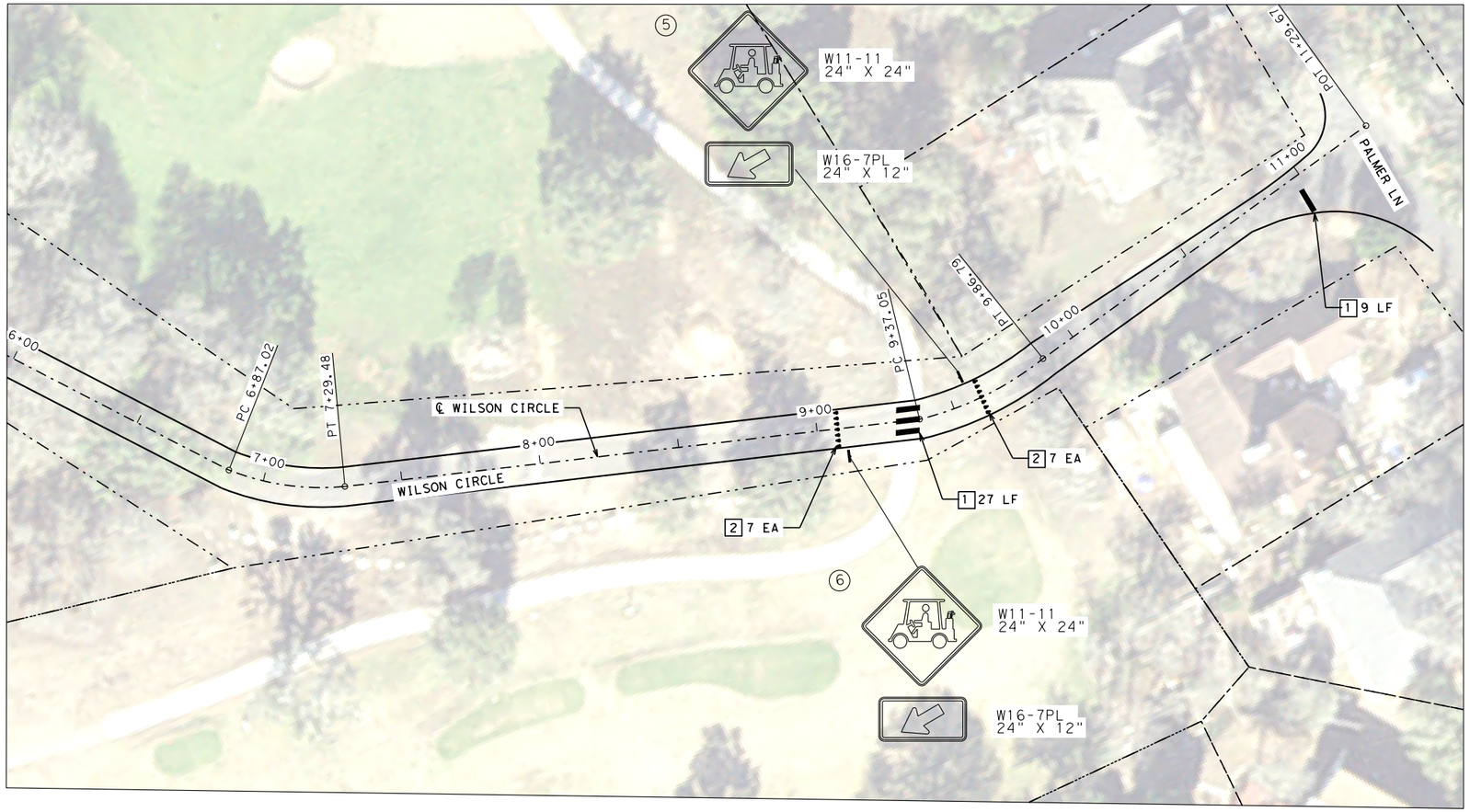

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LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
WILSON CIR

CITY OF WOODCREEK

SHEET	OF
SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	103 228

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0 25 50

LEGEND

- EDGE OF PAVEMENT
- PROPERTY LINE
- [1] REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)
- [2] YIELD LINE
- [3] TY II-A-A MARKERS (SIZE EXAGGERATED FOR VIEWING)
- PROPOSED SIGN

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CITY OF WOODCREEK
RESIDENTIAL STREET MILL & OVERLAY PROJECT
PAVEMENT MARKINGS
CYPRESS POINT

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(FIRM # 6535)

The City of Woodcreek
IN THE MIDST OF THE TEXAS HILL COUNTRY

CITY OF WOODCREEK

SCALE	AS NOTED
DATE	5/19/2023
SHEET NUMBER	105

229

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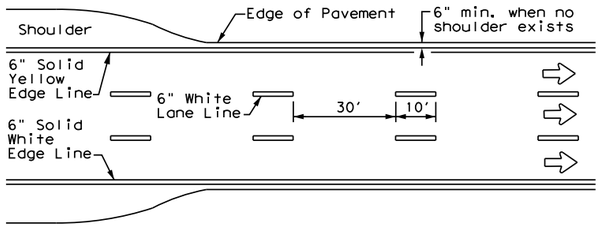
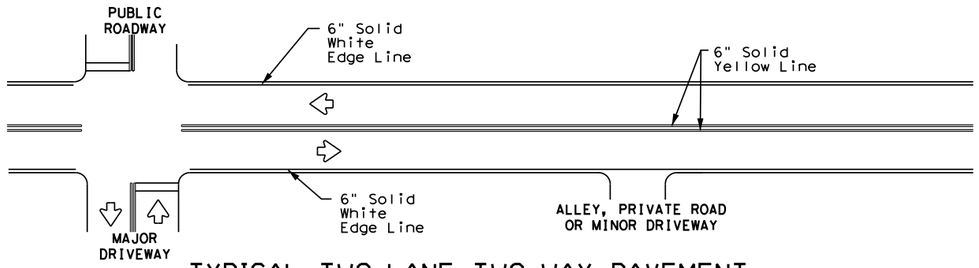
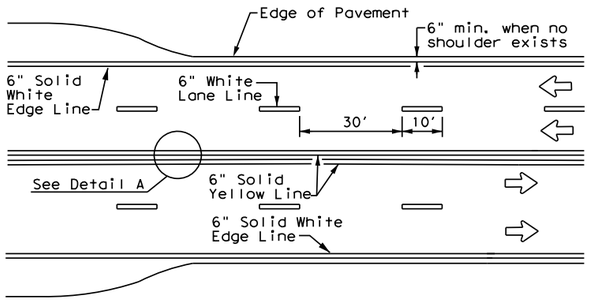
DATE:
FILE:

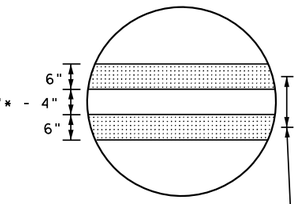


EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS





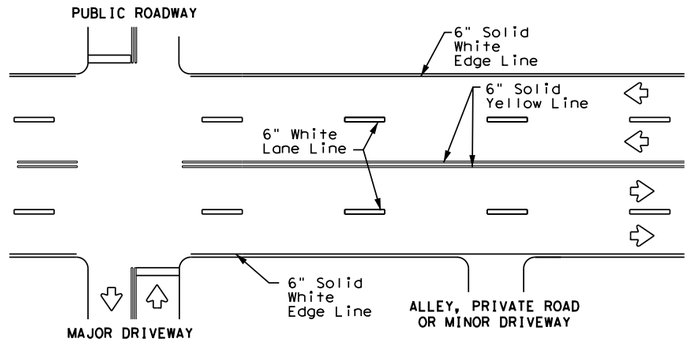
DETAIL "A"

9"** min. - 10" typ.
(18" max. for traveled way greater than 48' only)

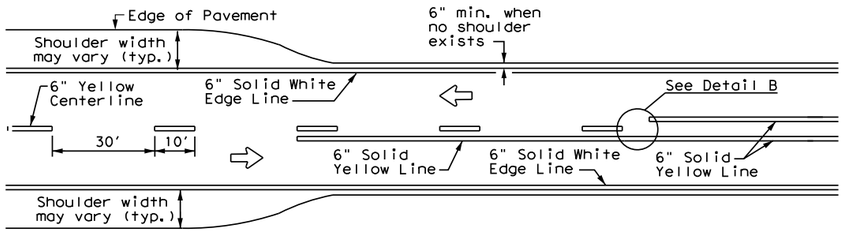
CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

* 2" minimum for restripe projects when approved by the Engineer.

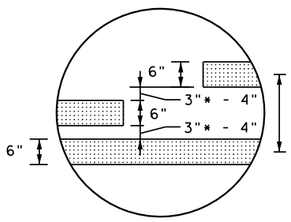
** 8" minimum for restripe projects when approved by the Engineer.



TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS

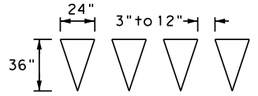


TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



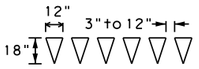
DETAIL "B"

* 2" minimum for restripe projects when approved by the Engineer.

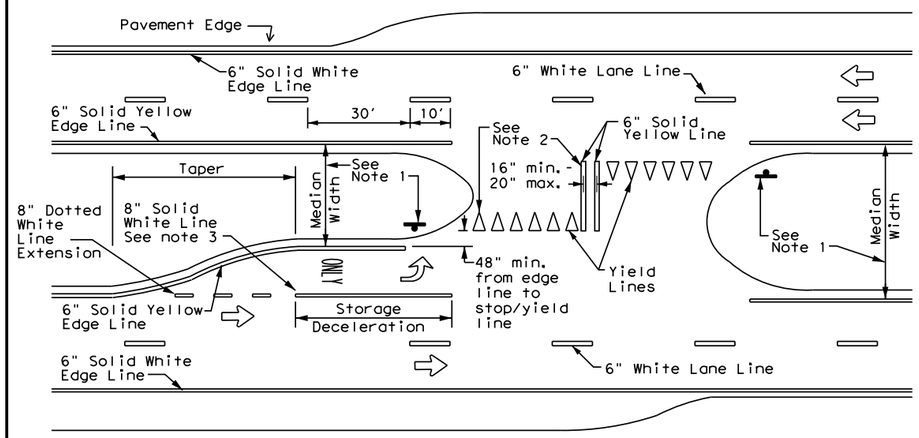


For posted speed on road being marked equal to or greater than 45 MPH.

YIELD LINES



For posted speed on road being marked equal to or less than 40 MPH.



FOUR LANE DIVIDED ROADWAY CROSSOVERS

NOTES

1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs and stop bars are optional as determined by the Engineer.
2. Install median striping (double yellow centerlines and stop lines/yield lines) when a 50' or greater median centerline can be placed. Stop lines shall only be used with stop signs. Yield lines shall only be used with yield signs.
3. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

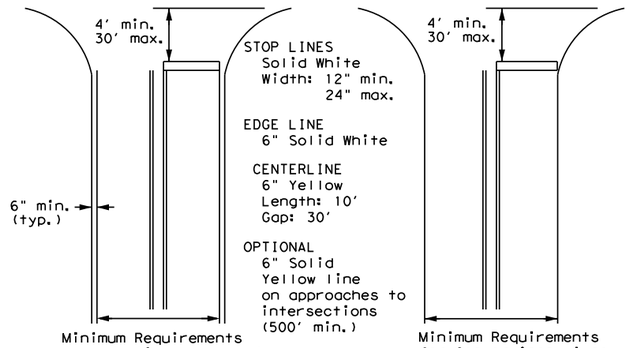
GENERAL NOTES

Item 1.

1. Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edge lines are not required in curb and gutter sections of roadways.
2. The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the center of edge line to the center of edge line of a two lane roadway.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



NOTE: Traveled way is exclusive of shoulder widths. Refer to General Note 2 for additional details.

GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Roadways

Texas Department of Transportation

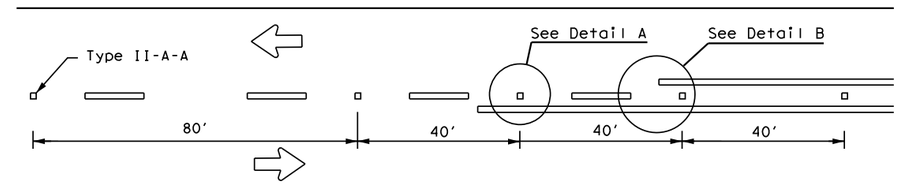
Traffic Safety Division Standard

TYPICAL STANDARD PAVEMENT MARKINGS

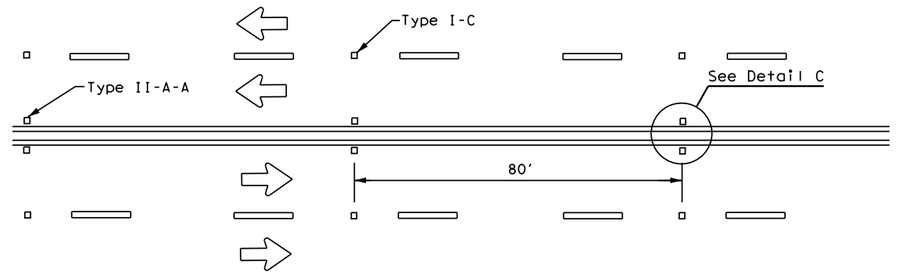
PM(1)-22

FILE: pm1-22.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 11-78 8-00 6-20 / 8-95 3-03 12-22 / 5-00 2-12	DIST	COUNTY		230
22A				106

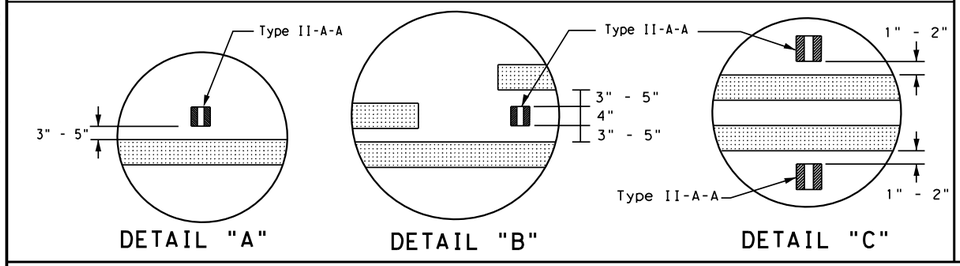
REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE



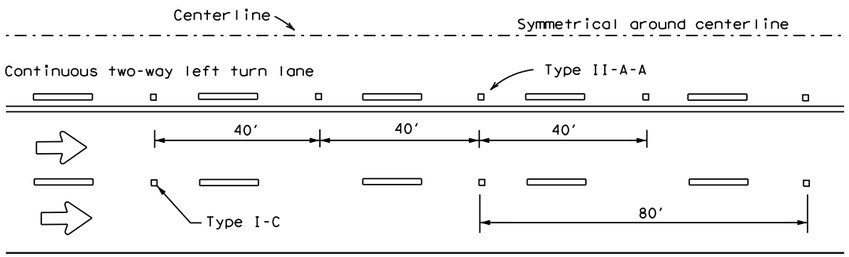
CENTERLINE FOR ALL TWO LANE TWO-WAY ROADWAYS



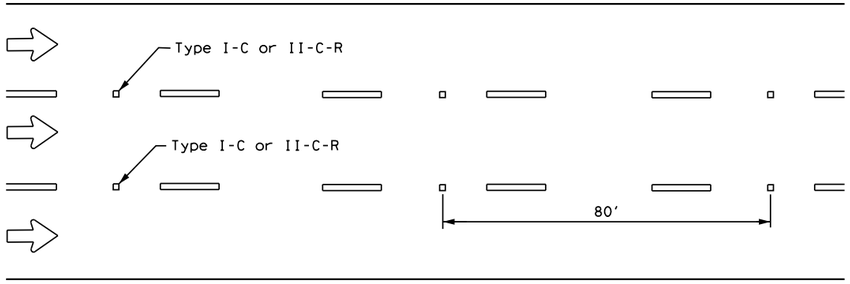
CENTERLINE & LANE LINES
FOR FOUR LANE TWO-WAY ROADWAYS



DETAIL "A" DETAIL "B" DETAIL "C"



CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



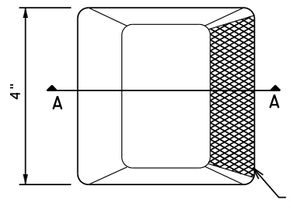
LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.

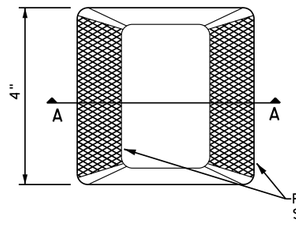
See Note 3.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

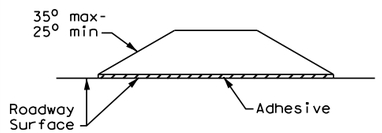
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)

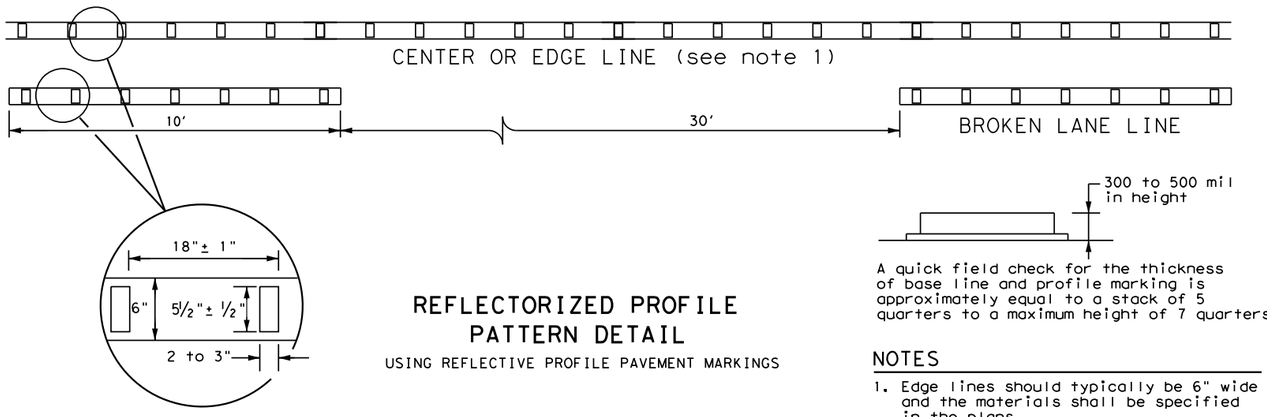


Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS



6" EDGE LINE, 6" CENTERLINE
OR 6" LANE LINE

REFLECTORIZED PROFILE
PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

A quick field check for the thickness of base line and profile marking is approximately equal to a stack of 5 quarters to a maximum height of 7 quarters.

NOTES

1. Edge lines should typically be 6" wide and the materials shall be specified in the plans.
2. Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

GENERAL NOTES

1. All raised pavement markers placed along broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.
3. Use raised pavement marker Type I-C with undivided roadways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.

Texas Department of Transportation

Traffic Safety Division Standard

POSITION GUIDANCE USING RAISED MARKERS RELECTORIZED PROFILE MARKINGS PM(2)-22

FILE: pm2-22.dgn	DN:	CK:	DW:	CK:
©TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-77 8-00 6-20 4-92 2-10 12-22 5-00 2-12	DIST	COUNTY		231

22B

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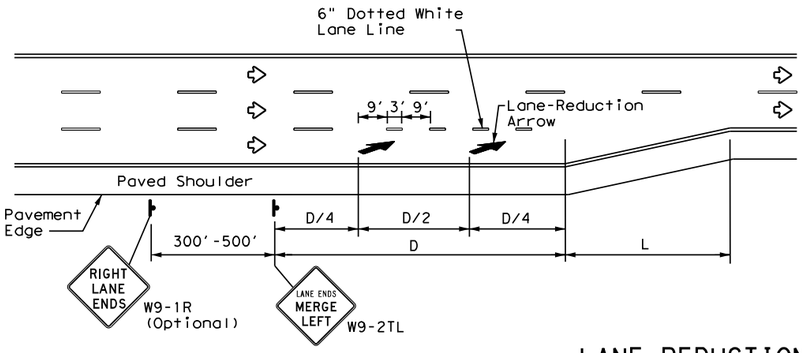
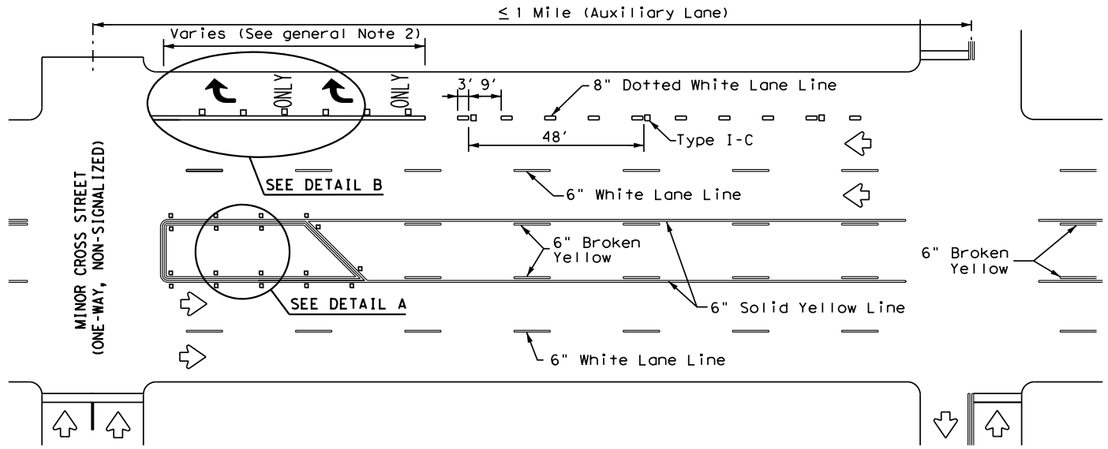


LANE REDUCTION

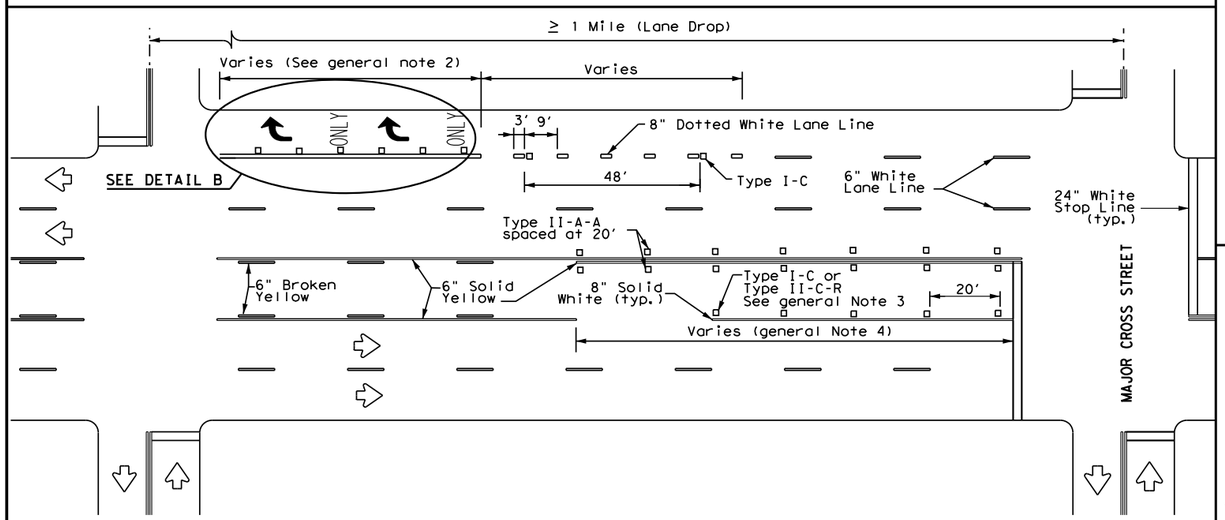
NOTES

1. Lane reduction pavement markings are used where the number of through lanes is reduced because of narrowing of the roadway or because of a section of on-street parking in what would otherwise be a through lane. For Texas Super 2 Passing Lanes, see TS2(PL) standard sheets.
2. On divided highways, an additional RIGHT LANE ENDS (W9-1R) sign may be installed in the median aligned with the W9-1R sign on the right side of the highway.
3. Lane reduction arrows are required for speeds of 45 mph or greater. An optional third lane reduction arrow may be added based on engineering judgement. If used, the optional third lane reduction arrow should be centered between the first and last lane reduction arrows.
4. For lane reductions on Freeways and Expressways, signing shall conform to the TxDOT Freeway Signing Handbook.

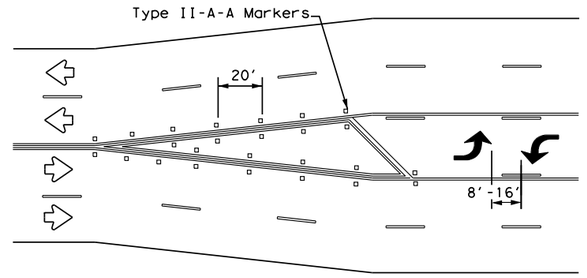
ADVANCED WARNING SIGN DISTANCE (D)		
Posted Speed	D (ft)	L (ft)
30 MPH	460	$L=\frac{WS^2}{60}$
35 MPH	565	
40 MPH	670	
45 MPH	775	L=WS
50 MPH	885	
55 MPH	990	
60 MPH	1,100	
65 MPH	1,200	
70 MPH	1,250	
75 MPH	1,350	



TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP



A two-way left-turn (TWLT) lane-use arrow pavement marking should be used at or just downstream from the beginning of a two-way left-turn lane within a corridor. Repeating the marking after each intersection or dedicated turn bay is not required unless stated elsewhere in the plans.

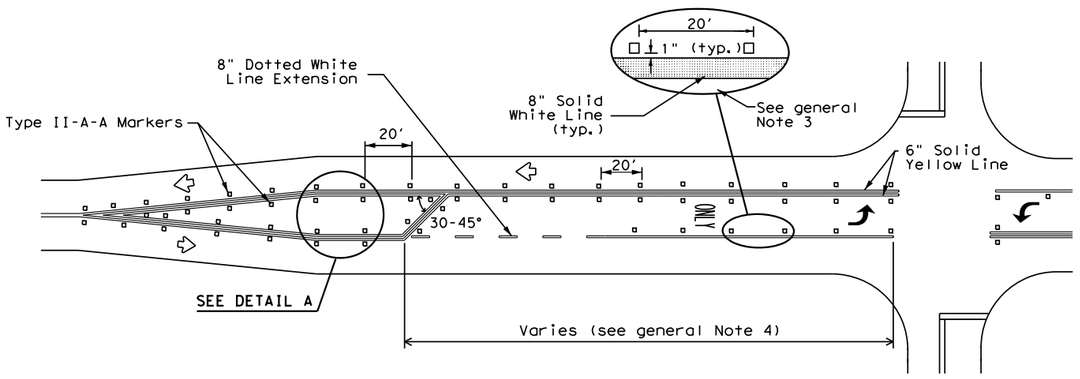
TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

GENERAL NOTES

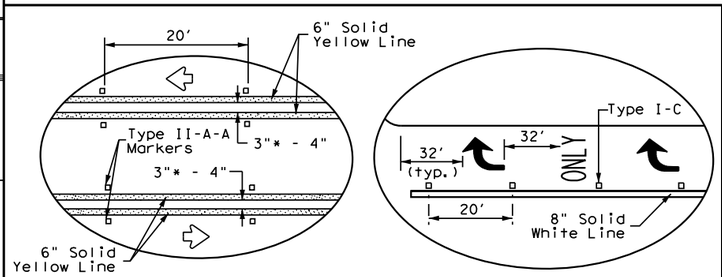
1. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows are as shown in the Standard Highway Sign Designs for Texas.
2. When lane-use words and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 180 feet. When a single lane use arrow or word and arrow marking is used for a short turn lane, it should be located at or near the upstream end of the full-width turn lane.
3. Use raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.
4. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer. See Chapter 3 of the Roadway Design Manual for additional information on turning lanes or storage lengths.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



TYPICAL TWO-LANE ROADWAY INTERSECTION WITH LEFT TURN BAYS



* 2" minimum allowed for restripe projects when approved by the Engineer.

Texas Department of Transportation

Traffic Safety Division Standard

TWO-WAY LEFT TURN LANES, RURAL LEFT TURN BAYS, AND LANE REDUCTION PAVEMENT MARKINGS

PM(3)-22

FILE: pm3-22.dgn	DN:	CK:	DW:	CK:
©TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-98 3-03 6-20 5-00 2-10 12-22 8-00 2-12	DIST	COUNTY		232
22C				108

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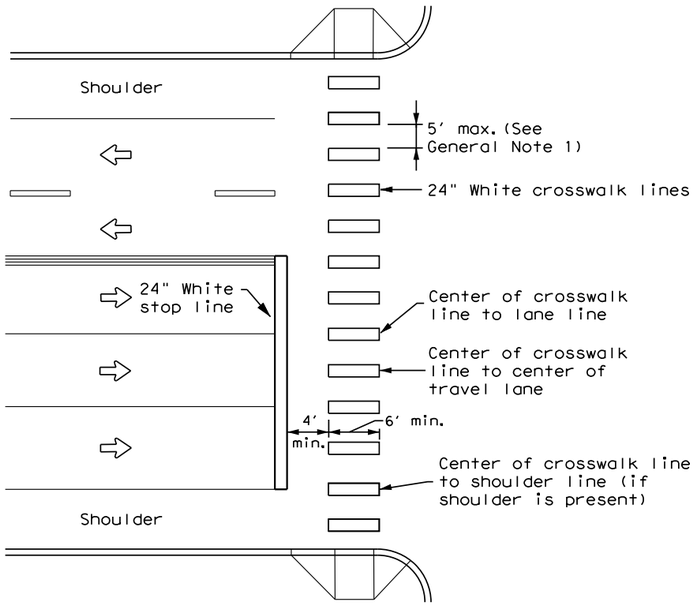


HIGH-VISIBILITY LONGITUDINAL CROSSWALK
AT CONTROLLED APPROACH

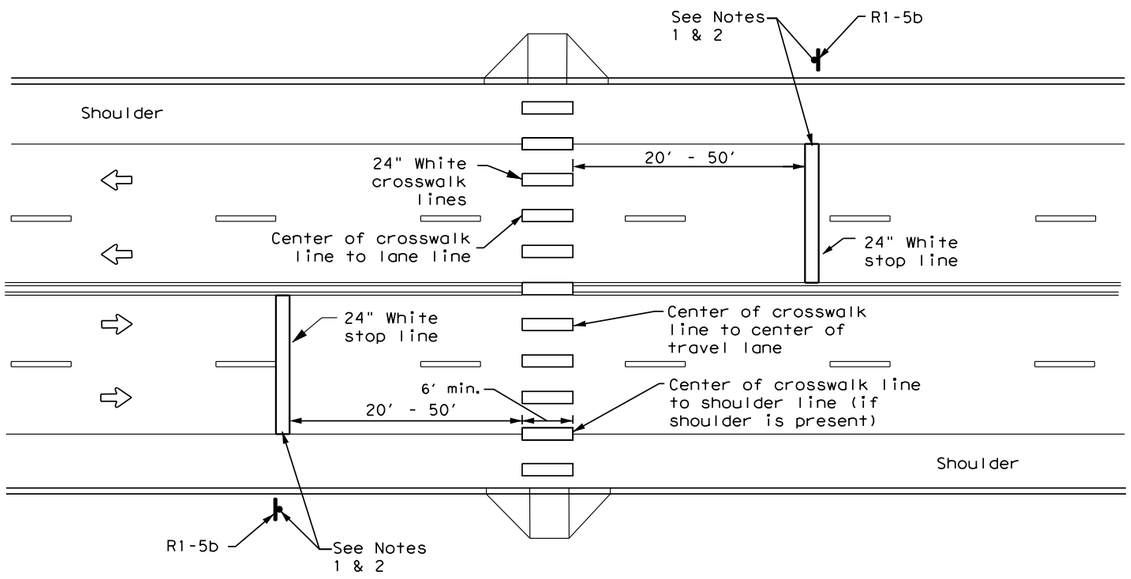
GENERAL NOTES

Item 1.

1. Longitudinal crosswalk lines should not be placed in the wheel path of vehicles. Center the crosswalk lines on travel lanes, lane lines, and shoulder lines (if present).
2. A minimum 6" clear distance shall be provided to the curb face. If the last crosswalk line falls into this distance it must be omitted.
3. For divided roadways, adjustments in spacing of the crosswalk lines should be made in the median so that the crosswalk lines are maintained in their proper location across the travel portion of the roadway.
4. At skewed crosswalks, the crosswalk lines are to remain parallel to the lane lines.
5. Each crosswalk shall be a minimum of 6' wide.
6. The High-Visibility Longitudinal Crosswalk is the preferred crosswalk pattern on State Highways. Other crosswalk patterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used. All crosswalk designs and dimension shall comply with the "Texas Manual on Uniform Traffic Control Devices."
7. Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



UNSIGNALIZED MIDBLOCK HIGH-VISIBILITY
LONGITUDINAL CROSSWALK

NOTES:

1. Use stop bars with Stop Here For Pedestrians (R1-5b) signs at unsignalized midblock cross walks.
2. Use stop bars with STOP HERE ON RED (R10-6 or R10-6a) signs at mid block crosswalks controlled by traffic signals or pedestrian hybrid beacons.

Texas Department of Transportation

Traffic Safety Division Standard

CROSSWALK PAVEMENT MARKINGS

PM(4)-22A

FILE: pm4-22a.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 6-20 6-22 12-22	DIST	COUNTY		233
22D				109

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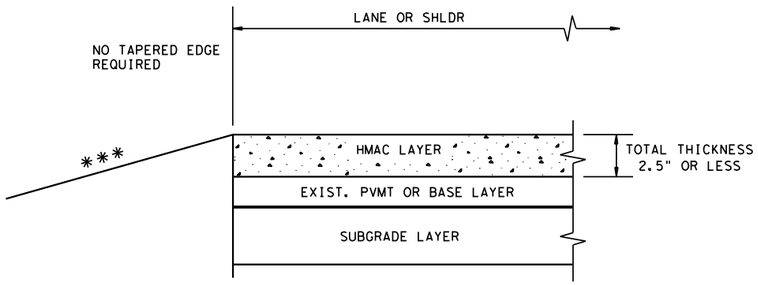
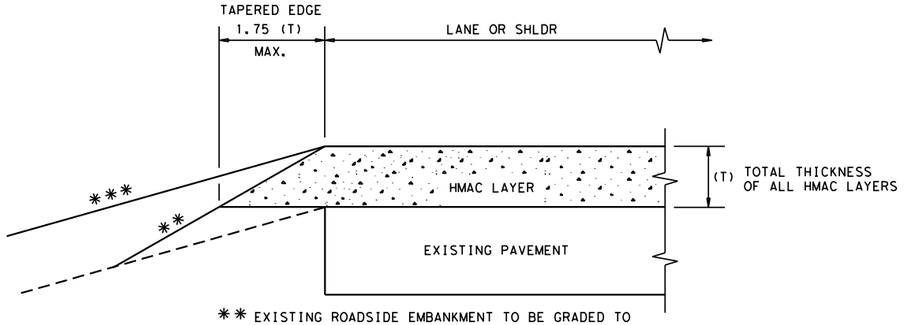
GENERAL NOTES

1. UNLESS OTHERWISE SHOWN IN THE PLANS, A VERTICAL EDGE IS PERMISSIBLE FOR HMAC PLACED GREATER THAN 5" BELOW THE EDGE OF PAVEMENT AND FOR THICKNESS OF HMAC LESS THAN 2.5".
2. FOR FURTHER INFORMATION REGARDING THE ROADSIDE AND PAVEMENT DETAILS, SEE TYPICAL SECTIONS.
3. PAYMENT FOR TAPERED EDGE WILL BE IN ACCORDANCE WITH APPLICABLE ITEMS IN THE CONTRACT.
4. THE SLOPE OF THE TAPERED EDGE SHALL BE 1.75H:1V OR FLATTER.
5. THE TAPERED EDGE SHALL BE PRODUCED BY USE OF A SCREED ATTACHMENT CAPABLE OF PRODUCING A SMOOTH COMPACTED SURFACE. ADDITIONAL COMPACTING EFFORT BEHIND THE SCREED IS NOT REQUIRED.



*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

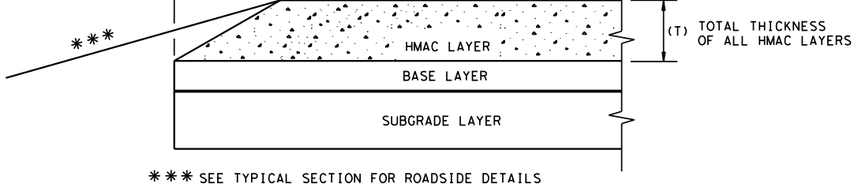
CONDITION - 1
THIN HMAC SURFACES OR HMAC OVERLAY WITH THICKNESS OF 2.5" OR LESS



** EXISTING ROADSIDE EMBANKMENT TO BE GRADED TO PRODUCE A SMOOTH LEVEL SURFACE FOR PLACEMENT OF TAPERED EDGE. THIS WORK IS SUBSIDIARY TO THE VARIOUS BID ITEMS.

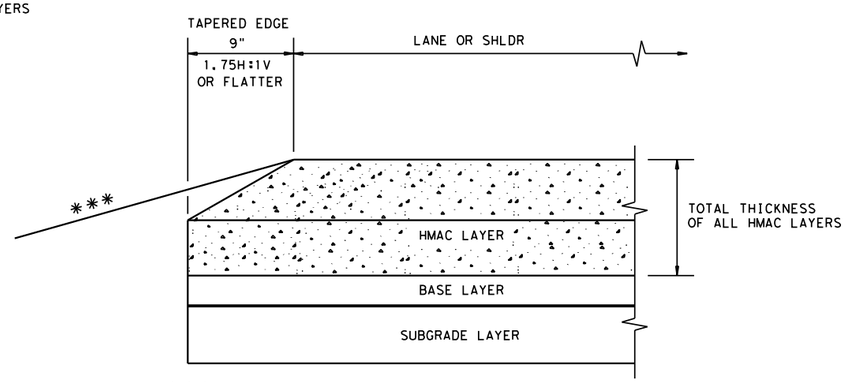
*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

CONDITION - 2
OVERLAY OF EXISTING PAVEMENT HMAC THICKNESS 2.5" TO 5"



*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

CONDITION - 3
NEW OR RECONSTRUCTED PAVEMENT HMAC THICKNESS 2.5" TO 5"



*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

CONDITION - 4
NEW OR RECONSTRUCTED PAVEMENT HMAC THICKNESS 5" OR GREATER

(NOT TO SCALE)

Texas Department of Transportation

Design Division Standard

TAPERED EDGE DETAILS HMAC PAVEMENT

TE(HMAC)-11

FILE: tehmac11.dgn	DN: TxDOT	CK: RL	DW: KB	CK:
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REVISIONS				
	DIST	COUNTY		

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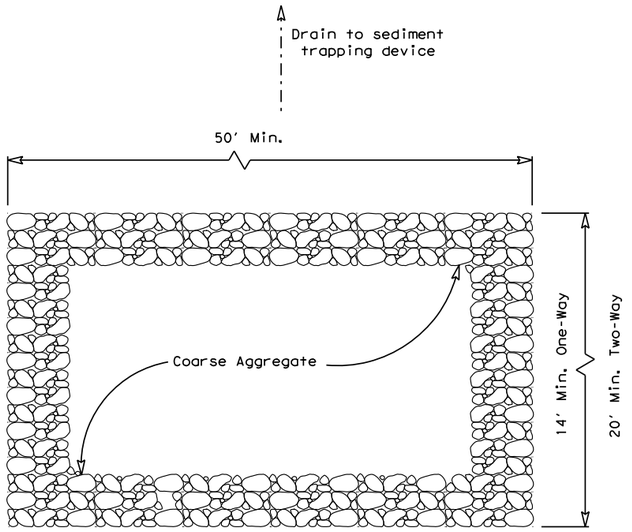
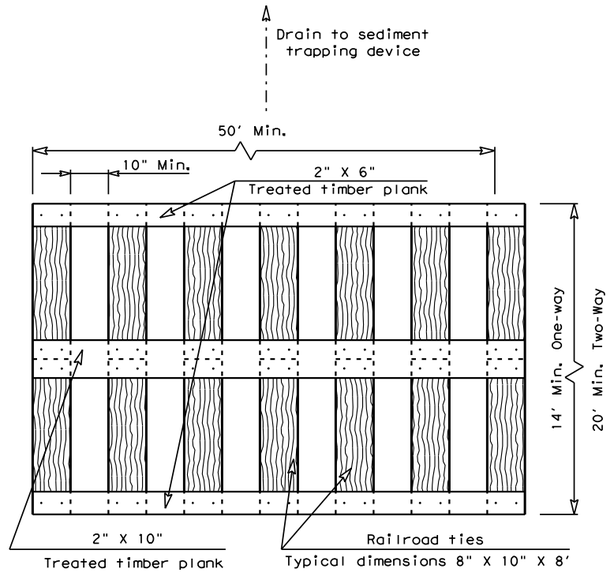
FILE: X:\Projects\0915_City of Woodcreek Transportation Bond\300 Plans and Drawings\330 Plan Production\335 Standards\ec316.dgn



PLAN VIEW



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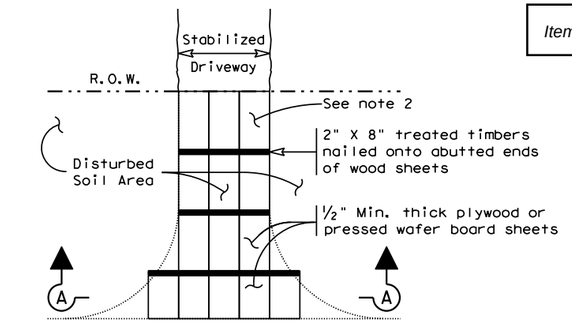
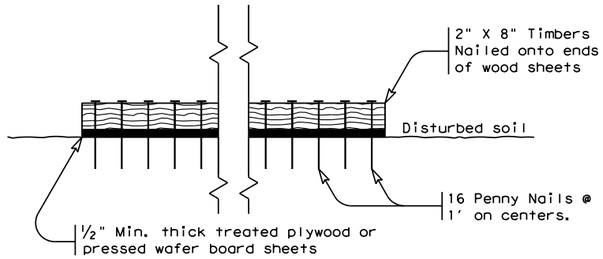


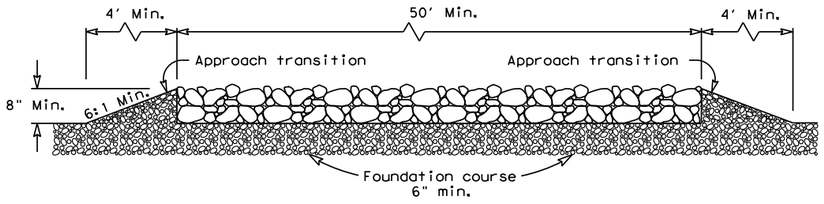
PLAN VIEW



SECTION A-A

CONSTRUCTION EXIT (TYPE 3)

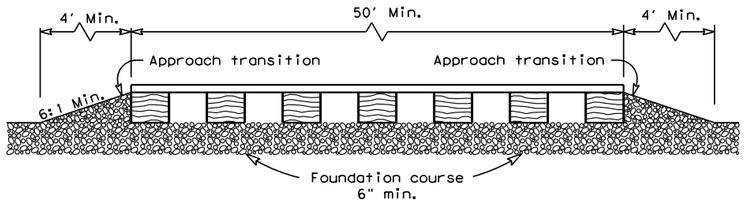
SHORT TERM



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 1)

ROCK CONSTRUCTION (LONG TERM)



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 2)

TIMBER CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 1)

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other materialas approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

GENERAL NOTES (TYPE 2)

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50'.
2. The treated timber planks shall be attached to the railroad ties with ½"x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
8. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

GENERAL NOTES (TYPE 3)

1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

CONSTRUCTION EXITS

EC(3)-16

FILE: ec316	DN: TxDOT	CK: KM	DW: VP	DN/CK: LS
©TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		235

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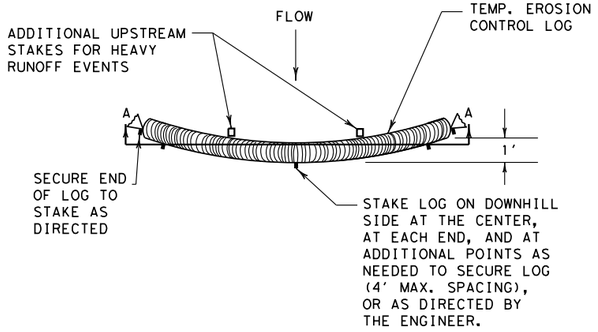
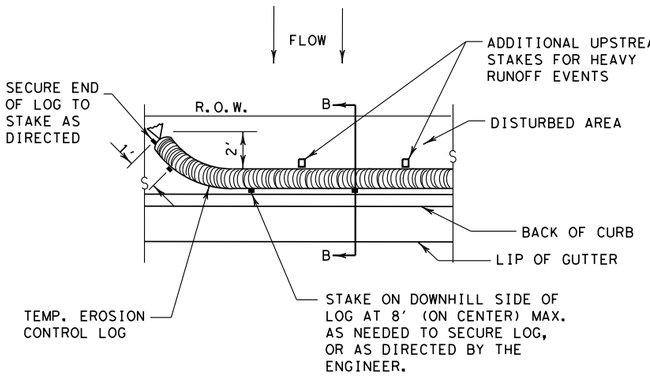


PLAN VIEW



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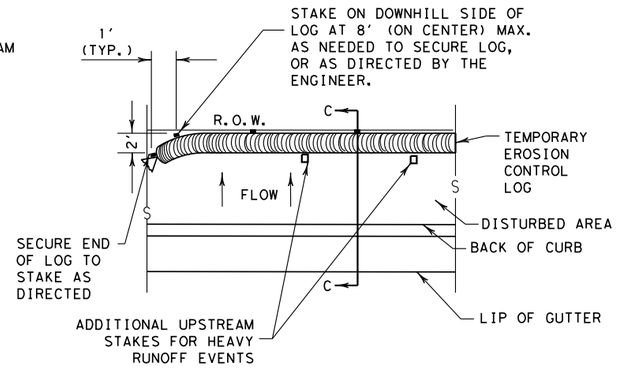

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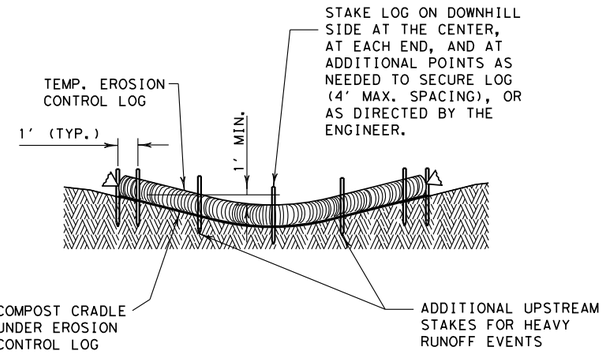
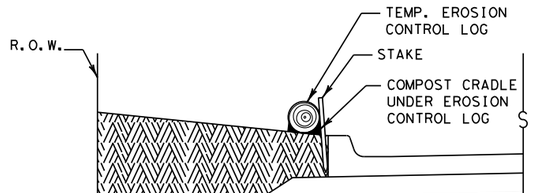


SECTION A-A

EROSION CONTROL LOG DAM

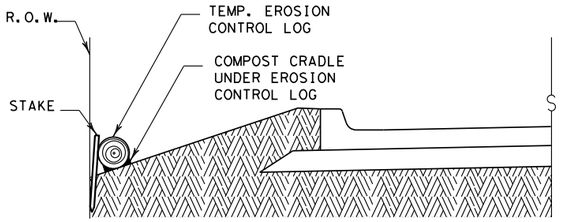
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

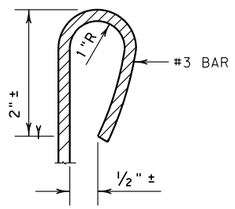
CL-BOC



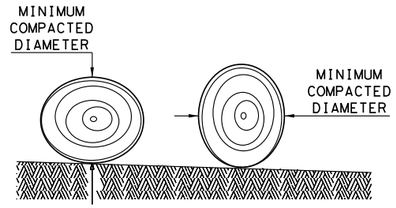
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW



REBAR STAKE DETAIL



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.

LEGEND

- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY
- CL-SST — EROSION CONTROL LOGS ON SLOPES STAKE AND TRENCHING ANCHORING
- CL-SSL — EROSION CONTROL LOGS ON SLOPES STAKE AND LASHING ANCHORING
- CL-DI — EROSION CONTROL LOG AT DROP INLET
- CL-CI — EROSION CONTROL LOG AT CURB INLET
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
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	DIST	COUNTY		

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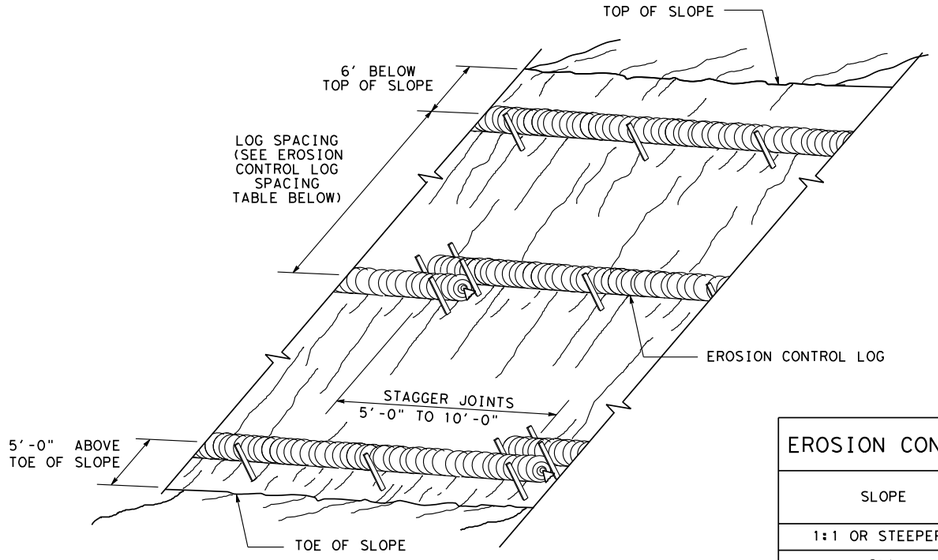
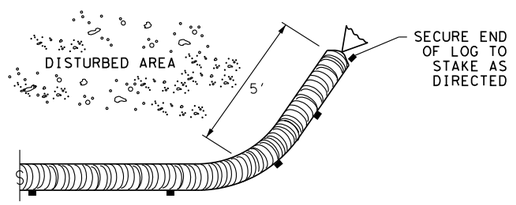


EROSION CONTROL LOGS ON SLOPES
STAKE AND TRENCHING ANCHORING

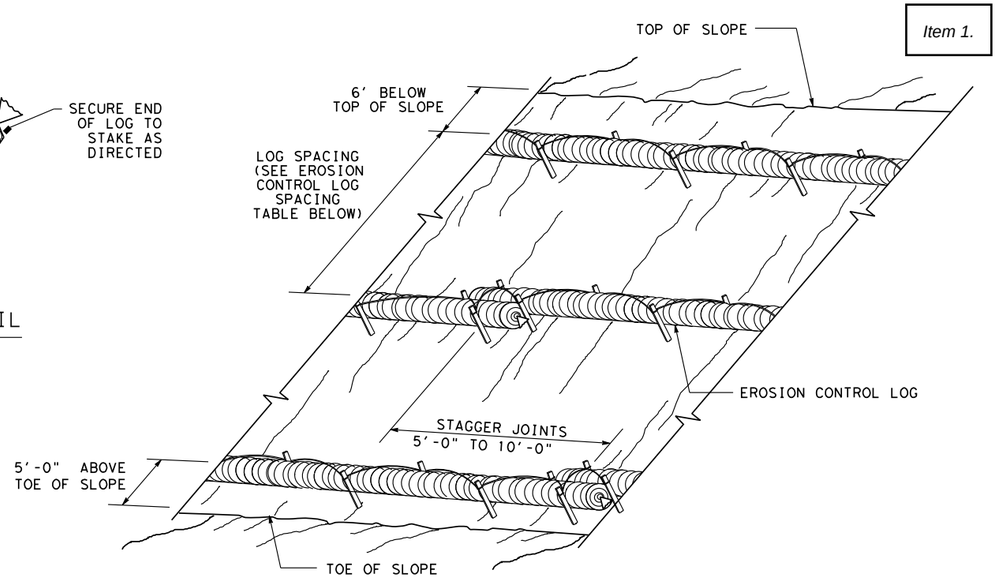
CL-SST



END SECTION RAP DETAIL

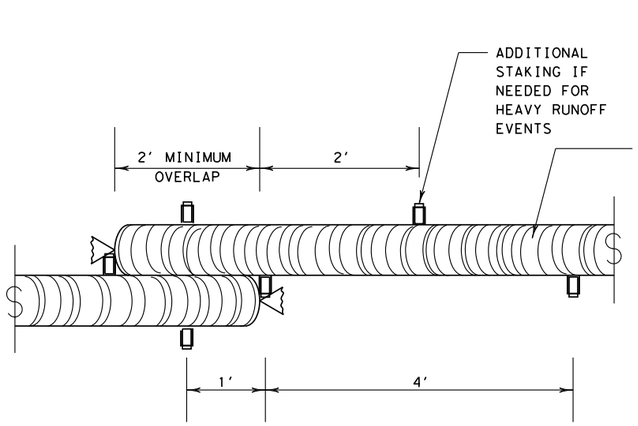
EROSION CONTROL LOG SPACING TABLE				
SLOPE	LOG DIAMETER			
	6"	8"	12"	18"
1:1 OR STEEPER	5′	10′	15′	20′
2:1	10′	20′	30′	40′
3:1	15′	30′	45′	60′
4:1 OR FLATTER	20′	40′	60′	80′

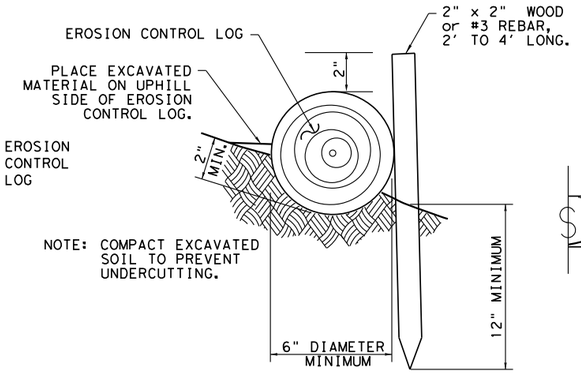
* ADJUSTMENTS CAN BE MADE FOR SOIL TYPE:
SOFT, LOAMY SOILS-ADJUST ROWS CLOSER TOGETHER;
HARD, ROCKY SOILS- ADJUST ROWS FARTHER APART



EROSION CONTROL LOGS ON SLOPES
STAKE AND LASHING ANCHORING

CL-SSL

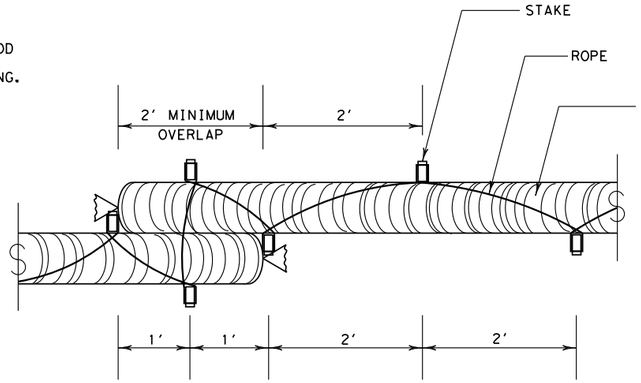


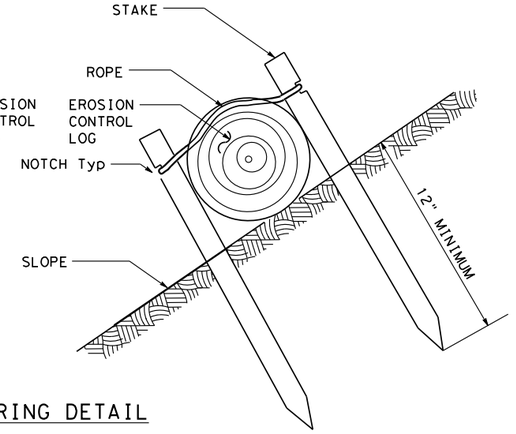


STAKE AND TRENCHING ANCHORING DETAIL

CL-SST

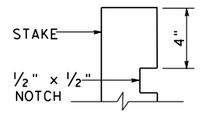
TRENCH DEPTH TABLE	
LOG DIAMETER	DEPTH
6"	2"
8"	3"
12"	4"
18"	5"





STAKE AND LASHING ANCHORING DETAIL

CL-SSL



STAKE NOTCH DETAIL

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

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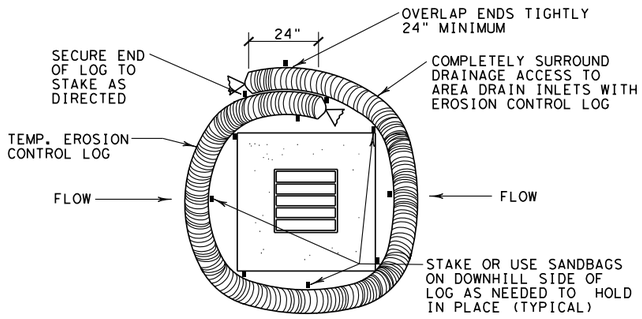
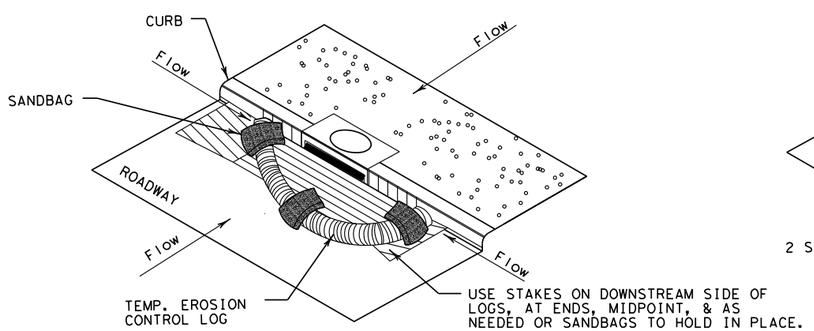


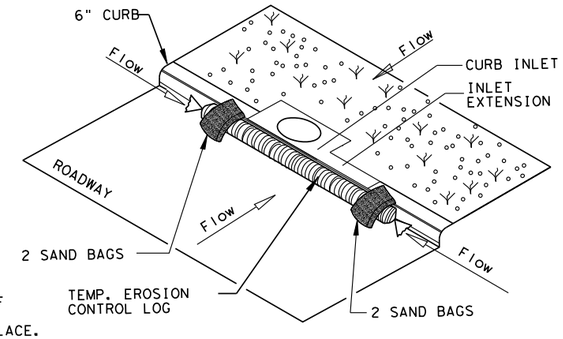
EROSION CONTROL LOG AT DROP INLET

CL-DI



EROSION CONTROL LOG AT CURB INLET

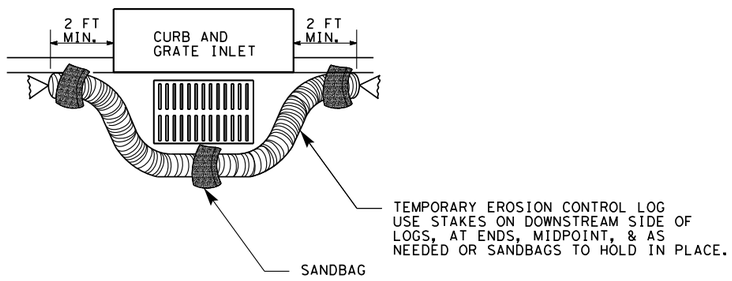
CL-CI



EROSION CONTROL LOG AT CURB INLET

CL-CI

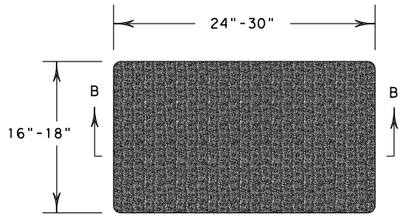
NOTE:
EROSION CONTROL LOGS USED AT CURB INLETS SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.



EROSION CONTROL LOG AT CURB & GRADE INLET

CL-GI

SECTION B-B



SANDBAG DETAIL

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

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