CONTRUBUTING ZONE PLAN (CZP)

FOR

ARROW POINT

FM 1431

CEDAR PARK, TEXAS 78613

Prepared for:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

Robert O'Farrell

1703 W. 5th Street Suite 850

Austin, Texas 78703

Prepared by:

WAELTZ & PRETE, INC.

Antonio A. Prete, P.E.

211 N. A.W. Grimes Blvd.

Round Rock, Texas 78665

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

July 2025
Job No. 073-030

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with 30 TAC 213.

Administrative Review

1. Edwards Aquifer applications must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

   To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: http://www.tceq.texas.gov/field/eapp.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.

3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.

4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

   An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.

6. If the geologic assessment was completed before October 1, 2004 and the site contains "possibly sensitive" features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

<table>
<tr><td colspan="5">1. Regulated Entity Name:
Arrow Point</td><td colspan="5">2. Regulated Entity No.:</td></tr>
<tr><td colspan="5">3. Customer Name:
Central Southwest Texas Development, LLC</td><td colspan="5">4. Customer No.: 605487818</td></tr>
<tr><td>5. Project Type:
(Please circle/check one)</td><td>New √</td><td colspan="3">Modification</td><td>Extension</td><td colspan="2">Exception</td><td></td></tr>
<tr><td>6. Plan Type:
(Please circle/check one)</td><td>WPAP</td><td>CZP √</td><td>SCS</td><td>UST</td><td>AST</td><td>EXP</td><td>EXT</td><td>Technical Clarification</td><td>Optional Enhanced Measures</td></tr>
<tr><td>7. Land Use:
(Please circle/check one)</td><td colspan="2">Residential</td><td colspan="3">Non-residential √</td><td colspan="2">8. Site (acres):</td><td>7.79 ac.</td></tr>
<tr><td>9. Application Fee:</td><td colspan="2">$5,000</td><td colspan="3">10. Permanent BMP(s):</td><td colspan="3">Batch Detention Pond</td></tr>
<tr><td>11. SCS (Linear Ft.):</td><td colspan="2">n/a</td><td colspan="3">12. AST/UST (No. Tanks):</td><td colspan="3">n/a</td></tr>
<tr><td>13. County:</td><td colspan="2">Williamson</td><td colspan="3">14. Watershed:</td><td colspan="3">South Brushy Creek-Brushy Creek</td></tr>
</table>

Application Distribution

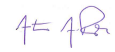
Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	_ √ _
Region (1 req.)	___	___	_ √ _
County(ies)	___	___	_ √ _
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville _ √ _Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	___	___	___	___
Region (1 req.)	___	___	___	___	___
County(ies)	___	___	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village ___Hollywood Park ___San Antonio (SAWS) ___Shavano Park	___Bulverde ___Fair Oaks Ranch ___Garden Ridge ___New Braunfels ___Schertz	NA	___San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Antonio A. Prete, P.E.
Print Name of ~~Customer~~/Authorized Agent  07/31/2025
Signature of ~~Customer~~/Authorized Agent Date

FOR TCEQ INTERNAL USE ONLY				
Date(s)Reviewed:		Date Administratively Complete:		
Received From:		Correct Number of Copies:		
Received By:		Distribution Date:		
EAPP File Number:		Complex:		
Admin. Review(s) (No.):		No. AR Rounds:		
Delinquent Fees (Y/N):		Review Time Spent:		
Lat./Long. Verified:		SOS Customer Verification:		
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):			Signed (Y/N):	
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):	

Contributing Zone Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Contributing Zone to the Edwards Aquifer and Relating to 30 TAC §213.24(1), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Contributing Zone Plan Application** is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Customer/Agent: Antonio A. Prete, P.E.

Date: 07/31/2025

Signature of Customer/Agent:

Regulated Entity Name: Arrow Point

Project Information

1. County: Williamson
2. Stream Basin: South Brushy Creek-Brushy Creek
3. Groundwater Conservation District (if applicable): _____
4. Customer (Applicant):

   Contact Person: Robert O'Farrell
   Entity: Central Southwest Texas Development, LLC
   Mailing Address: 1703 W. 5th Street Suite 850
   City, State: Austin, Texas Zip: 78703
   Telephone: (512) 861-3550 Fax: _____
   Email Address: Robert.OFarrell@am.jll.com

5. Agent/Representative (If any):

Contact Person: Antonio A. Prete ,P.E.
Entity: Waeltz & Prete, Inc
Mailing Address: 211 N. A.W. Grimes Blvd.
City, State: Round Rock, Texas Zip: 78655
Telephone: (512) 505-8953 Fax: _____
Email Address: tony@w-pinc.com

6. Project Location:

☒ The project site is located inside the city limits of Cedar Park.
☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
☐ The project site is not located within any city's limits or ETJ.

7. ☒ The location of the project site is described below. Sufficient detail and clarity has been provided so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

Located @ the southwest corner of E. Whitestone Blvd. & Arrow Point Dr.

8. ☒ **Attachment A - Road Map**. A road map showing directions to and the location of the project site is attached. The map clearly shows the boundary of the project site.

9. ☒ **Attachment B - USGS Quadrangle Map**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') is attached. The map(s) clearly show:

☒ Project site boundaries.
☒ USGS Quadrangle Name(s).

10. ☒ **Attachment C - Project Narrative**. A detailed narrative description of the proposed project is attached. The project description is consistent throughout the application and contains, at a minimum, the following details:

☒ Area of the site
☒ Offsite areas
☒ Impervious cover
☒ Permanent BMP(s)
☒ Proposed site use
☒ Site history
☒ Previous development
☒ Area(s) to be demolished

11. Existing project site conditions are noted below:

☐ Existing commercial site
☐ Existing industrial site
☐ Existing residential site

☐ Existing paved and/or unpaved roads
☐ Undeveloped (Cleared)
☒ Undeveloped (Undisturbed/Not cleared)
☐ Other: _____

12. The type of project is:

☐ Residential: # of Lots: _____
☐ Residential: # of Living Unit Equivalents: _____
☒ Commercial
☐ Industrial
☐ Other: _____

13. Total project area (size of site): 7.7924 Acres

Total disturbed area: 7.7924 Acres

14. Estimated projected population: 150

15. The amount and type of impervious cover expected after construction is complete is shown below:

Table 1 - Impervious Cover

Impervious Cover of Proposed Project	***Sq. Ft.***	***Sq. Ft./Acre***	***Acres***
Structures/Rooftops	62,110	÷ 43,560 =	1.42
Parking	154,785	÷ 43,560 =	3.55
Other paved surfaces	17,375 10,450 (off-site)	÷ 43,560 =	0.40 0.24 (off-site)
Total Impervious Cover	244,785 255,235 (including off-site)	÷ 43,560 =	5.37 5.61 (including off-site)

Total Impervious Cover 5.37 or (5.61 including off-site) **÷ Total Acreage** 7.79 or (8.03 including off-site) **X 100 =** 68.93 or (69.86 including off-site) **% Impervious Cover**

16. ☒ **Attachment D - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water quality is attached. If applicable, this includes the location and description of any discharge associated with industrial activity other than construction.

17. ☒ Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

For Road Projects Only

Complete questions 18 - 23 if this application is exclusively for a road project.

☐ N/A

18. Type of project:

☐ TXDOT road project.
☐ County road or roads built to county specifications.
☐ City thoroughfare or roads to be dedicated to a municipality.
☐ Street or road providing access to private driveways.

19. Type of pavement or road surface to be used:

☐ Concrete
☐ Asphaltic concrete pavement
☐ Other: _____

20. Right of Way (R.O.W.):

Length of R.O.W.: _____ feet.
Width of R.O.W.: _____ feet.
L x W = _____Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

21. Pavement Area:

Length of pavement area: _____ feet.
Width of pavement area: _____ feet.
L x W = _____Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

22. ☐ A rest stop will be included in this project.

☐ A rest stop will not be included in this project.

23. ☐ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

Stormwater to be generated by the Proposed Project

24. ☒ **Attachment E - Volume and Character of Stormwater**. A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

Wastewater to be generated by the Proposed Project

25. ☒ Wastewater is to be discharged in the contributing zone. Requirements under 30 TAC §213.6(c) relating to Wastewater Treatment and Disposal Systems have been satisfied.

☐ N/A

26. Wastewater will be disposed of by:

☐ On-Site Sewage Facility (OSSF/Septic Tank):

☐ **Attachment F - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☒ Sewage Collection System (Sewer Lines):

The sewage collection system will convey the wastewater to the Brushy Creek Wastewater (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

☐ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

Complete questions 27 - 33 if this project includes the installation of AST(s) with volume(s) greater than or equal to 500 gallons.

☒N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
1			
2			
3			

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
4			
5			

Total x 1.5 = _____ Gallons

28. ☐ The AST will be placed within a containment structure that is sized to capture one and one-half (1 1/2) times the storage capacity of the system. For facilities with more than one tank system, the containment structure is sized to capture one and one-half (1 1/2) times the cumulative storage capacity of all systems.

    ☐ **Attachment G - Alternative Secondary Containment Methods**. Alternative methods for providing secondary containment are proposed. Specifications showing equivalent protection for the Edwards Aquifer are attached.

29. Inside dimensions and capacity of containment structure(s):

Table 3 - Secondary Containment

Length (L)(Ft.)	*Width(W)(Ft.)*	*Height (H)(Ft.)*	*L x W x H = (Ft3)*	*Gallons*

Total: _____ Gallons

30. Piping:

    ☐ All piping, hoses, and dispensers will be located inside the containment structure.
    ☐ Some of the piping to dispensers or equipment will extend outside the containment structure.
    ☐ The piping will be aboveground
    ☐ The piping will be underground

31. ☐ The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of: _____.

32. ☐ **Attachment H - AST Containment Structure Drawings**. A scaled drawing of the containment structure is attached that shows the following:

    ☐ Interior dimensions (length, width, depth and wall and floor thickness).
    ☐ Internal drainage to a point convenient for the collection of any spillage.
    ☐ Tanks clearly labeled
    ☐ Piping clearly labeled

☐ Dispenser clearly labeled

33. ☐ Any spills must be directed to a point convenient for collection and recovery. Spills from storage tank facilities must be removed from the controlled drainage area for disposal within 24 hours of the spill.

    ☐ In the event of a spill, any spillage will be removed from the containment structure within 24 hours of the spill and disposed of properly.

    ☐ In the event of a spill, any spillage will be drained from the containment structure through a drain and valve within 24 hours of the spill and disposed of properly. The drain and valve system are shown in detail on the scaled drawing.

Site Plan Requirements

Items 34 - 46 must be included on the Site Plan.

34. ☒ The Site Plan must have a minimum scale of 1" = 400'.

    Site Plan Scale: 1" = Varies'.

35. 100-year floodplain boundaries:

    ☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

    ☒ No part of the project site is located within the 100-year floodplain.

    The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA Panel 48491C0470F, dated December 20, 2019 .

36. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.

    ☐ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot contour intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.

37. ☒ A drainage plan showing all paths of drainage from the site to surface streams.

38. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.

39. ☒ Areas of soil disturbance and areas which will not be disturbed.

40. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

41. ☒ Locations where soil stabilization practices are expected to occur.

42. ☐ Surface waters (including wetlands).

    ☒ N/A

43. ☐ Locations where stormwater discharges to surface water.

    ☒ There will be no discharges to surface water.

44. ☐ Temporary aboveground storage tank facilities.

    ☒ Temporary aboveground storage tank facilities will not be located on this site.

45. ☐ Permanent aboveground storage tank facilities.

    ☒ Permanent aboveground storage tank facilities will not be located on this site.

46. ☒ Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

Practices and measures that will be used during and after construction is completed.

47. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

    ☐ N/A

48. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

    ☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

    ☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____.

    ☐ N/A

49. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

    ☐ N/A

50. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
☒ The site will not be used for low density single-family residential development.

51. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ **Attachment I - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
☒ The site will not be used for multi-family residential developments, schools, or small business sites.

52. ☒ **Attachment J - BMPs for Upgradient Stormwater**.

☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
☒ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

53. ☒ **Attachment K - BMPs for On-site Stormwater**.

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.
☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

54. ☐ **Attachment L - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams is attached.

☒ N/A

55. ☒ **Attachment M - Construction Plans**. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. Construction plans for the proposed permanent BMPs and measures are attached and include: Design calculations, TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

    ☐ N/A

56. ☒ **Attachment N - Inspection, Maintenance, Repair and Retrofit Plan**. A site and BMP specific plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan fulfills all of the following:

    ☒ Prepared and certified by the engineer designing the permanent BMPs and measures
    ☒ Signed by the owner or responsible party
    ☒ Outlines specific procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofit.
    ☒ Contains a discussion of record keeping procedures

    ☐ N/A

57. ☐ **Attachment O - Pilot-Scale Field Testing Plan**. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

    ☒ N/A

58. ☐ **Attachment P - Measures for Minimizing Surface Stream Contamination**. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that result in water quality degradation.

    ☒ N/A

Responsibility for Maintenance of Permanent BMPs and Measures after Construction is Complete.

59. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be

responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

60. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

Administrative Information

61. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.

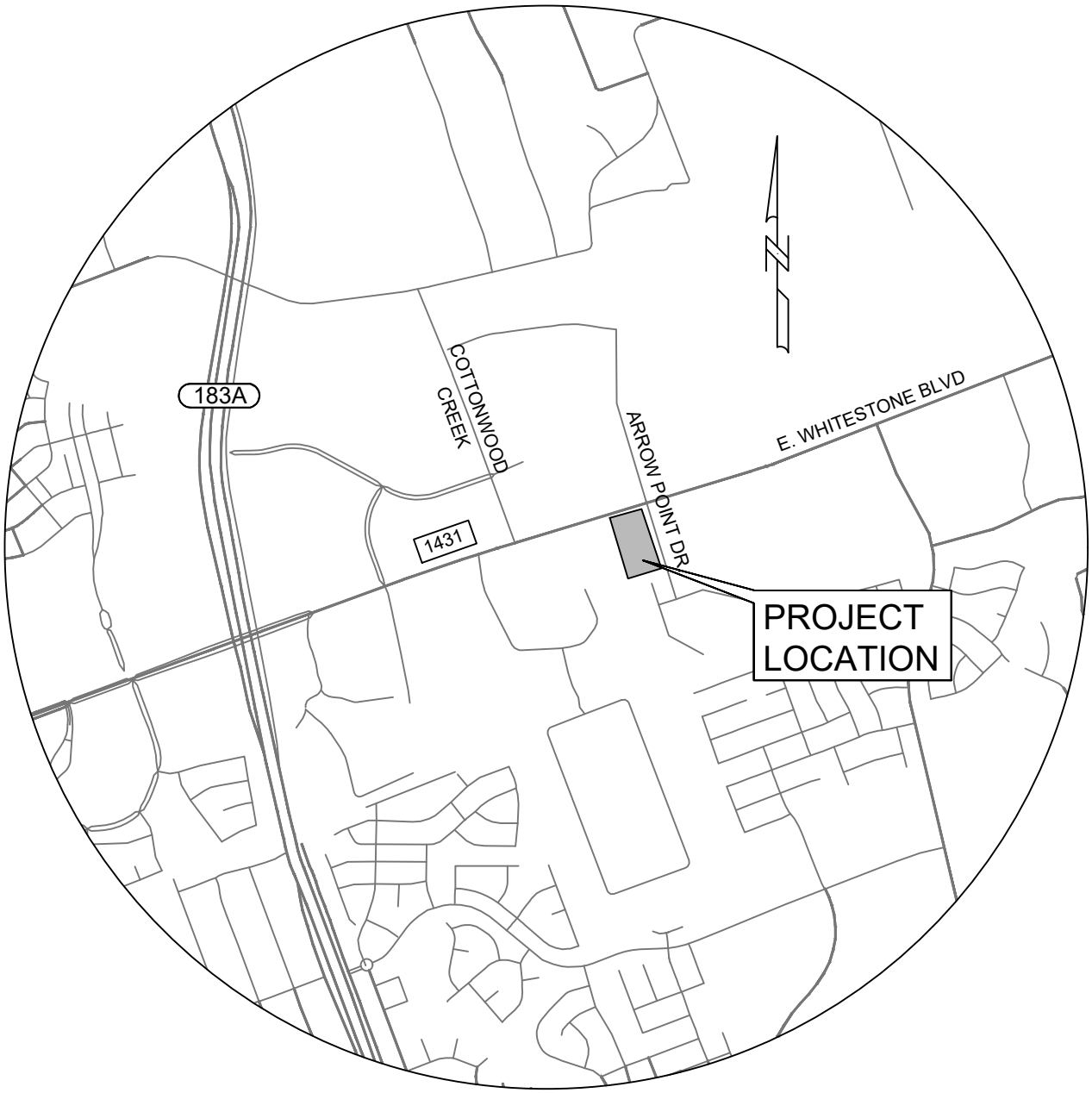
62. ☒ Any modification of this Contributing Zone Plan may require TCEQ review and Executive Director approval prior to construction, and may require submission of a revised application, with appropriate fees.

63. ☐ The site description, controls, maintenance, and inspection requirements for the storm water pollution prevention plan (SWPPP) developed under the EPA NPDES general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) of the technical report. All requirements of 30 TAC §213.24(1-5) have been met by the SWPPP document.

☒ The Temporary Stormwater Section (TCEQ-0602) is included with the application.

ATTACHMENT “A”

ROAD MAP



LOCATION MAP
N.T.S.

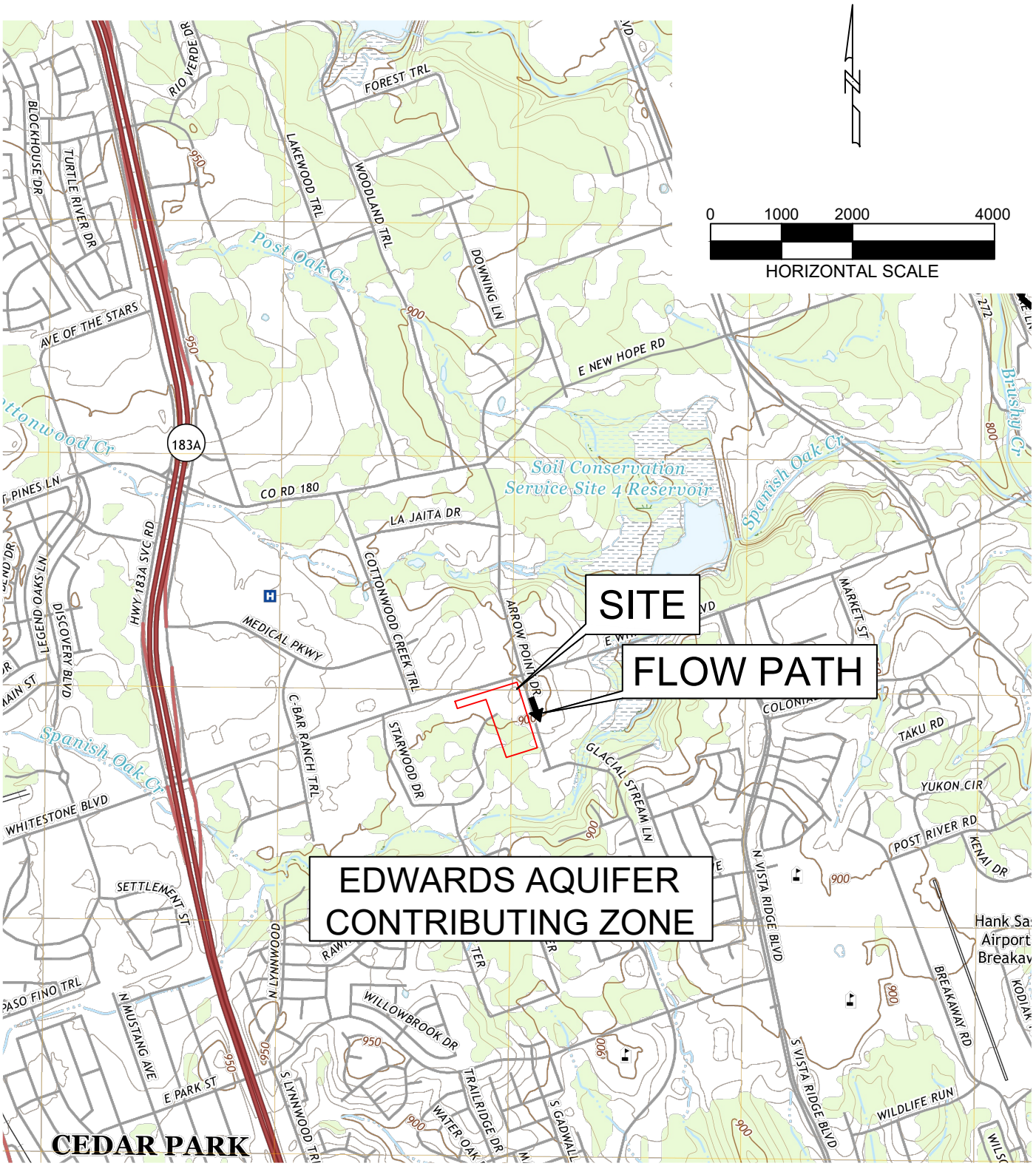
ATTACHMENT "A"
ROAD MAP
ARROW POINT

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

K:\CAD\073-030 CSW Arrow Point\4-CAD\EXHIBITS\073-030 Road Map.dwg, 7/30/2025 4:01:26 PM, DWG To PDF.pc3, 1:1, JRW

ATTACHMENT “B”

USGS QUADRANGLE MAP



WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

USGS - 7 1/2 MIN. MAP
CONTRIBUTING ZONE
ARROW POINT
CEDAR PARK, TX

K:\CAD\073-030 CSW Arrow Point\4-CAD\EXHIBITS\073-030 USGS-Edwards Recharge Map.dwg, 7/30/2025 4:44:49 PM, DWG To PDF.pc3, 1:1, JRW

ATTACHMENT "C"

PROJECT NARRATIVE

The site is located at FM 1431 Cedar Park, Texas 78613. The 7.79 ac. property is part of the AW0170 AW0170 - Damon, S. Sur., original survey. It should be noted that the property is planned to be subdivided into two separate lots. The platting process has begun and is under review with the City of Cedar Park. The site lies within the Edward's Aquifer Contributing Zone and as a larger common development of 5 acres or more will require Water Quality Best Management Practices (BMP's).

The existing 7.79 acre project area has a total of 0.09 acres of imperious cover. It is currently undeveloped and uncleared.

The proposed improvements will consist of two developments:

- The development for Future Lot 1, Block A, CSW Arrow Point subdivision will consist of constructing a Trader Joe's grocery store approx. 13,110 sf building & loading dock, retaining walls, pavement, sidewalks, storm sewer system, water & wastewater services, grading, landscaping & irrigation.

- The development for Future Lot 2, Block A, CSW Arrow Point subdivision will consist of constructing three office/warehouse style buildings approx. 15,400 sf 16,100 sf & 17,500 sf, off-site turn lane & median improvements, driveway, pavement, sidewalks, storm sewer system with water quality treatment (Batch Detention Pond), retaining walls, water & wastewater services, grading, landscaping & irrigation.

Both developments are intended to be permitted with this Contributing Zone Plan (CZP) submittal.

The Contributing Zone Plan (CZP) is for a project area of 7.79 acres and minor off-site improvements.

- (WQ-1) The 7.79 acre project area will have a total of 5.37 acres of impervious cover (68.93%). This area accounts for the development of both Lot 1 & Lot 2, Block A of the CSW Arrow Point subdivision. The impervious cover from these improvements will be treated by the proposed Batch Detention Pond.

- (WQ-2) The 0.24 acre off-site improvement area will have a total of 0.24 acres of impervious cover. (100.00%). The impervious cover from these improvements will be accounted for by overtreatment by the proposed Batch Detention Pond.

In summary, the 7.79 acre project area and off-site improvements will have a total of 5.61 acres of impervious cover requiring water quality treatment. Therefore, a total of 4,805 lbs. of 80% TSS removal is required. To remove the required 80% TSS a Batch Detention Pond has been proposed.

The batch detention pond is located on the South side of the Lot 2 development and will treat storm water runoff from drainage basin DA-1 (Reference Proposed Drainage Boundary on sheet C-44 of the construction set). DA-1 contains 6.68 acres with 5.37 acres of impervious cover (80.40%) and discharges directly into the batch detention pond. The off-site improvements contain 0.24 acres with 0.24 acres of impervious cover (100.00%) that is not captured by the batch detention pond. However, by utilizing overtreatment the required TSS removal for this area will be accounted for. In total the batch detention pond will remove a total of 5,431 lbs. of TSS, which exceeds the required 4,805 lbs of 80% TSS removal. The design for the Batch Detention Pond follows the TCEQ “Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices” design criteria.

All referenced TSS removal calculations are attached directly behind this page. Construction plans are being submitted in conjunction with the Contributing Zone Plan (CZP).

ON-SITE IMPROVEMENTS (WQ-1)
TSS REMOVAL CALCULATIONS

(In Accordance with TCEQ Regulations : RG-348)

Required Load Reduction (L_M)- Total Project Area:

Eq 3.2 $L_m = 28.9 (A_N * P)$

County =		Williamson	
P	= Average Annual Precipitation	32.0	[in]
$A_{tot-prj}$	= Total project area included in the plan	7.79	[ac]
A_{pre}	= Predevelopment impervious area	0.09	[ac]
A_{post}	= Postdevelopment impervious area	5.37	[ac]
A_N	= Area of the net increase of impervious area	5.28	[ac]
IC_{pre}	= Fraction of impervious cover (Pre Development)	1.16	[%]
IC_{post}	= Fraction of impervious cover (Post Development)	68.93	[%]
L_M	= Req'd TSS removal (***80%*** of Increase)	**4,596**	**[lbs]**

OFFSITE IMPROVEMENTS (WQ-2)
TSS REMOVAL CALCULATIONS

(In Accordance with TCEQ Regulations : RG-348)

Required Load Reduction (L_M)- Total Project Area:

Eq 3.2 $L_m = 28.9 (A_N * P)$

County =		Williamson	
P	= Average Annual Precipitation	32.0	[in]
$A_{tot-prj}$	= Total project area included in the plan	0.24	[ac]
A_{pre}	= Predevelopment impervious area	0.00	[ac]
A_{post}	= Postdevelopment impervious area	0.24	[ac]
A_N	= Area of the net increase of impervious area	0.24	[ac]
IC_{pre}	= Fraction of impervious cover (Pre Development)	0.00	[%]
IC_{post}	= Fraction of impervious cover (Post Development)	100.00	[%]
L_M	= Req'd TSS removal (***80%*** of Increase)	**209**	**[lbs]**

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER

31Jul25

Total Required TSS Removal = **4,805 [lbs]**

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

BATCH DETENTION POND
REMOVAL CALCULATIONS

(IN ACCORDANCE WITH TCEQ REGULATIONS: RG-348)

Load Removed by BMP (L_R):

Eq 3.8 $L_R = (\text{BMP Eff}) * P\ (A_I * 34.6 + A_P * 0.54)$

$A_{tot\text{-}sub}$	= Total area treated in the BMP subbasin	6.68	[ac]
A_I	= Impervious area proposed in BMP subbasin	5.37	[ac]
A_p	= Pervious area remainaing in the BMP subbasin	1.31	[ac]
IC	= Impervious cover (Post Development)	80.39	[%]
BMP Type	=	**Batch Detention**	
BMP Eff	= BMP TSS Removal Efficiency	0.91	
L_R	= TSS Load Removed From Subbasin by BMP	**5,431**	**[lbs]**

Fraction of Annual Runoff to Treat the subbasin (F):

Eq 3.9 $F = L_M / \Sigma L_R$

Desired L_M	= Req'd TSS removal (80% of Increase typical)	4,805	[lbs]
L_R	= Load removed from *each* BMP	5,431	[lbs]
F	= Fraction of the Annual Rainfall treated by BMP	**0.88**	

Water Quality Volume Required (WQV_{req}):

Eq 3.10 $WQV = d * Rv * A$

Eq 3.11 $R_v = 1.72(IC)^3 - 1.97(IC)^2 + 1.23(IC) + .02$

$WQV_{req} = WQV + S$

F	= Fraction of the Annual Rainfall treated by BMP	0.88	
d	= Rainfall Depth required to capture	1.50	[in]
A	= Portion of Site contributing to BMP	6.68	[ac]
IC	= Fraction of Impervious Cover	0.80	
R_v	= Runoff Coefficient	0.63	
WQV	= Water quality volume	22,887	[ft^3]
S	= 20% Increase for Sediment Storage	4,577	[ft^3]
WQV_{req}	= Water quality volume required (With 20% increase)	**27,465**	**[ft^3]**

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER

31Jul25

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

ATTACHMENT “D”

FACTORS AFFECTING SURFACE WATER QUALITY

Factors that could affect the quality of surface and ground water are the parking and use of motor vehicles on site. This includes the emission of certain hydrocarbon based substances as well as the tracking of silt. In addition, the maintenance of lawn or landscape areas could also affect the quality of surface and ground water through runoff of chemical fertilizers or pesticides.

ATTACHMENT “E”

VOLUME AND CHARACTER OF STORMWATER

It is expected that the character of surface and ground water run-off would be consistent with the development of a commercial site; analysis has been completed incorporating the ultimate development of the property, which will include a grocery store, three office/warehouse style buildings, and all additional improvement shown within the construction plans. Constituents would include hydrocarbon based product residues, silt, pesticides, and chemicals resulting from vehicular emissions and landscape maintenance.

The expected volume of run-off was based on the Rational method. This was calculated using "C" factors, which are based on impervious cover and the nature of surfaces over which run-off water flows. These calculations are presented in the attachment directly behind this page and in the attached construction plans.

The stormwater quality for the site was determined using “Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices”. The results from these calculations are presented directly behind this page.

EXISTING CONDITIONS DRAINAGE TABLE (RATIONAL METHOD - ATLAS 14):

SUB-BASIN DESIGNATION	AREA [acres]	T_c [min.]	ESTIMATED IMPERV. +/- [%]	C_2	C_{10}	C_{25}	C_{100}	I_2 [in/hr]	I_{10} [in/hr]	I_{25} [in/hr]	I_{100} [in/hr]	Q_2 [cfs]	Q_{10} [cfs]	Q_{25} [cfs]	Q_{100} [cfs]
EX-1	6.15	11.86	5.00	0.31	0.37	0.41	0.49	4.60	6.90	8.50	11.30	8.77	15.70	21.43	34.04
EX-2	0.42	9.70	0.00	0.29	0.35	0.39	0.46	4.92	7.39	9.12	12.14	0.60	1.09	1.49	2.35

PROPOSED CONDITIONS DRAINAGE TABLE (RATIONAL METHOD - ATLAS 14):

SUB-BASIN DESIGNATION	AREA [acres]	T_c [min.]	ESTIMATED IMPERV. +/- [%]	C_2	C_{10}	C_{25}	C_{100}	I_2 [in/hr]	I_{10} [in/hr]	I_{25} [in/hr]	I_{100} [in/hr]	Q_2 [cfs]	Q_{10} [cfs]	Q_{25} [cfs]	Q_{100} [cfs]
DA-1	6.68	10.75	80.40	0.66	0.74	0.78	0.87	4.82	7.27	9.01	11.98	21.25	35.94	46.95	69.62
OS-1	0.48	5.00	5.00	0.31	0.37	0.41	0.49	6.17	9.25	11.40	15.14	0.92	1.64	2.24	3.56
OS-2	0.53	6.07	0.00	0.29	0.35	0.39	0.46	5.92	8.88	10.94	14.54	0.91	1.65	2.26	3.54

31Jul25

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

ATTACHMENT “F”

SUITABILITY LETTER FROM AUTHORIZED AGENT

There are no On-Site Sewage Facilities proposed for this project.

ATTACHMENT “I”

20% or LESS IMPERVIOUS COVER WAIVER

This project is not seeking an impervious cover waiver.

ATTACHMENT “J”

BMPs FOR UPGRADIENT STORMWATER

There is no storm water originating up gradient that is running through the proposed project.

ATTACHMENT “K”

BMPs FOR ON-SITE STORMWATER

Storm water from this project will be treated by the following Best Management Practice (BMP).

The batch detention pond is located on the South side of the Lot 2 development and will treat storm water runoff from drainage basin DA-1 (Reference Proposed Drainage Boundary on sheet C-44 of the construction set). DA-1 contains 6.68 acres with 5.37 acres of impervious cover (80.40%) and discharges directly into the batch detention pond. The off-site improvements contain 0.24 acres with 0.24 acres of impervious cover (100.00%) that is not captured by the batch detention pond. However, by utilizing overtreatment the required TSS removal for this area will be accounted for. In total the batch detention pond will remove a total of 5,431 lbs. of TSS, which exceeds the required 4,805 lbs of 80% TSS removal. The design for the Batch Detention Pond follows the TCEQ “Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices” design criteria.

All referenced TSS removal calculations are attached directly behind this page. Construction plans are being submitted in conjunction with the Contributing Zone Plan (CZP).

ON-SITE IMPROVEMENTS (WQ-1)
TSS REMOVAL CALCULATIONS

(In Accordance with TCEQ Regulations : RG-348)

Required Load Reduction (L_M)- Total Project Area:

Eq 3.2 $L_m = 28.9 (A_N * P)$

County =		Williamson	
P	= Average Annual Precipitation	32.0	[in]
$A_{tot-prj}$	= Total project area included in the plan	7.79	[ac]
A_{pre}	= Predevelopment impervious area	0.09	[ac]
A_{post}	= Postdevelopment impervious area	5.37	[ac]
A_N	= Area of the net increase of impervious area	5.28	[ac]
IC_{pre}	= Fraction of impervious cover (Pre Development)	1.16	[%]
IC_{post}	= Fraction of impervious cover (Post Development)	68.93	[%]
L_M	= Req'd TSS removal (***80%*** of Increase)	**4,596**	**[lbs]**

OFFSITE IMPROVEMENTS (WQ-2)
TSS REMOVAL CALCULATIONS

(In Accordance with TCEQ Regulations : RG-348)

Required Load Reduction (L_M)- Total Project Area:

Eq 3.2 $L_m = 28.9 (A_N * P)$

County =		Williamson	
P	= Average Annual Precipitation	32.0	[in]
$A_{tot-prj}$	= Total project area included in the plan	0.24	[ac]
A_{pre}	= Predevelopment impervious area	0.00	[ac]
A_{post}	= Postdevelopment impervious area	0.24	[ac]
A_N	= Area of the net increase of impervious area	0.24	[ac]
IC_{pre}	= Fraction of impervious cover (Pre Development)	0.00	[%]
IC_{post}	= Fraction of impervious cover (Post Development)	100.00	[%]
L_M	= Req'd TSS removal (***80%*** of Increase)	**209**	**[lbs]**

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER

31Jul25

Total Required TSS Removal = **4,805 [lbs]**

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

BATCH DETENTION POND
REMOVAL CALCULATIONS

(IN ACCORDANCE WITH TCEQ REGULATIONS: RG-348)

Load Removed by BMP (L_R):

Eq 3.8 $L_R = (\text{BMP Eff}) * P\ (A_I * 34.6 + A_P * 0.54)$

$A_{tot\text{-}sub}$	= Total area treated in the BMP subbasin	6.68	[ac]
A_I	= Impervious area proposed in BMP subbasin	5.37	[ac]
A_p	= Pervious area remainaing in the BMP subbasin	1.31	[ac]
IC	= Impervious cover (Post Development)	80.39	[%]
BMP Type	=	**Batch Detention**	
BMP Eff	= BMP TSS Removal Efficiency	0.91	
L_R	= TSS Load Removed From Subbasin by BMP	**5,431**	**[lbs]**

Fraction of Annual Runoff to Treat the subbasin (F):

Eq 3.9 $F = L_M / \Sigma L_R$

Desired L_M	= Req'd TSS removal (80% of Increase typical)	4,805	[lbs]
L_R	= Load removed from *each* BMP	5,431	[lbs]
F	= Fraction of the Annual Rainfall treated by BMP	**0.88**	

Water Quality Volume Required (WQV_{req}):

Eq 3.10 $WQV = d * Rv * A$

Eq 3.11 $R_v = 1.72(IC)^3 - 1.97(IC)^2 + 1.23(IC) + .02$

$WQV_{req} = WQV + S$

F	= Fraction of the Annual Rainfall treated by BMP	0.88	
d	= Rainfall Depth required to capture	1.50	[in]
A	= Portion of Site contributing to BMP	6.68	[ac]
IC	= Fraction of Impervious Cover	0.80	
R_v	= Runoff Coefficient	0.63	
WQV	= Water quality volume	22,887	[ft^3]
S	= 20% Increase for Sediment Storage	4,577	[ft^3]
WQV_{req}	= Water quality volume required (With 20% increase)	**27,465**	**[ft^3]**

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER

31Jul25

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

ATTACHMENT “L”

BMPs FOR SURFACE STREAMS

There is no surface water, groundwater, or stormwater originating upgradient from the site that runs across the site. All upgradient stormwater is directed around the site.

ATTACHMENT “M”

CONSTRUCTION PLANS

The constructions plans have been attached as part of this submittal. The design calculations, treatment summary, and specifications for the proposed Batch Detention Pond are attached directly behind this page.

Special Specification 7130
Batch Detention Pond

1. Description

Furnish, install, test, and make fully operational a Batch Detention Pond Control System as specified below or an engineer approved equal with appurtenances included hereafter at designated locations as shown on the plans. Approved equal equipment shall provide the same functionality and monitoring functions as the equipment specified below. Ensure the equipment, design, and construction use the latest available techniques with a minimum number of different parts, subassemblies, circuits, cards, and modules to maximize standardization and commonality.

For each solar power system located at each project site submit electrical load calculations, structural load calculations, drawings, and details. Include the structural connection details for solar panels, control panel, and battery enclosure to poles. Structural calculations shall be sealed by a licensed structural engineer in the state of Texas. Provide equipment data sheets, details, and specifications.

2. Materials

Provide all materials necessary for the installation of a Detention Pond Control System. Provide materials that comply with the details shown on the plans, the requirements of this Item, and the pertinent requirements of the following items:

- Item 416, “Drilled Shaft Foundation"
- Item 421, "Hydraulic Cement Concrete"
- Item 440, “Reinforcement for Concrete“
- Item 442, "Metal for Structures“
- Item 445, "Galvanizing“
- Item 449, “Anchor Bolts“
- Item 465, “Junction Boxes, Manholes and Inlets”
- Item 618 “Conduit“
- Item 620, "Electrical Conductors“
- Item 624, “Ground Boxes“
- Item 687, “Pedestal Pole Assemblies“

3. Equipment

Provide labor, equipment and materials to employ solar-generated, battery-backed power for the assigned field equipment specified in the plans, or as directed. Install all equipment, including batteries and solar charge controller, in a suitably sized enclosure or enclosures.

Size the enclosure to house the solar controller, batteries, and lightning protection equipment. Furnish a solar powered system that supplies and maintains 100% continuous and intermittent electrical loads for up to 24 hr. per day with autonomy of 3.6 days. Provide system as described in the plans, and generally consisting of the following:

- Photovoltaic (PV) modules with mounts or racks, and mounting brackets for affixing the modules to a pole as shown on the plans. Two year manufacturer's material and workmanship and twelve year 90% minimum power output warranties. Provide adjustable tilt mounts that can be repositioned to an appropriate angle to maximize seasonal solar radiation.
- 12 VDC sealed, valve-regulated, absorbed glass mat (AGM), maintenance-free batteries
- One toggle-type power switch or overcurrent protection device for emergency shutoff, and external conduit, wiring cable and conductors (as recommended by the supplier) between the following:
  - Photovoltaic module to controller panel
  - Battery interconnect and batteries to controller panel, and wiring between components in cabinet.

Pre-set the equipment, optimize photovoltaic module direction, and configure hardware components to allow automatic operation. Furnish and install a fully operational assembly with all cabling and terminations matched to support the selected components. Use the component sizing chart, Table 1 shown below to size the individual components (PV modules, batteries, etc.) based on the planned electrical load and days autonomy:

	COUNT	VDC	UNIT POWER (W)	HOURS PER DAY	TOTAL POWER (W-hr)
In-Situ, Inc. LevelTROLL 500 (Measuring)	1	12	0.048	0.0003	0.0000144
In-Situ, Inc. LevelTROLL 500 (Sleep Mode)	1	12	0.00216	23.9997	0.052
ISCO Signature Base Meter	1	12	1.628	24	39.072
Remote Hand Station	1	24	0.72	24	17.280
Control Valve	1	24	360	.025	9.000
				TOTAL	**65.404**

Table 1 Solar Power System Component Load Requirements

3.1. **PV Modules**. Supply and install the appropriate number and size of PV modules needed to meet the minimum power requirements shown in Table 1 or as required by the plans. Use photo voltaic USA (PVUSA) test conditions (PTC) ratings.

Supply industrial grade, mono-crystalline or poly-crystalline type solar modules. Consumer grade modules are not acceptable. Ensure that the PV modules meet the following minimum requirements:

- Minimum output voltage of 12 VDC.
- Minimum area efficiency rating of 9.4%.
- Include an ultraviolet (UV) resistant, Ingress Protection (IP) 65 rated junction box providing wire termination for 8-14 AWG wiring with the PV module.
- Hail impact resistance up to 1 in. diameter at 50 mi. per hr.
- UL 1703 listing.

Ensure PV modules, regardless of wattage size, shares common mounting holes for mounting so that a single mounting structure will accommodate the entire module line.

PV modules may be wired in "strings" of panels wired in series, which are then wired in parallel to other strings. Ensure that the open circuit voltage of any single string of PV modules does not exceed 127 V.

Construct PV modules with a tempered glass surface and an industrial grade anodized aluminum frame that completely surrounds and seals the module laminate. Ensure construction is consistent with the demands of installation near humid salt air environments.

Design and construct the photovoltaic module mounting assembly of galvanized steel (ASTM A-153 Class A) or aluminum. The mounting assembly must be of adequate design and strength to provide a means of securely attaching the PV module frame to a pole. Provide a mounting assembly capable of 360° horizontal orientation with a means of locking the bracket at an inscribed angular position about the pole. Ensure the mounting assembly is designed and installed to prevent module re-positioning during 110 mph wind conditions.

Label all PV modules with open-circuit voltage, operating (maximum power) voltage, maximum permissible voltage, operating (maximum power) current, short-circuit current, and maximum power.

Provide a warning label on all DC junction boxes warning that the active parts inside the boxes are fed by a PV array and may still be energized after isolation.

Mark each PV system disconnect as such. NEC 690.13(B).

3.2. **Solar Control Panel.** This panel shall contain the solar controller equipment, batteries, and block (plug) valve controls within the same or multiple enclosures. The enclosure or enclosures shall be pole-mounted, NEMA 3R, lockable, and 304 stainless steel construction. Provide a double flanged cabinet door opening. Provide cabinet with a Corbin style #2 lock with a keyhole cover as an integral part of the door and 2 keys. Provide cabinet with provisions to hold the door open at approximately 90º and 120º positions.

Provide louvers on each side of the cabinet to allow adequate cooling of the electronic components and to prevent the accumulation of gases. Provide screen vents that prevent entry of insects.

Provide an aluminum back panel in the lower compartment with a thickness of 0.125 in. Size the back panel to provide adequate space for the control electronics and terminal strips. Equip the cabinet with at least two shelves of a minimum thickness of 0.125 in, with a 1 in. x 3 in. cutout in the back of the shelves for cable run. Ensure that the shelves are capable of supporting design battery weight. Provide a rubber mat installed on each shelf that supports the batteries and two 1/8 in. drain holes located in the bottom of the cabinet at opposite corners. Provide a minimum of 2 in. of separation from the top of the battery posts to the bottom of the next shelf. Equip the cabinet with all necessary mounting equipment and hardware. Configure the cabinet for pole mounting using two aluminum "U" channel mounting brackets with stainless steel reinforcing plates on the inside of the cabinet. Include a 0.25 in. aluminum reinforcing plate mounted in the bottom of the cabinet. The supplier shall be Amerseco Solar as provided by C.C. Lynch & Associates, Inc., 1-800-333-2252, or engineer approved equal.

Solar Controller. The solar controller shall be capable of providing continuous 24 VDC power to the control valve and 12 VDC power to the LevelTROLL and Signature Base Station for the worst anticipated available daylight. The Controller shall be capable of operating in temperatures ranging from -40^{o}C to 60^{o}C and a humidity of 5% to 95% non-condensing. The Controller shall be a complete turn-key packaged system integrated by a single provider. The Controller supplier shall be regularly engaged in fabricating controllers of this type for a minimum of 5 years. The Contractor shall provide a list of Controller supplier(s) for approval. For calculating the daylight availability, the system design shall be based on the central Texas area with a useful minimum daily solar exposure of 4.19 hours.

3.3. **Batteries**. Provide maintenance free, spill proof, AGM batteries with the following minimum characteristics:

- 12 VDC,
- 80% allowable depth of discharge (DOD),

- rated for a minimum of 2,000 recharge cycles, and
- capacity rated at 77ºF, 100 hr. discharge rate.

Supply appropriate number of batteries to ensure the minimum total amp-hours meets or exceeds the value in Table 1, as described in the plans, when wired in series. Label, with a UV resistant system, the battery bank with maximum operating voltage, equalization voltage, and polarity.

Arrange the system components so that all battery terminals are guarded and adequate working space is provided per (NEC) 690.71(B)(2) and (NEC)480.9.

Install current-limiting fuses on battery output circuits per (NEC) 690.71(C).

Provide overcurrent protection for the battery circuit conductors in conformance with (NEC) 690.9(A) and (NEC) 240.

Use battery interconnections with #4 AWG or larger flexible cables that are listed for hard-service use and are moisture resistant

3.4. **Control Valve Motor Operator Controller**. The control valve motor operator controller shall include timing and logic functions to control the basin plug valve based on sensing the presence of water in a pipe with an In-Situ, Inc. LevelTROLL 500 pressure transducer**.** The controller shall operate at 12VDC and shall include three wires that are internally connected to isolated relay contacts rated for 30 amps wired as a common, normally open, and normally closed. The controller shall poll the pressure transducer via MODBUS or SDI-12 at user selectable intervals and shall close the relay when water has been detected above a threshold for 12 hours. The pressure transducer shall be in "sleep mode" when not being polled in order to conserve power. The controller display shall be capable of a keypress timeout function in order to conserve power. The relay shall be opened when the water level detected by the pressure transducer drops below the threshold. The controller shall be capable of logging data internally which can be retrieved by USB thumb drive, laptop, cell modem, or Ethernet modem. The controller shall be model Teledyne ISCO Signature Base Station with a TIENet 304 Contact Output Card, and SPA 999 30 Amp alarm contacts. The pressure transducer shall be an In-Situ, Inc. LevelTROLL 500 (5 PSIG)). The LevelTROLL 500 shall be supplied with an NPT adapter and ISCO RuggedCable. Refer to plans for RuggedCable lengths.

The basin plug valve controls shall include the controls for the plug valve and the pressure transducer to detect water in the pipe. These controls shall contain, but not necessarily limited to, the control valve motor operator controller, relay box, terminal blocks, and control valve remote hand station. Configure controller to operate as diagrammed on the drawings.

3.5. **Remote Hand Station:** Provide a Remote Hand Station (RHS) to locally control the basin plug valve from solar control panel. The RHS shall be suitable for remote connection to an electric actuator up to 100m (330ft) distance, include local control facilities, a backlit LCD display and terminals for communication highway connection to the host actuator housed within a self-contained, double-sealed enclosure.

In order to maintain the integrity of the enclosure, setting of the actuator torque levels, position limits and configuration of the indication contacts etc. shall be carried out without the removal of any covers via a Bluetooth® wireless interface. Sufficient commissioning tools shall be provided with the actuators and must meet the enclosure protection and certification levels of the actuator and remote hand station. Commissioning tools shall not form an integral part of the actuator and must be removable for secure storage / authorized release. In addition, provision shall be made for the protection of configured actuator settings by a means independent of access to the commissioning tool. Provision shall be made to disable Bluetooth® communications or only allow a Bluetooth® connection initiated by an Infra-Red command for maximum security.

The RHS shall be suitable for indoor and outdoor use. The unit shall be capable of functioning in an ambient temperature ranging from -50°C (-58°F) to 70°C (158°F), up to 100% relative humidity. Actuators for

hazardous area applications shall meet the area classification, gas group and surface temperature requirements specified in data sheet.

RHS enclosure shall be O-ring sealed, watertight to IP66/IP68 7m for 72hrs, NEMA 4, 6. The internal electrical elements of the actuator shall be protected from ingress of moisture and dust when the terminal cover is removed for site for cabling, the terminal compartment having the same ingress protection rating as the actuator with the terminal cover removed. The RHS enclosure shall allow for temporary site storage without the need for electrical supply connection. All external fasteners shall be plated stainless steel. The use of un-plated stainless steel or steel fasteners is not permitted.

The RHS shall incorporate local controls for Open, Close and Stop and a Local/Stop/Remote mode selector switch lockable in any one of the following three positions: local control only, stop (no electrical operation), remote control plus local stop only. It shall be possible to select maintained or non-maintained local control. The local controls shall be arranged so that the direction of valve travel can be reversed without the necessity of stopping the actuator. Provision should be made to enable control arbitration between the RHS and the connected actuator. The local controls and display shall be rotatable through increments of 90 degrees to suit mounting orientation and access.

Power for the RHS shall be provided from the actuator and shall run in the same cable as the interconnecting communication. Independent power is not acceptable. Communication between the RHS and actuator should be based on a high-speed CAN bus technology.

The RHS display shall include a dedicated numeric/symbol digital position indicator displaying valve position from fully open to fully close in 0.1% increments. Valve closed and open positions shall be indicated by symbols showing valve position in relation to the pipework to ensure that valve status is clearly interpreted. With power connected, the display shall be backlit to enhance contrast at all ambient light levels and shall be legible from a distance of at least 5m (16ft). Red, green, and yellow LEDs corresponding to open, closed and intermediate valve positions shall be included on the RHS display when power is switched on. The yellow LED should also be fully programmable for on/off, blinker and fault indication. The RHS display shall include a fully configurable dot-matrix display element with a minimum pixel resolution of 168 x 132 to display operational, alarm, configuration and graphical datalogger information. The text display shall be selectable between English and other languages such as: Spanish, German, French, and Italian. Provision shall be made to upload a different language without removal of any covers or using specialized tools not provided as standard with the actuator. Datalogger graphical displays should as a minimum be able to display log and trend graphs on the local LCD for the following:

- Torque versus Position
- Number of Starts versus Position
- Number of starts per hour
- Average temperature

The display shall be capable of indicating 4 different home-screens of the following configuration:

- Position and status
- Position and torque (analogue)
- Position and torque (digital)
- Position and demand (positioning)

Provision shall be made for the addition of an optional environmental cover to protect the display from high levels of UV radiation or abrasive materials.

The local controls and display shall be rotatable through increments of 90 degrees to suit valve and actuator orientation. A vandal-proof cover should be available to prevent un-authorized operation and to protect the LCD and window from damage.

Facilities shall be provided for monitoring actuator operation and availability directly from the RHS. Actuator datalogger information shall be accessed via non-intrusive Bluetooth® communication via the RHS and data displayed on the LCD. Sufficient standard intrinsically safe tools shall be provided for downloading datalogger and actuator configuration files from the actuators and subsequent uploading to a PC. The actuator manufacturer shall supply PC software to enable datalogger files to be viewed and analyzed

A terminal compartment shall be provided to enable interconnecting cables to be terminated without the removal of the main electronics cover. The terminal compartment shall be separated from the inner electrical components of the actuator by means of a watertight seal. All wiring supplied as part of the RHS to be contained within the main enclosure for physical and environmental protection.

A durable anodized aluminum nameplate shall be affixed to the RHS housing and contain all relevant serial and approval information.

3.6. **Future Cellular Modem and Antenna.** Provide provisions in solar control panel system for a future cellar modem The Modem shall be FCC approved and approved for CDMA networks such as Verizon. The modem shall be integral to the Teledyne ISCO Signature Base Station.

3.7. **End User Interface.** Provide provisions to allow for future offsite access and control of the Signature Base Station, at a minimum it shall be capable of remote access through cellular modem for online editing, email messaging via SMTP for statuses and alarms, remote monitoring and programming, and read/write data table access. In addition, the Signature Base Station shall have a MODBUS RS-485 output using ASCII or RTU transmission coding.

3.8. **Batch Detention Outlet Structure.** An outlet structure with duel hatch entry hatch for access shall be furnished and installed. The structure shall contain, but not necessarily limited to, 6" motor operated eccentric plug valve, 6" manual eccentric plug valve, connectors, pipe supports, pressure transducer, piping, conduit and a NEMA 4X junction box.

3.9. **Perforated Riser Column and Outlet Pipe with Trash Rack.** A perforated riser column shall be connected to an outlet pipe and installed with a trash rack as shown in the plans.

3.10. **Vertical Sediment Depth Marker.** A PVC pipe with wing channel post as shown in plans.

3.11. **Grounding.**

Ungrounded Systems. Include disconnects, overcurrent protection, and ground-fault protection. Provide equipment that is listed for use with ungrounded systems per NEC 690.35.

Module Grounding Connectivity. Provide module connections such that removal of a module does not interrupt a grounded conductor to another PV source circuit per NEC 620.4***9***).

Ground-Fault Protection. Provide ground fault protection for grounded arrays per NEC 690.5.

PV System Grounding. Provide one grounded DC conductor for two-wire PV systems operating above 50 V per NEC 690.41.

Single Point. Provide DC grounding at a single point on the PV output circuit per NEC 690.42.

Equipment Grounding. Ground non-current-carrying metal components, including module frames, mounting structures, equipment, conduit, and boxes per NEC 690.43.

Equipment Grounding Conductors. Route equipment conductors with PV circuit conductors per NEC 690.43.

Equipment Grounding Conductor Size. If the array has ground fault protection, size the grounding conductor according to NEC 250.122. If not, size the grounding conductor to handle at least twice the derated circuit conductor ampacity per NEC 690.45.

Grounding Electrode Systems. Ground the AC system according to NEC 250.50 through 250.60. Ground the DC system according to NEC 250.166 through 250.169, and NEC 690.47.

Common Grounding. If the system includes both AC and DC systems, bond the grounding electrodes together. Size the bonding conductor for the larger of the AC and DC requirements per NEC 690.47(C).

3.12. **Disconnects**. Provide disconnects to disconnect equipment (batteries, solar controllers, etc.) from all ungrounded conductors of all power sources per NEC 690.15.

For fuses that are energized from both directions, provide disconnects to independently disconnect the fuse from all sources of power.

Provide disconnects to open all ungrounded conductors which are readily accessible, externally operated, have ON/OFF indications, and have appropriate interrupt ratings. Manually operated switches and circuit breakers are allowed to fulfill these requirements per NEC 690.17.

4. Construction

4.1. **Installation.** Provide equipment that utilizes the latest available techniques for design and construction with a minimum number of parts, subassemblies, and modules to maximize standardization and commonality.

4.2. **System Configuration.** Configure and fully integrate the equipment to provide a fully operational system.

4.3. **General.** Furnish and install all materials, including support, calibration and test equipment, to ensure an operating and functional solar power system. Install power and data cables, power grounding and lightning suppression systems. Prior to beginning installation, inspect each site to verify suitability of the design for installation, grounding and lightning protection. Provide written documentation to the Engineer for approval prior to installation.

4.4. Configure and setup the solar power system to assure connection and electric power delivery to the field equipment as indicated in the plans. Locate and mount all equipment as detailed in the plans and as directed by the Engineer.

4.5. **Wiring.** Provide wiring that meets the requirements of the NEC. Provide wires that are cut to proper length before assembly. Provide cable slacks to facilitate removal and replacement of assemblies, panels, and modules. It is not acceptable to “double-back” wire to take up slack. Lace wires neatly with nylon lacing or plastic straps. Secure cables with clamps. Provide service loops at connections.

4.6. Size all conductors for a de-rated ampacity of at least 125% of the maximum currents calculated. De-rating factors include high ambient temperatures and number of conductors run together within a conduit or cable, per NEC 690.8(B), 310.15(B) and 310.16. Single-conductor cables in sizes 16 AWG and 18 AWG are permitted for module interconnections if they meet the ampacity requirements.

4.7. Protect all conductors operating at more than 30 V and installed in readily accessible locations with conduit, per NEC 690.31(A).

Provide conductors rated for 194ºF (90ºC) and wet service per NEC 690.31(B).

Run PV source- and output-circuit conductors separately from conductors of other systems per NEC 690.31(B).

Color code all wiring. Mark grounded conductors white or gray. Use green, green/yellow or bare grounding conductors, per NEC 310.12.

Provide strain relief or conduit on all conductors per NEC 300.4.

4.8. **Pole**s. Mount all PV units and cabinets on poles as shown on plans Provide poles as shown on plans for the height specified. Coordinate location of PV system pole with location of batch outlet structure. Ensure poles are located a maximum of 100m (330ft) from batch outlet structure.

4.9. **Testing.** Perform testing in accordance with, Special Specification 6005, “Testing, Training, Documentation, Final Acceptance, and Warranty. Test the system at the factory and in the field to assure proper function operation.

ATTACHMENT "N"

INSPECTION, MAINTENANCE, REPAIR, & RETROFIT PLAN

Maintenance Plan and Schedule for Best Management Practices (Batch Detention)

Batch Detention:

Inspections: Inspections should take place a minimum of twice a year. One inspection should take place during wet weather to determine if the basin is meeting the target detention time of 12 hours and a drawdown time of no more than 48 hours. The remaining inspections should occur between storm events so that manual operation of the valve and controller can be verified. The level sensor in the basin should be inspected and any debris or sediment in the area should be removed. The outlet structure and the trash screen should be inspected for signs of clogging. Debris and sediment should be removed from the orifice and outlet(s) as described in previous sections. Debris obstructing the valve should be removed. During each inspection, erosion areas inside and downstream of this BMP should be identified and repaired/revegetated immediately.

Mowing: The basin, basin side-slopes, and embankment of the basin must be mowed to prevent woody growth and control weeds. A mulching mower should be used, or the grass clippings should be caught and removed. Mowing should take place at least twice a year, or more frequently if vegetation exceeds 18 inches in height. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas.

Litter & Debris Removal: Litter and debris removal should take place at least twice a year, as part of the periodic mowing operations and inspections. Debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed.

Erosion control: The basin side slopes and embankment all may periodically suffer from slumping and erosion. To correct these problems, corrective action, such as regrading and revegetation, may be necessary. Correction of erosion control should take place whenever required based on the periodic inspections.

Nuisance Control: Standing water or soggy conditions may occur in the basin. Some standing water may occur after a storm event since the valve may close with 2 to 3 inches of water in the basin. Some flow into the basin may also occur between storms due to spring flow and residential water use that enters the storm sewer system. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.).

Structural Repairs & Replacement:

With each inspection, any damage to structural elements of the basin (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. An example of this type of repair can include patching of cracked concrete, sealing of voids, removal of vegetation from cracks and joints. The various inlet/outlet structures in a basin will eventually deteriorate and must be replaced.

Sediment Removal: A properly designed batch detention basin will accumulate quantities of sediment over time. The accumulated sediment can detract from the appearance of the facility and reduce the pollutant removal performance of the facility. The sediment also tends to accumulate near the outlet structure and can interfere with the level sensor operation. Sediment shall be removed from the basin at least every 5 years, when sediment depth exceeds 6 inches, when the sediment interferes with the level sensor or when the basin does not drain within 48 hours. Care should be taken not to compromise the basin lining during maintenance.

Logic Controller: The Logic Controller should be inspected as part of the twice yearly investigations. Verify that the external indicators (active, cycle in progress) are operating properly by turning the controller off and on, and by initiating a cycle by triggering the level sensor in the basin. The valve should be manually opened and closed using the open/close switch to verify valve operation and to assist in inspecting the valve for debris. The solar panel should be inspected and any dust or debris on the panel should be carefully removed. The controller and all other circuitry and wiring should be inspected for signs of corrosion, damage from insects, water leaks, or other damage. At the end of the inspection, the controller should be reset.

Record Keeping: During construction the project superintendent shall have a log for entering site inspections for all regular and rainfall events. Results of inspections, including damage and any recommended remedial action, shall be noted along with inspection personnel data and date of completion of any action. The log shall be made available for review by TCEQ, if requested. "Proper" disposal of accumulated silt shall be accomplished following TCEQ and Local Authority guidelines and specifications.

Responsible Party for Maintenance:

Name: Robert O'Farrell

Entity: Central Southwest Texas Development, LLC

Address: 1703 W. 5th St. Suite 850
Austin, Texas 78703

Signature of Responsible Party: _____

Printed Name of Responsible Party: Robert O'Farrell, Manager

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER

31Jul25

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

ATTACHMENT “O” –

PILOT-SCALE FIELD TESTING PLAN

Not applicable for this project.

ATTACHMENT “P”

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

No surface streams are located on this project.

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

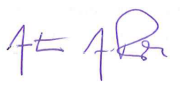
Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Antonio A. Prete, P.E.

Date: 07/31/2025

Signature of Customer/Agent:



Regulated Entity Name: Arrow Point

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

   ☐ The following fuels and/or hazardous substances will be stored on the site: _____

   These fuels and/or hazardous substances will be stored in:

   ☐ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

☒ Fuels and hazardous substances will not be stored on the site.

2. ☒ **Attachment A - Spill Response Actions**. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.

3. ☐ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. ☒ **Attachment B - Potential Sources of Contamination**. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

5. ☒ **Attachment C - Sequence of Major Activities**. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.

☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

☐ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

6. ☐ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: _____

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

7. ☒ **Attachment D – Temporary Best Management Practices and Measures**. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

☐ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.

☐ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

☐ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. ☒ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

   ☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

   ☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. ☒ **Attachment F - Structural Practices**. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.

10. ☒ **Attachment G - Drainage Area Map**. A drainage area map supporting the following requirements is attached:

    ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

    ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

    ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

    ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

☒ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.

11. ☐ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations**. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.

☒ N/A

12. ☒ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.

13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. ☒ **Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices**. A schedule of the interim and permanent soil stabilization practices for the site is attached.

18. ☒ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

ATTACHMENT "A"

SPILL RESPONSE ACTIONS

1.4.16 Spill Prevention and Control

The objective of this section is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

(1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.

(2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

(3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

(4) Establish a continuing education program to indoctrinate new employees.

(5) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

(1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

(2) Store hazardous materials and wastes in covered containers and protect from vandalism.

(3) Place a stockpile of spill cleanup materials where it will be readily accessible.

(4) Train employees in spill prevention and cleanup.

(5) Designate responsible individuals to oversee and enforce control measures.

(6) Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise clean up activities.

(7) Do not bury or wash spills with water.

(8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the revisions in applicable BMPs.

(9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.

(10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

(11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

(12) Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

(1) Clean up leaks and spills immediately.

(2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

(3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

(1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

(2) Use absorbent materials on small spills rather than hosing down or burying the spill.

(3) Absorbent materials should be promptly removed and disposed of properly.

(4) Follow the practice below for a minor spill:

(5) Contain the spread of the spill.

(6) Recover spilled materials.

(7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spills should be cleaned up immediately:

(1) Contain spread of the spill.

(2) Notify the project foreman immediately.

(3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.

(4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

(5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

(1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

(2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

(3) Notification should first be made by telephone and followed up with a written report.

(4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.

(5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: https://www.tceq.texas.gov/response/spills .

ATTACHMENT “B”

POTENTIAL SOURCES OF CONTAMINATION

Potential sources of contamination from this site include hydrocarbon residue, emissions from vehicles, asphaltic products used for paved surfaces, and tracking of silt onto paved surfaces by construction equipment.

ATTACHMENT “C”

SEQUENCE OF MAJOR ACTIVITIES

Activity	**Area**
Install Erosion Controls	± 7.55 ac (Limits of Construction)
Clearing / Grubbing	± 7.55 ac (Limits of Construction)
Fill / Excavation (Grading)	± 7.55 ac (Limits of Construction)
Utility Installation	± 1.50 ac
Paving / Infrastructure	± 6.50 ac
Revegetation	± 7.55 ac (Limits of Construction)

NOTE: There are no common drainage areas containing more than 10 acres of disturb area.

ATTACHMENT “D”

TEMPORARY BEST MANAGEMENT PRACTICES & MEASURES

The TBMP’s are to be installed prior to any site activities and will be in place for all sequenced activities. This includes the placement of temporary inlet protection, stabilized construction entrance, concrete washout area, and silt fencing on the down gradient side of the site to prevent any silted run-off to water surfaces and to prevent any erosion or disturbance to vegetation.

Post construction of improvements and prior to project acceptance, the limits of disturbance shall be revegetated.

ATTACHMENT “E”

REQUEST TO TEMPORARILY SEAL A FEATURE

A request to temporarily seal a feature is not being made.

ATTACHMENT “F”

STRUCTURAL PRACTICES

This includes the placement of temporary inlet protection, stabilized construction entrance, concrete truck washout area, and silt fencing on the down gradient side of the site to prevent any silted run-off to water surfaces and to prevent any erosion or disturbance to vegetation.

ATTACHMENT “G”

DRAINAGE AREA MAP

A drainage area map has been included as part of the construction plans, which has been submitted with this Contributing Zone Plan (CZP).

ATTACHMENT “H”

TEMPORARY SEDIMENT POND(S) PLANS & CALCULATIONS

There are no common drainage areas containing more than 10 acres of disturb area. Therefore, a temporary sediment pond is not required for this project

ATTACHMENT "I"

INSPECTION & MAINTENANCE FOR BMPs

SILT FENCES & INLET PROTECTION:

Weekly: Accumulated silt shall be removed when it reaches a depth of 6 inches. Silt shall be disposed of in an approved site and in such a manner as to not contribute to additional siltation. Repair and replace any damaged section resulting from construction activity or other cases.

After Rainfall: Fences shall be checked for structural damage from stormwater flows immediately after a significant (≥ 0.5 inch) rainfall as soon as ground conditions make fences accessible (usually within 24 hours). Should there be prolonged rainfall, inspections should be conducted without vehicles and temporary repairs made until equipment can be brought in without major surface damage. Remove accumulated silt when depth reaches 6 inches and dispose of as indicated in Weekly maintenance.

Adjust fence configuration if necessary after rainfall event to accommodate conditions defined by stormwater flows.

STABILIZED CONSTRUCTION ENTRANCE:

Weekly: The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public roadways. If necessary, top dress with additional stone and repair and/or cleanout any measures used to trap sediment.

After Rainfall: Immediately after a significant rainfall (≥ 0.5 inch), as soon as ground conditions make stabilized construction entrance accessible (usually within 24 hours), the same inspection and maintenance procedures for the weekly requirements shall be performed.

CONCRETE TRUCK WASHOUT:

Daily: The washout lining and sidewalls shall be inspected for damages and leaks. Repair and replace any damages resulting from construction activity or other cases. Ensure the washout area does not exceed 75% capacity. If 75% capacity is exceeded, the wash water should be vacuumed off or allowed to evaporate to avoid overflows. Once the remaining cementitious solids have hardened, they shall be removed and recycled.

Before Rainfall: Prior to a heavy rainfall, the washout's liquid level should be lowered or the washout area should be covered.

After Rainfall: Immediately after a significant rainfall (≥ 0.5 inch), as soon as ground conditions are accessible (usually within 24 hours), the same inspection and maintenance procedures for the daily requirements shall be performed.

RECORD KEEPING:

Project superintendent shall have a log for entering site inspections for both weekly and rainfall events. Results of inspections including damage and recommended repairs shall be noted, along with inspection personnel data and date of remedial action taken.

ATTACHMENT “J”

SCHEDULE OF INTERIM & PERMANENT SOIL STABLIZATION PRACTICES

If portions of the site will have a temporary or permanent cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.

Post final grading, permanent soil stabilization shall occur at the first practical opportunity after the completion of construction activities in an area (Within fourteen days). Records must be kept as to when each soil stabilization measure was instituted in each area.

Reference erosion & sedimentation notes and detail in the construction plans.

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Arrow Point
Regulated Entity Location: FM 1431 Cedar Park, Texas 78613
Name of Customer: Central Southwest Texas Development, LLC
Contact Person: Robert O'Farrell Phone: (512) 861-3550
Customer Reference Number (if issued):CN 605487818
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☒ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	7.79 Acres	$ 5,000
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____ Date: 07/31/2025

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

Project	*Project Area in Acres*	*Fee*
One Single Family Residential Dwelling	< 5	$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Robert O'Farrell,
Print Name

Manager
Title - Owner/President/Other

of Central Southwest Texas Development, LLC,
Corporation/Partnership/Entity Name

have authorized Antonio A. Prete, P.E.
Print Name of Agent/Engineer

of Waeltz & Prete, Inc.
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE: Central Southwest Texas Development, LLC

Applicant's Signature
Robert O'Farrell
Manager

7/31/25
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Robert O'Farrell known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 31 day of July, 2025

NOTARY PUBLIC

STEPHANIE MONTEMAYOR
Notary Public, State of Texas
Comm. Expires 11-05-2027
Notary ID 132239433

Stephanie Montemayor
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 11/5/27

TCEQ Core Data Form

TCEQ Use Only

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided.)*

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 605487818		RN

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership

☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* *If new Customer, enter previous Customer below:*

Central Southwest Texas Development, LLC

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
800900223	32034175	26-3147569	

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☒ Limited

Government: ☐ City ☐ County ☐ Federal ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following:*

☒ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

1703 W. 5th Street
Suite 850

City	State	ZIP	ZIP + 4
Austin	TX	78703	

16. Country Mailing Information *(if outside USA)*

17. E-Mail Address *(if applicable)*
Robert.OFarrell@am.jll.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 861-3550		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC.)

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Arrow Point

23. Street Address of the Regulated Entity: *(No PO Boxes)*	FM 1431 Cedar Park, Texas 78613							
	City		**State**		**ZIP**		**ZIP + 4**	
24. County								

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	Located @ the southwest corner of E. Whitestone Blvd. & Arrow Point Dr.

26. Nearest City	**State**	**Nearest ZIP Code**
Cedar Park	TX	78613

27. Latitude (N) In Decimal:	30.528546		**28. Longitude (W) In Decimal:**	97.801326	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	31	42.76	97	48	4.77

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
4225		493110	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

General Office/Warehouse

34. Mailing Address:	**1703 W. 5th Street**							
	Suite 850							
	City	**Austin**	**State**	**TX**	**ZIP**	**78703**	**ZIP + 4**	

35. E-Mail Address:	**Robert.OFarrell@am.jll.com**

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 861-3550		**( ) -**

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

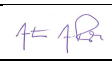
SECTION IV: Preparer Information

40. Name:	Antonio A. Prete, P.E.	**41. Title:**	President

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 505-8953	11	( ) -	tony@w-pinc.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Waeltz & Prete, Inc.	**Job Title:**	President
Name*(In Print)* **:**	Antonio A. Prete, P.E.	**Phone:**	(512) 505-8953
Signature:		**Date:**	07/31/2025

Owner Authorization Form

for Required Signature for submitting and signing an application for an Edwards Aquifer Protection Plan (Plan) and conducting regulated activities in accordance with an approved Plan.

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
Relating to the Edwards Aquifer Rules of
Title 30 of the Texas Administrative Code
(30 TAC), Chapter 213
Effective June 1, 1999

Land Owner Authorization

I, Sean Hladky of First Cedar Park Capital Funding, LLC

Land Owner Name (Individual) — Firm (applicable to Legal Entities)

am the Owner of Record or Title Holder of the property located at:

Address: FM 1431, Cedar Park, TX 78613 (Legal description: AW0170 AW0170 - Damon, S. Sur., ACRES 7.79)

(Legal description of the property referenced in the application)

and being duly authorized under 30 TAC § 213.4(c)(2) and § 213.4(d)(1) or § 213.23(c)(2) and § 213.23(d) to submit and sign an application for a Plan, do hereby authorize:

Central Southwest Texas Development, LLC

(Applicant Name / Plan Holder (Legal Entity or Individual))

to conduct:

Constructing three buildings, off-site roadway improvements, driveways, paving, sidewalks, batch detention pond, retaining walls, utilities, etc.

(Description of the proposed regulated activities)

on the property described above or at:

Address: FM 1431, Cedar Park, TX 78613 (Legal description: AW0170 AW0170 - Damon, S. Sur., ACRES 7.79)

(If applicable to a precise location for the authorized regulated activities)

Land Owner Acknowledgement

I, Sean Hladky of First Cedar Park Capital Funding, LLC

Land Owner Name (Individual) — Firm (applicable to Legal Entities)

understand that while Central Southwest Texas Development, LLC

Applicant Name / Plan Holder (Legal Entity or Individual)

is responsible for compliance with the approved or conditionally approved Plan and any special conditions of the approved Plan through all phases of Plan implementation,

I, Sean Hladky of First Cedar Park Capital Funding, LLC
Land Owner Name (Individual) Firm (applicable to Legal Entities)

as Owner of Record or Title Holder of the property described above, I am ultimately responsible for ensuring that compliance with the approved or conditionally approved Plan and any special conditions of the approved Plan, through all phases of Plan implementation, is achieved even if the responsibility for compliance and the right to possess and control of the property referenced in the application has been contractually assumed by another legal entity.

I, Sean Hladky of First Cedar Park Capital Funding, LLC
Land Owner Name (Individual) Firm (applicable to Legal Entities)

further understand that any failure to comply with any condition of the Executive Director's approval is a violation and is subject to administrative rule or orders and penalties as provided under 30 TAC § 213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

Land Owner Signature

Land Owner Signature

7-31-25
Date

THE STATE OF § New York

County of § New York

BEFORE ME, the undersigned authority, on this day personally appeared known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 31st day of July 2025

Naomi Phelan
NOTARY PUBLIC

Naomi Phelan
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 03/27/2029

Attached: (Mark all that apply)

- ☐ Lease Agreement
- ☐ Signed Contract
- ☐ Deed Recorded Easement
- ☐ Other legally binding document

NAOMI PHELAN
STATE OF NEW YORK
NOTARY PUBLIC
Qualified in New York County
01PH6356184
MY COMMISSION EXPIRES 03/27/2029

Applicant Acknowledgement

I, Robert O'Farrell of Central Southwest Texas Development, LLC
Applicant Name (Individual) Firm (applicable to Legal Entities)

acknowledge that First Cedar Park Capital Funding, LLC
Land Owner Name (Legal Entity or Individual)

has provided Central Southwest Texas Development, LLC
Applicant Name (Legal Entity or Individual)

with the right to possess and control the property referenced in the Edwards Aquifer Protection Plan (Plan).

I understand that Central Southwest Texas Development, LLC
Applicant Name (Legal Entity or Individual)

is responsible, contractually or not, for compliance with the approved or conditionally approved Plan and any special conditions of the approved Plan through all phases of Plan implementation. I further understand that failure to comply with any condition of the Executive Director's approval is a violation and is subject to administrative rule or orders and penalties as provided under § 213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

Applicant Signature Central Southwest Texas Development, LLC

Applicant Signature Robert O'Farrell, Manager

7/31/2025
Date

THE STATE OF § Texas

County of § Travis

BEFORE ME, the undersigned authority, on this day personally appeared known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 31 day of July, 2025

NOTARY PUBLIC

STEPHANIE MONTEMAYOR
Notary Public, State of Texas
Comm. Expires 11-05-2027
Notary ID 132239433

Stephanie Montemayor
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 11/5/27

SITE DEVELOPMENT PLANS FOR:

ARROW POINT

LOT 2, BLOCK 'A' (4.7060 AC.)
CSW ARROW POINT SUBDIVISION

FM 1431
CEDAR PARK, TEXAS 78613

JULY, 2025
CITY OF CEDAR PARK
SITE DEVELOPMENT PERMIT NUMBER: _____-_____

DESIGN PROFESSIONALS:

CIVIL ENGINEER / APPLICANT:

ANTONIO A. PRETE, P.E.
WAELTZ & PRETE, INC.
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TEXAS 78665
PH: (512) 505-8953
EMAIL: tony@w-pinc.com

LANDSCAPE ARCHITECT:

BRADLEY T. JONES, PLA
ECOLAND DESIGN GROUP
2800 IH 35, SUITE 170
AUSTIN, TEXAS 78704
PH: (859) 556-0313
EMAIL: bjones@ecolanddesigngroup.com

ARCHITECT:

BRETT PITT
MERRIMAN PITT ANDERSON
208 W. 4TH STREET
AUSWTIN, TEXAS 78701
PH: (512) 472-1111
EMAIL: bpitt@mpaaustin.com

PROJECT DESCRIPTION:

THIS PROJECT CONSISTS OF CONSTRUCTION ON A 4.7060 ACRE LOT WITH ADDITIONAL OFFSITE IMPROVEMENTS. THE SITE WILL CONSIST OF 3 BUILDINGS (15,400 SF, 16,100 SF, 17,500 SF), PAVING, SIDEWALKS, RETAINING WALLS, WATER & WASTEWATER UTILITIES, STORM SEWER SYSTEM, BATCH DETENTION POND, LANDSCAPING, GRADING, IRRIGATION, ETC. OFF-SITE IMPROVEMENTS WILL CONSIST OF A RIGHT TURN LANE ALONG WHITESTONE BLVD., MEDIAN IMPROVEMENTS WITHIN ARROW POINT DRIVE, INTERNAL DRIVE & SHARED USE DRIVEWAY WITHIN THE LIMIT OF LOT 1, AND MINOR WATER LINE ADJUSTMENTS.

PLANNING _____ DATE: _____

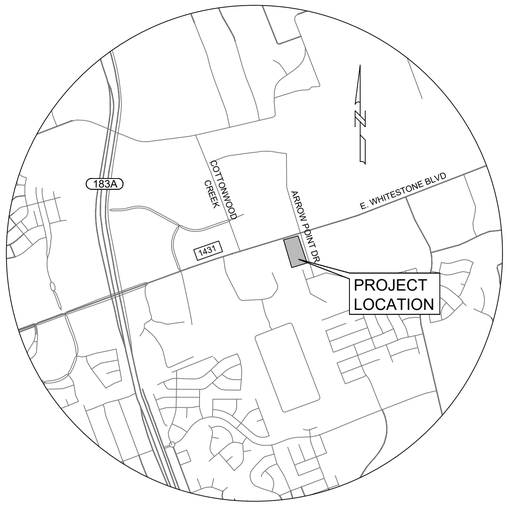
ENGINEERING SERVICES _____ DATE: _____

INDUSTRIAL PRETREATMENT_____ DATE: _____

LANDSCAPE PLANNER _____ DATE: _____

ADDRESSING _____ DATE: _____

SITE DEVELOPMENT PERMIT NUMBER: _____



LOCATION MAP
1" = 2000'

Texas 811
know what's below.
Call before you dig.

NOTES:

1. THESE PLANS ARE NOT TO BE CONSIDERED FINAL FOR CONSTRUCTION UNTIL ACCEPTED BY THE CITY. CHANGES MAY BE REQUIRED PRIOR TO APPROVAL.
2. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY, ACTUAL LOCATIONS AND DEPTH OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS IMMEDIATELY. ANY DAMAGE BY THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT THIS EXPENSE.
3. NO PORTION OF THIS SITE IS WITHIN THE FEMA 1% ANNUAL CHANCE FLOODPLAIN, PER PANEL NUMBER 48491C0470F, DATED DECEMBER 20, 2019.
4. THIS SITE IS LOCATED WITHIN THE SOUTH BRUSHY CREEK WATERSHED.
5. THIS SITE PLAN HAS BEEN SUBMITTED TO THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR) FOR REVIEW OF COMPLIANCE WITH THE ARCHITECTURAL BARRIERS ACT. THE REFERENCE #TABS_____ IS PROOF OF SUBMITTAL TO TDLR.
6. THIS SITE IS LOCATED WITHIN THE EDWARD'S AQUIFER CONTRIBUTING ZONE. WATER QUALITY WILL BE PROVIDED ON-SITE.
7. ALL SIGNAGE WILL REQUIRE A SEPARATE PERMIT. APPROVAL OF A SITE DEVELOPMENT OR BUILDING PERMIT DOES NOT CONSTITUTE APPROVAL OF SIGNAGE.

SHEET INDEX

SHT. No.	DESCRIPTION	SHT. No.	DESCRIPTION
C-1	COVER SHEET	C-46	BATCH DETENTION POND PLAN
C-2	GENERAL NOTES (1 OF 2)	C-47	BATCH DETENTION POND DETAILS (1 OF 3)
C-3	GENERAL NOTES (2 OF 2)	C-48	BATCH DETENTION POND DETAILS (2 OF 3)
C-4	PLAT (1 OF 3)	C-49	BATCH DETENTION POND DETAILS (3 OF 3)
C-5	PLAT (2 OF 3)	C-50	WATER QUALITY SUMMARY
C-6	PLAT (3 OF 3)	C-51	TXDOT STANDARD TCP (1-4) - 18
C-7	EXISTING CONDITIONS & DEMOLITION PLAN (1 OF 2)	C-52	TXDOT STANDARD BC(1) - 21
C-8	EXISTING CONDITIONS & DEMOLITION PLAN (2 OF 2)	C-53	TXDOT STANDARD BC(2) - 21
C-9	EROSION & SEDIMENT CONTROL PLAN (1 OF 2)	C-54	TXDOT STANDARD BC(3) - 21
C-10	EROSION & SEDIMENT CONTROL PLAN (2 OF 2)	C-55	TXDOT STANDARD BC(4) - 21
C-11	SITE DIMENSIONAL CONTROL PLAN (1 OF 2)	C-56	TXDOT STANDARD BC(5) - 21
C-12	SITE DIMENSIONAL CONTROL PLAN (2 OF 2)	C-57	TXDOT STANDARD BC(6) - 21
C-13	FIRE PROTECTION PLAN	C-58	TXDOT STANDARD BC(7) - 21
C-14	FIRE LANE PROFILE (1 OF 3)	C-59	TXDOT STANDARD BC(8) - 21
C-15	FIRE LANE PROFILE (2 OF 3)	C-60	TXDOT STANDARD BC(9) - 21
C-16	FIRE LANE PROFILE (3 OF 3)	C-61	TXDOT STANDARD BC(10) - 21
C-17	WATER PLAN (1 OF 2)	C-62	TXDOT STANDARD BC(11) - 21
C-18	WATER PLAN (2 OF 2)	C-63	TXDOT STANDARD BC(12) - 21
C-19	WATER PROFILE (1 OF 2)	C-64	ESC DETAILS (1 OF 2)
C-20	WATER PROFILE (2 OF 2)	C-65	ESC DETAILS (2 OF 2)
C-21	WASTEWATER PLAN	C-66	SITE DETAILS (1 OF 5)
C-22	WASTEWATER PROFILE (1 OF 2)	C-67	SITE DETAILS (2 OF 5)
C-23	WASTEWATER PROFILE (2 OF 2)	C-68	SITE DETAILS (3 OF 5)
C-24	STORM SEWER PLAN (1 OF 2)	C-69	SITE DETAILS (4 OF 5)
C-25	STORM SEWER PLAN (2 OF 2)	C-70	SITE DETAILS (5 OF 5)
C-26	STORM SEWER PROFILE (1 OF 8)	C-71	WATER DETAILS (1 OF 2)
C-27	STORM SEWER PROFILE (2 OF 8)	C-72	WATER DETAILS (2 OF 2)
C-28	STORM SEWER PROFILE (3 OF 8)	C-73	WASTEWATER DETAILS
C-29	STORM SEWER PROFILE (4 OF 8)	C-74	STORM SEWER DETAILS (1 OF 2)
C-30	STORM SEWER PROFILE (5 OF 8)	C-75	STORM SEWER DETAILS (2 OF 2)
C-31	STORM SEWER PROFILE (6 OF 8)	C-76	TXDOT STANDARD - BACKLESS CURB INLET
C-32	STORM SEWER PROFILE (7 OF 8)	C-77	TXDOT STANDARD - SET-CB (1 OF 2)
C-33	STORM SEWER PROFILE (8 OF 8)	C-78	TXDOT STANDARD - SET-CB (2 OF 2)
C-34	PAVING, SIGNAGE, & STRIPING PLAN (1 OF 2)	L1-L2	LANDSCAPE PLANS & DETAILS
C-35	PAVING, SIGNAGE, & STRIPING PLAN (2 OF 2)	A3.01-A3.03	ARCHITECTURAL ELEVATION PLANS
C-36	ROADWAY PLAN - RIGHT TURN LANE		
C-37	ROADWAY PLAN - BACKLESS CURB INLET		
C-38	ROADWAY PLAN - MEDIAN IMPROVEMENTS		
C-39	GRADING PLAN (1 OF 5)		
C-40	GRADING PLAN (2 OF 5)		
C-41	GRADING PLAN (3 OF 5)		
C-42	GRADING PLAN (4 OF 5)		
C-43	GRADING PLAN (5 OF 5)		
C-44	EXISTING AND PROPOSED DRAINAGE AREA MAP		
C-45	ON-SITE DRAINAGE AREA MAP		

STATE OF TEXAS

COUNTY OF WILLIAMSON

I, ANTONIO A. PRETE, P.E., DO HEREBY CERTIFY THAT THE PUBLIC WORKS AND DRAINAGE IMPROVEMENTS DESCRIBED HEREIN HAVE BEEN DESIGNED IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORMWATER DRAINAGE POLICY ADOPTED BY THE CITY OF CEDAR PARK, TEXAS.

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER

ANTONIO A. PRETE, P.E. — DATE 18 July 25
STATE OF TEXAS #93759

JOB NO.: 073-030

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF CEDAR PARK MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

ACCEPTED FOR CONSTRUCTION:

(CITY OF CEDAR PARK'S APPROVAL SIGNATURE BLOCK LOCATED ABOVE)

OWNER:

ROBERT O'FARRELL
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC
1703 W. 5TH ST SUITE 850
AUSTIN, TX 78703
512-861-3550

ENGINEER:

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

REVISIONS:

No.	Date	Revision	ACC.	DATE

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 CVR.dwg, 7/31/2025 2:30:08 PM, DWG To PDF.pc3, 1:1, JRW

CONSTRUCTION NOTES FOR SUBDIVISIONS & SITE PLANS CITY OF CEDAR PARK

Revised March 22, 2021

GENERAL NOTES:

1. General Contractor shall call for all utility locates prior to any construction. Water & wastewater owned by the City of Cedar Park can be located by calling Texas 811 at 1-800-344-8377. Allow three business days for utility locates by the City of Cedar Park.

2. All construction shall be in accordance with the latest City of Austin Standard Specifications. City of Austin standards shall be used unless otherwise noted.

3. Design procedures shall be in general compliance with the City of Austin Drainage Criteria Manual. All variances to the manual are listed below: N/A

4. Benchmarks should be tied to the City of Cedar Park benchmarks and be correctly "geo- referenced" to state plane coordinates. A list of the City's benchmarks can be found at: http://www.cedarparktexas.gov/index.aspx?page=793.

5. Prior to issuance of a certificate of occupancy for a site development permit, the right of way between the property line and edge of pavement / back of curb shall be revegetated according to COA specification 602S and 606S. Prior to City acceptance of subdivision improvements all graded and disturbed areas shall be re-vegetated in accordance with the City of Austin Specification Item #604 native seeding unless non- native is specifically approved.

6. The Contractor shall provide the City of Cedar Park copies of all test results prior to acceptance of subdivision improvements.

7. City, owner, engineer, contractor, representatives of all utility companies, and a representative from the testing lab shall attend pre-construction conference prior to start of construction. The contractor shall schedule the meeting with the City of Cedar Park Engineering Department a minimum of 48 hours prior to this pre-construction meeting (512-401-5000). Final construction plans shall be delivered to Engineering a minimum of seven business days prior to requesting a pre-construction meeting.

8. Excess soil shall be removed at the contractor's expense. Notify the City of Cedar Park if the disposal site is inside the City's jurisdictional boundaries.

9. Burning is prohibited.

10. Any changes or revisions to these plans must first be submitted to the City by the design engineer for review and written approval prior to construction of the revision. All changes and revisions made to the design of utilities or impacts utilities shall use revision clouds to highlight all revisions or changes with each submittal. Revision triangles shall be used to mark revisions. All clouds and triangle markers from previous revisions may be removed. Revision information shall be updated in the appropriate areas of the Title Block.

11. Minimum setback requirements for existing and newly planted trees from the edge of pavement to conform to the requirements as shown in Table 6-1 of the City of Austin's Transportation Criteria Manual.

12. The Contractor will reimburse the City for all cost incurred as a result of any damage to any City utility or any infrastructure within the Right-of-Way by the Contractor, regardless of these plans.

13. An engineer's concurrence letter and electronic 22"x34" record drawings shall be submitted to the Engineering Department prior to the issuance of certificate of occupancy or subdivision acceptance. The Engineer and Contractor shall verify that all
final revisions and changes have been made to record drawings prior to City submittal. Record construction drawings, including roadway and all utilities, shall be provided to the City in AutoCad ". dwg" files and ".PDF" format on a CD or DVD. Line weights, line types and text size shall be such that if half-size prints (11"x 17") were produced, the plans would still be legible. All required digital files shall contain a minimum of two (2) control points referenced to the State Plane Grid Coordinate System - Texas Central Zone (4203), in US feet and shall include rotation information and scale factor required to reduce surface coordinates to grid coordinates in US feet.

14. The City of Cedar Park has not reviewed these plans for compliance with the Americans With Disabilities Act. It is the responsibility of the owner to provide compliance with all legislation related to accessibility within the limits of construction shown in these plans.

15. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF CEDAR PARK MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

16. No blasting is allowed on this project.

17. A traffic control plan, in accordance with the Texas Manual on Uniform Traffic Control Devices, shall be submitted to the City for review and approval prior to any partial or complete roadway closures. Traffic control plans shall be site specific and seal by a registered professional engineer.

18. The contractor shall keep the site clean and maintained at all times, to the satisfaction of the City. The subdivision will not be accepted (or Certificate of Occupancy issued) until the site has been cleaned to the satisfaction of the City.

19. Signs are not permitted in Public Utility Easements, Set Backs or Drainage Easements.

20. It shall be the responsibility of the Contractor to inspect temporary erosion controls on a daily basis. Adjust the controls and/or remove any sediment buildup as necessary. A stop work order and/or fine may be imposed if the erosion controls are not maintained.

21. A final certificate of occupancy will not be issued on commercial sites until all disturbed areas have been re-vegetated. Substantial grass cover, as determined by Engineering Department, must be achieved prior to the issuance of a final certificate of occupancy. All erosion controls must remain in place and maintained until all disturbed areas have been re-vegetated to the acceptance of the City of Cedar Park Engineering Department. Prior to issuance of a certificate of occupancy for a site development permit, the right of way between the property line and edge of pavement / back of curb shall be revegetated according to COA specification 602S and 606S.

22. Contractor will be responsible for keeping roads and drives adjacent to and near the site free from soil, sediment and debris. Contractor will not remove soil, sediment or debris from any area or vehicle by means of water, only shoveling and sweeping will be allowed. Contractor will be responsible for dust control from the site. Failure to comply with this requirement may result in a stop work order or a fine.

23. All wet utilities shall be installed and all densities must have passed inspection(s) prior to the installation of dry utilities.

24. A minimum of seven days of cure time is required for HMAC prior to the introduction of vehicular traffic to any streets.

25. Prior to plan approval, the Engineer shall submit to the Engineering Department documentation of subdivision/site registration with the Texas Department of Licensing and Regulations (TDLR) and provide documentation of review and compliance of the subdivision/site construction plans with Texas Architectural Barriers Act (TABA).

26. Prior to subdivision/site acceptance, the engineer/developer-owner shall submit to the Engineering Department documentation that the subdivision/site was inspected by TDLR or a registered accessibility specialist (RAS) and the subdivision/site is in compliance with the requirements of the TABA.

27. All construction and construction related activities shall be performed Monday thru Friday from 7:00 A.M. to 6:00 P.M. However, construction activities within one hundred feet (100') of a dwelling or dwelling unit shall be performed between the hours of 8:00 a.m. and 6:00 p.m. Otherwise all construction and construction related activities shall conform to City of Cedar Park Code of Ordinances, specifically ARTICLE 8.08.

28. Approval for construction activities performed on Owner's Holidays, and/or Saturdays, outside of Monday through Friday 8 am to 5 pm, or in excess of 8 hours per day shall be obtained in writing 48 hours in advance, and inspection fees at 1.5 times the hourly inspection rate shall be billed directly to the contractor. There shall be no construction or construction related activities performed on Sunday. The City reserves the right to require the contractor to uncover all work performed without City inspection.

29. All poles to be approved by City and PEC, no conduit shall be installed down lot lines / between homes. All conduit shall be located in the public ROW or in an easement adjacent to and parallel to the public ROW.

30. Dry utilities shall be installed after subgrade is cut and before first course base. No trenching of compacted base. If necessary dry utilities installed after first course base shall be bored across the full width of the ROW.

31. No ponding of water shall be allowed to collect on or near the intersection of private driveway(s) and a public street. Reconstruction of the driveway approach shall be at the Contractor's expense.

32. All driveway approaches shall have a uniform two percent slope within the ROW unless approved in writing by the Engineering Department.

33. Contractors on site shall have an approved set of plans at all times. Failure to have an approved set may result in a stop work order.

34. Contractor to clear five feet beyond all right of way to prevent future vegetative growth into the sidewalk areas.

35. There shall be no water or wastewater appurtenances, including but not limited to, valves, fittings, meters, clean-outs, manholes, or vaults in any driveway, sidewalk, traffic or pedestrian area.

36. Sidewalks shall not use curb inlets as a partial walking surface. Sidewalks shall not use traffic control boxes, meter or check valve vaults, communication vaults, or other buried or partially buried infrastructure as a vehicular or pedestrian surface.

STREET NOTES:

1. No trenching of compacted base will be allowed. A penalty and/or fine may be imposed to the general contractor if trenching of compacted base occurs without City approval, regardless of who performed the trenching.

2. All sidewalks shall comply with the Americans With Disabilities Act. The City of Cedar Park has NOT reviewed these plans for compliance with the Americans With Disabilities Act, or any other accessibility legislation, and does not warranty or approve these plans for any accessibility standards.

3. Street barricades shall be installed on all dead end streets and as necessary during construction to maintain job safety.

4. Any damage caused to existing pavement, curbs, sidewalks, ramps, etc., shall be repaired by the contractor to the satisfaction of the City prior to acceptance of the subdivision.

5. At intersections, which have valley drainage, the crown to the intersecting street will be culminated at a distance of 40 ft. from the intersecting curb line unless otherwise noted.

6. The subgrade material was tested by ***XXX - COMPANY - XXX*** the pavement sections were designed accordingly. The pavement sections are to be constructed as follows: ***(See Sheet C-XX)***

7. Density testing of compacted subgrade material, first course and second course compacted base, shall be made at 500 foot intervals.

8. All density testing is the responsibility of the owner or contractor and shall be witnessed by the City of Cedar Park's project representative. The contractor is to notify the City 48 hours prior to scheduled density testing.

9. Traffic control signs and pavement markings shall be in accordance with the Texas Manual on Uniform Traffic Control Devices and installed as directed by the City of Cedar Park prior to City acceptance of the Subdivision.

10. Slope of natural ground adjacent to the right-of-way shall not exceed 3:1. If a 3:1 slope is not possible, a retaining wall or some other form of slope protection approved by the City shall be placed in a location acceptable to the City.

11. The City, engineer, contractor, and a representative from the asphalt testing lab shall attend a pre-paving conference prior to the start of HMAC paving. The contractor shall give the City a minimum of 48 hours notice prior to this meeting (512-401-5000).

12. The Contractor or owner is responsible for conducting tests on asphalt pavement in accordance with the requirements set forth in the City of Austin Standard Specification No. 340. Any re-testing of the asphalt pavement shall be conducted under the supervision of the engineer and the City of Cedar Park. Re-testing of the asphalt pavement shall be limited to one retest per project.

13. All pavement markings and signage shall comply with MUTCD standards. Street name letter sizing shall be in accordance with MUTCDTable2D-2.Pavement markings shall be thermoplastic unless otherwise noted.

14. All street name signs shall be high intensity retro grade.

15. No Fencing or Wall is allowed to be constructed so that it obstructs the sight lines of drivers from an intersecting public roadway or from an intersecting private driveway. Sight lines are to be maintained as described in City Code Section 14.05.007. Installing a fence or wall which does not comply with the City's Sight Distance Requirements or Fencing Regulations is a violation of the City's Ordinance and may be punishable pursuant to Section 1.01.009 of City Code.

16. Temporary rock crushing operations are not allowed. All sources for flexible base material are required to be approved by the City. Prior to base placement all current triaxial test reports for the proposed stockpiles are to be submitted to the City's project representative for review and approval.

17. Utility service boxes or other utility facilities shall not be installed within areas determined to be required sight lines of two intersecting public streets or within sight lines of a private driveway. Sight lines are to be maintained compliant with Table 1-1 of the Austin Transportation Criteria Manual. Utilities determined by the Director of Engineering to be placed within required sight lines may be required to be relocated at the expense of the contractor prior to the City issuing a Certificate of Occupancy or prior to the City's Acceptance of the Project Improvements.

18. All lane closures shall occur only between the hours of 9 AM and 4 PM. Any night time lane closures require approval by the Director of Engineering and shall occur between the hours of 8 PM and 6 AM. Lane closures observed by City during the peak hours of 6 AM to 9 AM, or 4 PM to 8 PM will be subject to fine per Chapter 1 of City Ordinance, and/or subsequent issuance of Work Stoppage.

19. Improvements that include reconstruction of an existing Type II driveway shall be done in a manner which retains operations of not less than half of the driveway at all times. Full closure of such driveway can be considered with written authorization retained by the Contractor from the property owner(s) or access easement right holder(s) of the driveway allowing full closure of the driveway.

20. Trees must not overhang within 10' vertically of a sidewalk, or 18' vertically of a roadway or driveway.

WASTEWATER NOTES:

1. Refer to the City of Cedar Park Public Works Utility Policy and Specifications manual.

2. Manhole frames and covers and water valve boxes shall be raised to finished pavement grade at the owner's expense by the contractor with the City approval. All utility adjustments shall be completed prior to final paving construction.

3. The location of any existing utility lines shown on these plans may not be accurate. Any damage to existing utility lines, both known and unknown, shall be repaired at the expense of the contractor. The contractor shall locate all utilities prior to bidding the project.

4. All iron pipe and fittings shall be wrapped with at least 8 mil. Polyethylene wrap.

5. All water mains, wastewater mains and service lines shall meet City of Austin minimum cover specifications. All streets are to be cut to subgrade prior to installation of water mains or cuts will be issued by the engineer.

6. Where 48-inches of cover below subgrade cannot be achieved for wastewater service lines alternate materials may be used. A minimum of 36-inches of cover below subgrade shall be achieved. Any wastewater service line with cover between 36-inch and 48- inches shall be SDR-26 PVC pressure pipe.

7. Gasketed PVC sewer main fittings shall be used to connect SDR-35 PVC to SDR-26 PVC pressure pipe or C-900.
Pipe materials to be used for construction of utility lines:
Wastewater- ***PVC SDR-26, D3034 & D2241***

   Force Main- ***N/A***
   (Note: If using PVC, SDR-26 is required, SDR-35 WW is not allowed. Forcemains shall be epoxy lined ductile iron)

8. All sanitary sewers, excluding service lines, shall be mandrel tested per TCEQ (Texas Commission on Environmental Quality) criteria. A mandrel test will not be performed until backfill has been in place for a minimum of 30 days.

9. All wastewater lines 10" and larger shall be video recorded according to COA 510 at the Contractor's expense. The contractor shall supply two copies to the City's Field Representative. No separate pay unless noted on the bid form.

10. All sanitary sewers, including service lines, shall be air tested per City of Austin Standard Specifications.

11. Density testing of compacted backfill shall be made at a rate of one test per two foot lifts per 500 feet of installed pipe.

12. City shall be given 48 hours notice prior to all testing of water and wastewater lines. City inspection is required for all testing of water and wastewater lines.

13. Where a water or wastewater line crosses above (or below) a storm sewer structure and the bottom (or top) of the pipe is within 18 inches of the top (or bottom) of the utility structure, the pipe shall be encased with concrete for a distance of at least 1 ft. on either side of the ditch line of the utility structure or the storm sewer. Concrete encasement will not be required for ductile iron (thickness Class 50), AWWA C-900 (SDR-18) 150 psi rated PVC in sizes to 12 inches or AWWA C-905 (SDR-25) 165 psi rated PVC in sizes larger than 12 inches. Concrete encasement shall conform to C.O.A. standard detail 505-1.

14. The allowable (maximum) adjustment for a manhole shall be 12" (inches) or less.

15. Where a sewer line crosses a water line, the sewer line shall be one 20 ft. joint of 150 psi rated PVC centered on crossing.

16. All manhole and inlet covers shall read "City of Cedar Park".

17. Contractor to notify, and obtain approval from, the City of Cedar Park 48 hours prior to connecting to existing City utilities.

18. All pipe bedding material shall conform to City of Austin Standard Specifications.

19. Unless otherwise specified by the Engineer all concrete is to be Class "A" (5 sack, 3000 psi ~ 28-days), and all reinforcing steel to be ASTM A615 60.

20. All wastewater manholes to be coated with organic materials and procedures listed in City of Austin Qualified Products List No. WW-511 (WW-511A and WW-511B are not allowed unless manhole is being structurally rehabilitated with approval by Public Works). All manholes will be pre-coated or coated AFTER testing.

21. Polybrid Coatings on wastewater manholes will not be allowed. Any other product appearing on the COA SPL WW-511 is acceptable.

22. All penetrations of existing wastewater manholes are required to be re-coated in accordance with the specifications listed in Note 20.

23. All manholes will be vacuum tested only.

24. Tracer tape AND marking tape shall be installed on all water and wastewater mains in accordance with City of Austin Standards, regardless of the type of pipe.

25. All pressure pipe shall have mechanical restraint and concrete thrust blocking at all valves, bends, tees, plugs, and other fittings.

WATER NOTES:

1. Refer to the City of Cedar Park Public Works Utility Policy and Specifications manual.

2. The top of valve stems shall be at least 18", and no more than 36", below finished grade. Valve stem risers shall be welded on each end to the City's satisfaction.

3. Fire hydrant leads to be ductile iron, Class 350, and installed per City of Austin standard specifications and detail.

4. Prior to installation of fire hydrants, the engineer will provide the Contractor one (1) cut from a hub pin, establishing the elevation of the bury line.

5. The engineer shall provide cuts for all water lines at all storm sewer crossings to the City of Cedar Park.

6. Pipe materials to be used for construction of utility lines:

   Water - ***DI CL350 & PVC C-900 DR-14***
   Copper pipe and fittings are not permitted within the Right-of-Way. Minimum DR-14 12" dia and smaller. Minimum class 250 DI larger than 12" dia.

7. Approved 5 ¼" fire hydrants:
   - American Flow Control, B84B
   - Mueller Company, Super Centurion 250
   - Clow Medallion Hydrant
   - American AVK Company, Series 27 (Model 2780)
   - All fire hydrants must meet City of Cedar Park thread specifications (National Thread)
   - Blue reflector markers shall be located on the centerline of the pavement across from all fire hydrants. Pavement markers at intersections shall be four-sided.

8. Should a Tapping Saddle be approved by Public Works, the saddle shall be Smith-Blair 662 Stainless Steel Tapping Sleeves with all stainless hardware, or approved equal. Requests for alternate providers shall be made to the City of Cedar Park Public Works. No tap exceeding 2" in diameter will be approved.

9. All water lines, including service lines, shall be pressure and leak tested per City of Austin Standard Specifications and witnessed by the City of Cedar Park representative. All testing is to be the responsibility of the contractor, and the contractor may be required to re-test lines if the testing is not witnessed by the City. Contractor must notify the City of Cedar Park 48 hours prior to any testing.

10. All water lines shall be sterilized and bacteriologically tested in accordance with City of Austin Standards. The contractor is responsible for sterilization and the City of Cedar Park is responsible for submitting bacteriological samples to the State. Public Works will require a contractor specialized in disinfection for large diameter lines or critical infrastructure, subsidiary to pipe installation.

11. Density testing of compacted backfill shall be made at a rate of one test per two foot lifts per 500 feet of installed pipe.

12. Contractor to obtain a water meter from the City of Cedar Park for any water that may be required during construction. (512-401-5000)

13. ALL WATER METER BOXES SHALL BE FORD GULF METER BOX WITH LOCKING LID.
   - SINGLE G-148-233
   - DUAL DG-148-243
   - 1" METER YL111 - 444
   - 1 ½" - 2" METER 1730-R (LID) & 1730-12 (BOX)/ACCEPTABLE BOXES FOR THIS SIZE OF METER

14. Manhole frames and covers and water valve boxes shall be raised to finished pavement grade, when in public streets, at the owner's expense by the contractor with City inspection. All utility adjustments shall be completed prior to final paving construction.

15. The location of any existing utility lines shown on these plans is the best available and may not be accurate. Any damage to existing utility lines, both known and unknown, shall be repaired at the expense of the contractor.

16. All iron pipe and fittings shall be wrapped with at least 8 mil. Polyethylene wrap.

17. All water mains, wastewater mains and service lines shall meet City of Austin Specifications for minimum cover requirements. All streets are to be cut to subgrade prior to installation of water mains or cuts will be issued by the engineer.

18. City to be given 48 hours notice prior to all testing of water and wastewater lines. City inspection is required for all testing of water and wastewater lines.

19. Where a water or wastewater line crosses above (or below) a storm sewer structure and the bottom (or top) of the pipe is within 18 inches of the top (or bottom) of the utility structure, the pipe shall be encased with concrete for a distance of at least 1 ft. on either side of the ditch line of the utility structure or the storm sewer. Concrete encasement will not be required for ductile iron (thickness Class 50), AWWA C-900 (SDR-18) 150 psi rated PVC in sizes to 12 inches or AWWA C-905 (SDR-25) 165 psi rated PVC in sizes larger than 12 inches. Concrete encasement shall conform to C.O.A. standard detail 505-1.

20. Contractor to notify the City of Cedar Park 48 hours prior to connecting to existing utilities.

21. All pipe bedding material shall conform to City of Austin Standard Specifications.

22. Tracer tape shall be installed on all water and wastewater mains regardless of the type of pipe or depth of pipe installed.

23. Unless otherwise specified by the Engineer all concrete is to be Class "A" (5 sack, 3000 psi ~ 28-days), and all reinforcing steel to be ASTM A615 60.

24. The City considers protection of its water system paramount to construction activities. City personnel will operate, or authorize the contractor to operate, all water valves that will pass through the City's potable water. The contractor may not operate any water valve, existing or proposed, that will allow water from the City's water system to flow to a proposed or existing water system without the express consent of the City. Notify the City two business days in advance of any request to operate a water valve. The general contractor may be fined $500 or more, including additional theft of water fines, if a water valve is operated in an unauthorized manner, regardless of who operated the valve.

25. All water valves over 24" in size shall have a by-pass line and valve installed. By-pass valves and lines are subsidiary to the cost of the valve unless specifically identified on the bid form.

26. All water valves, including those over 12" in size, shall be gate valves.

27. A double check backflow device in a vault shall be installed at the property line on all private fire lines. A detector water meter will be installed on this backflow device, and it must be a Sensus SRII 3/4" meter with AMI radio read capability. The City will provide this meter. Please reference the City of Cedar Park Double Check Backflow Prevention Assembly Detail.

28. All potable water system components installed after January 4, 2014, shall be "lead free" according to the United States Safe Drinking Water Act. The only components exempt from this requirement are fire hydrants. Components that are not clearly identified by the manufacturer as meeting this requirement by marking, or on the product packaging, or by pre-approved submittal, will be rejected for use. A NSF certification will be adequate if the certification has not expired as of January 4, 2014 and remains unexpired at the time of construction.

29. All pressure pipe shall have mechanical restraint and concrete thrust blocking at all valves, bends, tees, plugs, and other fittings.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
8/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

GENERAL NOTES (1 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-2

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 GEN NOTES.dwg 7/31/2025 12:09:38 PM, DWG To PDF.pc3, 1:1, JRW

CONSTRUCTION NOTES FOR SUBDIVISIONS & SITE PLANS CITY OF CEDAR PARK - CONTINUED

Revised March 22, 2021

STORM SEWER NOTES:

1. Manhole frames and covers and water valve boxes shall be raised to finished pavement grade at the owner's expense by the contractor with City inspection. All utility adjustments shall be completed prior to final paving construction. Contractor shall backfill around manholes and junction boxes with Class A concrete.
2. All manhole lids shall be 32" or larger, unless expressly approved in writing by the Engineering Department.
3. The location of any existing utility lines shown on these plans is the best available and may not be accurate. Any damage to existing utility lines, both known and unknown, shall be repaired at the expense of the contractor.
4. Pipe materials to be used for construction of utility lines: Unless otherwise specified by the Engineer, all storm sewer RCP shall be Class III. Corrugated Metal Pipe is not permitted.
5. All manhole and inlet covers shall read "City of Cedar Park".
6. Contractor to notify the City of Cedar Park 48 hours prior to connecting to existing utilities.
7. All pipe bedding material shall conform to City of Austin Standard Specifications.
8. Unless otherwise specified by the Engineer all concrete is to be Class "A" (5 sack, 3000 psi ~ 28-days), and all reinforcing steel to be ASTM A615 60.
9. Contractor to install and maintain geo-textile fabric barrier (inlet protection) around storm sewer leads and inlets to prevent silt and other material from entering the storm sewer collection system.
10. Install concrete safety end treatments to all culverts and ends of drainage pipe.
11. All curb inlets shall have an Almetek 4" Disc "No Dumping Drains to Waterway" marker.

SEQUENCE OF CONSTRUCTION NOTES:

The following sequence of construction shall be used for all development. The applicant is encouraged to provide any additional details appropriate for the particular development.

1. Temporary erosion and sedimentation controls are to be installed as indicated on the approved site plan or subdivision construction plan and in accordance with the Erosion Sedimentation Control Plan (ESC) and Stormwater Pollution Prevention Plan (SWPPP) that is required to be posted on the site. Install tree protection and initiate tree mitigation measures.
2. The General Contractor must contact the City Inspector at 512-401-5000, 72 hours prior to the scheduled date of the required on-site preconstruction meeting.
3. The General Contractor will follow the Erosion Sedimentation Control Plan (ESC) and Storm Water Pollution Prevention Plan (SWPPP) posted on the site. Temporary erosion and sedimentation controls will be revised, if needed, to comply with City Inspectors' directives, and revised construction schedule relative to the water quality plan requirements and the erosion plan.
4. Rough grade the pond(s) at 100% proposed capacity. Either the permanent outlet structure or a temporary outlet must be constructed prior to development of embankment or excavation that leads to ponding conditions. The outlet system must consist of a sump pit outlet and an emergency spillway meeting the requirements of the City of Austin Drainage Criteria Manual, as required. The outlet system shall be protected from erosion and shall be maintained throughout the course of construction until installation of the permanent water quality pond(s).
5. Temporary erosion and sedimentation controls will be inspected and maintained in accordance with the Erosion Sedimentation Control Plan (ESC) and Storm Water Pollution Prevention Plan (SWPPP) posted on the site.
6. Begin site clearing/construction (or demolition) activities.
7. Underground utilities will be installed, including fire hydrants.
8. 8Fire Department access will be installed where required by approved site plan.
9. Vertical construction may occur after the Pre-vertical Inspection has been cleared by the Fire Marshal.
10. Permanent water quality ponds or controls will be cleaned out and filter media will be installed prior to/concurrently with revegetation of site.
11. Complete construction and start revegetation of the site and installation of landscaping.
12. Upon completion of the site construction and revegetation of a project site, the design engineer shall submit an engineer's letter of concurrence bearing the engineer's seal, signature, and date to the City indicating that construction, including revegetation, is complete and in substantial compliance with the approved plans. After receiving this letter, a final inspection will be scheduled by the City Inspector.
13. Upon completion of landscape installation of a project site, the Landscape Architect shall submit a letter of concurrence to the City indicating that the required landscaping is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the City Inspector.
14. After a final inspection has been conducted by the City Inspector and with approval from the City Inspector, remove the temporary erosion and sedimentation controls and complete any necessary final revegetation resulting from removal of the controls. Conduct any maintenance and rehabilitation of the water quality ponds or controls.

Texas Commission on Environmental Quality Contributing Zone Plan General Construction Notes

TCEQ-0596 (Rev. July 15, 2015)

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any ground disturbance or construction activities. This notice must include:
   - The name of the approved project;
   - The activity start date; and
   - The contact information of the prime contractor.
2. All contractors conducting regulated activities associated with this project should be provided with complete copies of the approved Contributing Zone Plan (CZP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractor(s) should keep copies of the approved plan and approval letter on-site.
3. No hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.
4. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.
5. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.
6. Sediment must be removed from the sediment traps or sedimentation basins when it occupies 50% of the basin's design capacity.
7. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.
8. All excavated material that will be stored on-site must have proper E&S controls.
9. If portions of the site will have a cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.
10. The following records should be maintained and made available to the TCEQ upon request:
    - The dates when major grading activities occur;
    - The dates when construction activities temporarily or permanently cease on a portion of the site; and
    - The dates when stabilization measures are initiated.
11. The holder of any approved CZP must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

A. Any physical or operational modification of any best management practices (BMPs) or structure(s), including but not limited to temporary or permanent ponds, dams, berms, silt fences, and diversionary structures;

B. Any change in the nature or character of the regulated activity from that which was originally approved;

C. Any change that would significantly impact the ability to prevent pollution of the Edwards Aquifer; or

D. Any development of land previously identified as undeveloped in the approved contributing zone plan.

Austin Regional Office
12100 Park 35 Circle, Building A
Austin, Texas 78753-1808
Phone (512) 339-2929
Fax (512) 339-3795

San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480
Phone (210) 490-3096
Fax (210) 545-4329

ABBREVIATIONS:

BOT = BOTTOM
CL = CLASS
CNC = TOP OF CONCRETE
DET = DETENTION
D/S = DOWNSPOUT
DI = DUCTILE IRON
ESMT = EASEMENT
EX = EXISTING
FG = FINISHED GROUND
FH = FIRE HYDRANT
FL = FLOWLINE
FPS = FEET PER SECOND
FLG = FLANGE
GB = GRADE BREAK
GV = GATE VALVE
HPT = HIGHPOINT
LOC = LIMITS OF CONSTRUCTION
LPT = LOW POINT
MH = MANHOLE
MJ = MECHANICAL JOINT
NG = NATURAL GROUND
PAV = TOP OF PAVEMENT
PDWF = PEAK DRY WEATHER FLOW
PWWF = PEAK WET WEATHER FLOW
PROP = PROPOSED
PVC = POLYVINYL CHLORIDE
REF = REFERENCE
RS = RESILIENT SEAT
SCH = SCHEDULE
SF = SILT FENCE
SLAB = TOP OF SLAB
SS = STORM SEWER
SSL = STORM SEWER LINE
SW = TOP OF SIDEWALK
TC = TOP OF CURB
TG = TOP OF GRATE
TOF = TOP OF FOOTING
TOI = TOP OF INLET
TOW = TOP OF WALL
TP = TREE PROTECTION
TR = TOP OF MANHOLE RIM
TYP = TYPICAL
WL = WATER LINE
WQ = WATER QUALITY
WSE = WATER SURFACE ELEVATION
WTR = WATER
WWL = WASTEWATER LINE
WWMH = WASTEWATER MANHOLE

LEGEND

- REBAR WITH CAP FOUND
- FIRE HYDRANT
- WATER METER
- WATER VALVE
- WASTEWATER MANHOLE
- SIGN
- TREE (303)
- POWER POLE
- LIGHT POLE
- SPRLINKLER CONTROL VALVE
- BENCHMARK (BM #1)
- BARB-WIRE FENCE
- CHAIN-LINK FENCE
- EDGE OF PAVEMENT
- GAS LINE
- UNDERGROUND ELEC.
- UNDERGROUND TELE.
- WATER LINE
- WASTEWATER LINE
- WOOD FENCE
- EASEMENT
- PROPERTY LINE

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW
DRAWN: JRW
APPROVED: AAP
DATE: 7/31/2025

RECOMD
REVISIONS
DATE
No.

SHEET TITLE:

GENERAL NOTES (2 OF 2)

WP PROJECT NO.:
073-030

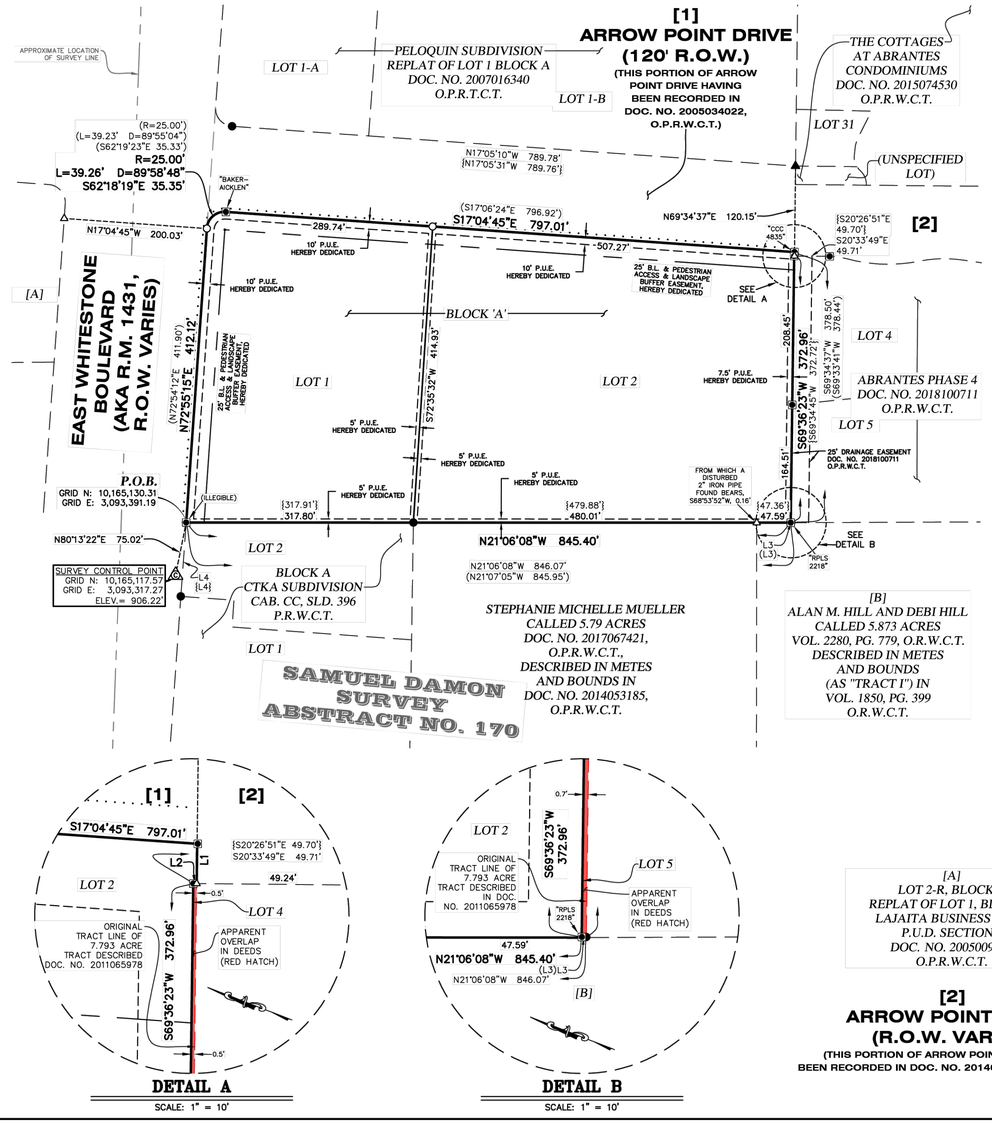
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-3

K:\CAD\073-030 CSW Arrow Point\4 CAD\PLANS\073-030 GEN-NOTES.dwg, 7/31/2025 1:18:29 PM, DWG To PDF.pc3, 1:1, JRW

CSW ARROW POINT

CITY OF CEDAR PARK, WILLIAMSON COUNTY, TEXAS

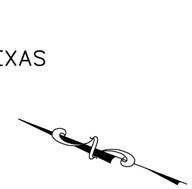


DETAIL A

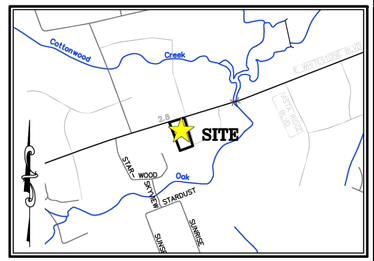
SCALE: 1" = 10'

DETAIL B

SCALE: 1" = 10'



GRAPHIC SCALE: 1" = 100'



VICINITY MAP

SCALE: 1" = 2000'

BEARING BASIS:
ALL BEARINGS ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, GRID NORTH, CENTRAL ZONE, (4203), NAD83, ALL DISTANCES WERE ADJUSTED TO SURFACE USING A COMBINED SCALE FACTOR OF 1.000127828258.

SURVEY CONTROL:
CONTROL FOR THIS SURVEY IS BASED ON A 1/2" IRON ROD WITH "4WARD CONTROL" CAP SET, GRID COORDINATES (STATE PLANE TEXAS CENTRAL – 4203) AND ELEVATIONS (NAVD88) SHOWN HEREON WERE COMPUTED FROM NGS O.P.U.S. SOLUTION REPORT DERIVED FROM 4WARD STATIC DATA COLLECTED OCTOBER 22, 2024.

FLOODPLAIN NOTE:
THIS PROPERTY IS LOCATED WITHIN ZONE 'X', AREAS OF MINIMAL FLOOD HAZARD, AS SHOWN ON F.I.R.M. MAP NO. 48491C0470F, WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS, MAP REVISED DECEMBER 20, 2019.

THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR THE STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

OWNERS: CENTRAL SOUTHWEST TEXAS DEVELOPMENT LLC

ADDRESS: 1703 W. 5th St. Ste 850
AUSTIN, TX 78703

ACREAGE: 7.7924 ACRES (339,437 SQ. FT.)

ACREAGE BY LOT:

LOT 1	3.0864 ACRES	(134,444 SQ. FT.)
LOT 2	4.7060 ACRES	(204,993 SQ. FT.)
TOTAL:	7.7924 ACRES	(339,437 SQ. FT.)

SURVEY: SAMUEL DAMON SURVEY,ABSTRACT NO. 170

NUMBER OF LOTS AND PROPOSED USE:
DEVELOPMENT LOTS: 2

SUBMITTAL DATE: APRIL 21, 2025

SURVEYOR: 4WARD LAND SURVEYING, LLC
PHONE: (512) 537-2384

ENGINEER: WAELTZ & PRETE, INC.
PHONE: (512) 505-8953

LINE TABLE

LINE #	DIRECTION	LENGTH
L1	S69°34'37"W	5.55'
L2	N20°33'49"W	0.47'
L3	S21°06'08"E	0.66'
L4	S72°59'33"W	103.51'

RECORD LINE TABLE

LINE #	DIRECTION	LENGTH
--	-----	--
--	-----	--
(L3)	S21°07'05"E	0.67'
[L4]	S05°50'56"W	103.69'

LEGEND

	PROPERTY LINE
	ADJACENT PROPERTY LINES
	EXISTING EASEMENT LINES
	PROPOSED SIDEWALK
●	1/2" IRON ROD FOUND (UNLESS NOTED)
△	CALCULATED POINT
○	1/2" IRON ROD WITH "4WARD BOUNDARY" CAP SET
◉	IRON ROD WITH "CBD SETSTONE" CAP FOUND (UNLESS NOTED)
▲	MAG NAIL FOUND
⚠	SURVEY CONTROL POINT
CAB./SLD.	CABINET, SLIDE
P.O.B.	POINT OF BEGINNING
DOC. NO.	DOCUMENT NUMBER
VOL./PG.	VOLUME, PAGE
B.L.	BUILDING LINE
P.R.W.C.T.	PLAT RECORDS, WILLIAMSON COUNTY, TEXAS
O.P.R.W.C.T.	OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS
O.R.W.C.T.	OFFICIAL RECORDS, WILLIAMSON COUNTY, TEXAS
(.....)	RECORD INFORMATION PER PLAT DEED DOC. NO. 2011065978
{.....}	RECORD INFORMATION FOR ADJACENT PROPERTIES

[A]
LOT 2-R, BLOCK B
REPLAT OF LOT 1, BLOCK B
LAJAITA BUSINESS PARK
P.U.D. SECTION 1
DOC. NO. 2005009610
O.P.R.W.C.T.

[2]
ARROW POINT DRIVE
(R.O.W. VARIES)
(THIS PORTION OF ARROW POINT DRIVE HAVING BEEN RECORDED IN DOC. NO. 2014083287, O.P.R.W.C.T.)

2025-4-SFP

4WARD Land Surveying
A Limited Liability Company
PO Box 90876, Austin Texas 78709
INFO@4WARDLS.COM (512) 537-2384
TBPELS FIRM #10174300

Date:	5/22/2025
Project:	01948
Scale:	1" = 100'
Reviewer:	DV
Tech:	TE
Field Crew:	JC/MW
Survey Date:	OCT. 2024
Sheet:	1 OF 3

P:\01948\Dwg\01948_Plot.dwg

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

PLAT (1 OF 3)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-4

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 PLAT.dwg, 7/31/2025 12:04:46 PM, _DWG To PDF.pc3, 1:1, JRW

CSW ARROW POINT

CITY OF CEDAR PARK, WILLIAMSON COUNTY, TEXAS

FIELD NOTES:

BEING A DESCRIPTION OF A TRACT OF LAND CONTAINING 7.7924 ACRES (339,437 SQUARE FEET) OF LAND, MORE OR LESS, BEING OUT OF THE SAMUEL DAMON SURVEY, ABSTRACT NO. 170, IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A CALLED 7.793 ACRE TRACT CONVEYED TO FIRST CEDAR PARK CAPITAL FUNDING, LLC IN DOCUMENT NO. 2011065978 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.T.), SAID 7.7924 ACRES BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING, AT A 1/2-INCH IRON ROD WITH ILLEGIBLE CAP FOUND IN THE SOUTHEAST RIGHT-OF-WAY LINE OF EAST WHITESTONE BOULEVARD (A.K.A. RANCH TO MARKET ROAD 1431, RIGHT-OF-WAY VARIES), BEING THE NORTHWEST CORNER OF SAID 7.793 ACRE TRACT, AND BEING THE NORTHEAST CORNER OF LOT 2, BLOCK A, CTKA SUBDIVISION, A SUBDIVISION RECORDED IN CABINET CC, SLIDE 396 OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS (P.R.W.C.T.) FOR THE NORTHWEST CORNER AND POINT OF BEGINNING HEREOF, FROM WHICH A 1/2-INCH IRON ROD FOUND IN THE SOUTHEAST RIGHT-OF-WAY LINE OF SAID EAST WHITESTONE BOULEVARD, BEING THE NORTHWEST CORNER OF SAID LOT 2, AND BEING THE NORTHEAST CORNER OF LOT 1 OF SAID BLOCK A, CTKA SUBDIVISION, BEARS, S72°59'33"W, A DISTANCE OF 103.51 FEET;

THENCE, WITH THE SOUTHEAST RIGHT-OF-WAY LINE OF SAID EAST WHITESTONE BOULEVARD AND THE NORTHWEST LINE OF SAID 7.793 ACRE TRACT, N72°55'15"E, A DISTANCE OF 412.12 FEET TO A 1/2-INCH IRON ROD WITH "4WARD BOUNDARY" CAP SET FOR A POINT OF CURVATURE HEREOF, SAID POINT BEING AT THE INTERSECTION OF THE SOUTHEAST RIGHT-OF-WAY LINE OF SAID EAST WHITESTONE BOULEVARD AND THE WEST RIGHT-OF-WAY LINE OF ARROW POINT DRIVE (120' RIGHT-OF-WAY, THIS PORTION OF ARROW POINT DRIVE HAVING BEEN DEDICATED TO THE CITY OF CEDAR PARK AS A CALLED 2.26 ACRE TRACT IN DOCUMENT NO. 2005034022, O.P.R.W.C.T.);

THENCE, WITH THE WEST RIGHT-OF-WAY LINE OF SAID ARROW POINT DRIVE AND THE EAST LINE OF SAID 7.793 ACRE TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1) ALONG A CURVE TO THE RIGHT, WHOSE RADIUS IS 25.00 FEET, WHOSE ARC LENGTH IS 39.26 FEET, AND WHOSE CHORD BEARS, S62°18'19"E, A DISTANCE OF 35.35 FEET TO A 1/2-INCH IRON ROD WITH "BAKER-AICKLEN" CAP FOUND FOR A POINT OF TANGENCY HEREOF, AND
2) S17°04'45"E, A DISTANCE OF 797.01 FEET TO A 1/2-INCH IRON ROD WITH "CCC 4835" CAP FOUND FOR THE SOUTHEAST CORNER HEREOF, SAID POINT BEING THE SOUTHWEST CORNER OF SAID CALLED 2.26 ACRE PORTION OF ARROW POINT DRIVE, BEING IN THE NORTH LINE OF THE PORTION OF ARROW POINT DRIVE HAVING BEEN DEDICATED PER ABRANTES PHASE 1, A SUBDIVISION RECORDED IN DOCUMENT NO. 2014083287 (O.P.R.W.C.T.), AND BEING THE SOUTHEAST CORNER OF SAID 7.793 ACRE TRACT;

THENCE, WITH THE WEST RIGHT-OF-WAY LINE OF SAID ARROW POINT DRIVE AND THE SOUTH LINE OF SAID 7.793 ACRE TRACT, S69°34'37"W, A DISTANCE OF 5.55 FEET TO A CALCULATED POINT FOR AN ANGLE POINT HEREOF, SAID POINT BEING THE NORTHWEST CORNER OF SAID PORTION OF ARROW POINT DRIVE HAVING BEEN DEDICATED PER ABRANTES PHASE 1, AND BEING IN THE EAST LINE OF LOT 4, BLOCK A, ABRANTES PHASE 4, A SUBDIVISION RECORDED IN DOCUMENT NO. 2018100711 (O.P.R.W.C.T.), FROM WHICH A 1/2-INCH IRON ROD WITH "CBD SETSTONE" CAP FOUND FOR AN ANGLE POINT IN THE WEST RIGHT-OF-WAY LINE OF SAID ARROW POINT DRIVE, BEING AN ANGLE POINT IN THE EAST LINE OF SAID LOT 4, BEARS, S20°33'49"E, A DISTANCE OF 49.24 FEET;

THENCE, LEAVING THE WEST RIGHT-OF-WAY LINE OF SAID ARROW POINT DRIVE, WITH THE EAST LINE OF SAID LOT 4, IN CONFLICT WITH THE SOUTH LINE OF SAID 7.793 ACRE TRACT, AND OVER AND ACROSS SAID 7.793 ACRE TRACT, N20°33'49"W, A DISTANCE OF 0.47 FEET TO A 1/2-INCH IRON ROD WITH "CBD SETSTONE" CAP FOUND FOR AN INTERNAL ELL-CORNER HEREOF, SAID POINT BEING THE NORTHEAST CORNER OF SAID LOT 4;

THENCE, OVER AND ACROSS SAID 7.793 ACRE TRACT, IN PART WITH THE NORTH LINE OF SAID LOT 4, AND IN PART WITH THE NORTH LINE OF LOT 5 OF SAID BLOCK A, ABRANTES PHASE 4, IN CONFLICT WITH THE SOUTH LINE OF SAID 7.793 ACRE TRACT, S69°36'23"W, PASSING AT A DISTANCE OF 208.45 FEET A 1/2-INCH IRON ROD WITH "CBD SETSTONE" CAP FOUND FOR THE COMMON NORTH CORNER OF SAID LOT 4 AND SAID LOT 5, AND CONTINUING FOR A TOTAL DISTANCE OF 372.96 FEET TO A 1/2-INCH IRON ROD WITH "RPLS 2218" CAP FOUND FOR THE SOUTHWEST CORNER HEREOF, SAID POINT BEING IN THE WEST LINE OF SAID 7.793 ACRE TRACT, BEING THE NORTHWEST CORNER OF SAID LOT 5, AND BEING IN THE EAST LINE OF A CALLED 5.873 ACRE TRACT CONVEYED TO ALAN M. HILL AND DEBI HILL IN VOLUME 2280, PAGE 779 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS (O.R.W.C.T.), FROM WHICH A 1/2-INCH IRON ROD FOUND FOR THE SOUTHWEST CORNER OF SAID 7.793 ACRE TRACT, BEING IN THE COMMON LINE OF SAID LOT 5 AND SAID 5.873 ACRE TRACT, BEARS, S21°06'08"E, A DISTANCE OF 0.66 FEET;

THENCE, WITH THE WEST LINE OF SAID 7.793 ACRE TRACT, IN PART WITH THE EAST LINE OF SAID 5.873 ACRE TRACT, IN PART WITH THE EAST LINE OF A CALLED 5.79 ACRE TRACT CONVEYED TO STEPHANIE MICHELLE MUELLER IN DOCUMENT NO. 2017067412 (O.P.R.W.C.T.), AND IN PART WITH THE EAST LINE OF SAID LOT 2, N21°06'08"W, PASSING AT A DISTANCE OF 47.59 FEET A CALCULATED POINT FOR THE COMMON EAST CORNER OF SAID 5.873 ACRE TRACT AND SAID 5.79 ACRE TRACT, FROM WHICH CALCULATED POINT A DISTURBED 2-INCH IRON PIPE FOUND BEARS, S68°53'52"W, A DISTANCE OF 0.16 FEET, PASSING AT A DISTANCE OF 527.60 FEET A 1/2-INCH IRON ROD FOUND FOR THE COMMON EAST CORNER OF SAID 5.79 ACRE TRACT AND SAID LOT 2, AND CONTINUING FOR A TOTAL DISTANCE OF 845.40 FEET TO THE POINT OF BEGINNING AND CONTAINING 7.7924 ACRES (339,437 SQUARE FEET) OF LAND, MORE OR LESS.

2025-4-SFP

4WARD Land Surveying
A Limited Liability Company
PO Box 90876, Austin Texas 78709
INFO@4WARDLS.COM (512) 537-2384
TBPELS FIRM #10174300

Date:	5/22/2025
Project:	01948
Scale:	N/A
Reviewer:	DV
Tech:	TE
Field Crew:	JC/MW
Survey Date:	OCT. 2024
Sheet:	2 OF 3

P:\01948\Dwg\01948_Plat.dwg

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/7/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

PLAT (2 OF 3)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - _____

SHEET NO.:
C-5

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 PLAT.dwg, 7/31/2025 12:05:30 PM, _DWG To PDF.pc3, 1:1, JRW

CSW ARROW POINT

CITY OF CEDAR PARK, WILLIAMSON COUNTY, TEXAS

STATE OF TEXAS §
COUNTY OF WILLIAMSON §

KNOW ALL MEN BY THESE PRESENTS:

I, ROBERT O'FARRELL, MANAGER OF CENTRAL SOUTHWEST TEXAS DEVELOPMENT LLC, OWNER OF THAT CERTAIN TRACT OR PARCEL OF LAND CONTAINING 7.7924 ACRES (339,437 SQUARE FEET) OF LAND, MORE OR LESS, BEING OUT OF THE SAMUEL DAMON SURVEY, ABSTRACT NO. 170, IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A CALLED 7.793 ACRE TRACT CONVEYED TO FIRST CEDAR PARK CAPITAL FUNDING, LLC IN DOCUMENT NO. 2011065978 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.T.), DO HEREBY SUBDIVIDE SAID TRACT AS SHOWN HEREON; DO HEREBY COVENANT TO ALL RESTRICTIONS LISTED HEREIN, WHICH SHALL RUN WITH THE LAND; AND DO HEREBY DEDICATE TO THE CITY OF CEDAR PARK, THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF CEDAR PARK MAY DEEM APPROPRIATE. I HEREBY BIND MY HEIRS, SUCCESSORS, AND ASSIGNS TO WARRANT AND FOREVER DEFEND SUCH DEDICATIONS, ALL AND SINGULAR, TO THE CITY OF CEDAR PARK AGAINST EVERY PERSON WHOMSOEVER CLAIMING OR TO CLAIM THE SAME OR ANY PART THEREOF. THIS SUBDIVISION IS TO BE KNOWN AS:

CSW ARROW POINT

TO CERTIFY WHICH, WITNESS BY MY HAND THIS _____ DAY OF _____, 20___.

_____
BY:
ROBERT O'FARRELL, MANAGER
CENTRAL SOUTHWEST TEXAS DEVELOPMENT LLC
1703 W. 5TH STREET
SUITE 850
AUSTIN, TEXAS 78703

STATE OF TEXAS §
COUNTY OF WILLIAMSON §

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED ROBERT O'FARRELL, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT OF WRITING, AND HE ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED.

WITNESS MY HAND AND SEAL OF OFFICE, THIS THE _____ DAY OF _____, 20___ A.D.

_____
NOTARY PUBLIC FOR WILLIAMSON, COUNTY, TEXAS

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

I, <NAME OF CURRENT LIEN HOLDER>, LIEN HOLDER OF THE CERTAIN <ACREAGE> TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT NO. _____ OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CONSENT TO THE SUBDIVISION OF SAID TRACT AS SHOWN HEREON; DO FURTHER HEREBY JOIN, APPROVE AND COVENANT TO ALL RESTRICTIONS LISTED HEREIN; AND DO HEREBY DEDICATE TO <THE CITY OF CEDAR PARK OR WILLIAMSON COUNTY> THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF CEDAR PARK/WILLIAMSON COUNTY MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS CSW ARROW POINT.

TO CERTIFY WHICH, WITNESS BY MY HAND THIS DAY OF , 2025.

_____
<LIEN HOLDER'S TYPED NAME AND ADDRESS>

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

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED <LIEN HOLDER'S NAME>, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 20___.
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS
MY COMMISSION EXPIRES ON:

ENGINEER'S CERTIFICATION:

I, ANTONIO A. PRETE, REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS SUBDIVISION IS IN THE EDWARDS AQUIFER CONTRIBUTING ZONE, AND IS NOT ENCROACHED BY A ZONE A FLOOD AREA, AS DENOTED HEREIN, AND AS DEFINED BY FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, COMMUNITY PANEL NUMBER 48491C0470F, EFFECTIVE DATE DECEMBER 20, 2019 AND THAT EACH LOT CONFORMS TO THE CITY OF CEDAR PARK REGULATIONS.
THE FULLY DEVELOPED, CONCENTRATED STORMWATER RUNOFF RESULTING FROM THE ONE HUNDRED (100) YEAR FREQUENCY STORM IS CONTAINED WITHIN THE DRAINAGE EASEMENTS SHOWN AND/OR PUBLIC RIGHTS-OF-WAY DEDICATED BY THIS PLAT.
TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT WILLIAMSON COUNTY, TEXAS, THIS DAY OF_____, 2025.

_____
ANTONIO A. PRETE, P.E. DATE
REGISTERED PROFESSIONAL ENGINEER NO. 93759
WAELTZ & PRETE, INC. – TBPLS FIRM NO. 10308

CEDAR PARK PLAT NOTES (REVISION DATE 11/2/2021):

1. CONSTRUCTION PLANS AND SPECIFICATIONS FOR ALL SUBDIVISION IMPROVEMENTS SHALL BE REVIEWED AND APPROVED BY THE CITY OF CEDAR PARK PRIOR TO ANY CONSTRUCTION WITHIN THE SUBDIVISION.

2. ALL SUBDIVISION CONSTRUCTION SHALL CONFORM TO THE CITY OF CEDAR PARK CODE OF ORDINANCES, CONSTRUCTION STANDARDS, AND GENERALLY ACCEPTED ENGINEERING PRACTICES.

3. ON-SITE STORM WATER DETENTION FACILITIES WILL BE PROVIDED TO REDUCE POST-DEVELOPMENT PEAK RATES OF DISCHARGE OF THE 2, 10, 25 AND 100-YR. STORM EVENTS.

4. THE OWNER OF THIS SUBDIVISION, AND HIS OR HER SUCCESSORS AND ASSIGNS, ASSUMES RESPONSIBILITY FOR PLANS FOR CONSTRUCTION OF SUBDIVISION IMPROVEMENTS WHICH COMPLY WITH APPLICABLE CODES AND REQUIREMENTS OF THE CITY OF CEDAR PARK. THE OWNER UNDERSTANDS AND ACKNOWLEDGES THAT PLAT VACATION OR REPLATTING MAY BE REQUIRED, AT THE OWNER'S SOLE EXPENSE, IF PLANS TO CONSTRUCT THIS SUBDIVISION DO NOT COMPLY WITH SUCH CODES AND REQUIREMENTS.

5. NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO THE CITY OF CEDAR PARK WATER DISTRIBUTION AND WASTEWATER COLLECTION FACILITIES.

6. THIS SUBDIVISION PLAT WAS APPROVED AND RECORDED BEFORE THE CONSTRUCTION AND ACCEPTANCE OF STREETS AND/OR OTHER SUBDIVISION IMPROVEMENTS. THE OWNER OF THIS SUBDIVISION AND HIS OR HER SUCCESSORS AND ASSIGNS, ARE RESPONSIBLE FOR THE CONSTRUCTION OF ALL STREETS, WATER SYSTEMS, WASTEWATER SYSTEMS, AND OTHER FACILITIES NECESSARY TO SERVE THE LOTS WITHIN THE SUBDIVISION.

7. SITE DEVELOPMENT CONSTRUCTION PLANS SHALL BE REVIEWED AND APPROVED BY THE CITY OF CEDAR PARK PRIOR TO ANY CONSTRUCTION.

8. WASTEWATER AND WATER SYSTEMS SHALL CONFORM TO TCEQ (TEXAS COMMISSION ON ENVIRONMENTAL QUALITY) AND STATE BOARD OF INSURANCE REQUIREMENTS. THE OWNER UNDERSTANDS AND ACKNOWLEDGES THE PLAT VACATION OR RE-PLATTING MAY BE REQUIRED, AT THE OWNER'S SOLE EXPENSE, IF PLANS TO DEVELOP THIS SUBDIVISION DO NOT COMPLY WITH SUCH CODES AND REQUIREMENTS.

9. NO BUILDINGS, FENCES, LANDSCAPING OR OTHER STRUCTURES ARE PERMITTED WITHIN DRAINAGE EASEMENTS SHOWN, EXCEPT AS APPROVED BY THE CITY OF CEDAR PARK PUBLIC WORKS DEPARTMENT.

10. PROPERTY OWNER SHALL PROVIDE FOR ACCESS TO DRAINAGE EASEMENTS AS MAY BE NECESSARY AND SHALL NOT PROHIBIT ACCESS BY CITY OF CEDAR PARK.

11. ALL EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE PROPERTY OWNER OR HIS OR HER ASSIGNS.

12. FISCAL SURETY FOR SUBDIVISION CONSTRUCTION, IN A FORM ACCEPTABLE TO THE CITY OF CEDAR PARK, SHALL BE PROVIDED PRIOR TO PLAT APPROVAL BY THE PLANNING AND ZONING COMMISSION.

13. IN ADDITION TO THE EASEMENT SHOWN HEREON, A TEN (10) FOOT WIDE PUBLIC UTILITY EASEMENT (P.U.E.) IS HEREBY DEDICATED ADJACENT TO STREET ROW ON ALL LOTS. A FIVE (5) FOOT WIDE P.U.E. IS HEREBY DEDICATED ALONG EACH SIDE LOT LINE. A SEVEN AND ONE HALF (7 ½) FOOT WIDE P.U.E. IS HEREBY DEDICATED ADJACENT TO ALL REAR LOT LINES.

14. COMMUNITY IMPACT FEES FOR INDIVIDUAL LOTS TO BE PAID PRIOR TO ISSUANCE OF ANY BUILDING PERMITS.

15. DEVELOPER SHALL BE RESPONSIBLE FOR ALL RELOCATION AND MODIFICATIONS TO EXISTING UTILITIES.

16. NO PORTION OF THIS TRACT IS WITHIN A FLOOD HAZARD AREA AS SHOWN ON THE FLOOD INSURANCE RATE MAP PANEL # 48491C0470F FOR WILLIAMSON CO., EFFECTIVE DECEMBER 20, 2019.

17. TEMPORARY AND PERMANENT EASEMENTS TO BE PROVIDED AS REQUIRED FOR OFFSITE WATER, WASTEWATER AND DRAINAGE IMPROVEMENTS.

18. ALL PROPOSED ACCESS POINTS AND/OR ACCESS EASEMENTS INTERSECTING THE PUBLIC ROADWAY ROW SHALL BE IN COMPLIANCE WITH CITY ACCESS STANDARDS AS DESCRIBED IN CHAPTER 14 OF CITY CODE.

19. THIS SITE IS LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE. DEVELOPMENT OF THIS SITE WILL COMPLY WITH ALL APPLICABLE TCEQ EDWARDS AQUIFER RULES.

20. THIS SUBDIVISION IS NOT SUBJECT TO THE LAKE TRAVIS NON-POINT SOURCE POLLUTION CONTROL ORDINANCE OF THE CEDAR PARK CITY CODE. A NON-POINT SOURCE POLLUTION DEVELOPMENT PERMIT IS REQUIRED PRIOR TO ANY CONSTRUCTION WITHIN THE SUBDIVISION.

21. PRIOR TO SUBDIVISION/SITE PLAN APPROVAL, THE ENGINEER SHALL SUBMIT TO THE CITY OF CEDAR PARK (COCP) DOCUMENTATION OF SUBDIVISION/SITE REGISTRATION WITH THE TEXAS DEPARTMENT OF LICENSING AND REGULATIONS (TDLR) AND PROVIDE DOCUMENTATION OF REVIEW AND COMPLIANCE OF THE SUBDIVISION CONSTRUCTION PLANS WITH TEXAS ARCHITECTURAL BARRIERS ACT (TABA).

22. ALL PROPOSED FENCES AND WALLS ADJACENT TO INTERSECTING PUBLIC ROADWAY RIGHT-OF-WAY OR ADJACENT TO PRIVATE ACCESS POINTS SHALL BE IN COMPLIANCE WITH CITY CODE SECTION 14.05.007 SIGHT DISTANCE REQUIREMENTS. INSTALLING A FENCE OR WALL WHICH DOES NOT COMPLY WITH THE CITY'S SIGHT DISTANCE REQUIREMENTS OR FENCING REGULATIONS IS A VIOLATION OF THE CITY'S ORDINANCE AND MAY BE PUNISHABLE PURSUANT TO SECTION 1.01.009.

23. NO BUILDINGS, FENCES, RETAINING WALLS, SIGNS, PONDS, TREES, PARKING LOTS, OR OTHER STRUCTURES ARE PERMITTED WITHIN ANY OF THE PUBLIC WATER OR WASTEWATER EASEMENTS SHOWN ON THIS PLAT EXCEPT AS APPROVED BY THE CITY OF CEDAR PARK PUBLIC WORKS DEPARTMENT.

ADDITIONAL PLAT NOTES:

24. THE SUBDIVISION WILL BE IN FULL COMPLIANCE WITH THE LANDSCAPE AND TREE ORDINANCE OF THE CITY OF CEDAR PARK, TEXAS.

25. WATER AND WASTEWATER SERVICES TO BE PROVIDED BY THE CITY OF CEDAR PARK, TEXAS.

26. PRIOR TO CONSTRUCTION OF ANY IMPROVEMENTS ON LOTS IN THIS SUBDIVISION, BUILDING PERMITS WILL BE OBTAINED FROM THE CITY OF CEDAR PARK.

27. SETBACKS NOT SHOWN ON LOTS SHALL CONFORM TO THE CITY OF CEDAR PARK ZONING ORDINANCE.

28. THIS SUBDIVISION SHALL COMPLY WITH THE MAJOR CORRIDOR ORDINANCE OF THE CITY OF CEDAR PARK.

29. THIS SUBDIVISION SHALL COMPLY WITH THE MAJOR CORRIDOR STANDARDS OF THE CITY OF CEDAR PARK ZONING CODE.

30. SIDEWALKS SHALL BE INSTALLED ALONG ALL PUBLIC ROW FRONTAGE.

31. PRIOR TO CONNECTING TO CITY OF CEDAR PARK WATER, ANY EXISTING ON-SITE WATER WELLS WOULD NEED TO BE CAPPED AND PLUGGED IN ACCORDANCE WITH THE TCEQ REQUIREMENTS OUTLINED IN 16 TAC 76.104 AND RECORDED IN THE TEXAS WATER DEVELOPMENT BOARD'S PLUGGED WELL DATABASE.

32. PRIOR TO CONNECTING TO CITY OF CEDAR PARK WASTEWATER, ANY EXISTING ON-SITE SEPTIC SYSTEM FACILITY (OSSF) WOULD NEED TO BE PROPERLY ABANDONED IN ACCORDANCE WITH THE TCEQ REQUIREMENTS OUTLINED IN 30 TAC 285.

33. ALL DRIVE LANES, FIRE LANES, AND DRIVEWAYS WITHIN THIS SUBDIVISION SHALL PROVIDE RECIPROCAL ACCESS FOR INGRESS TO ALL OTHER LOTS WITHIN THIS SUBDIVISION AND ADJACENT SIMILARLY ZONED PROPERTIES. EACH OWNER IS RESPONSIBLE FOR MAINTENANCE OF ALL THE PORTION OF THE DRIVE LANES, FIRE LANES, AND DRIVEWAYS WITHIN EACH OWNERS RESPECTIVE PROPERTY TO ALLOW CONTINUOUS USE AND ACCESS TO THE DRIVE LANES, FIRE LANES, AND DRIVEWAYS.

34. LOTS 1 & 2 SHALL SHARE DRIVEWAY ACCESS TO ARROWPOINT DRIVE AND WHITESTONE BOULEVARD, AS DESCRIBED IN THE CONDITIONS, COVENANTS, AND RESTRICTIONS (CCR), DOCUMENT # _____.

SURVEYOR'S CERTIFICATION:

I, STEVEN M. DUARTE, REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE FROM AN ACTUAL SURVEY MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON, THAT ALL EXISTING EASEMENTS ON OR ADJACENT TO THE PROPOSED SUBDIVISION ARE SHOWN AS NOTED IN THE MOST RECENT TITLE SURVEY OR DISCOVERED WITH A TITLE SEARCH PREPARED IN CONJUNCTION WITH THE MOST RECENT PURCHASE OF THE PROPERTY, AND THAT THERE ARE NO APPARENT DISCREPANCIES, CONFLICTS, OVERLAPPING OF IMPROVEMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE, EXCEPT AS SHOWN ON THE ACCOMPANYING PLAT, AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF CEDAR PARK, TEXAS. THIS PLAT COMPLIES WITH CHAPTER 12, SECTION 12 OF THE CEDAR PARK CITY CODE.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT CEDAR PARK, WILLIAMSON COUNTY, TEXAS, THIS DAY OF _____, 20___.

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT. FOR REVIEW PURPOSES ONLY.

_____
PAUL N. GUERRERO, R.P.L.S. DATE
TEXAS REGISTRATION NO. 5992
PGUERRERO@4WARDLS.COM

SURVEYING BY:
4WARD LAND SURVEYING
2201 WOODWARD STREET, SUITE 2201
AUSTIN, TEXAS 78744
512-537-2384

THIS SUBDIVISION TO BE KNOWN AS CSW ARROW POINT HAS BEEN ACCEPTED AND APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS, ACCORDING TO THE MINUTES OF THE MEETING OF THE CEDAR PARK PLANNING AND ZONING COMMISSION ON THE _____ DAY OF _____, 20____ A.D.

_____
RALPH E STRADER, II, CHAIR DATE

_____
KIMBERLY BRADFORD-BROWN, SECRETARY DATE

_____
BOB INGRAHAM, SECRETARY

JURISDICTION ON THIS THE _____ DAY OF _____, 20____ A.D.

I, AMY LINK, DIRECTOR OF DEVELOPMENT SERVICES OF THE CITY OF CEDAR PARK, TEXAS, DO HEREBY CERTIFY ATTEST AND AUTHORIZE THIS PLAT TO BE FILED FOR RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

_____
AMY LINK, DIRECTOR OF DEVELOPMENT SERVICES DATE

STATE OF TEXAS §
COUNTY OF WILLIAMSON §

THAT I, NANCY RISTER, CLERK OF THE COUNTY COURT OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING AND ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE _____ DAY OF _____, 20____ A.D., AT _____ O'CLOCK ___ M., AND DULY RECORDED ON THE _____ DAY OF _____, 20____ A.D., AT _____ O'CLOCK ___ M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN DOCUMENT NUMBER _____.

WITNESS MY HAND AND SEAL OF OFFICE OF THE COUNTY COURT OF SAID COUNTY, THIS THE _____ DAY OF _____, 20____ A.D.

NANCY RISTER, CLERK, COUNTY COURT,
WILLIAMSON COUNTY, TEXAS

_____
BY: DEPUTY

2025-4-SFP

4WARD Land Surveying
A Limited Liability Company
PO Box 90876, Austin Texas 78709
INFO@4WARDLS.COM (512) 537-2384
TBPELS FIRM #10174300

Date:	5/22/2025
Project:	01948
Scale:	N/A
Reviewer:	DV
Tech:	TE
Field Crew:	JC/MW
Survey Date:	OCT. 2024
Sheet:	3 OF 3

P:\01948\Dwg\01948_Plat.dwg

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 PLAT.dwg, 7/31/2025 12:10:18 PM, DWG To PDF.pc3, 1:1, /RW

WAELTZ & PRETE, INC.
CIVIL ENGINEERS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
7/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

PLAT (3 OF 3)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - ___ - _____

SHEET NO.:
C-6

BENCHMARK:

TBM #1:
SQUARE CUT ON TOP OF CONCRETE CURB INLET FOUND IN THE SOUTH MARGIN OF EAST WHITESTONE BOULEVARD, ±35' NORTHWEST OF A TELECOMMUNICATION SIGN FOUND IN THE SOUTH MARGIN OF EAST WHITESTONE BOULEVARD, AND ±150' SOUTHWEST OF A WATER MANHOLE FOUND IN THE SOUTH MARGIN OF EAST WHITESTONE BOULEVARD.

ELEVATION = 904.05'
VERTICAL DATUM = NAVD-88
GRID COORDINATES
N = 10165158.080
E = 3093346.655

TBM #2:
SQUARE CUT ON TOP OF CONCRETE CURB INLET FOUND IN THE EAST MARGIN OF ARROW POINT DRIVE, ±6' SOUTHEAST FROM A STORM MANHOLE FOUND IN THE EAST MARGIN OF ARROW POINT DRIVE, AND ±20' SOUTHEAST OF A WASTEWATER MANHOLE FOUND IN THE EAST MARGIN OF ARROW POINT DRIVE.

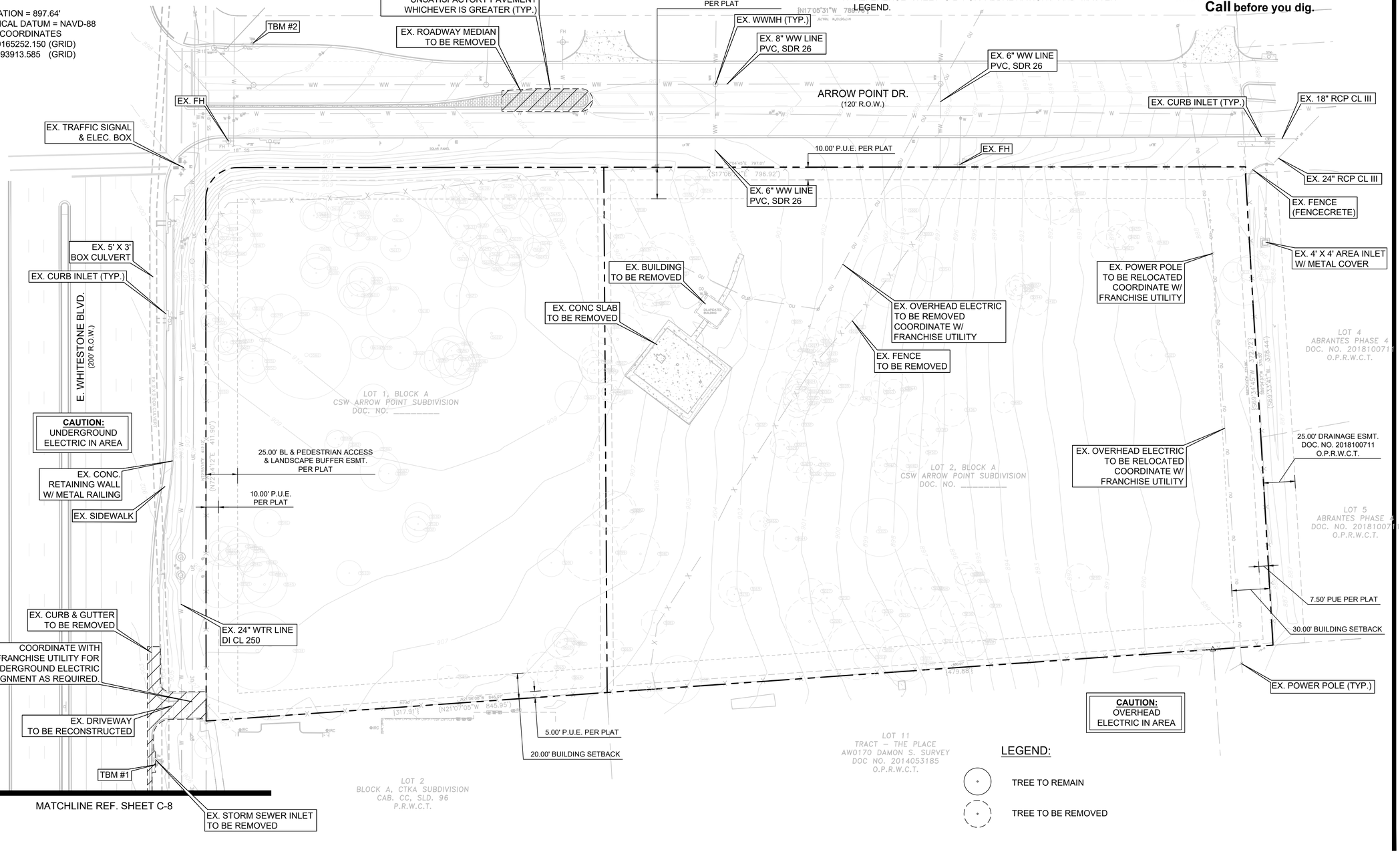
ELEVATION = 897.64'
VERTICAL DATUM = NAVD-88
GRID COORDINATES
N = 10165252.150 (GRID)
E = 3093913.585 (GRID)

NOTES:

1. DISTANCES ARE GRID DISTANCES.
2. COORDINATES ARE GRID VALUES WITH BEARING BASIS: NAD83, TEXAS CENTRAL (4203), STATE PLANE SYSTEM. COORDINATES FOR THIS FILE SURFACE BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.000127828258. BASED ON THE TEXAS STATE PLAN COORDINATE SYSTEM, NAD83.
3. SURVEY WAS PROVIDED BY 4WARD LAND SURVEYING, INC. ALL RESPONSIBILITY FOR THE ACCURACY OF THIS SURVEY REMAINS WITH THE SURVEYOR WHO PREPARED IT. IN USING THIS SURVEY, THE ENGINEER MUST RELY UPON THE ACCURACY OF THE WORK PROVIDED BY THE SURVEYOR.
4. CONTRACTOR'S SURVEYOR SHALL LEVEL/ TRAVERSE THROUGH THE BENCHMARKS/ TRAVERSE POINTS NOTED ON THIS PLAN TO VERIFY VERTICAL/ HORIZONTAL DATUM.
5. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
6. REFERENCE LANDSCAPE PLANS FOR TREE LIST & MITIGATION CALCULATIONS.
7. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

0 20 40 80
HORIZONTAL SCALE

Texas 811
know what's below.
Call before you dig.



LEGEND:

TREE TO REMAIN

TREE TO BE REMOVED

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/1/25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD
REVISIONS
DATE
No.

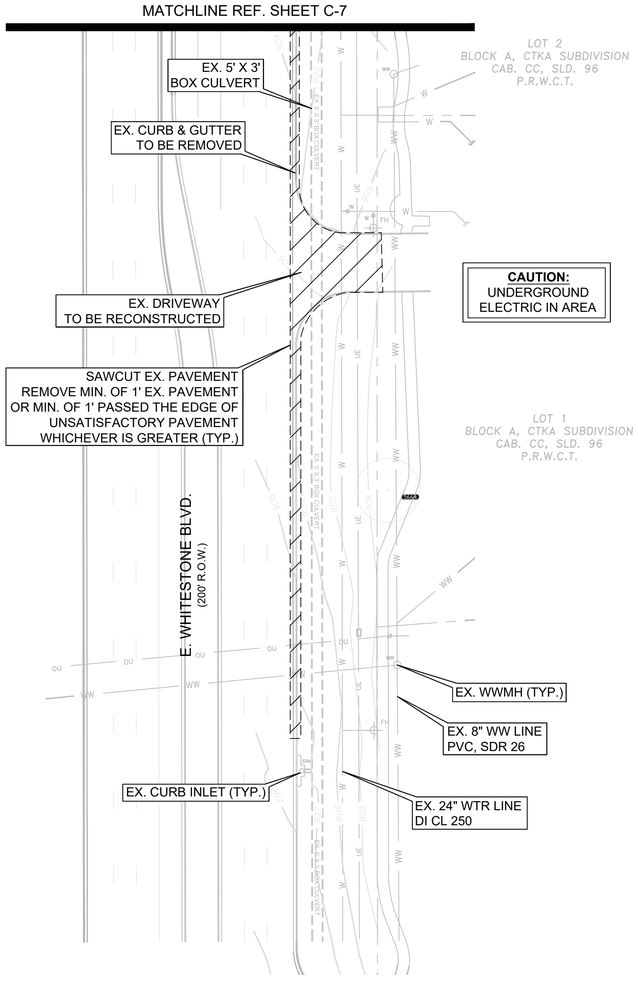
SHEET TITLE:
EXISTING CONDITIONS & DEMOLITION PLAN (1 OF 2)

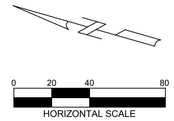
WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-7

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 EX-COND.dwg, 7/31/2025 1:36:08 PM, DWG To PDF.pc3, 1:1, JRW





know what's **below.**
Call before you dig.

NOTES:

1. DISTANCES ARE GRID DISTANCES.
2. COORDINATES ARE GRID VALUES WITH BEARING BASIS: NAD83, TEXAS CENTRAL (4203), STATE PLANE SYSTEM. COORDINATES FOR THIS FILE SURFACE BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.000127828258. BASED ON THE TEXAS STATE PLAN COORDINATE SYSTEM, NAD83.
3. SURVEY WAS PROVIDED BY 4WARD LAND SURVEYING, INC. ALL RESPONSIBILITY FOR THE ACCURACY OF THIS SURVEY REMAINS WITH THE SURVEYOR WHO PREPARED IT. IN USING THIS SURVEY, THE ENGINEER MUST RELY UPON THE ACCURACY OF THE WORK PROVIDED BY THE SURVEYOR.
4. CONTRACTOR'S SURVEYOR SHALL LEVEL/ TRAVERSE THROUGH THE BENCHMARKS/ TRAVERSE POINTS NOTED ON THIS PLAN TO VERIFY VERTICAL/ HORIZONTAL DATUM.
5. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
6. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/7/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

EXISTING CONDITIONS & DEMOLITION PLAN (2 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-8

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 EX-COND.dwg, 7/31/2025 12:07:14 PM, _DWG To PDF.pc3, 1:1, JRW

LEGEND

SILT FENCE — SF

LIMITS OF CONSTRUCTION — LOC

TREE PROTECTION — TP

INLET PROTECTION

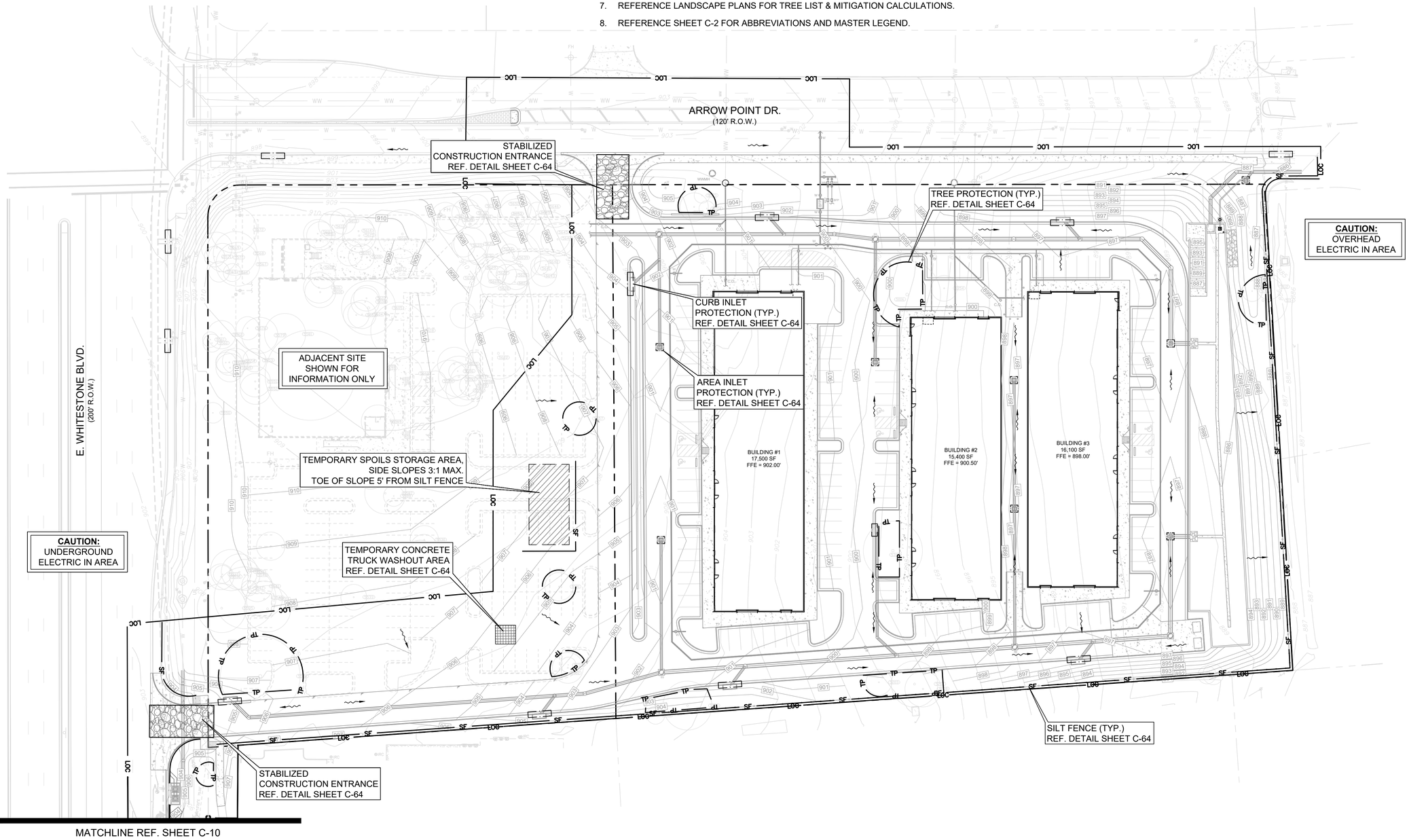
FLOW DIRECTION

NOTES:

1. ANY DIRT, MUD, DEBRIS, ETC., SPILLED TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES, AND AREAS USED BY THE PUBLIC, SHALL BE IMMEDIATELY CLEANED UP.
2. THE CONTRACTOR MAY SUBMIT AN ALTERNATE PLAN FOR THE LOCATION OF THE STAGING & SPOILS AREA AND/OR THE CONCRETE TRUCK WASH OUT AREA.
3. ALL DISTURBED AREAS SHALL BE REVEGETATED MEETING REQUIREMENTS OF CITY OF CEDAR PARK'S ORDINANCES.
4. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY INSPECTOR AT TIME OF CONSTRUCTION.
5. POST THE INSTALLATION OF PROPOSED INLETS, INLET PROTECTION SHALL BE INSTALLED AS SOON AS PRACTICABLE
6. THE CONTRACTOR SHALL BE REQUIRED TO COMPLY, MAINTAIN, REVISE, AND UPDATE THE PROJECT STORM WATER PREVENTION POLLUTION PLAN (SWPPP), AS REQUIRED IN ACCORDANCE WITH THE GENERAL PERMIT TXR 150000.
7. REFERENCE LANDSCAPE PLANS FOR TREE LIST & MITIGATION CALCULATIONS.
8. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

0 20 40 80
HORIZONTAL SCALE

Texas 811
know what's below.
Call before you dig.



WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD
REVISIONS
DATE
No.

SHEET TITLE:

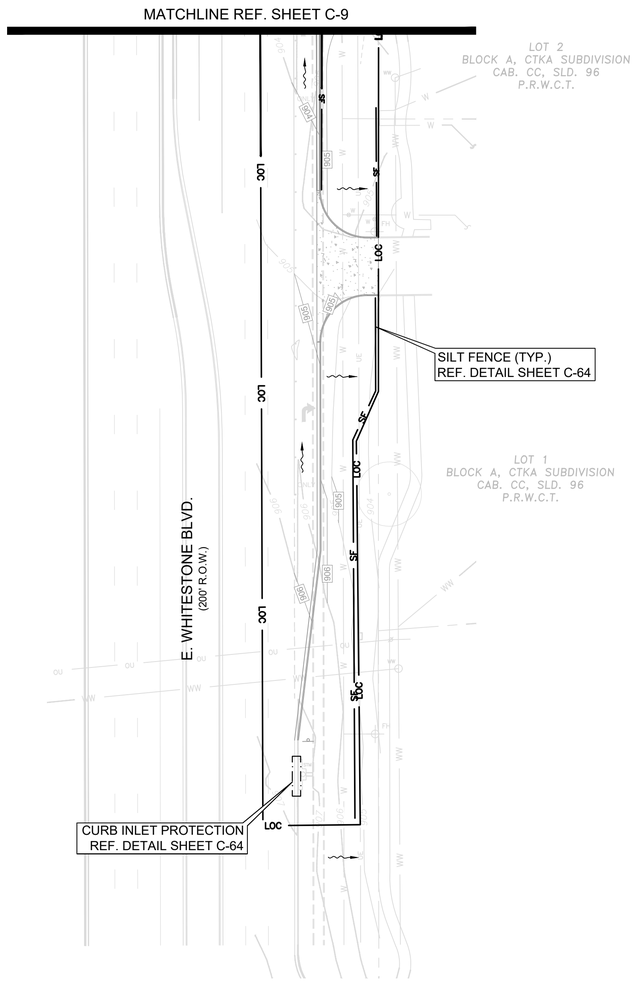
EROSION & SEDIMENT CONTROL PLAN (1 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-9

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 ESC.dwg, 7/31/2025 1:38:09 PM, DWG To PDF.pc3, 1:1, RW



0 20 40 80
HORIZONTAL SCALE

Texas 811
know what's below.
Call before you dig.

LEGEND

SILT FENCE ——— SF ———
LIMITS OF CONSTRUCTION ——— LOC ———
TREE PROTECTION ——— TP ———
INLET PROTECTION
FLOW DIRECTION

NOTES:

1. ANY DIRT, MUD, DEBRIS, ETC., SPILLED TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES, AND AREAS USED BY THE PUBLIC, SHALL BE IMMEDIATELY CLEANED UP.
2. THE CONTRACTOR MAY SUBMIT AN ALTERNATE PLAN FOR THE LOCATION OF THE STAGING & SPOILS AREA AND/OR THE CONCRETE TRUCK WASH OUT AREA.
3. ALL DISTURBED AREAS SHALL BE REVEGETATED MEETING REQUIREMENTS OF CITY OF CEDAR PARK'S ORDINANCES.
4. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY INSPECTOR AT TIME OF CONSTRUCTION.
5. POST THE INSTALLATION OF PROPOSED INLETS, INLET PROTECTION SHALL BE INSTALLED AS SOON AS PRACTICABLE
6. THE CONTRACTOR SHALL BE REQUIRED TO COMPLY, MAINTAIN, REVISE, AND UPDATE THE PROJECT STORM WATER PREVENTION POLLUTION PLAN (SWPPP), AS REQUIRED IN ACCORDANCE WITH THE GENERAL PERMIT TXR 150000.
7. REFERENCE LANDSCAPE PLANS FOR TREE LIST & MITIGATION CALCULATIONS.
8. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

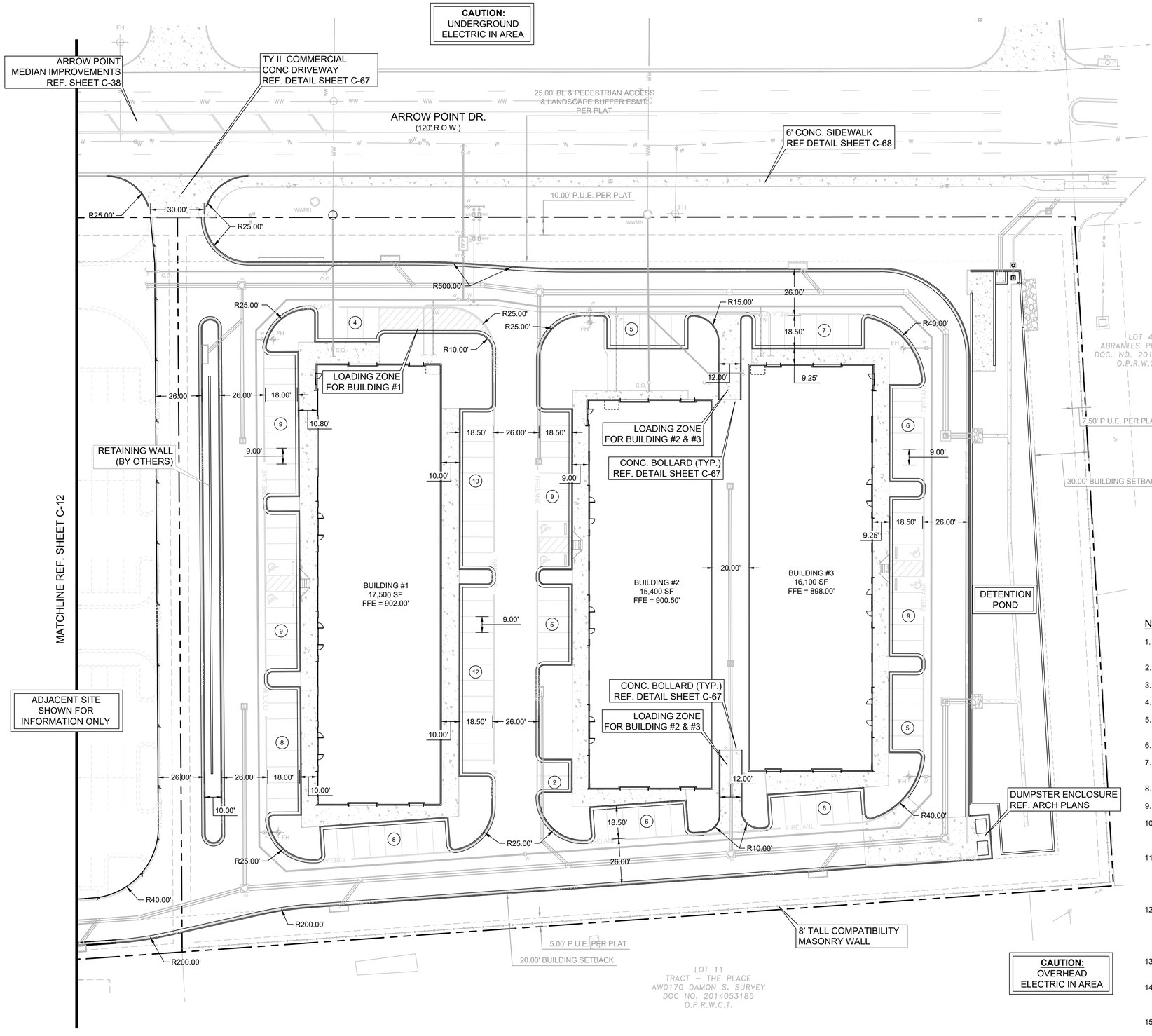
No.	DATE	REVISIONS	RECOMD

SHEET TITLE:
EROSION & SEDIMENT CONTROL PLAN (2 OF 2)

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-10

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 ESC.dwg, 7/31/2025 12:06:11 PM, _DWG To PDF.pc3, 1:1, JRW



0 15 30 60
HORIZONTAL SCALE

Texas 811
know what's below.
Call before you dig.

LEGEND

DELINEATES ACCESSIBLE ROUTE . . . . . .

SITE PLAN INFORMATION:

LEGAL DESCRIPTION:	LOT 2, BLOCK 'A' (4.7060 AC.) CSW ARROW POINT SUBDIVISION
SITE ADDRESS:	ARROW POINT DRIVE
PROPOSED USE:	GENERAL OFFICE/ WAREHOUSE
TYPE OF CONSTRUCTION:	TYPE II-B
BUILDING OCCUPANCY:	S-2
SITE ZONING:	GB - GENERAL BUSINESS
BUILDING SET BACKS:	25' FROM ROW & WEST BOUNDARY 30' FROM SOUTH BOUNDARY
FIRE FLOW REQUIREMENT:	2,750 GPM 1,500 GPM W/ 75% REDUCTION

PARKING REQUIREMENTS:

GENERAL OFFICE/ SHOWROOM/ WAREHOUSE (1 SPACE / 400 SF) (TOTAL GFA = 49,000 SF)	=	123
TOTAL REQUIRED PARKING	=	123

PARKING PROVIDED:

STANDARD PARKING	=	114
ACCESSIBLE PARKING (INCLUDES VAN ACCESSIBLE)	=	6
TOTAL PARKING PROVIDED	=	120

NOTES:

1. NO PORTION OF THIS SITE IS WITHIN THE FEMA 100 YEAR FLOODPLAIN AS PER PANEL NUMBER 48491C0470F, DATED DECEMBER 20, 2019.
2. ALL PARKING CURB RETURNS ARE 3' RADII UNLESS OTHERWISE NOTED.
3. ALL SIDEWALK RAMP CURB RETURNS ARE 1' RADII UNLESS OTHERWISE NOTED.
4. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
5. A 3 FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE FIRE HYDRANTS & REMOTE FDC.
6. TYPICAL PARKING SPACES SHALL BE 9' x 18.5' UNLESS OTHERWISE NOTED.
7. REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS. DO NOT LAYOUT BUILDING / BUILDINGS BASED ON CIVIL DRAWINGS.
8. CONSTRUCTION STAKING SHALL BE PROVIDED BY THE CONTRACTOR.
9. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.
10. ASSIGNED CITY ADDRESS NUMBERS SHALL BE PERMANENTLY AFFIXED TO ALL STRUCTURES IN SUCH POSITIONS AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET.
11. LIGHT SOURCES SHALL BE COMPLETELY CONCEALED WITHIN OPAQUE HOUSINGS AND SHALL NOT BE VISIBLE FROM ADJACENT STREETS OR PROPERTIES. ALL EXTERIOR LIGHTING FIXTURES SHALL BE FULL CUT-OFF TYPE FIXTURES. LIGHTING FIXTURES SHALL BE NO MORE THAN TWENTY-FIVE (25) FEET IN HEIGHT AS MEASURED FROM ADJACENT, FINISHED GRADE.
12. FOR OUTDOOR CONDENSERS, UTILITY HUTS, AND OTHER BUILDING SERVICE EQUIPMENT, SUCH EQUIPMENT SHALL BE COMPLETELY SCREENED FROM VIEW ON ALL SIDES USING A VEGETATIVE SCREEN WITH AT LEAST TWO (2) VARIETIES OF PLANT MATERIAL FROM THE PREFERRED PLANT LIST THAT, AT MATURITY, IS AT LEAST THE HEIGHT OF THE EQUIPMENT TO BE SCREENED.
13. ALL REFUSE AND/OR RECYCLING CONTAINERS SHALL BE COMPLETELY SCREENED FROM PUBLIC VIEW AND THE VIEW OF ADJOINING PROPERTIES.
14. ALL CONTAINERS SHALL BE SCREENED ON THREE SIDES BY WALLS OTHER THAN WOOD, WITH THE RESILIENCE OF METAL OR CONCRETE, NOT LESS THAN THE HEIGHT OF THE BIN OR CONTAINER.
15. AN OPENING SHALL BE SITUATED SO THE CONTAINER IS NOT VISIBLE FROM ADJACENT PROPERTIES, PUBLIC STREETS, OR VISIBLE TO THE PUBLIC MANEUVERING ON SITE, UNLESS THE OPENING IS EQUIPPED WITH AN OPAQUE GATE. GATES MUST HAVE TIEBACKS TO SECURE IN OPEN POSITION AND FASTENERS TO KEEP THEM CLOSED.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

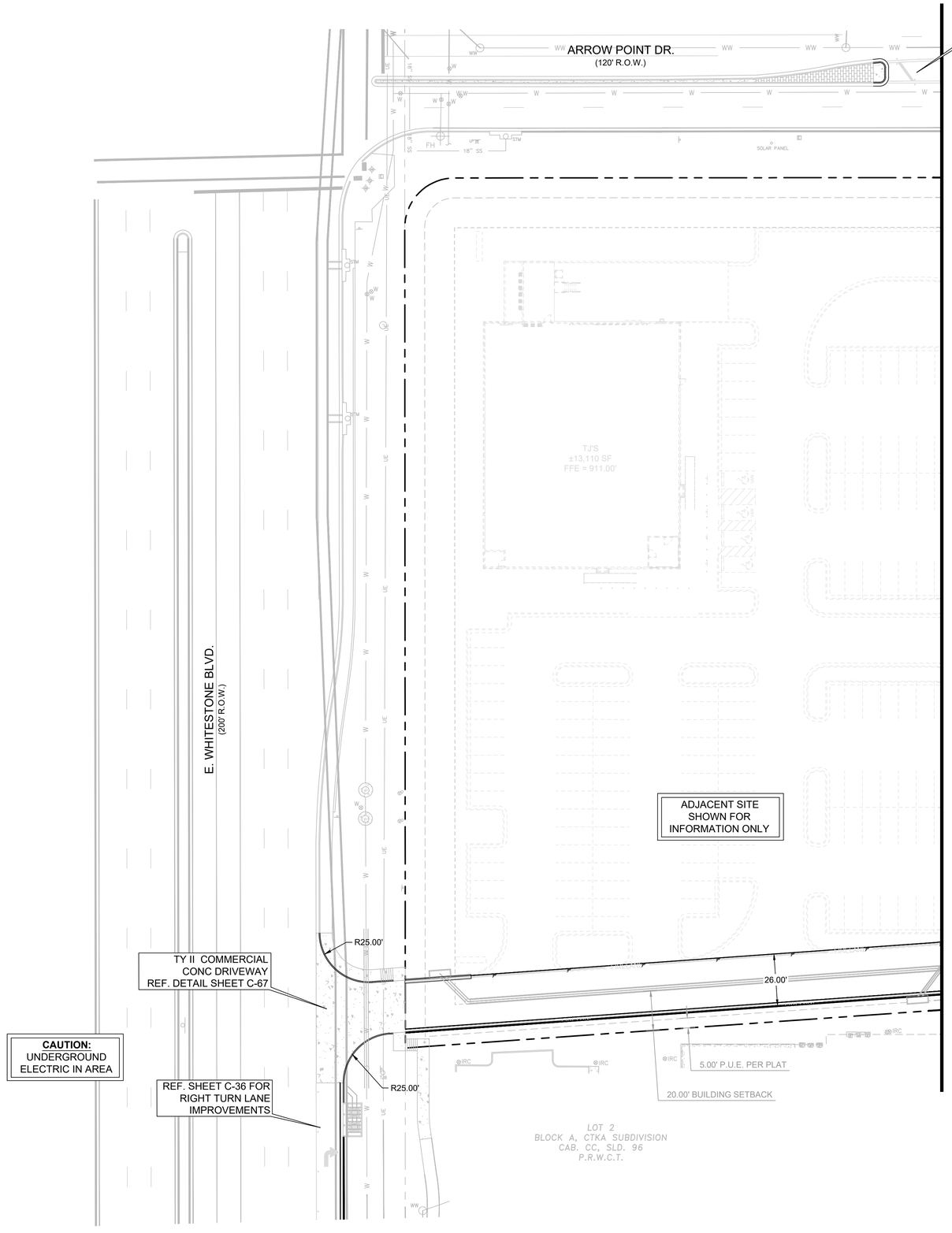
SITE
DIMENSIONAL
CONTROL PLAN
(1 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-11

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 SITE.dwg, 7/31/2025 1:49:28 PM, _DWG To PDF.pc3, 1:1, JRW



0 15 30 60
HORIZONTAL SCALE

know what's below.
Call before you dig.

NOTES:

1. REFERENCE SHEET C-11 FOR SITE AND DIMENSIONAL CONTROL PLAN NOTES.
2. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW
DRAWN: JRW
APPROVED: AAP
DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

SITE
DIMENSIONAL
CONTROL PLAN
(2 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - _____

SHEET NO.:
C-12

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 SITE.dwg, 7/31/2025 1:49:42 PM, DWG To PDF.pc3, 1:1, JRW

CITY OF CEDAR PARK FIRE DEPARTMENT STANDARD NOTES:

FIRE APPARATUS ACCESS ROADS (FIRE LANES)

I. FIRE APPARATUS ACCESS ROADS SHALL:
A. HAVE AN INSIDE RADIUS OF 25 FEET THROUGHOUT THE TURNING MOVEMENT, AND AN OUTSIDE RADIUS OF 50 FEET; ALL RADII LABELED ON PLANS
B. BE INSTALLED SUCH THAT NO DEAD-END STRETCH IS GREATER THAN 150 FEET IN LENGTH WITHOUT AN APPROVED AREA FOR TURNING AROUND FIRE APPARATUS*
C. HAVE A MINIMUM INSIDE RADIUS OF 28 FEET FOR ALL TURNAROUNDS
D. HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET; 26 FEET REQUIRED WHEN HYDRANTS ARE PRESENT ALONG THE FIRE APPARATUS ACCESS ROAD OR FOR AERIAL APPARATUS ACCESS ROADS
E. IF LONGER THAN 500 FEET, HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 26 FEET
F. HAVE AN UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES; AERIAL APPARATUS ACCESS ROADS SHALL HAVE NO VERTICAL OVERHANGS
G. SHALL HAVE A GRADE WITHIN THE LIMITS ESTABLISHED BY THE FIRE CODE OFFICIAL BASED ON THE CEDAR PARK FIRE DEPARTMENT'S APPARATUS
  i. CURRENTLY, CEDAR PARK REQUIRES THAT NO GRADE SHALL BE STEEPER THAN 12%; NO ANGLES OF APPROACH OR DEPARTURE SHALL HAVE AN ALGEBRAIC DIFFERENCE OF GREATER THAN 8% WITHIN ANY 50-FOOT LENGTH
H. BE MARKED BY LINES OF RED TRAFFIC PAINT OR DYE A MINIMUM OF 6 INCHES IN WIDTH TO SHOW THE BOUNDARIES OF THE LANE
  j. THE WORDS "FIRE LANE TOW AWAY ZONE" SHALL APPEAR IN 4 INCH WHITE LETTERS NO GREATER THAN 35 FEET APART
  a. THESE WORDS SHALL BE MARKED WITHIN THE RED STRIPE
  ii. FIRE LANE STRIPING SHALL BE CONTINUOUS THROUGHOUT
  iii. CURB FACING SHALL BE USED WHERE AVAILABLE
  a. WHERE THERE IS NO CURB, LAY DOWN STRIPING SHALL BE USED
II. BE MAINTAINED IN AN EASILY DISTINGUISHABLE CONDITION THROUGHOUT CONSTRUCTION*
A. WHERE THIS IS IMPOSSIBLE OR IMPRACTICAL, SIGNS APPROVED BY THE FIRE CODE OFFICIAL MAY BE USED
  i. ALL CONSTRUCTION VEHICLES AND CONSTRUCTION WORKER VEHICLES MUST BE PARKED ON SITE
  ii. NO VEHICLE SHALL BE ALLOWED TO PARK OR STOP IN THE FIRE APPARATUS ACCESS ROADS, WHETHER OCCUPIED OR UNOCCUPIED
III. FIRE LANE SHALL EXTEND TO WITHIN
A. 150 FEET OF ALL PORTIONS OF THE FACILITY
B. ALL PORTIONS OF THE EXTERIOR WALLS OF THE FIRST STORY OF THE BUILDING AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING
C. INTO INTERIOR COURTYARDS AS APPROVED BY THE FIRE CODE OFFICIAL
IV. PLEASE NOTE THAT FIRE APPARATUS ACCESS ROADS SHALL BE INSTALLED
A. PRIOR TO COMBUSTIBLE MATERIALS ARRIVING ON SITE AND
B. PRIOR TO THE ONSET OF VERTICAL CONSTRUCTION
V. COMPACTED ROAD BASE
A. CONTRACTOR SHOULD PLAN TO INSTALL FIRST LIFT OF ASPHALT.
B. ROAD BASE IS NOT CONSIDERED A SUBSTITUTE FOR AN APPROVED FIRE APPARATUS ACCESS ROAD, WITH THE FOLLOWING EXCEPTION:
  a. COMPACTED BASE MAY BE USED AS FIRE APPARATUS ACCESS ROAD DURING CONSTRUCTION IF APPROVED BY THE FIRE MARSHAL'S OFFICE.
  a. PERMISSION MUST BE GRANTED IN PERSON
  b. A COMPACTION REPORT SHALL BE SUBMITTED BY A THIRD-PARTY GROUP PRIOR TO VERTICAL CONSTRUCTION AND AT ANY TIME THROUGHOUT THE CONSTRUCTION PROCESS WHEN DEEMED NECESSARY BY THE FIRE MARSHAL'S OFFICE
  c. REQUIRED COMPACTION IS 100% OF OPTIMAL DENSITY THROUGHOUT
  d. FAILURE TO MAINTAIN COMPACTED BASE MAY RESULT IN A HALT IN CONSTRUCTION UNTIL ACCESS IS RESTORED ACCORDING TO THESE STANDARDS.
  e. EVEN WITH COMPACTED BASE, ALL CONCRETE DRIVEWAY APPROACHES MUST BE INSTALLED.

FIRE PROTECTION DURING CONSTRUCTION

I. DURING CONSTRUCTION, FIRE APPARATUS ACCESS ROADS SHALL:
A. BE MAINTAINED IN AN EASILY DISTINGUISHABLE CONDITION THROUGHOUT CONSTRUCTION*
B. WHERE THIS IS IMPOSSIBLE OR IMPRACTICAL, SIGNS APPROVED BY THE FIRE CODE OFFICIAL MAY BE USED
  i. ALL CONSTRUCTION VEHICLES AND CONSTRUCTION WORKER VEHICLES MUST BE PARKED ON SITE
  ii. NO VEHICLE SHALL BE ALLOWED TO PARK OR STOP IN THE FIRE APPARATUS ACCESS ROADS, WHETHER OCCUPIED OR UNOCCUPIED
II. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE PRIOR TO COMBUSTIBLE MATERIALS ARRIVING ON SITE AND PRIOR TO THE ONSET OF VERTICAL CONSTRUCTION
III. STRUCTURES UNDER CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE PROVIDED WITH NOT LESS THAN ONE APPROVED PORTABLE FIRE EXTINGUISHER IN ACCORDANCE WITH IFC SECTION 906 (MINIMUM SIZE OF 3A:40B:C) AND SIZED FOR NOT LESS THAN ORDINARY HAZARDS AS FOLLOWS
A. AT EACH STAIRWAY ON ALL FLOOR LEVELS WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED
B. IN EVERY STORAGE AND CONSTRUCTION SHED
C. ANYWHERE SPECIAL HAZARDS EXIST, INCLUDING BUT NOT LIMITED TO, THE STORAGE AND USE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS

FIRE HYDRANTS

I. A HYDRANT IS REQUIRED
A. WITHIN 400 FEET OF ALL EXTERIOR PORTIONS OF BUILDINGS, MEASURED AS THE HOSE LIES ALONG AN APPROVED ROUTE
II. MORE FIRE HYDRANTS REQUIRED
A. IN ACCORDANCE WITH APPENDICES B AND C OF THE INTERNATIONAL FIRE CODE
B. WITHIN 100' OF ALL FDCS, ON THE SAME SIDE OF THE FIRE LANE AS THE FDC
III. WITH REGARD TO ALL HYDRANTS
A. A MINIMUM 36 INCHES OF CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT, AND GROUND SHALL PROVIDE LEVEL FOOTING FOR OPERATION OF HYDRANT
B. HYDRANTS SHALL BE INSTALLED AT LEAST 3' FROM BACK OF CURB (INCLUDING PARKING CURBS), BUT NOT MORE THAN 6' FROM BACK OF CURB AT THE FIRE LANE.
C. CENTER OF 5.25" CAP SHALL MEASURE AT LEAST 18" FROM FINISHED GROUND, BUT NOT MORE THAN 24".
D. A BLUE REFLECTOR IS REQUIRED TO BE MOUNTED IN THE CENTER OF THE ADJACENT FIRE LANE TO MARK HYDRANT LOCATION
IV. NOTE ON PLANS THE FOLLOWING REGARDING FIRE HYDRANTS
A. WHERE FIRE HYDRANTS ARE SUBJECT TO IMPACT BY A MOTOR VEHICLE, GUARD POSTS SHALL BE CONSTRUCTED AS SET FORTH IN IFC SECTION 312 AND COMPLY WITH THE FOLLOWING REQUIREMENTS:
  i. CONSTRUCTED OF STEEL NOT LESS THAN 4 INCHES IN DIAMETER, FILLED COMPLETELY WITH CONCRETE
  ii. SPACED NOT MORE THAN 4 FEET ON CENTER BETWEEN POSTS
  iii. SET NOT LESS THAN 3 FEET DEEP IN A CONCRETE FOOTING OF NOT LESS THAN 15 INCHES IN DIAMETER
  iv. SET WITH THE TOP OF THE POSTS NOT LESS THAN 3 FEET ABOVE GRADE
  v. LOCATED NOT LESS THAN 3 FEET FROM THE PROTECTED OBJECT

FIRE DEPARTMENT CONNECTIONS (FDC)

I. FIRE DEPARTMENT CONNECTIONS MUST
  i. BE INSTALLED ON THE FRONT OF THE BUILDING,
  a. IN A LOCATION THAT IS READILY VISIBLE FROM THE APPROVED FIRE APPARATUS ACCESS ROAD
  ii. HAVE A MINIMUM OF 36 INCHES OF CLEAR SPACE MAINTAINED AROUND THE CIRCUMFERENCE OF THE FDC
  iii. HAVE A FIRE HYDRANT WITHIN 100 FEET OF THE FDC AND BE LOCATED IN SUCH A WAY THAT THE CONNECTION DOES NOT OBSTRUCT THE FIRE APPARATUS ACCESS ROAD FOR OTHER ARRIVING FIRE APPARATUS
  iv. NOT BE BLOCKED FROM VIEW OR USE BY
  a. STRUCTURAL MEMBERS
  b. PARKING SPACES
  c. TREES
  d. LANDSCAPING, ETC.
  v. A WHITE REFLECTOR IS REQUIRED TO BE MOUNTED IN THE CENTER OF THE ADJACENT DRIVE TO MARK THE FDC LOCATION
II. WHERE AN FDC IS SUBJECT TO IMPACT BY A MOTOR VEHICLE
A. GUARD POSTS SHALL BE CONSTRUCTED AS SET FORTH IN IFC SECTION 312 AND COMPLY WITH THE FOLLOWING REQUIREMENTS:
  i. GUARD POSTS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:
  ii. CONSTRUCTED OF STEEL NOT LESS THAN 4 INCHES IN DIAMETER, FILLED COMPLETELY WITH CONCRETE
  iii. SPACED NOT MORE THAN 4 FEET ON CENTER BETWEEN POSTS
  iv. SET NOT LESS THAN 3 FEET DEEP IN A CONCRETE FOOTING OF NOT LESS THAN 15 INCHES IN DIAMETER
  v. SET WITH THE TOP OF THE POSTS NOT LESS THAN 3 FEET ABOVE GRADE
  vi. LOCATED NOT LESS THAN 3 FEET FROM THE PROTECTED OBJECT
III. A REMOTE FDC MAY BE USED WHERE APPROVED BY THE FIRE CODE OFFICIAL; THIS IS RARE.
A. DETAILED PLANS SHALL BE REQUIRED IN THIS CASE

FLAMMABLE/COMBUSTIBLE WASTE AND STORAGE

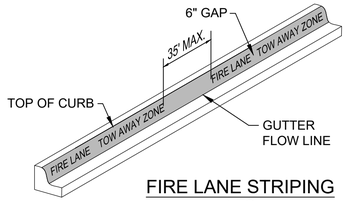
I. NOTE ON PLANS THE FOLLOWING:
A. FLAMMABLE AND COMBUSTIBLE LIQUID STORAGE AREAS SHALL
  i. BE MAINTAINED CLEAR OF COMBUSTIBLE VEGETATION AND WASTE MATERIALS
  ii. NOT BE USED FOR THE STORAGE OF OTHER COMBUSTIBLE MATERIALS.
B. COMBUSTIBLE DEBRIS, RUBBISH, AND WASTE MATERIAL SHALL
  i. NOT BE ALLOWED TO ACCUMULATE WITHIN BUILDINGS
  ii. BE REMOVED FROM BUILDINGS AT THE END OF EACH SHIFT OR WORK DAY
  iii. NOT BE DISPOSED OF BY BURNING ON SITE*

NOTE THAT OPEN BURNING OF ANY TYPE IS PROHIBITED ON CONSTRUCTION SITES WITHIN THE JURISDICTION OF THE CEDAR PARK FIRE DEPARTMENT

II. MATERIALS SUSCEPTIBLE TO SPONTANEOUS IGNITION, SUCH AS OILY RAGS, SHALL BE STORED IN A UL LISTED DISPOSAL CONTAINER
A. CONTENTS OF SUCH CONTAINERS SHALL BE REMOVED AND DISPOSED OF DAILY
B. STORAGE OF COMBUSTIBLE RUBBISH SHALL NOT PRODUCE CONDITIONS THAT WILL CREATE A NUISANCE OR BE A HAZARD TO PUBLIC HEALTH, SAFETY OR WELFARE
III. COMBUSTIBLE WASTE MATERIAL CREATING A FIRE HAZARD SHALL NOT BE ALLOWED TO ACCUMULATE IN BUILDINGS OR STRUCTURES, OR ON PREMISES
IV. OUTSIDE STORAGE OF COMBUSTIBLE MATERIALS SHALL NOT BE LOCATED WITHIN 10 FEET OF A PROPERTY LINE

SECURITY GATES

I. THE INSTALLATION OF SECURITY GATES ACROSS FIRE APPARATUS ACCESS ROADS SHALL
A. BE LOCATED IN A MANNER THAT ALLOWS THE ENTIRE FIRE APPARATUS TO BE CLEAR OF THE STREET BEFORE NEEDING TO STOP TO OPERATE THE GATE
B. BE APPROVED BY THE FIRE CODE OFFICIAL
C. HAVE AN APPROVED MEANS OF EMERGENCY OPERATION
II. MECHANICAL GATES REQUIRE A KNOX KEY SWITCH
III. MANUAL GATES REQUIRE AN EXTERIOR GRADE KNOX PAD LOCK
IV. THE SECURITY GATES AND EMERGENCY OPERATION COMPONENTS SHALL BE MAINTAINED OPERATIONAL AT ALL TIMES
V. SHALL HAVE AN UNOBSTRUCTED WIDTH OF 20'; GREATER WIDTH WHERE REQUIRED BY THE FIRE CODE OFFICIAL



FIRE LANE STRIPING
NTS

NOTES:

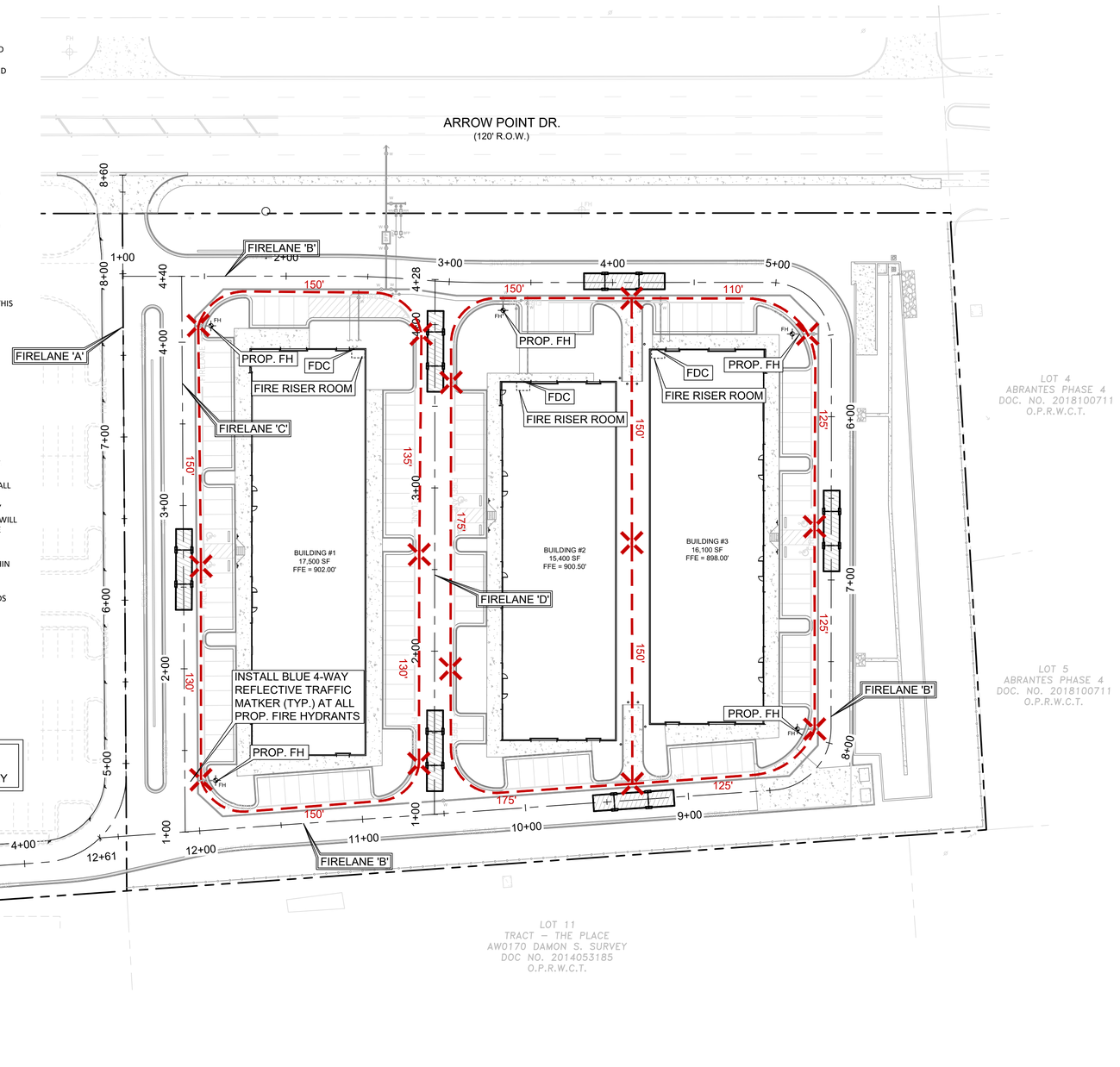
FIRE LANE STRIPING TO BE 6" WIDE RED PAINT WITH "FIRE LANE TOW AWAY ZONE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 35' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

SITE PLAN INFORMATION:

LEGAL DESCRIPTION:	LOT 2, BLOCK 'A' (4.7060 AC.) CSW ARROW POINT SUBDIVISION
SITE ADDRESS:	ARROW POINT DRIVE
PROPOSED USE:	GENERAL OFFICE/ WAREHOUSE
TYPE OF CONSTRUCTION:	TYPE II-B
BUILDING OCCUPANCY:	S-2
SITE ZONING:	GB - GENERAL BUSINESS
BUILDING SET BACKS:	25' FROM ROW & WEST BOUNDARY 30' FROM SOUTH BOUNDARY
FIRE FLOW REQUIREMENT:	2,750 GPM 1,500 GPM W/ 75% REDUCTION

0 20 40 80
HORIZONTAL SCALE

Texas 811
know what's below.
Call before you dig.



WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/31/25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

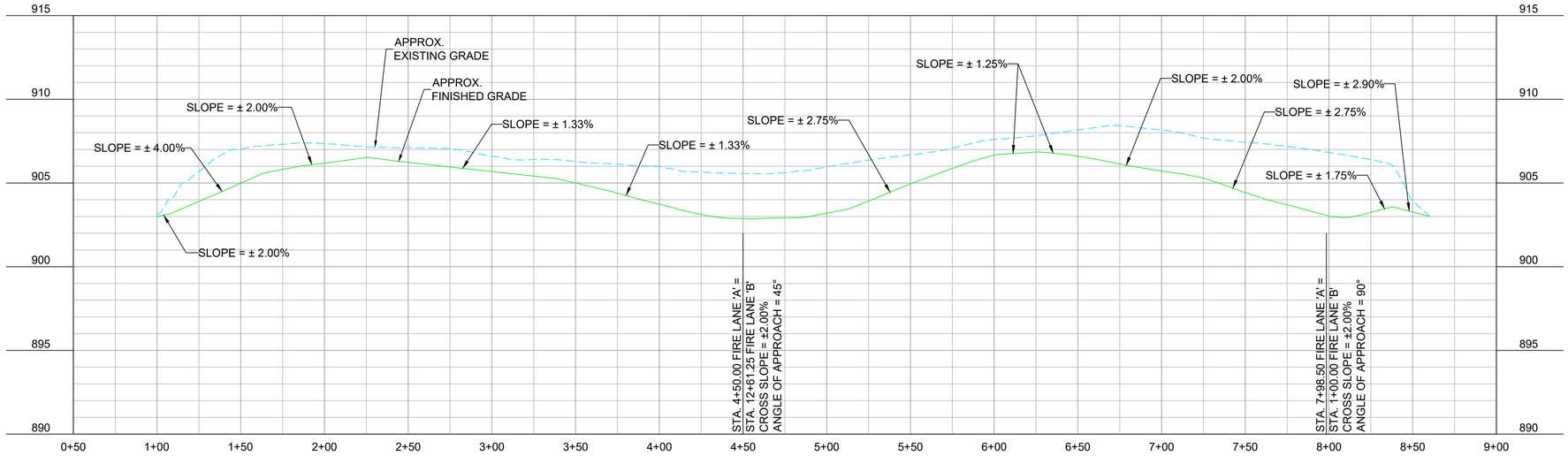
No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:
FIRE PROTECTION PLAN

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-13

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 FPP.dwg, 7/31/2025 12:07:26 PM, _DWG To PDF.pc3, 1:1, RW



FIRE LINE 'A' PROFILE

SCALE: HORZ. 1" = 40'
VERT. 1" = 4'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
7/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

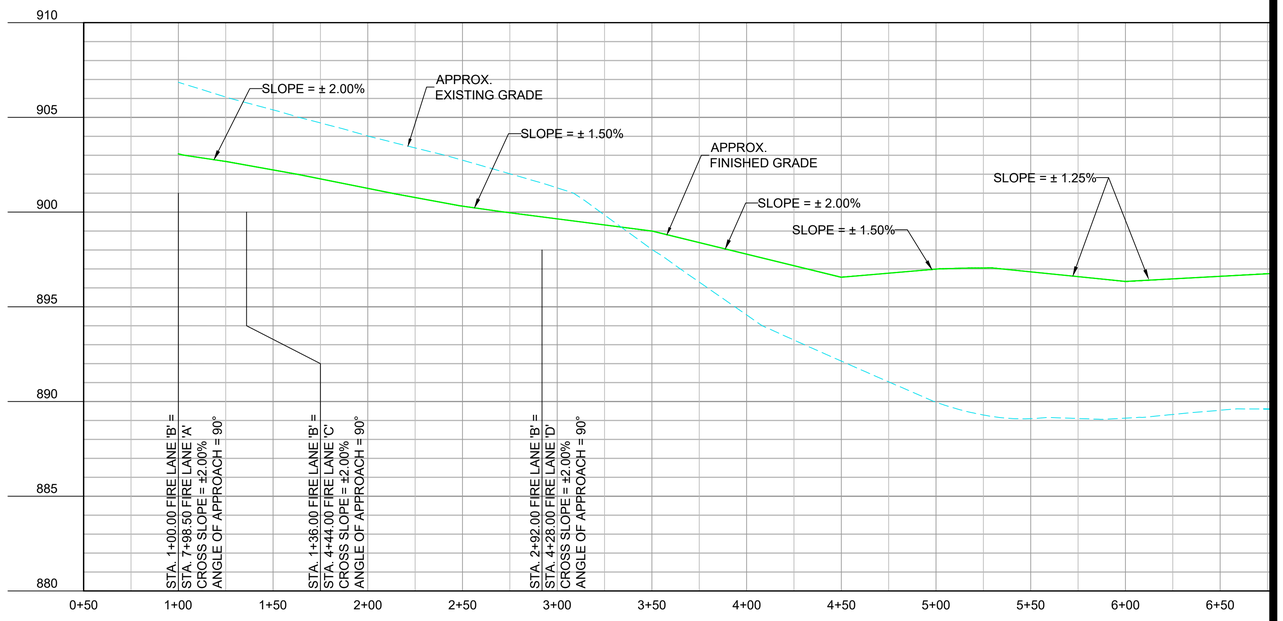
FIRE LANE PROFILE
(1 OF 3)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-14

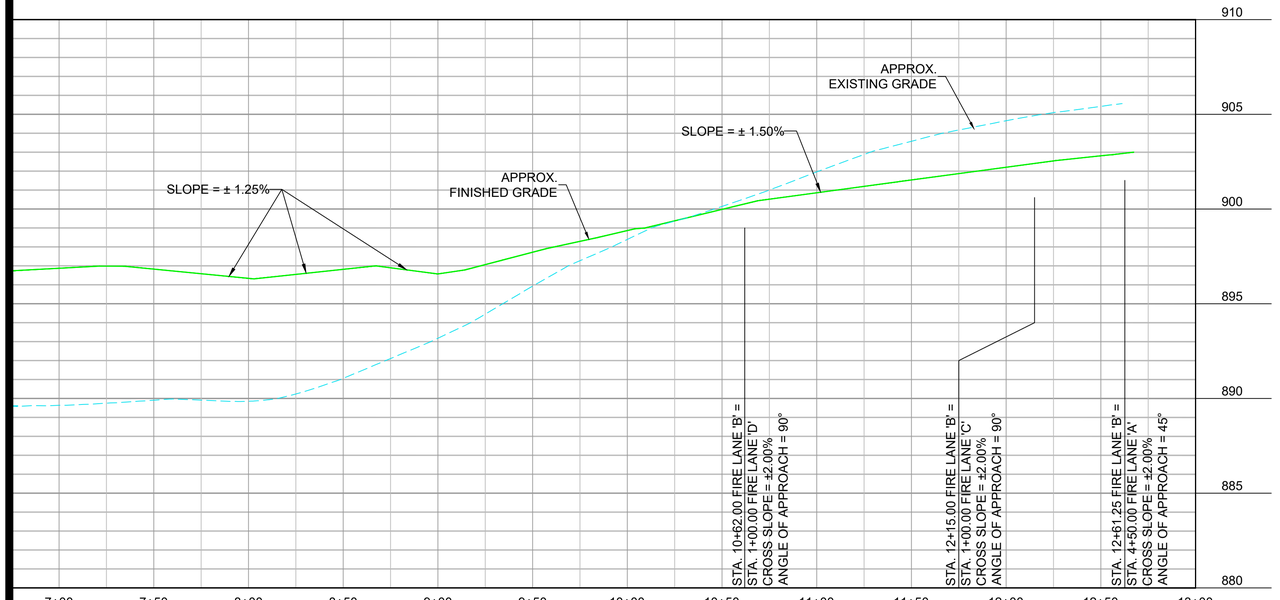
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 FFP.dwg, 7/31/2025 12:11:10 PM, _DWG To PDF.pc3, 1:1, JRW



MATCHLINE REF. THIS SHEET

FIRE LINE 'B' PROFILE
FROM STA. 1+00.00 TO STA. 6+75.00
SCALE: HORZ. 1" = 40'
VERT. 1" = 4'

MATCHLINE REF. THIS SHEET



FIRE LINE 'A' PROFILE
FROM STA. 6+75.00 TO STA. 12+61.25
SCALE: HORZ. 1" = 40'
VERT. 1" = 4'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
7/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

REVISIONS

No.	DATE	RECOM'D

SHEET TITLE:

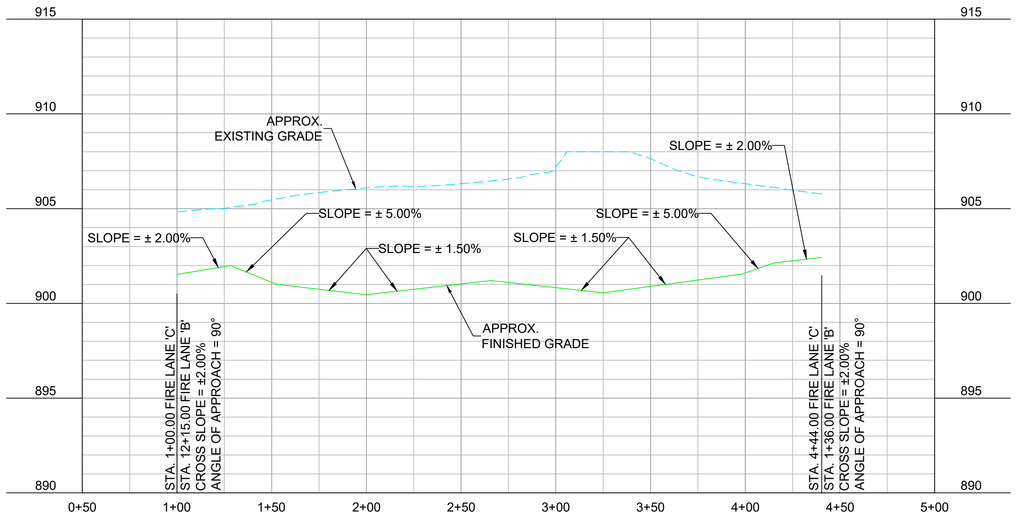
FIRE LANE PROFILE
(2 OF 3)

WP PROJECT NO.:
073-030

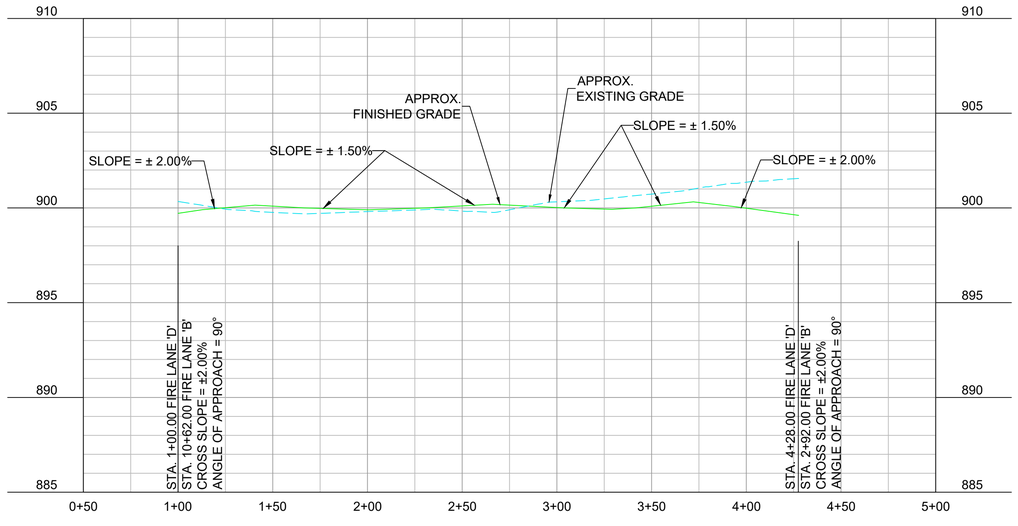
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-15

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 FPP.dwg, 7/31/2025 12:03:09 PM, _DWG To PDF.pc3, 1:1, JRW



FIRE LINE 'C' PROFILE
SCALE: HORZ. 1" = 40'
VERT. 1" = 4'



FIRE LINE 'D' PROFILE
SCALE: HORZ. 1" = 40'
VERT. 1" = 4'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

FIRE LANE PROFILE
(3 OF 3)

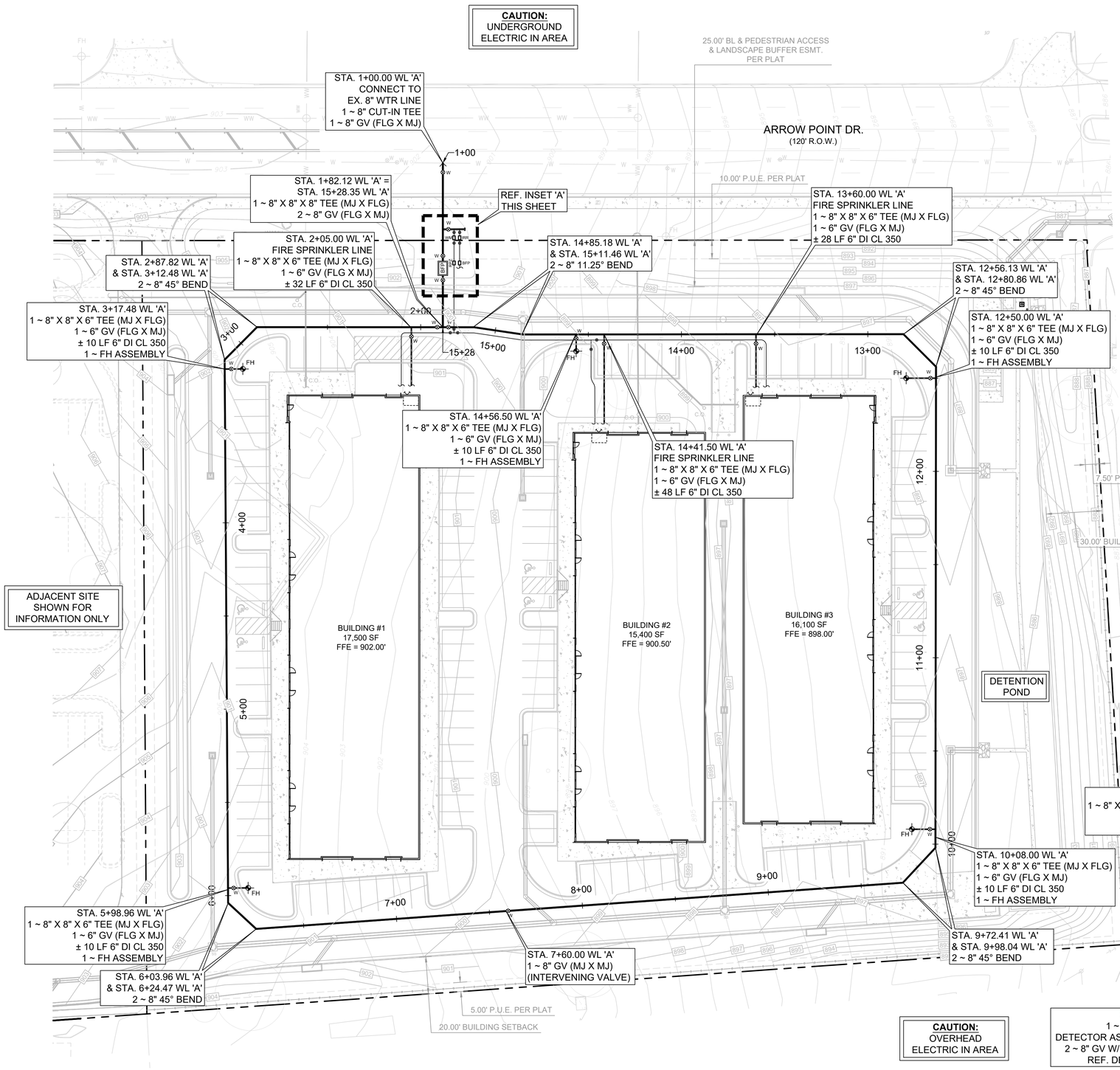
WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - _____

SHEET NO.:

C-16

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 FPP.dwg, 7/31/2025 12:10:27 PM, _DWG To PDF.pc3, 1:1, JRW



0 15 30 60
HORIZONTAL SCALE

know what's below.
Call before you dig.

NOTES:

1. THE CONTRACTOR SHALL POT HOLE AND FIELD VERIFY THE LOCATION AND DEPTHS OF ALL PROPOSED UTILITY CROSSINGS & CONNECTIONS PRIOR TO ANY CONSTRUCTION OR ORDERING OF MATERIALS. CONTRACTOR SHALL REPORT DISCREPANCIES OF EXISTING UTILITIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. REFER TO MEP PLAN FOR SERVICE CONNECTIONS TO UTILITY PROVIDERS: GAS / ELECTRIC / TELEPHONE / ETC.
4. STUB WATER, WASTEWATER SERVICE LINES, AND ROOF DRAIN STORM LINES 5' FROM BLDG. REFER TO MEP PLAN FOR CONTINUATION.
5. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF GEORGETOWN.
6. WHERE A SEWER CROSSES A WATERLINE, ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATERLINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. CENTER 1 JOINT OF WASTEWATER LINE ON CROSSING. PIPE BEDDING SHALL UTILIZE CONTROLLED LOW STRENGTH MATERIAL OR SAND STABILIZED WITH TWO OR MORE 80 POUND BAGS OF CEMENT PER CUBIC YARD OF SAND FOR ANY SECTION OF COLLECTION SYSTEM PIPE WITHIN NINE FEET OF PUBLIC WATER SUPPLY PIPE. INSTALLED FROM 6" BELOW THE PIPE TO 12" ABOVE THE PIPE.
7. TRENCH SAFETY SYSTEMS SHALL BE REQUIRED FOR TRENCHES EXCEEDING 5' DEPTH. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF TEXAS.
8. ADJUST ALL EXISTING & PROPOSED MANHOLE COVERS, VALVE BOXES, AND CASTINGS TO FINISH GRADE.
9. A 3 FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE FIRE HYDRANTS.
10. RESTRAIN ALL 6" & 8" PIPE FITTINGS, VALVES, ETC. RESTRAINT LENGTHS SHALL BE 25 LF FORWARD AND BACKWARDS OF THE FITTING, VALVE, ETC. USE MEGALUG OR APPROVED EQUAL.
11. ALL FITTINGS SHALL HAVE THRUST BLOCKING.
12. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS
		RECOM'D

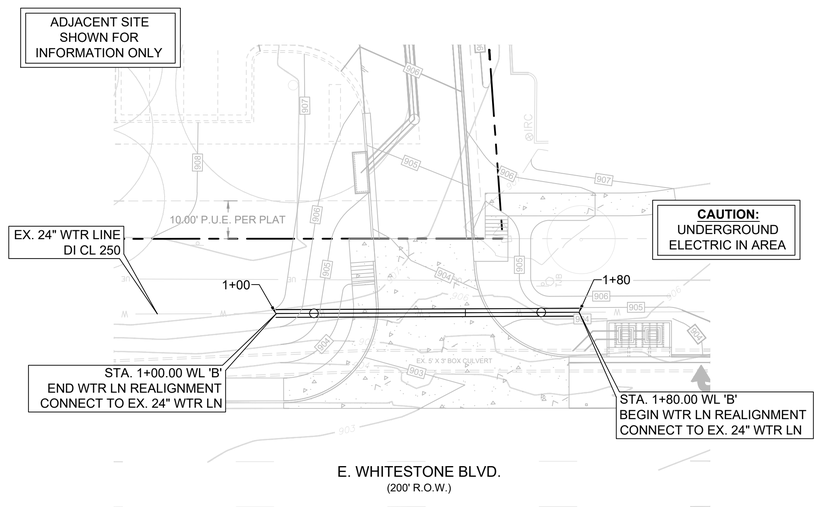
SHEET TITLE:

WATER PLAN (1 OF 2)

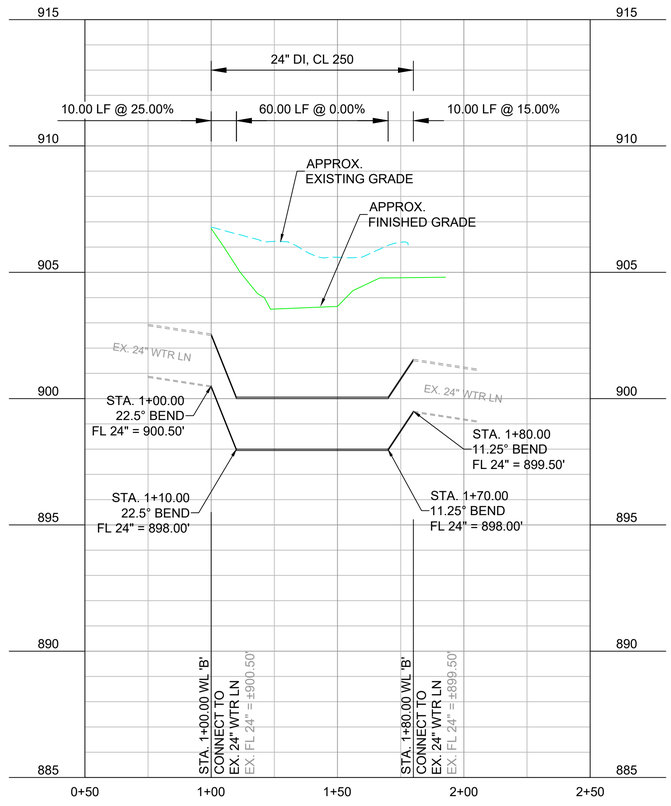
WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-17

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 UTIL - WTR.dwg, 7/31/2025 1:43:35 PM, DWG To PDF.pc3, 1:1, JRW



E. WHITESTONE BLVD.
(200' R.O.W.)



WATERLINE 'A' PROFILE
SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

NOTES:

1. REFERENCE SHEET C-17 FOR WATER UTILITY NOTES.
2. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW
DRAWN: JRW
APPROVED: AAP
DATE: 7/31/2025

RECOMD
REVISIONS
DATE
No.

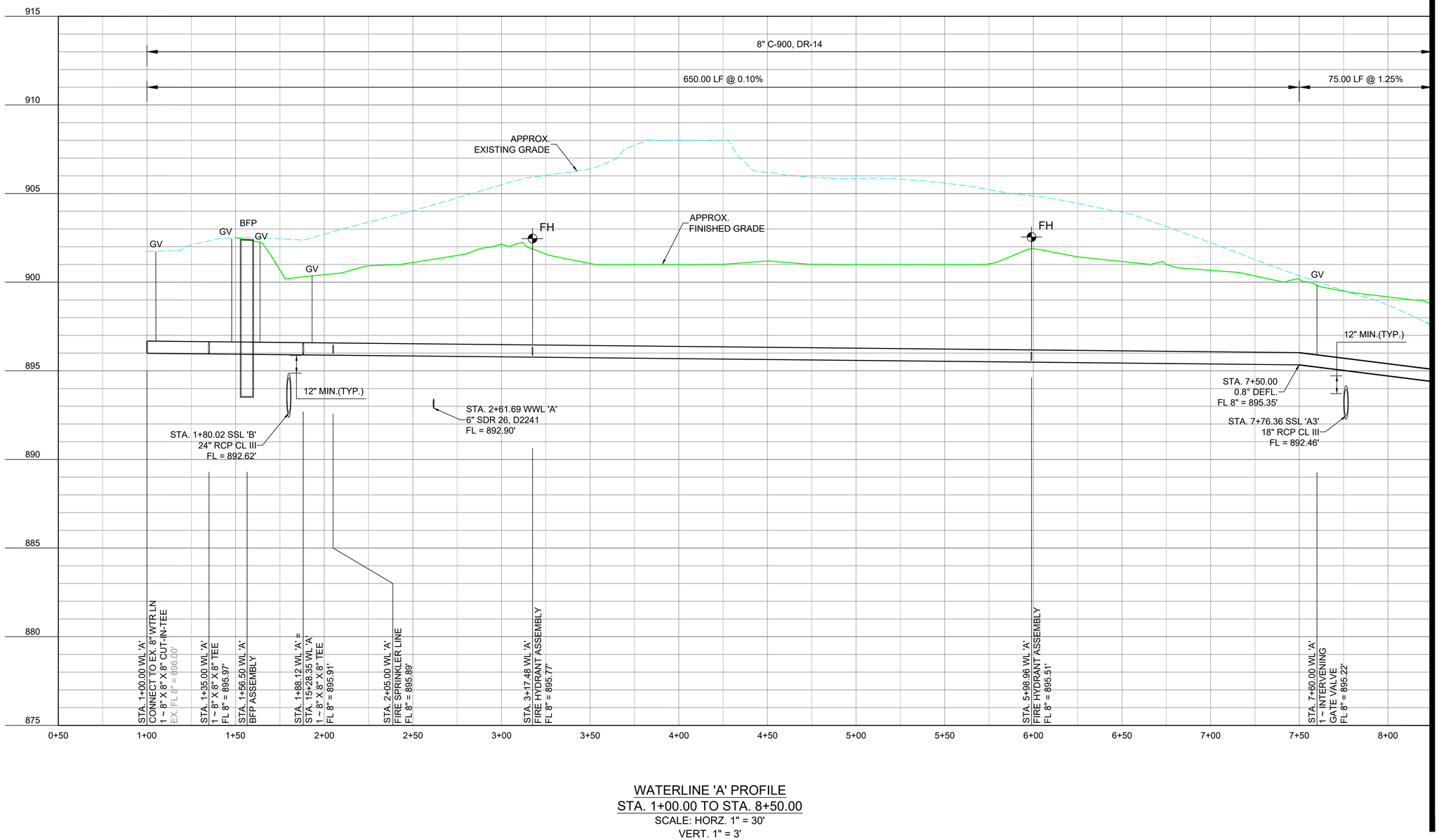
SHEET TITLE:

WATER PLAN (2 OF 2)

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-18

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 UTIL - WTR.dwg, 7/31/2025 12:07:06 PM, _DWG To PDF.pc3, 1:1, JRW



MATCHLINE REF. SHEET C-20

WATERLINE 'A' PROFILE
STA. 1+00.00 TO STA. 8+50.00
SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

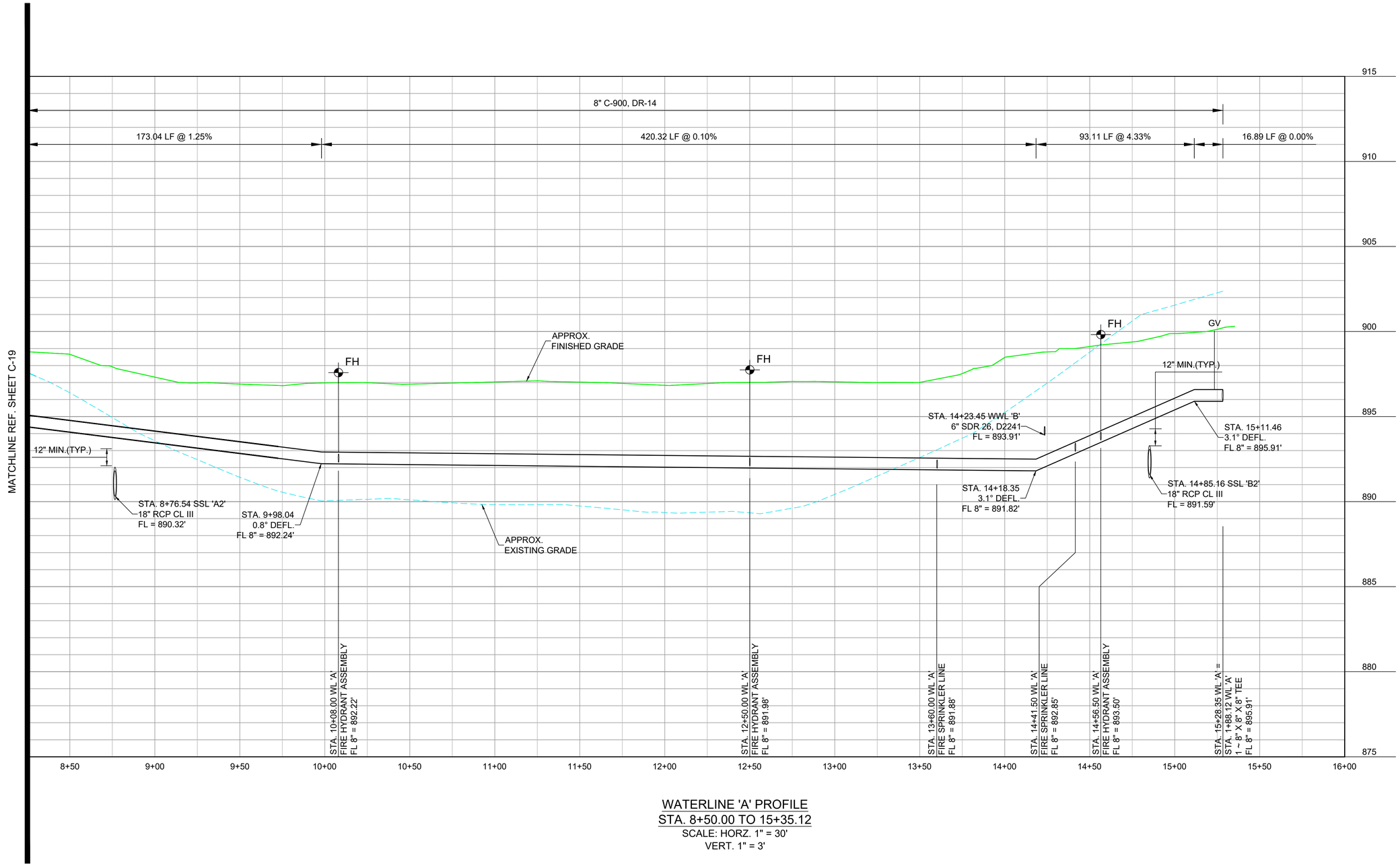
WATER PROFILE
(1 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-19

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 UTIL - WTR.dwg, 7/31/2025 12:01:03 PM, .DWG To PDF.pc3, 1:1, JRW



WATERLINE 'A' PROFILE
STA. 8+50.00 TO 15+35.12
SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

REVISIONS
No. DATE RECOM'D

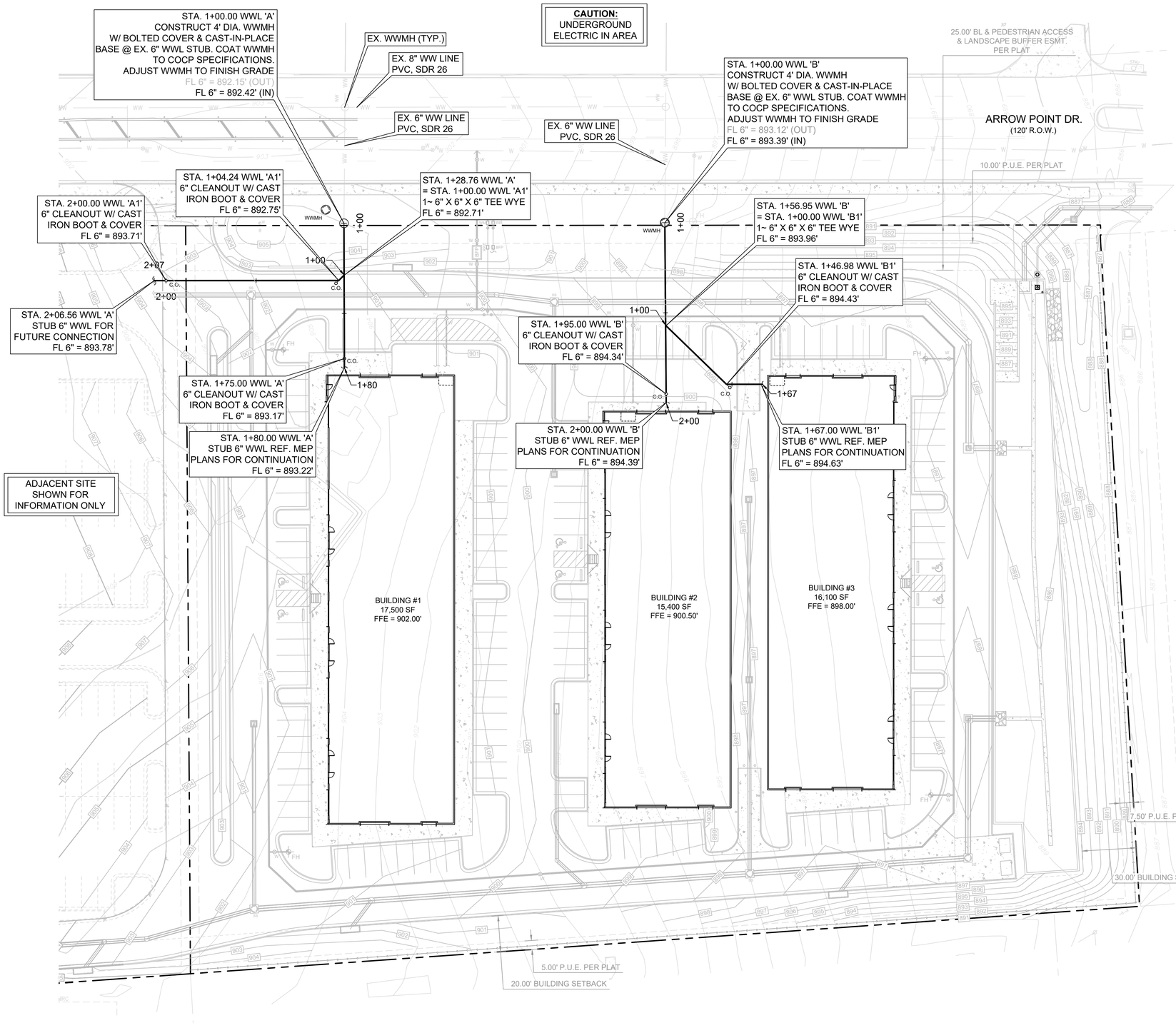
SHEET TITLE:

WATER PROFILE
(2 OF 2)

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-20

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 UTIL - 1WTR.dwg, 7/31/2025 12:06:21 PM, _DWG To PDF.pc3, 1:1, 1RW



0 15 30 60
HORIZONTAL SCALE

Texas 811
know what's below.
Call before you dig.

NOTES:

1. THE CONTRACTOR SHALL POT HOLE AND FIELD VERIFY THE LOCATION AND DEPTHS OF ALL PROPOSED UTILITY CROSSINGS & CONNECTIONS PRIOR TO ANY CONSTRUCTION OR ORDERING OF MATERIALS. CONTRACTOR SHALL REPORT DISCREPANCIES OF EXISTING UTILITIES TO THE ENGINEER PRIOR TO CONSTRUCTION.

2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

3. REFER TO MEP PLAN FOR SERVICE CONNECTIONS TO UTILITY PROVIDERS: GAS / ELECTRIC / TELEPHONE / ETC.

4. STUB WATER, WASTEWATER SERVICE LINES, AND ROOF DRAIN STORM LINES 5' FROM BLDG. REFER TO MEP PLAN FOR CONTINUATION.

5. WHERE A SEWER CROSSES A WATERLINE, ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATERLINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. CENTER 1 JOINT OF WASTEWATER LINE ON CROSSING. PIPE BEDDING SHALL UTILIZE CONTROLLED LOW STRENGTH MATERIAL OR SAND STABILIZED WITH TWO OR MORE 80 POUND BAGS OF CEMENT PER CUBIC YARD OF SAND FOR ANY SECTION OF COLLECTION SYSTEM PIPE WITHIN NINE FEET OF PUBLIC WATER SUPPLY PIPE. INSTALLED FROM 6" BELOW THE PIPE TO 12" ABOVE THE PIPE.

6. TRENCH SAFETY SYSTEMS SHALL BE REQUIRED FOR TRENCHES EXCEEDING 5' DEPTH. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF TEXAS.

7. ADJUST ALL EXISTING & PROPOSED MANHOLE COVERS, VALVE BOXES, AND CASTINGS TO FINISH GRADE.

8. ALL MANHOLE COVERS SHALL READ CITY OF CEDAR PARK.

9. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
7/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

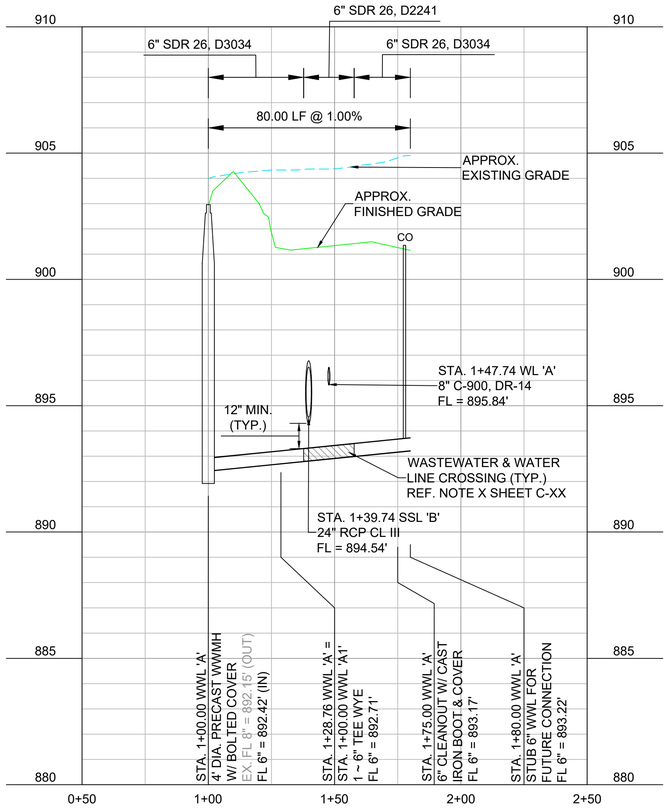
SHEET TITLE:

WASTEWATER PLAN

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-21

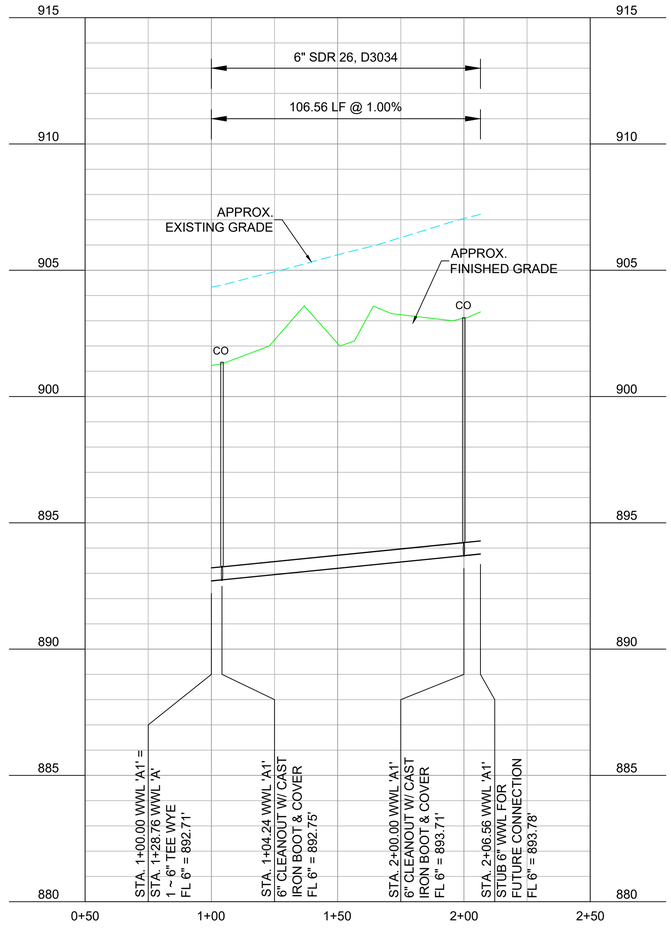
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 UTIL - WW.dwg, 7/31/2025 12:09:51 PM, DWG To PDF.pc3, 1:1, JRW



WASTEWATER LINE 'A' PROFILE

SCALE: HORZ. 1" = 30'

VERT. 1" = 3'



WASTEWATER LINE 'A1' PROFILE

SCALE: HORZ. 1" = 30'

VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS

211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

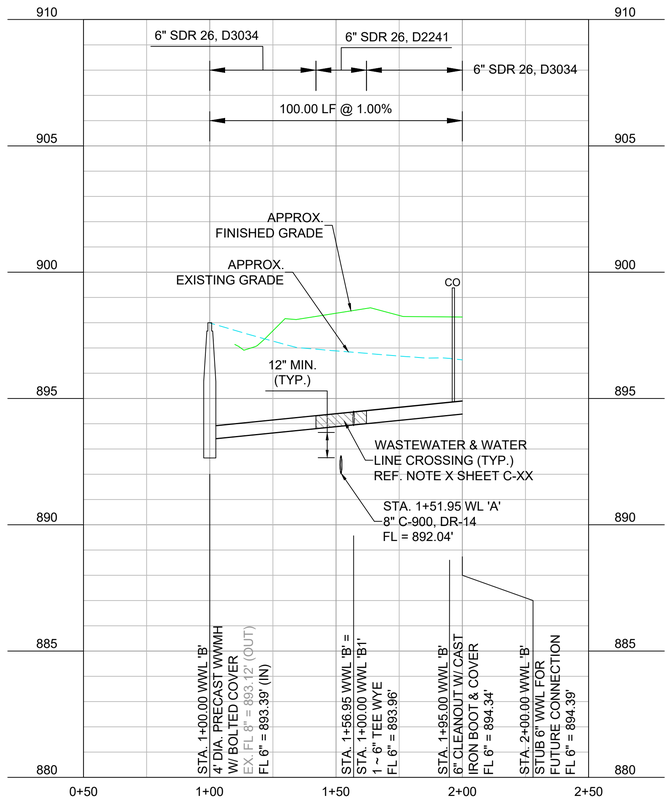
WASTEWATER
PROFILE (1 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

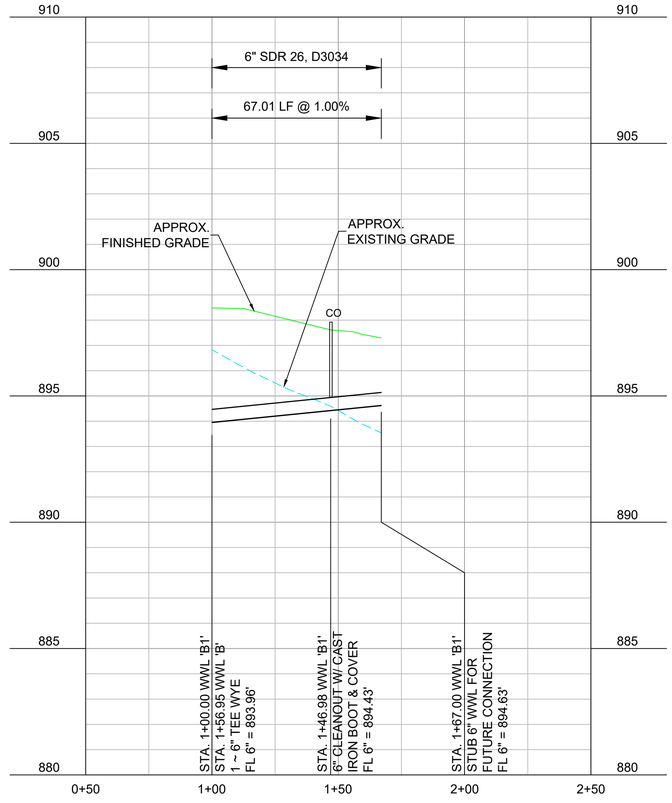
SHEET NO.:
C-22

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 UTIL - WW.dwg, 7/31/2025 12:11:19 PM, _DWG To PDF.pc3, 1:1, RW



WASTEWATER LINE 'B' PROFILE

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



WASTEWATER LINE 'B1' PROFILE

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD
REVISIONS
DATE
No.

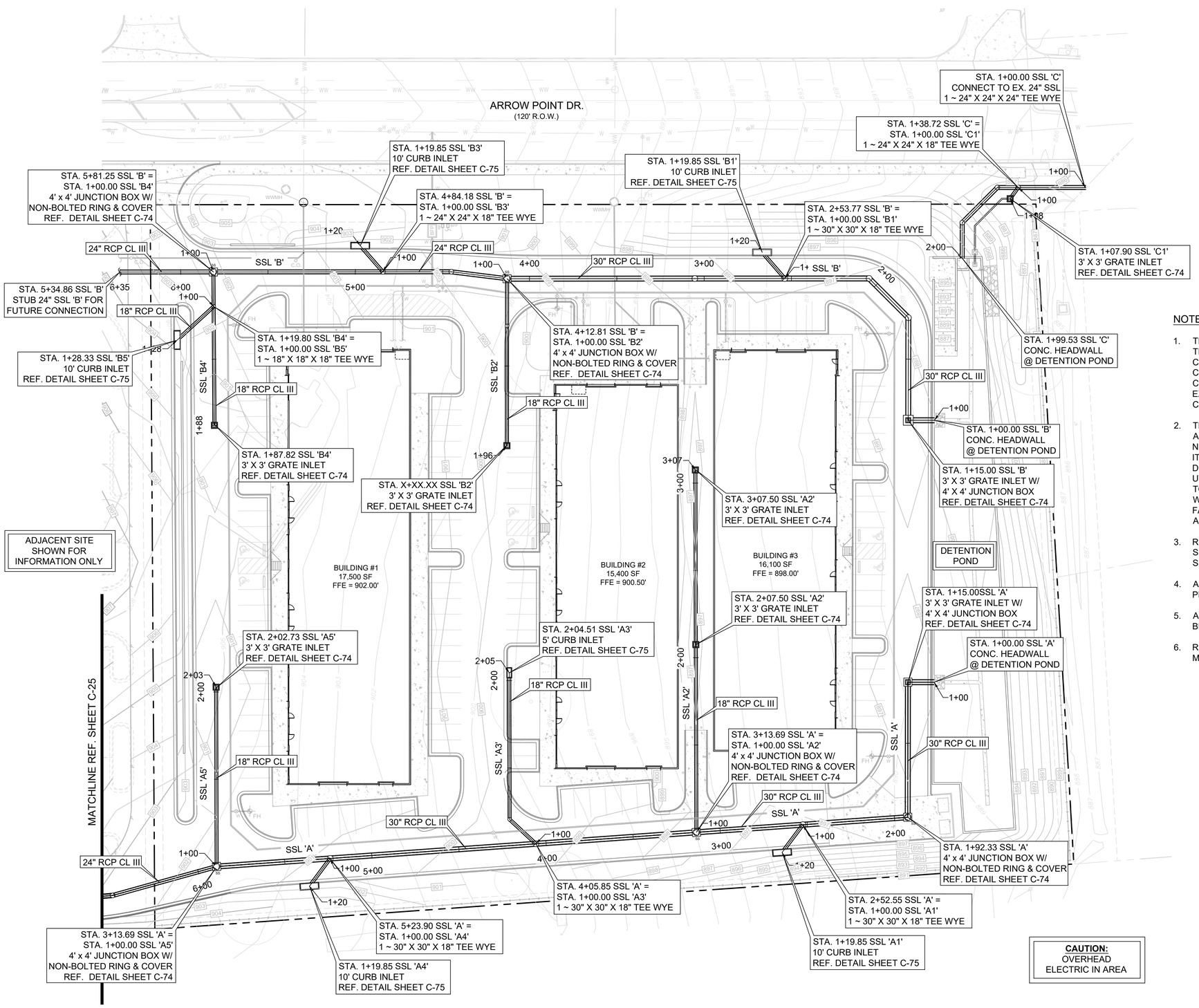
SHEET TITLE:

WASTEWATER
PROFILE (2 OF 2)

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-23

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 UTIL - WW.dwg, 7/31/2025 12:12:16 PM, _DWG To PDF.pc3, 1:1, JRW



0 15 30 60
HORIZONTAL SCALE

Texas 811
know what's below.
Call before you dig.

NOTES:

1. THE CONTRACTOR SHALL POT HOLE AND FIELD VERIFY THE LOCATION AND DEPTHS OF ALL PROPOSED UTILITY CROSSINGS & CONNECTIONS PRIOR TO ANY CONSTRUCTION OR ORDERING OF MATERIALS. CONTRACTOR SHALL REPORT DISCREPANCIES OF EXISTING UTILITIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. REFERENCE SHEET C-26 THROUGH C-33 FOR STORM SEWER PROFILES. REFERENCE SHEET C-XX FOR STORM SEWER CALCULATIONS.
4. ALL STORM SEWER BENDS AND WYES SHALL BE PREFABRICATED.
5. ALL STORM SEWER INLETS AND JUNCTION BOXES SHALL BE PREFABRICATED UNLESS OTHERWISE NOTED.
6. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

NOTE TO REVIEWER:
FOR UTILITY CROSSING
STATIONING, FLOW LINE ELEVATION,
PIPE MATERIAL, & SIZE REF. PROFILE
SHEET C-26 THROUGH C-33.

CAUTION:
OVERHEAD
ELECTRIC IN AREA

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

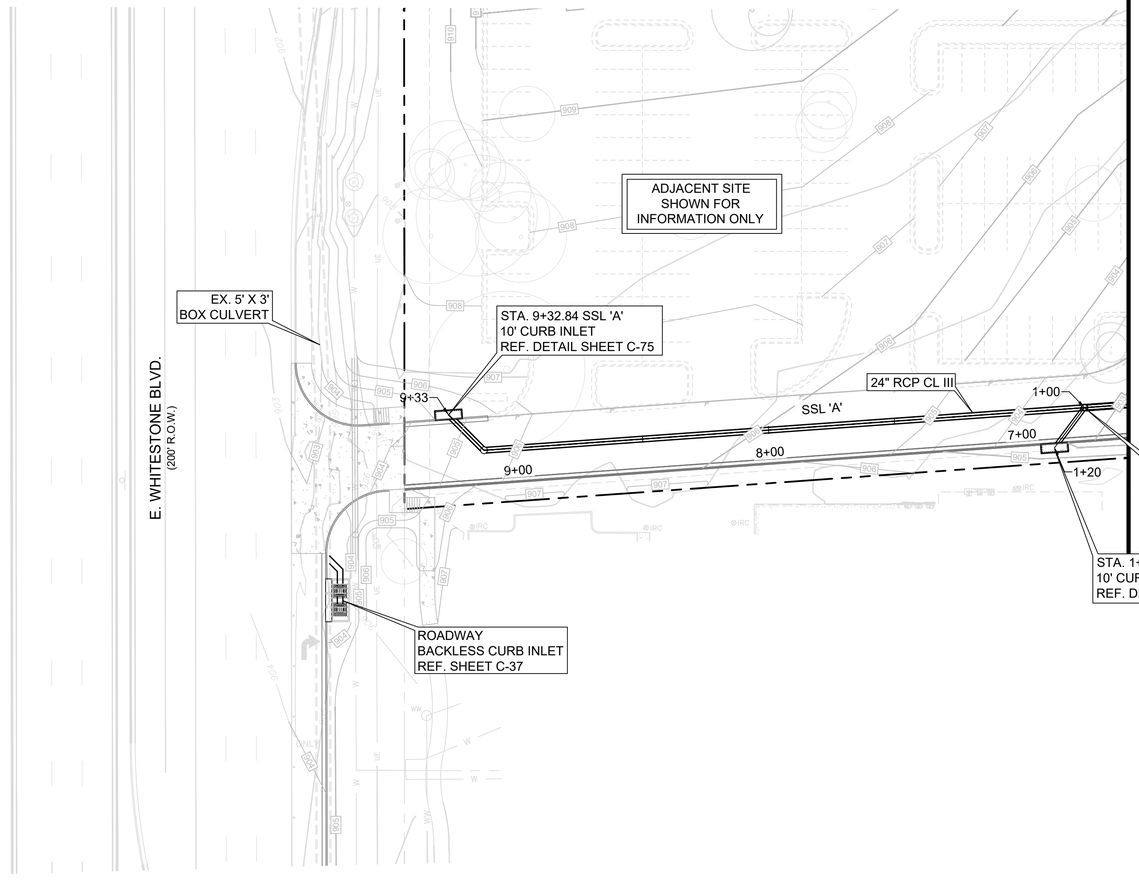
RECOMD
REVISIONS
No. DATE

SHEET TITLE:
STORM SEWER PLAN
(1 OF 2)

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-24

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 STORM.dwg, 7/31/2025 12:02:49 PM, , DWG To PDF.pc3, 1:1, JRW



0 15 30 60
HORIZONTAL SCALE

Texas 811
know what's **below.**
Call before you dig.

NOTES:

1. THE CONTRACTOR SHALL POT HOLE AND FIELD VERIFY THE LOCATION AND DEPTHS OF ALL PROPOSED UTILITY CROSSINGS & CONNECTIONS PRIOR TO ANY CONSTRUCTION OR ORDERING OF MATERIALS. CONTRACTOR SHALL REPORT DISCREPANCIES OF EXISTING UTILITIES TO THE ENGINEER PRIOR TO CONSTRUCTION.

2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

3. REFERENCE SHEET C-26 THRU C-33 FOR STORM SEWER PROFILES. REFERENCE SHEET C-XX FOR STORM SEWER CALCULATIONS.

4. ALL STORM SEWER BENDS AND WYES SHALL BE PREFABRICATED.

5. ALL STORM SEWER INLETS AND JUNCTION BOXES SHALL BE PREFABRICATED UNLESS OTHERWISE NOTED.

6. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/7/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW
DRAWN: JRW
APPROVED: AAP
DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

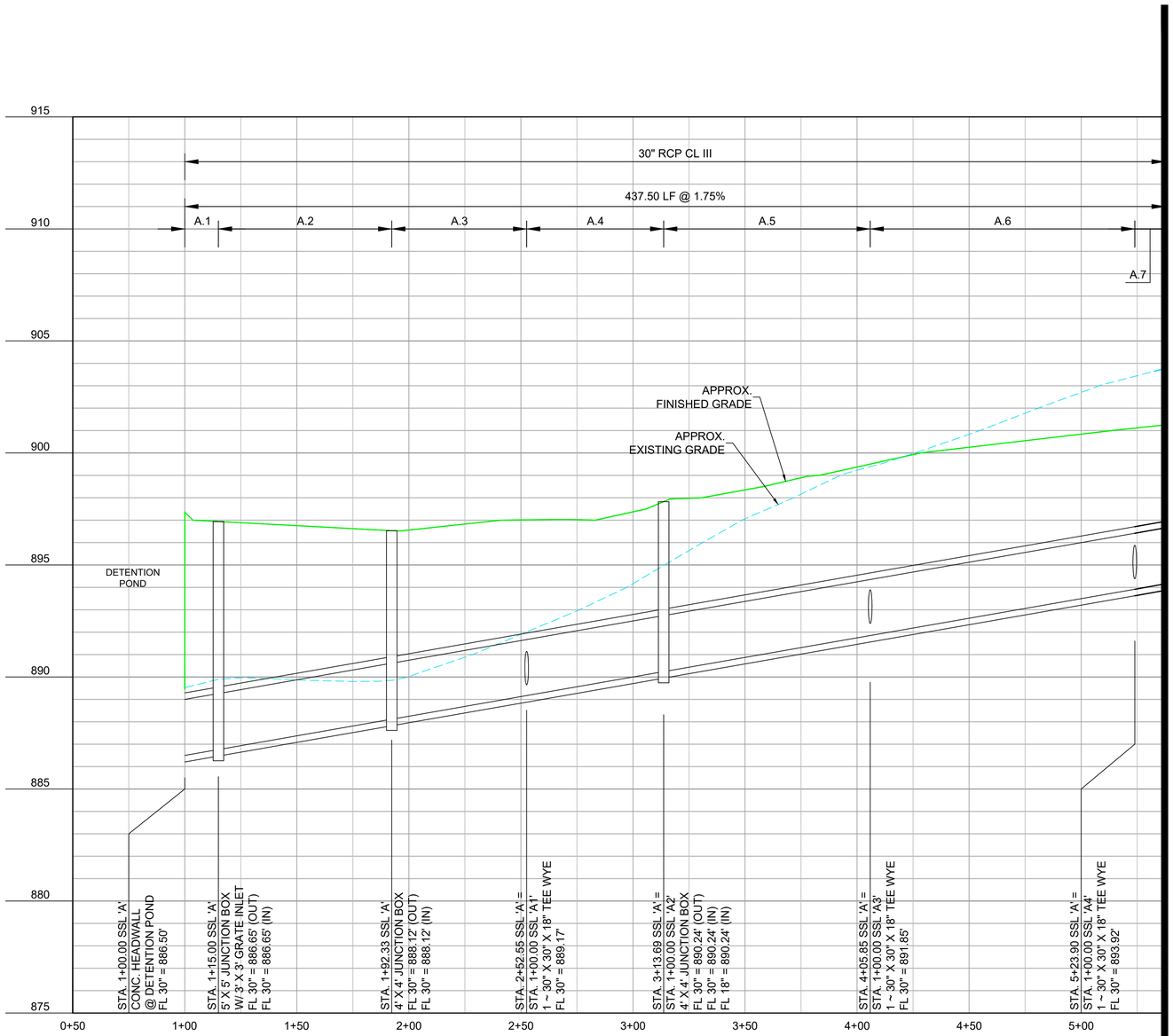
STORM SEWER PLAN
(2 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-25

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 STORM.dwg, 7/31/2025 12:05:05 PM, _DWG To PDF.pc3, 1:1, JRW



MATCHLINE REF. SHEET C-27

STORM SEWER LINE 'A' PROFILE
STA. 1+00.00 TO STA. 5+37.50

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

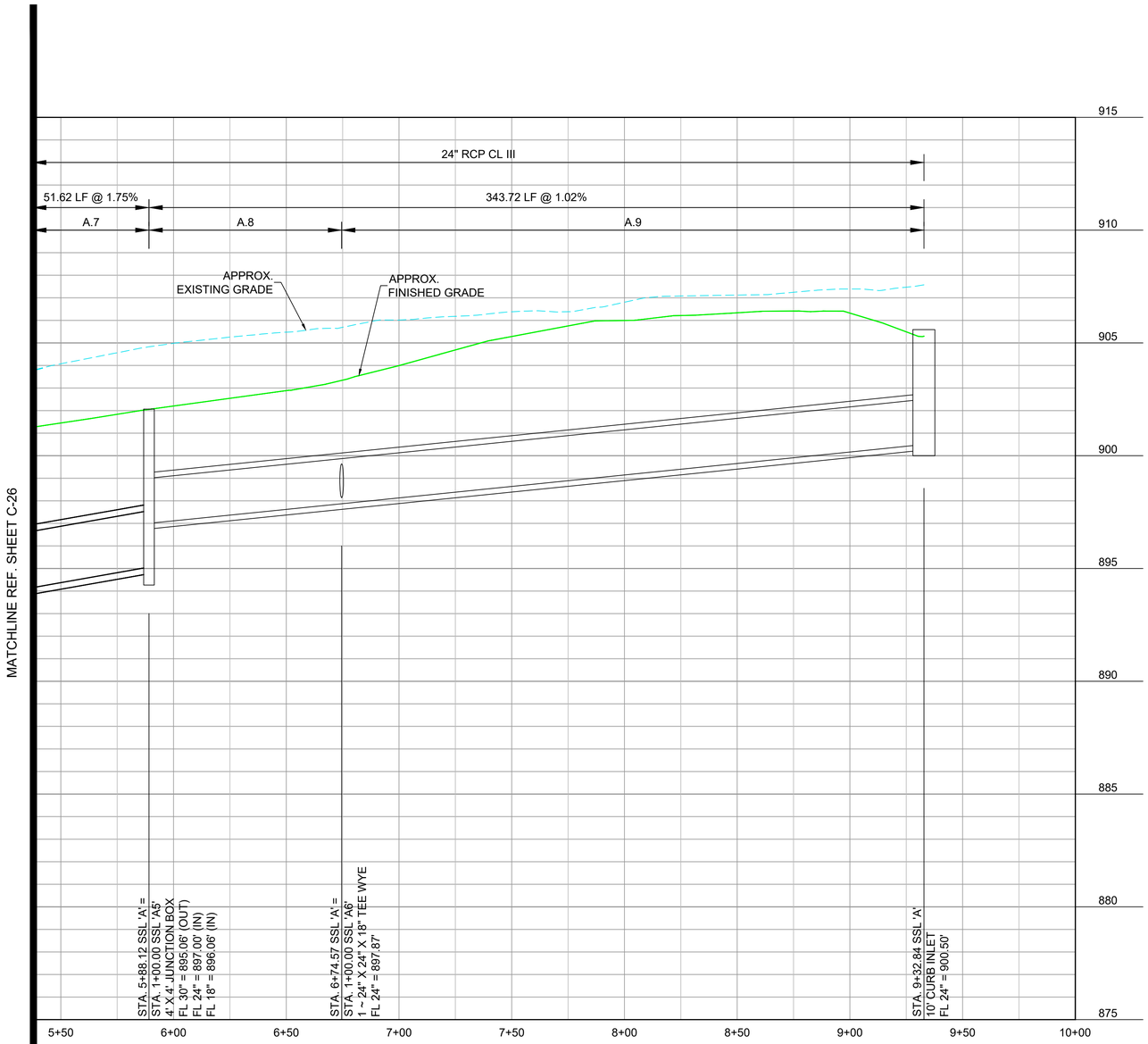
SHEET TITLE:

STORM SEWER
PROFILE (1 OF 8)

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-26

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 STORM.dwg, 7/31/2025 12:06:01 PM, _DWG To PDF.pc3, 1:1, JRW



STORM SEWER LINE 'A' PROFILE
STA. 5+37.50 TO STA. 9+32.84
SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

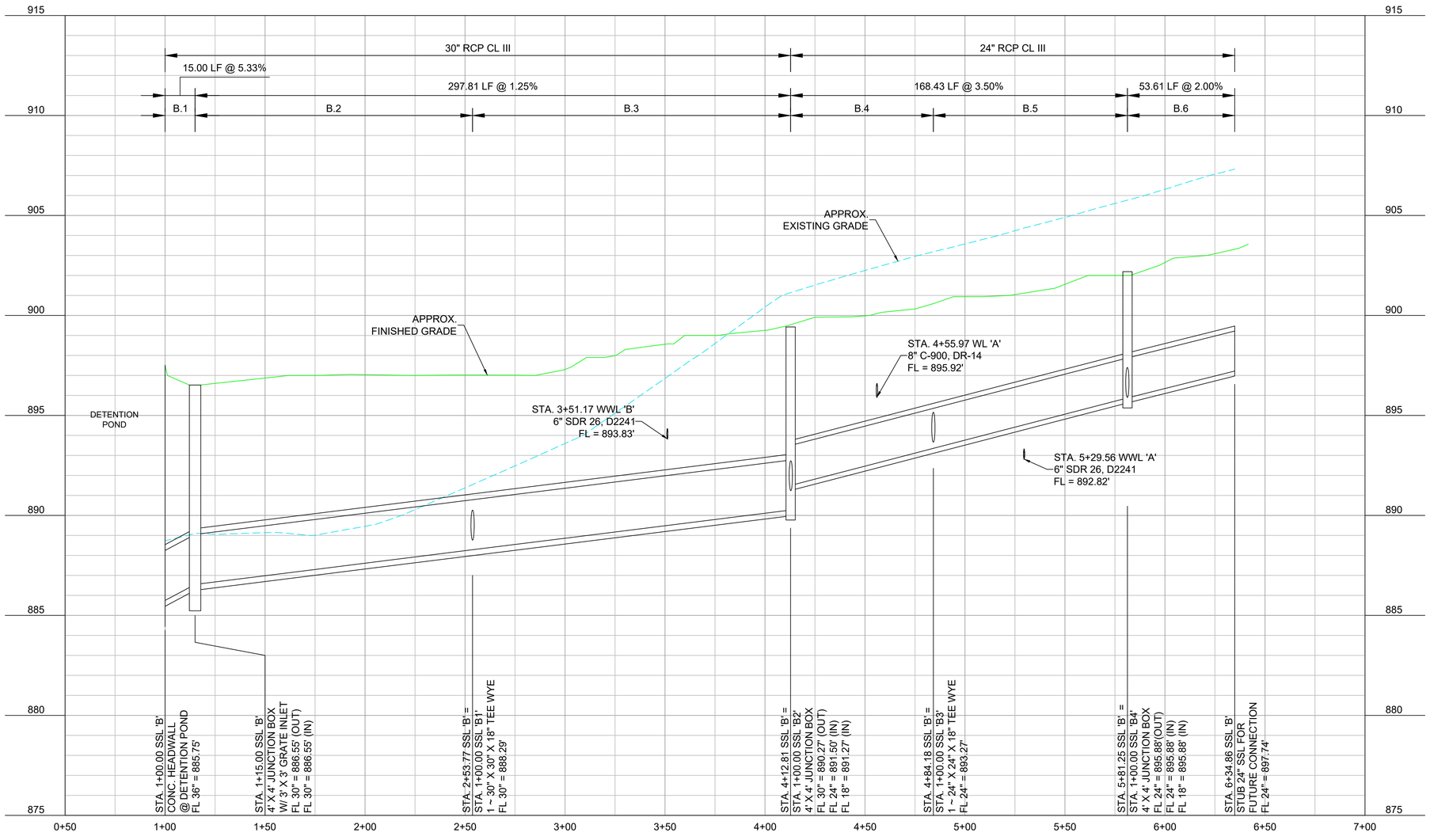
STORM SEWER PROFILE (2 OF 8)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-27

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 STORM.dwg, 7/31/2025 12:11:37 PM, , DWG To PDF.pc3, 1:1, JRW



STORM SEWER LINE 'B' PROFILE

SCALE: HORZ. 1" = 30'

VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS

211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

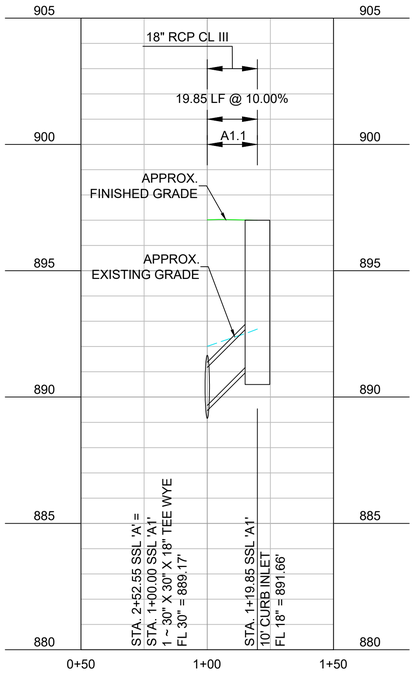
STORM SEWER PROFILE (3 OF 8)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-28

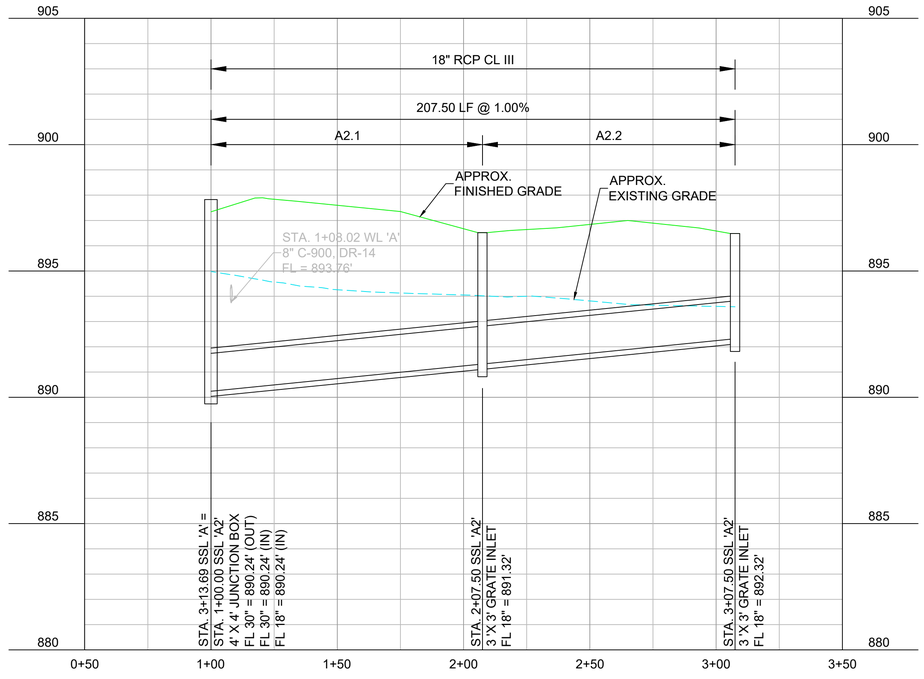
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 STORM.dwg, 7/31/2025 12:08:06 PM, _DWG To PDF.pc3, 1:1, RW



STORM SEWER LINE 'A1' PROFILE

SCALE: HORZ. 1" = 30'

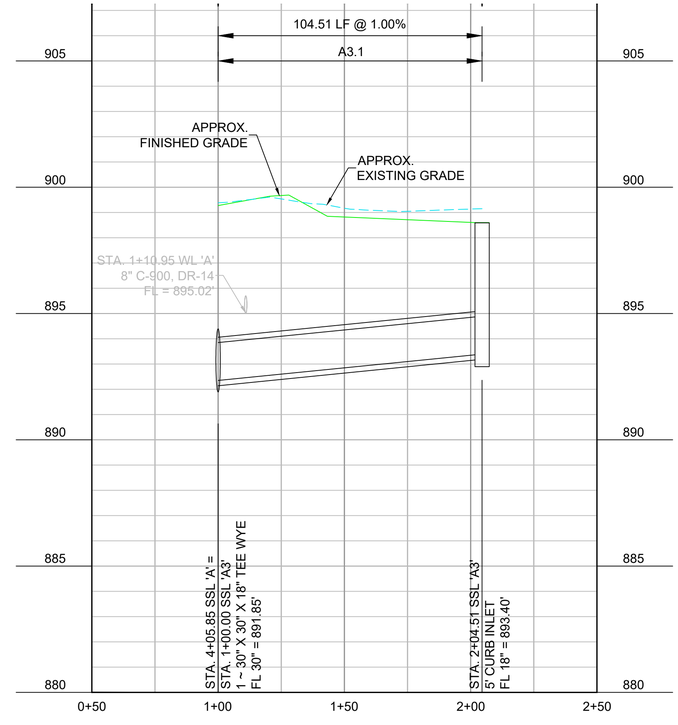
VERT. 1" = 3'



STORM SEWER LINE 'A2' PROFILE

SCALE: HORZ. 1" = 30'

VERT. 1" = 3'



STORM SEWER LINE 'A3' PROFILE

SCALE: HORZ. 1" = 30'

VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS

211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/1/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

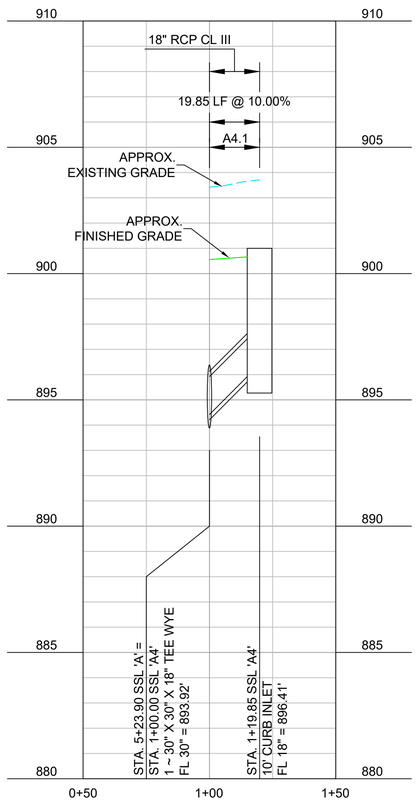
STORM SEWER
PROFILE (4 OF 8)

WP PROJECT NO.:
073-030

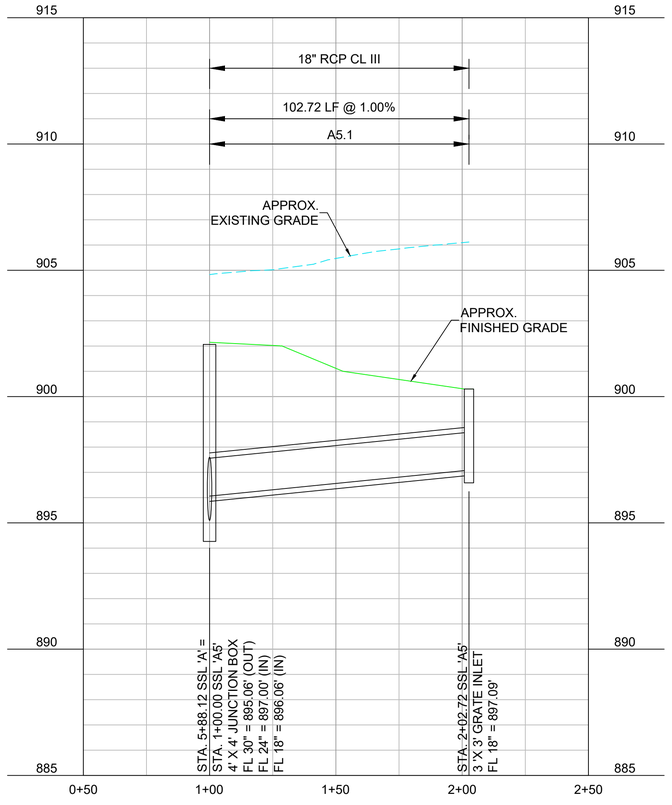
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-29

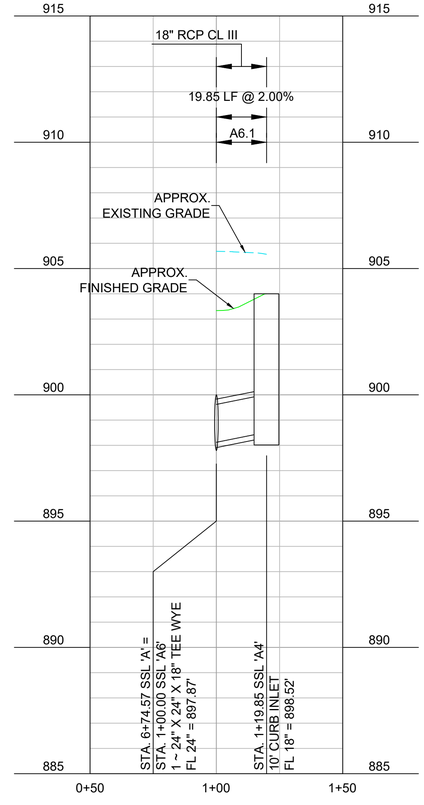
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 STORM.dwg, 7/31/2025 12:01:14 PM, _DWG To PDF.pc3, 1:1, JRW



STORM SEWER LINE 'A4' PROFILE
SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



STORM SEWER LINE 'A5' PROFILE
SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



STORM SEWER LINE 'A6' PROFILE
SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW
DRAWN: JRW
APPROVED: AAP
DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

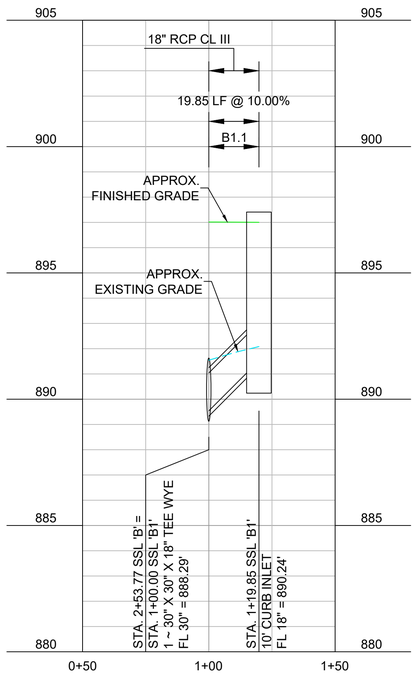
STORM SEWER
PROFILE (5 OF 8)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-30

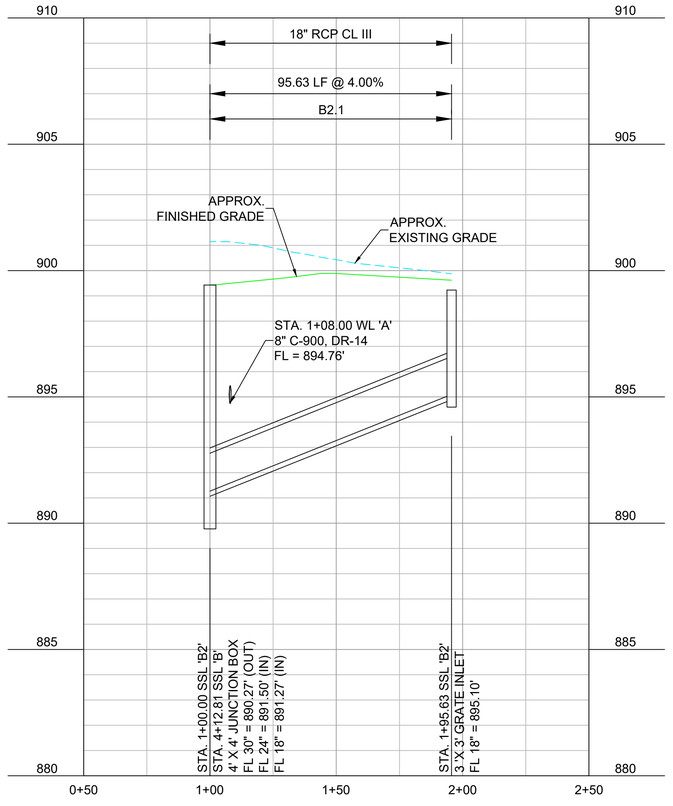
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 STORM.dwg, 7/31/2025 12:01:35 PM, _DWG To PDF.pc3, 1:1, JRW



STORM SEWER LINE 'B1' PROFILE

SCALE: HORZ. 1" = 30'

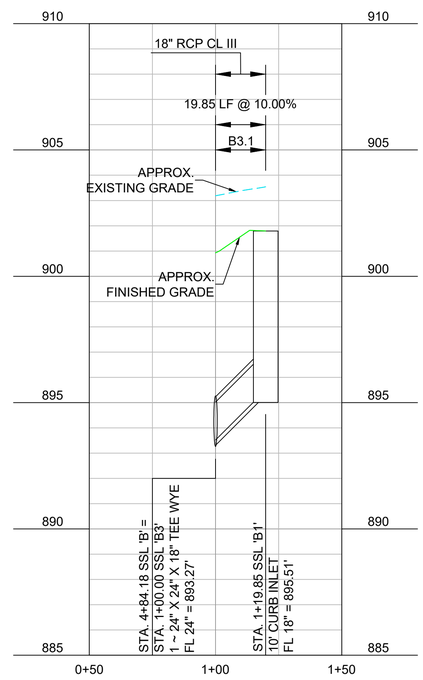
VERT. 1" = 3'



STORM SEWER LINE 'B2' PROFILE

SCALE: HORZ. 1" = 30'

VERT. 1" = 3'



STORM SEWER LINE 'B3' PROFILE

SCALE: HORZ. 1" = 30'

VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW
DRAWN: JRW
APPROVED: AAP
DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

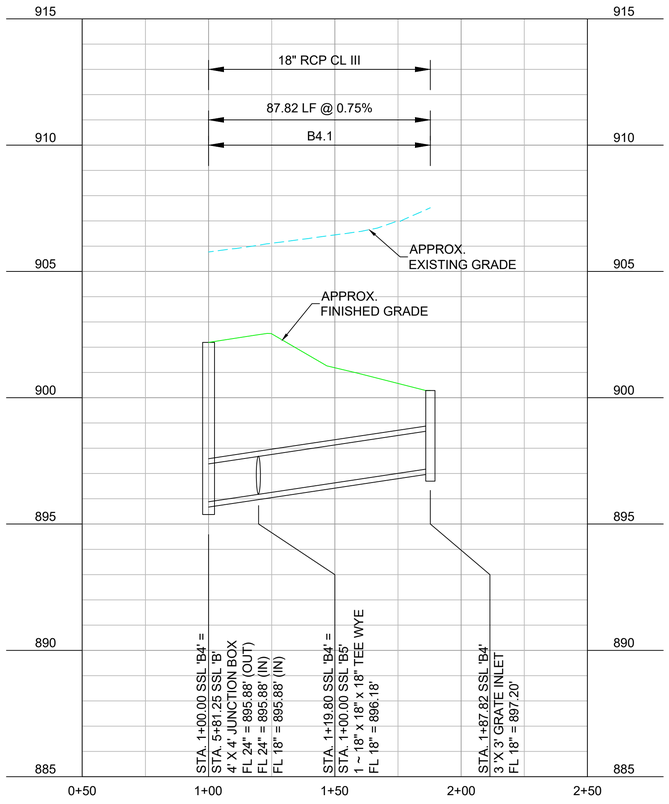
STORM SEWER
PROFILE (6 OF 8)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

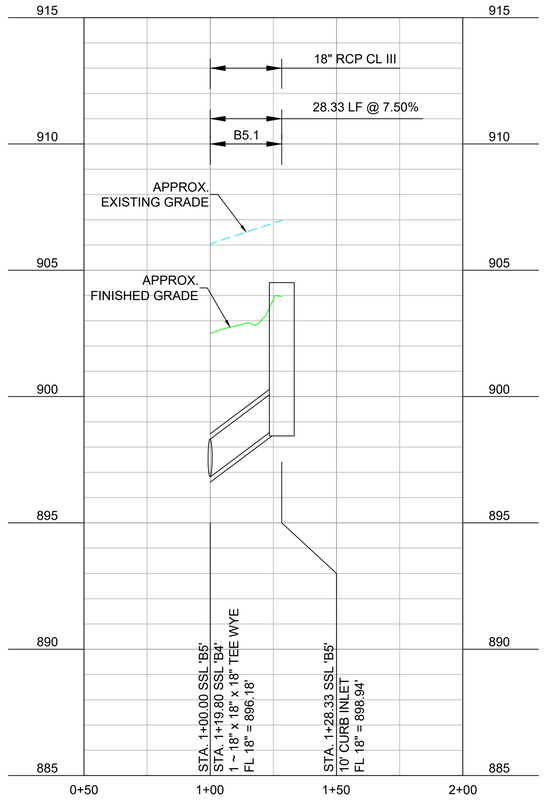
SHEET NO.:
C-31

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 STORM.dwg, 7/31/2025 12:07:38 PM, _DWG To PDF.pc3, 1:1, JRW



STORM SEWER LINE 'B4' PROFILE

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



STORM SEWER LINE 'B5' PROFILE

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS

211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW
DRAWN: JRW
APPROVED: AAP
DATE: 7/31/2025

RECOM'D
REVISIONS
DATE
No.

SHEET TITLE:

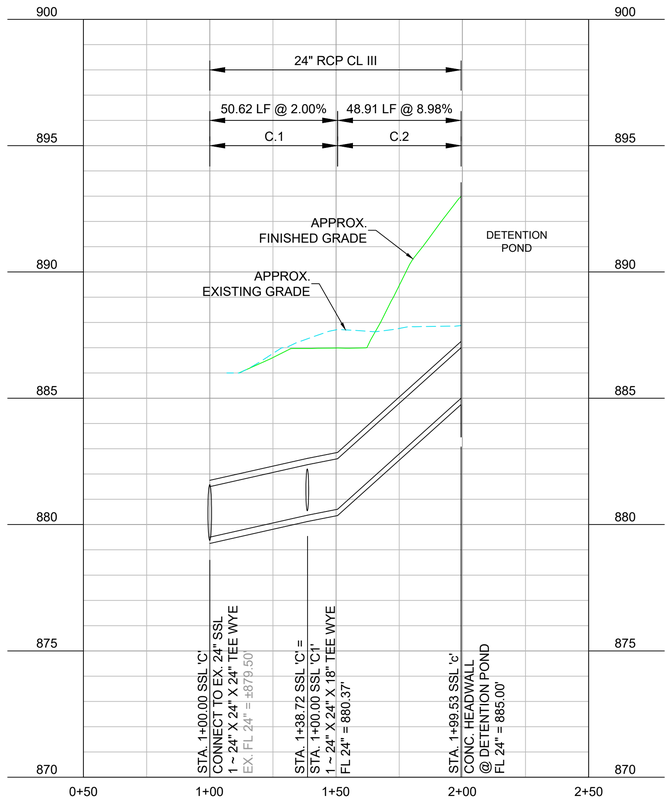
STORM SEWER
PROFILE (6 OF 8)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

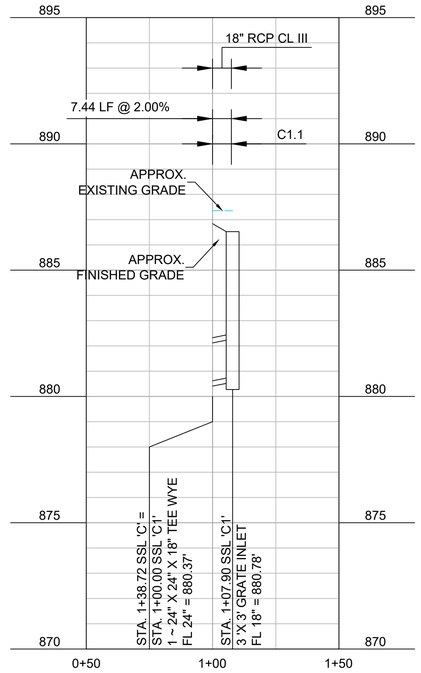
SHEET NO.:
C-32

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 STORM.dwg, 7/31/2025 12:05:16 PM, _DWG To PDF.pc3, 1:1, JRW



STORM SEWER LINE 'C' PROFILE

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



STORM SEWER LINE 'C1' PROFILE

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
7/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

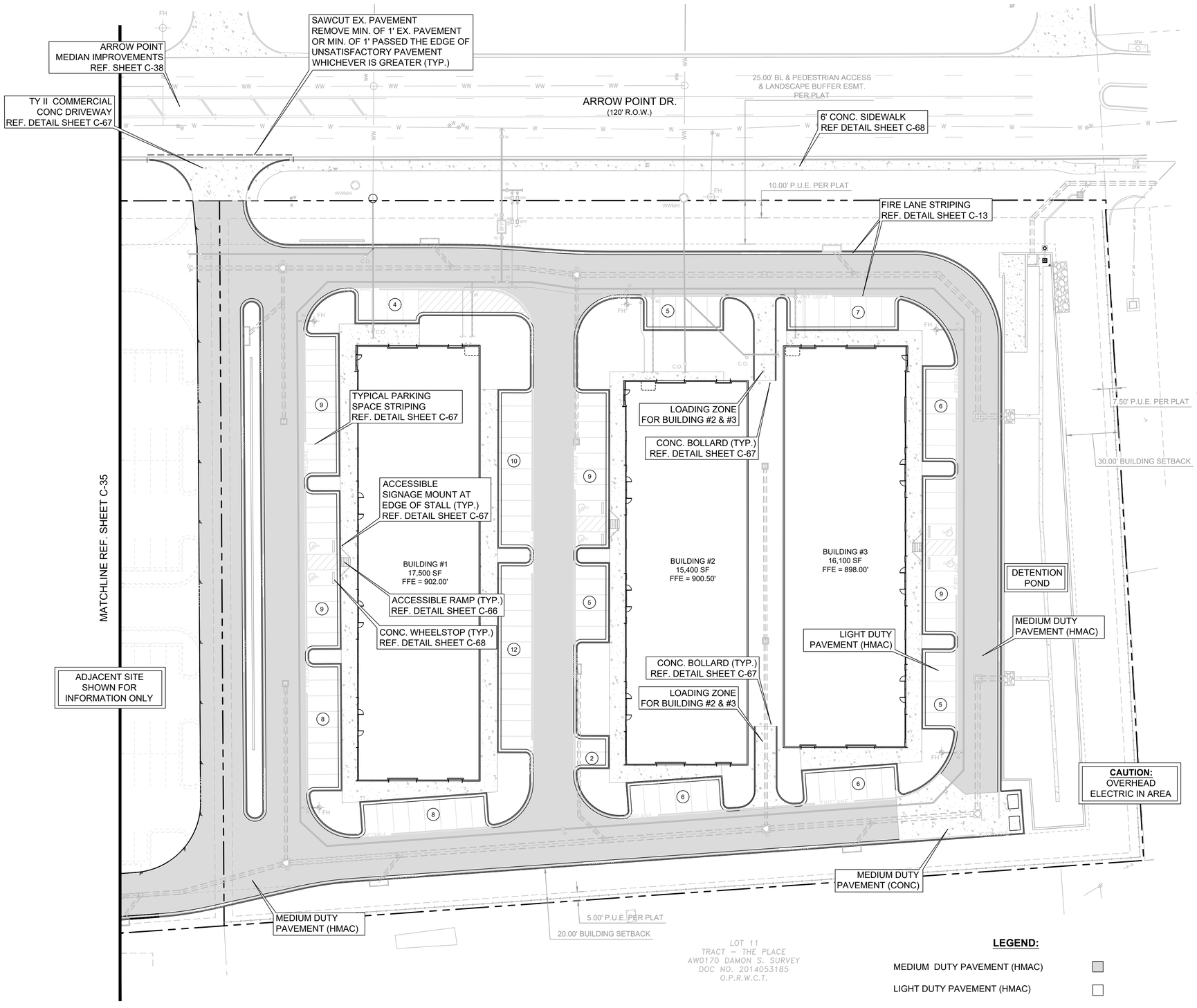
STORM SEWER
PROFILE (8 OF 8)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-33

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 STORM.dwg, 7/31/2025 12:11:47 PM, _DWG To PDF.pc3, 1:1, JRW



LEGEND:

MEDIUM DUTY PAVEMENT (HMAC)

LIGHT DUTY PAVEMENT (HMAC)

0 15 30 60

HORIZONTAL SCALE

Texas 811

know what's **below.**
Call before you dig.

PAVEMENT SECTION RECOMMENDATIONS

FLEXIBLE PAVEMENT SECTION	LIGHT	MEDIUM
HOT MIX ASPHALTIC CONCRETE (TYPE D)	1.5"	2.0"
CRUSHED LIMESTONE BASE	6.0"	8.0"

RIGID PAVEMENT SECTION		
JOINTED REINFORCED CONCRETE PAVEMENT 3600 PSI @ 28 DAYS	5.0"	5.0"

NOTES:

1. PAVEMENT SECTIONS WERE PREPARED BY ECCS TEXA, LLP. THE CONSTRUCTION AND TESTING SHALL COMPLY WITH THEIR RECOMMENDATIONS FROM THE " SUBSURFACE EXPLORATION & GEOTECHNICAL EVALUATION" GEOTECHNICAL ENGINEERING REPORT ECS PROJECT NO. 17-3591.

   P.O.C.: ROBERT W. ARCHER, P.E.
   PHONE NO.: 512-837-8221

2. LIGHT DUTY PAVEMENT AREAS ARE DEFINED AS PARKING STALLS & MEDIUM DUTY PAVEMENT AREAS ARE DEFINED AS DRIVE AISLES AND FIRE LANES.

3. CONCRETE PAVING SHALL HAVE TRANSVERSE AND LONGITUDINAL CONTRACTION JOINTS AT INTERVALS NOT EXCEEDING 12.5 FEET. DEPTH OF JOINTS SHALL BE AT LEAST 1/4 OF THE SLAB THICKNESS. THE JOINTS MUST BE SAW CUT AS SOON AS THE CONCRETE HAS HARDENED AND WILL NOT REAR OR RAVEL WHEN CUT, WITHIN 6-12 HOURS OF PLACEMENT.

4. SUPPORT REINFORCEMENT STEEL WITH CHAIRS OF PRECAST CONCRETE BLOCKS ABOUT 1 INCH BELOW THE BOTTOM OF THE PLANNED CONTRACTION JOINTS.

5. PROVIDE LOAD TRANSFER AT THE INTERFACE BETWEEN AREAS OF CONCRETE PLACED AT DIFFERENT TIMES USING TIED AND KEYED CONSTRUCTION JOINTS. PLACE CONSTRUCTION JOINT AT PLANNED CONTRACTION JOINT LOCATIONS.

6. ALL JOINTS SHALL BE SEALED IN ACCORDANCE WITH CORR SPECIFICATION ITEM 360.

7. STAGE PAVEMENT CONSTRUCTION SUCH THAT CONSTRUCTION TRAFFIC, INCLUDING CONCRETE TRUCKS, DO NOT TRAVEL ON NEWLY PLACED CONCRETE PAVEMENT UNTIL THE CONCRETE ACHIEVES AT LEAST 75% OF THE DESIGN STRENGTH, USUALLY 7 DAYS.

8. CONCRETE JOINTING FOR SIDEWALKS SHALL MATCH THE ADJACENT CURB OR PAVEMENT JOINTING.

9. SIDEWALKS ADJACENT TO CURB AND GUTTERS SHALL BE DOWELED TO PREVENT DIFFERENTIAL MOVEMENT.

10. SIDEWALKS AT DOORWAY LOCATIONS SHALL BE DOWELED TO THE BUILDING FOUNDATION TO PREVENT DIFFERENTIAL MOVEMENT.

11. CURBS WITHIN THE LIMITS OF CONCRETE PAVEMENT SHALL BE MONOLITHICALLY POURED WITH PAVEMENT.

12. FIRE ACCESS ALL WEATHER SURFACE (CONCRETE OR ASHPALT) IS REQUIRED FOR FIRE APPARTUS ACCESS ROADS BEFORE GOING VERTICAL WITH OR BRINGING CONBUSTIBLE MATERIALS TO THE CONSTRUCTION SITE. MUST SUPPORT 75,000 POUNDS. HYDRANTS AT THE CONSTRUCTION SITE SHALL BE IN SERVICE.

13. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
7/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

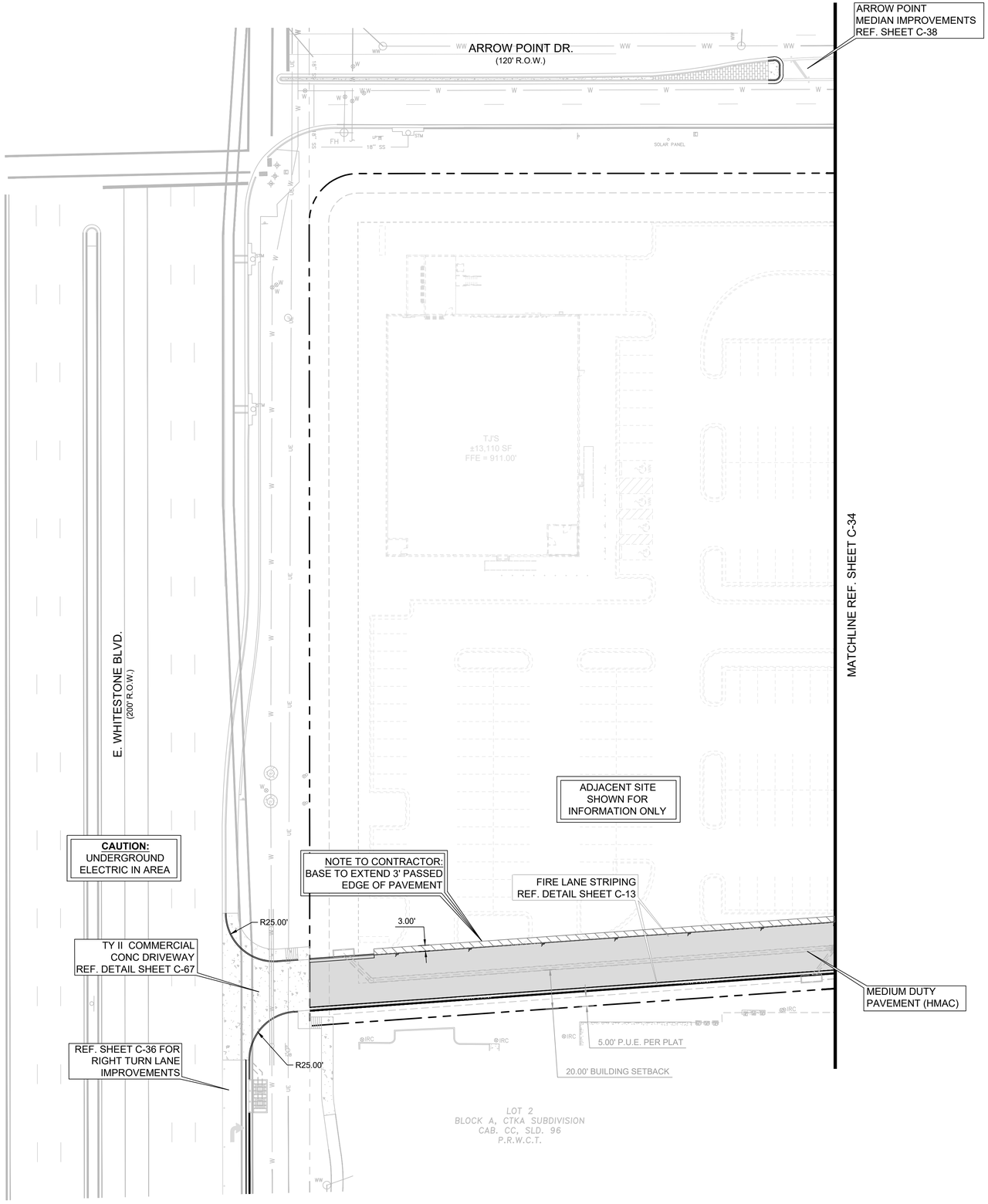
PAVING, SIGNAGE,
& STRIPING PLAN
(1 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-34

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 PAV.dwg, 7/31/2025 1:49:49 PM, _DWG To PDF.pc3, 1:1, JRW



0 15 30 60
HORIZONTAL SCALE

know what's **below.**
Call before you dig.

NOTES:

1. REFERENCE SHEET C-34 FOR PAVING, STRIPING, & SIGNAGE NOTES.
2. REFERENCE SHEET C-3 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
7/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

PAVING, SIGNAGE,
& STRIPING PLAN
(2 OF 2)

WP PROJECT NO.:
073-030

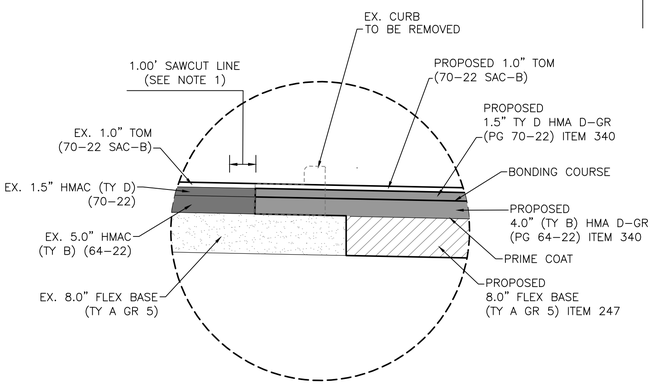
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-35

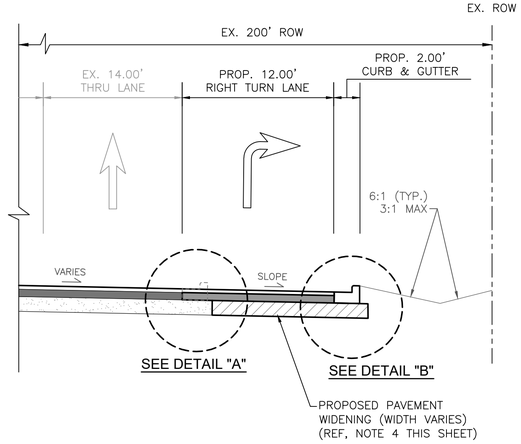
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 PAV.dwg, 7/31/2025 1:49:35 PM, _DWG To PDF.pc3, 1:1, JRW

NOTES:

1. FOR CHANNELIZING DEVICE SPACING, TAPER LENGTHS, ETC. SEE APPLICABLE TXDOT STANDARDS.
2. ADVANCE SIGNAGE CONSTRUCTION AHEAD, LANE SHIFT ETC. SHALL BE LOCATED PER APPROPRIATE TXDOT STANDARDS.
3. ALL CONFLICTING MARKING AND SIGNAGE TO BE REMOVED PRIOR TO INSTALLATION OF TEMPORARY SIGNAGE AND MARKING.
4. ALL REMOVED SIGNAGE SHALL BE DELIVERED TO TXDOT MAINTENANCE OFFICE LOCATED AT 2001 WHITESTONE BLVD IN CEDAR PARK, TEXAS.
5. THE CONTRACTOR MAY PROPOSE CHANGES TO THE TRAFFIC CONTROL PLAN THAT ARE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS.
6. ALL TRAFFIC CONTROL SIGNING, BARRICADES AND TEMPORARY PAVEMENT MARKINGS MUST BE IN PLACE PRIOR TO CONSTRUCTION ON ANY OF THE TRAFFIC CONTROL PHASES.
7. THE CONTRACTOR MUST NOTIFY TXDOT AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION, AFTER THE COMPLETION OF EACH CONSTRUCTION PHASE AND PRIOR TO INITIATION OF THE SUBSEQUENT CONSTRUCTION PHASE.
8. THE CONTRACTOR MUST PROVIDE THE NAME AND TELEPHONE NUMBER OF A PERSON RESPONSIBLE FOR THE CONSTRUCTION TRAFFIC CONTROL. THE DESIGNATED PERSON MUST BE AVAILABLE DURING CONSTRUCTION, EVENINGS AND WEEKENDS THROUGHOUT CONSTRUCTIO
9. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND CLEANING OF ALL TRAFFIC CONTROL DEVICES THROUGHOUT THE CONSTRUCTION PERIOD.
10. IN THE EVENT THE CONTRACTOR IS REQUIRED TO SHUT DOWN OR NARROW THE PROPOSED TRAFFIC LANES DURING CONSTRUCTION FOR THE PURPOSE OF TEMPORARY CONSTRUCTION PROCEDURES, ALL LANES WILL BE RESTORED TO TRAFFIC AT THE DESIGNATED WIDTH DURING NON-WORKING HOURS. ANY LANE CLOSURES OF RESTRICTIONS NECESSARY TO FACILITATE CONSTRUCTION MUST BE CONFINED TO NON-PEAK HOURS.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL TEMPORARY PAVEMENT SURFACES DURING THE COURSE OF CONSTRUCTION.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR/ MAINTENANCE OF EXISTING PAVEMENT SURFACES DURING THE COURSE OF CONSTRUCTION. ANY DAMAGES TO PAVEMENT SURFACES OR OTHER ROADWAY FEATURES OUTSIDE OF THE CONSTRUCTION LIMITS WILL BE REPAIRED BY THE CONTRACTOR.
13. PLACE ALL RAISED PAVEMENT MARKERS AS PER TXDOT STANDARD PM DETAILS. SEE SHEET 51 THRU 53. SUBSIDIARY TO OTHER BID ITEMS.
14. TYPE B SHALL BE PLACED IN 2 EQUAL LIFTS.
15. ALL LANE CLOSURES SHALL OCCUR ONLY BETWEEN THE HOURS OF 9 AM AND 4 PM. ANY NIGHT TIME LANE CLOSURES REQUIRE APPROVAL BY THE DIRECTOR OF ENGINEERING AND SHALL OCCUR BETWEEN THE HOURS OF 8 PM AND 6 AM. LANE CLOSURES OBSERVED BY CITY DURING THE PEAK HOURS OF 6 AM TO 9 AM, OR 4 PM TO 8 PM WILL BE SUBJECT TO FINE PER CHAPTER 1 OF CITY ORDINANCE, AND/OR SUBSEQUENT ISSUANCE OF WORK STOPPAGE.



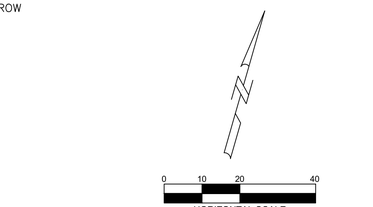
DETAIL "A"



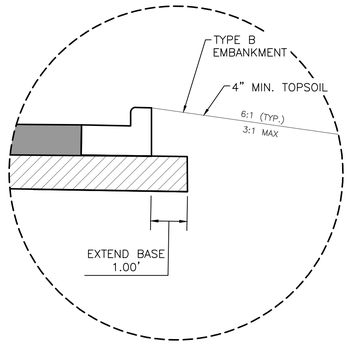
PROPOSED
RIGHT TURN LANE - TYPICAL SECTION
E. WHITESTON BLVD.
NTS

NOTES:

1. SAWCUT EXISTING PAVEMENT REMOVE MIN. OF 1.00' EXISTING PAVEMENT OR MIN. OF 1.00' PASSED THE EDGE OF UNSATISFACTORY PAVEMENT WHICHEVER IS GREATER.
2. EXISTING PAVEMENT CROSS-SLOPE VARIES. PROPOSED ROADWAY WIDENING CROSS SLOPE TO MATCH EXISTING PAVEMENT CROSS-SLOPE.
3. FULL PAVEMENT WIDTH WITHIN LIMITS OF CONSTRUCTION SHALL BE TREATED WITH TOM-TYPE C.
4. STRIPING SHALL BE 090 MIL THERMOPLASTIC.
5. TYPE II PAVEMENT STRIPING SHALL BE PLACED PRIOR TO TYPE I STRIPING.
6. REF. PAVING, SIGNAGE, AND STRIPING SHEET C-34 FOR ADDITIONAL NOTES.



know what's **below.**
Call before you dig.

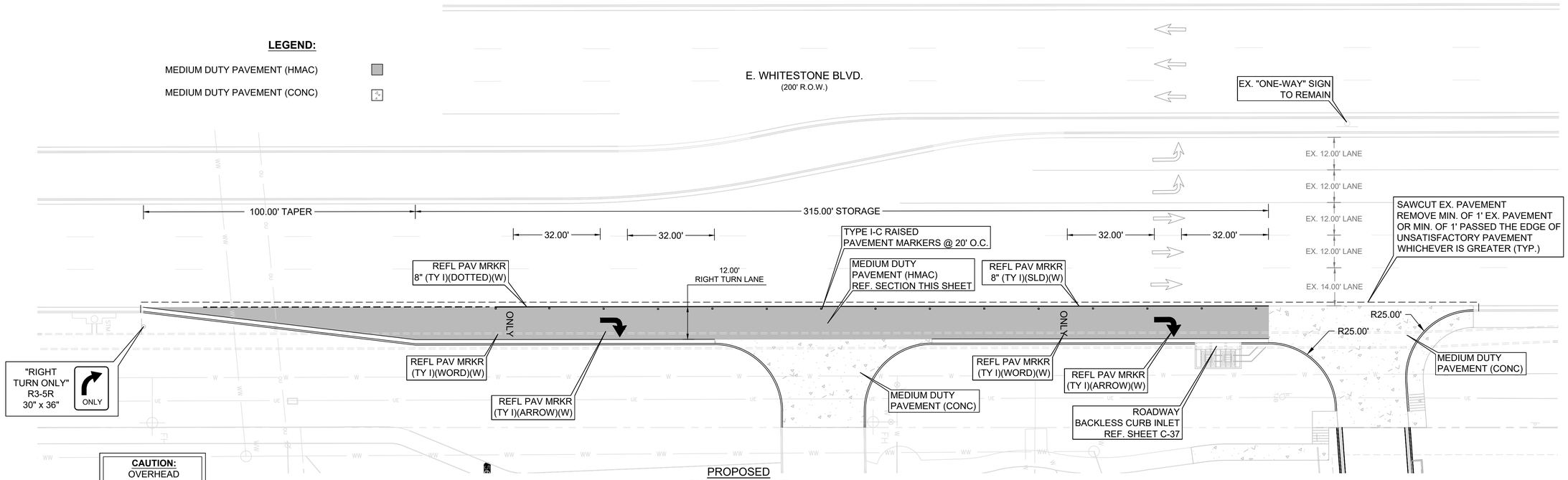


DETAIL "B"

LEGEND:

MEDIUM DUTY PAVEMENT (HMAC)

MEDIUM DUTY PAVEMENT (CONC)



CAUTION:
OVERHEAD
ELECTRIC IN AREA

CAUTION:
UNDERGROUND
ELECTRIC IN AREA

PROPOSED
RIGHT TURN LANE
E. WHITESTON BLVD.
SCALE:1" = 20'

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.31.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOM'D
REVISIONS
DATE
No.

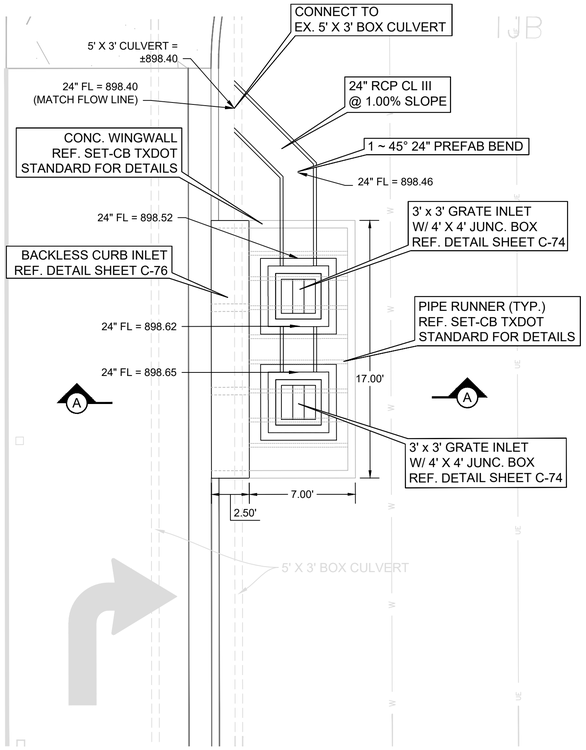
SHEET TITLE:

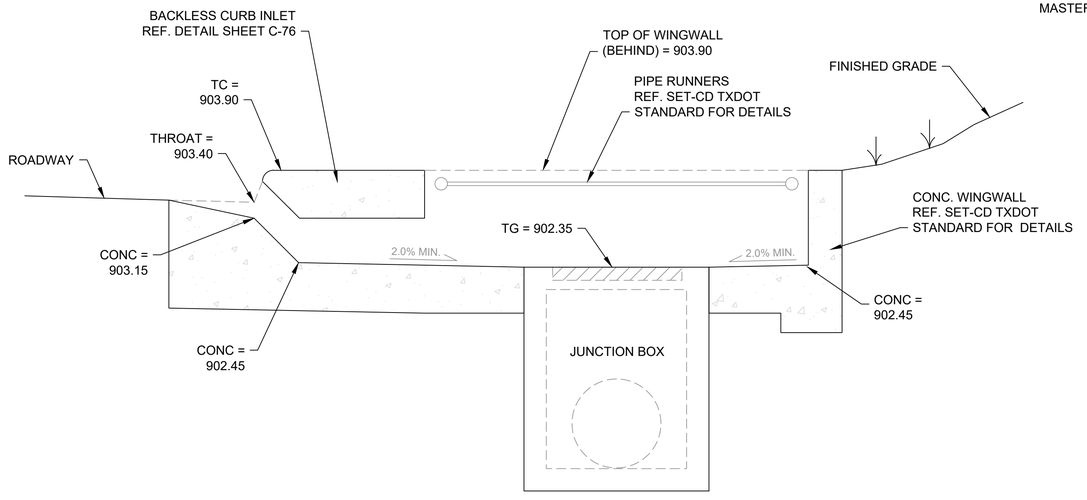
ROADWAY PLAN -
RIGHT TURN LANE

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

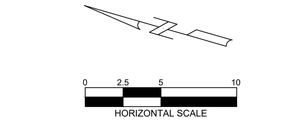
SHEET NO.:
C-36

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 PAV-RTL.dwg, 7/31/2025 12:11:00 PM, _DWG To PDF.pc3, 1:1, JRW





SECTION A-A
BACKLESS INLET DETAIL
NTS



Texas 811
know what's below.
Call before you dig.

NOTES:

1. THE CONTRACTOR SHALL POT HOLE AND FIELD VERIFY THE LOCATION AND DEPTHS OF ALL PROPOSED UTILITY CROSSINGS & CONNECTIONS PRIOR TO ANY CONSTRUCTION OR ORDERING OF MATERIALS. CONTRACTOR SHALL REPORT DISCREPANCIES OF EXISTING UTILITIES TO THE ENGINEER PRIOR TO CONSTRUCTION.

2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

3. ALL STORM SEWER BENDS AND WYES SHALL BE PREFABRICATED.

4. ALL STORM SEWER INLETS AND JUNCTION BOXES SHALL BE PREFABRICATED UNLESS OTHERWISE NOTED.

5. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/7/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

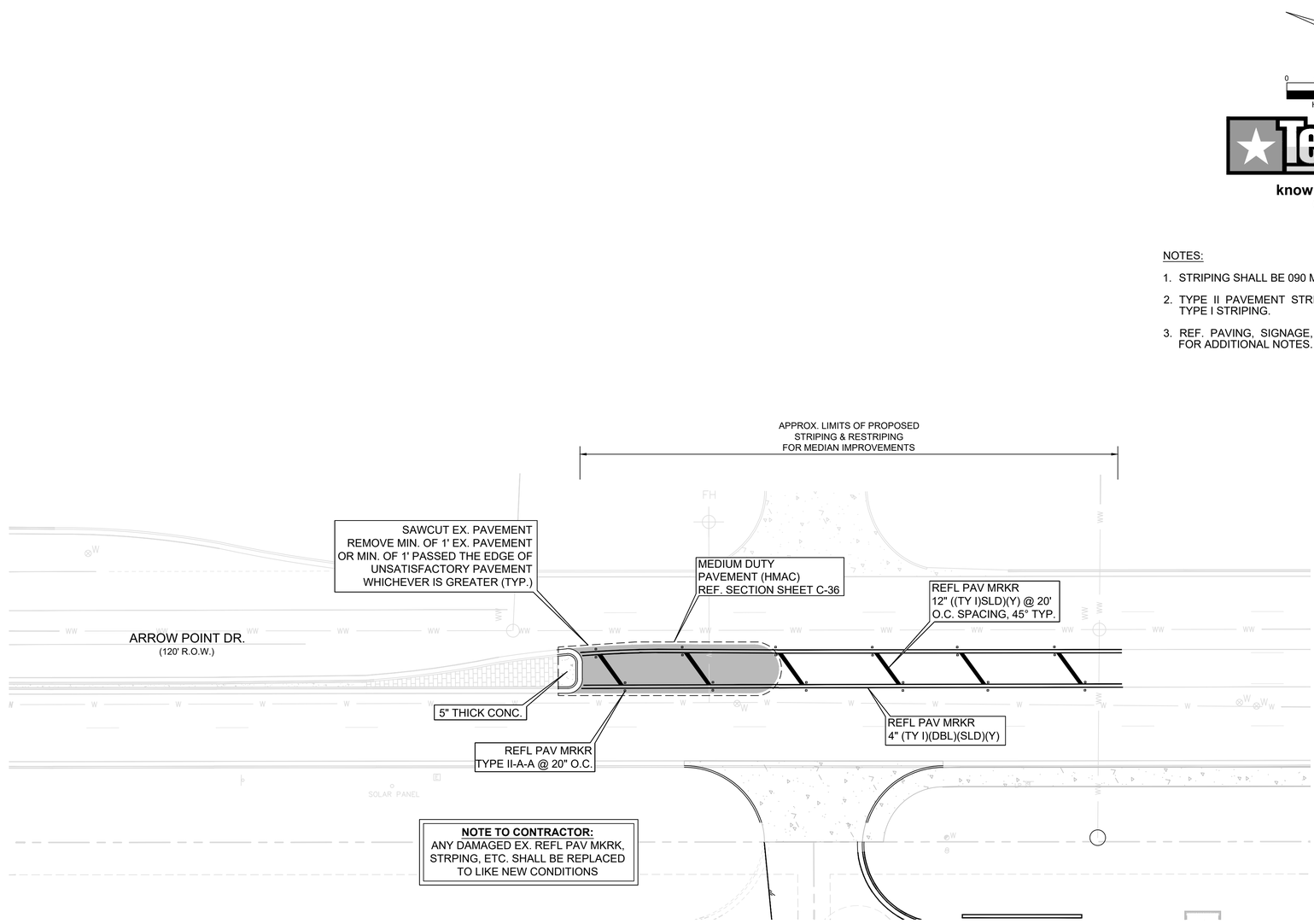
SHEET TITLE:

ROADWAY PLAN - BACKLESS CURB INLET

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-37

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 PAV-RTL.dwg, 7/31/2025 12:02:38 PM, _DWG To PDF.pc3, 1:1, JRW



PROPOSED
MEDIAN IMPROVEMNTS
ARROW POINT DRIVE
SCALE: 1" = 20'

0 10 20 40
HORIZONTAL SCALE

know what's **below.**
Call before you dig.

NOTES:

1. STRIPING SHALL BE 090 MIL THERMOPLASTIC.
2. TYPE II PAVEMENT STRIPING SHALL BE PLACED PRIOR TO TYPE I STRIPING.
3. REF. PAVING, SIGNAGE, AND STRIPING SHEET C-34 & C-36 FOR ADDITIONAL NOTES.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW
DRAWN: JRW
APPROVED: AAP
DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

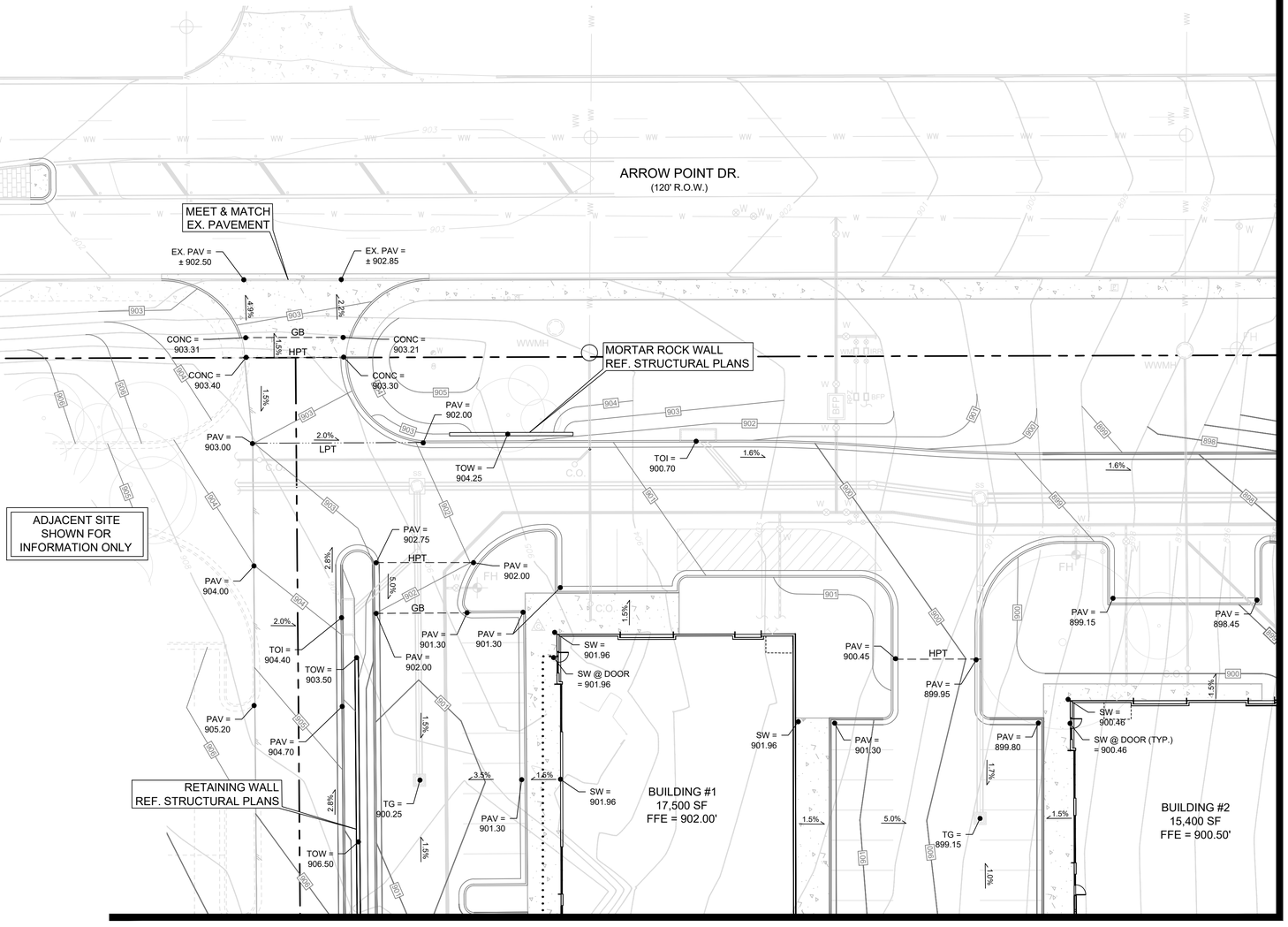
ROADWAY PLAN -
MEDIAN
IMPROVEMENTS

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-38

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 PAV-RTL.dwg, 7/31/2025 12:08:26 PM, _DWG To PDF.pc3, 1:1, JRW



0 10 20 40
HORIZONTAL SCALE

know what's **below.**
Call before you dig.

LEGEND

DELINEATES ACCESSIBLE ROUTE . . . . . .

NOTES:

1. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

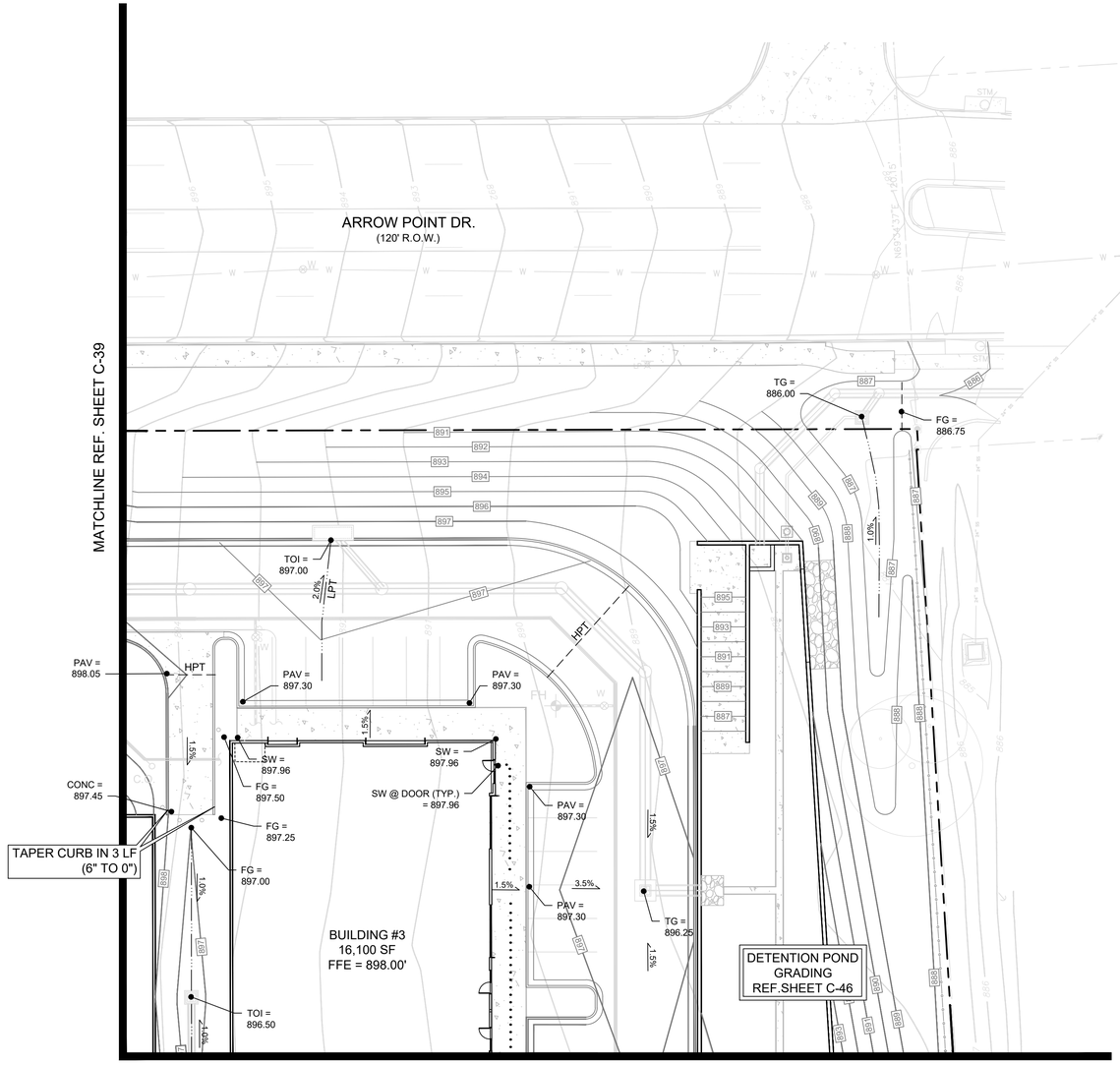
GRADING PLAN
(1 OF 5)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-39

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 GRAD.dwg, 7/31/2025 1:27:49 PM, _DWG To PDF.pc3, 1:1, JRW



0 10 20 40
HORIZONTAL SCALE

know what's **below.**
Call before you dig.

LEGEND

DELINEATES ACCESSIBLE ROUTE . . . . . .

NOTES:

1. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
7/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

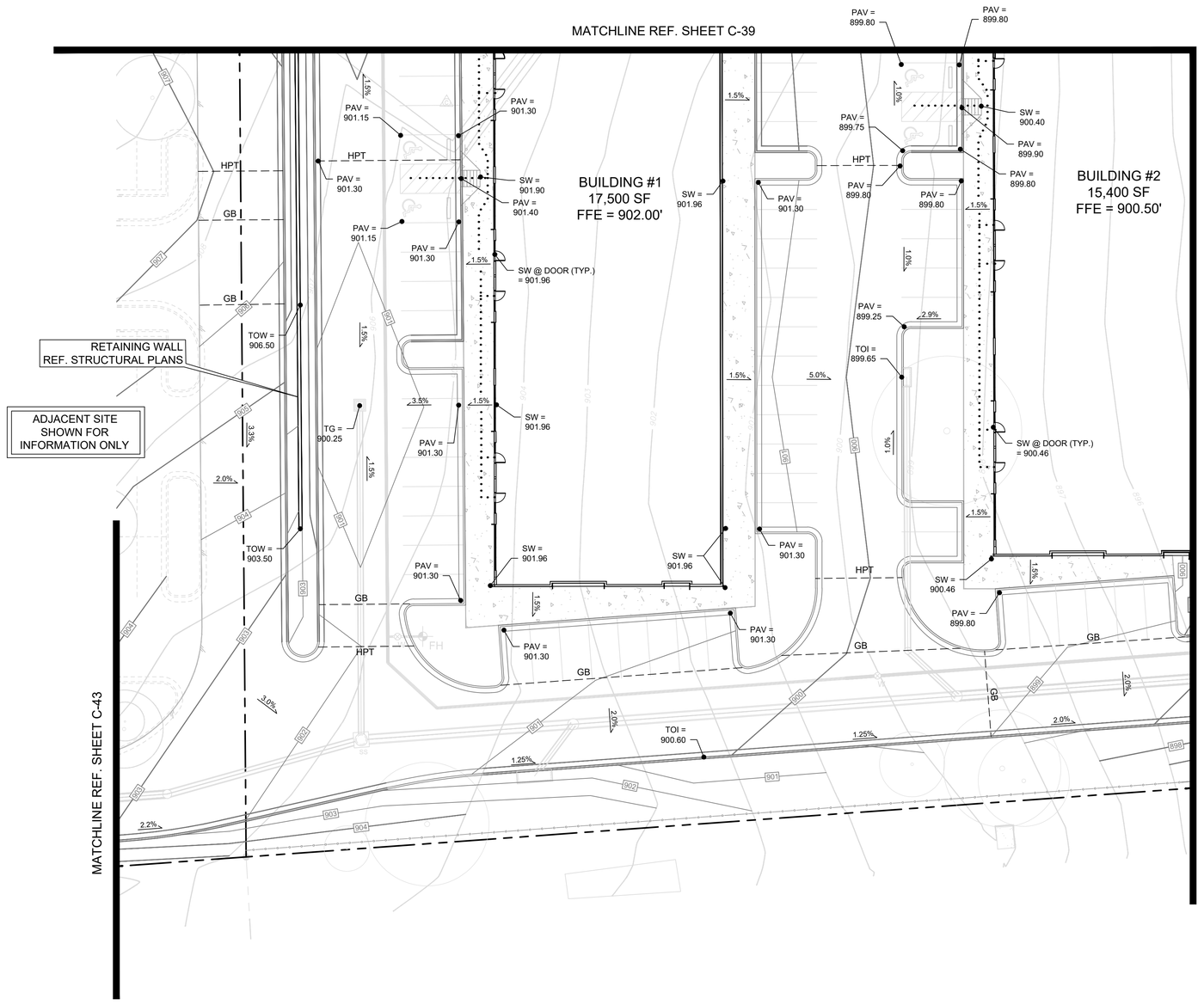
GRADING PLAN
(2 OF 5)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-40

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 GRAD.dwg, 7/31/2025 1:28:15 PM, _DWG To PDF.pc3, 1:1, JRW



0 10 20 40
HORIZONTAL SCALE

Texas 811
know what's below.
Call before you dig.

LEGEND

DELINEATES ACCESSIBLE ROUTE . . . . . .

NOTES:

1. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/7/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

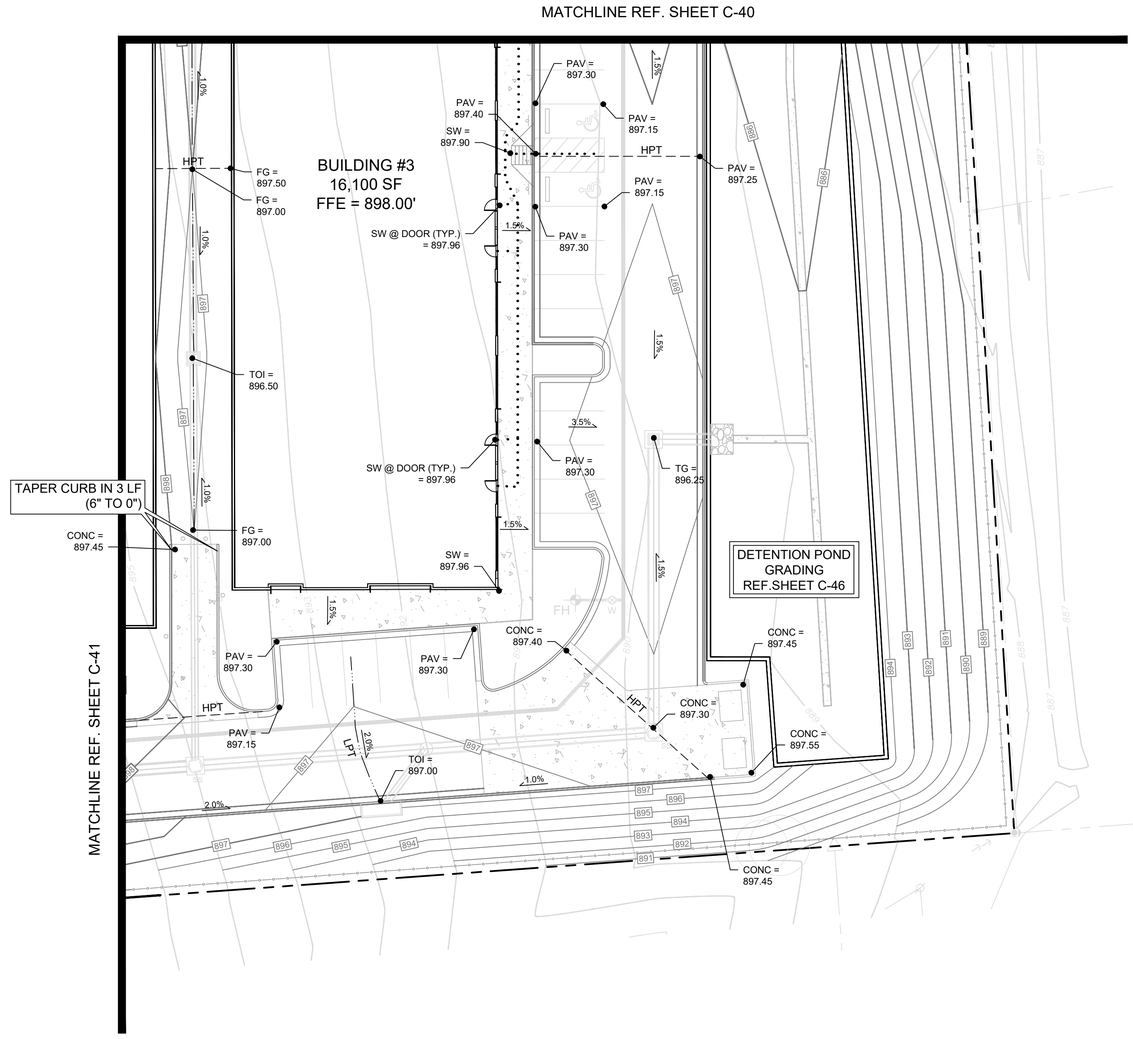
GRADING PLAN
(3 OF 5)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-41

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 GRAD.dwg, 7/31/2025 1:28:07 PM, _DWG To PDF.pc3, 1:1, JRW



know what's **below.**
Call before you dig.

LEGEND

DELINEATES ACCESSIBLE ROUTE . . . . . .

NOTES:

1. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/1/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

GRADING PLAN
(4 OF 5)

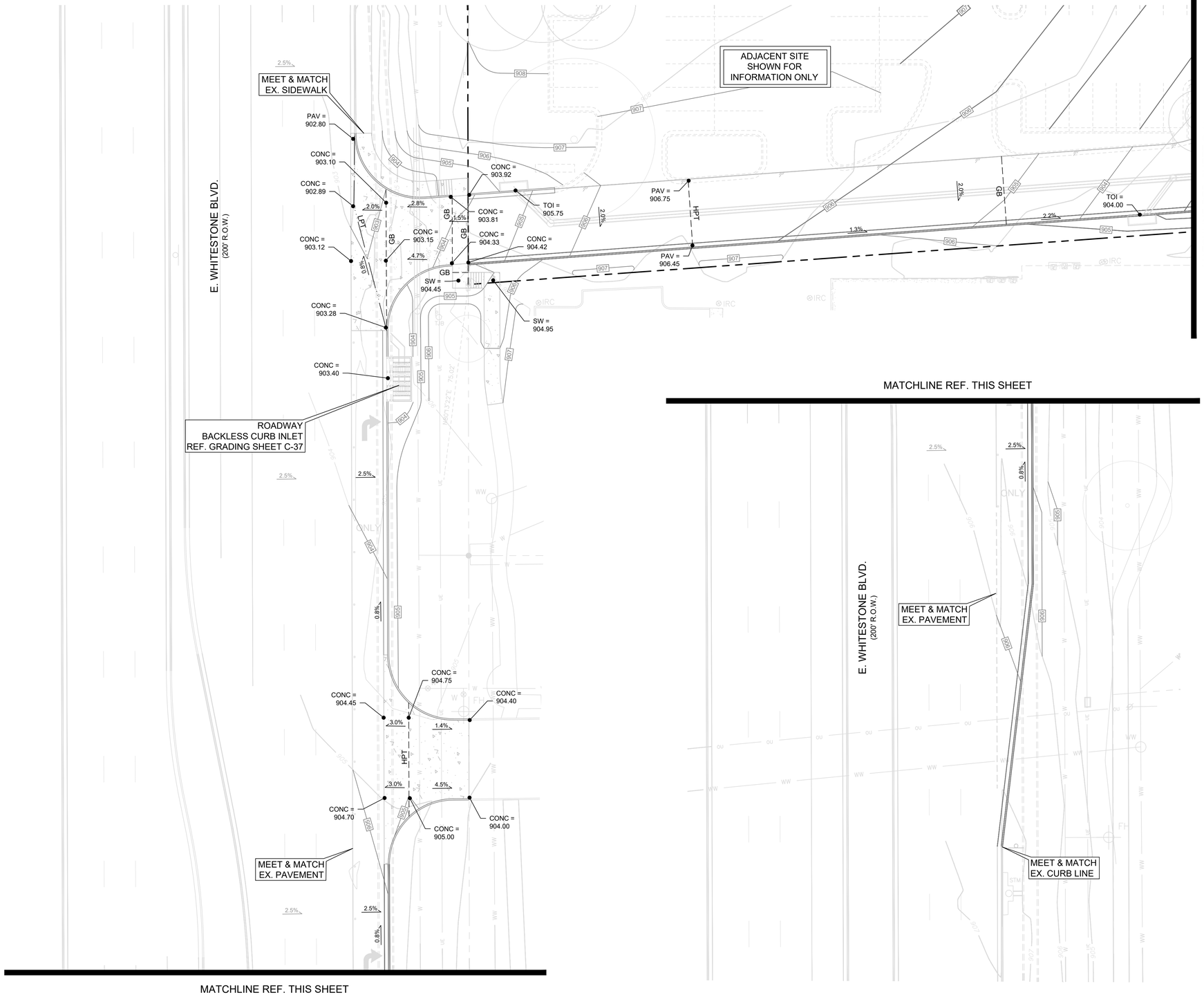
WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:

C-42

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 GRAD.dwg, 7/31/2025 1:28:24 PM, _DWG To PDF.pc3, 1:1, JRW



LEGEND

DELINEATES ACCESSIBLE ROUTE . . . . . .

NOTES:

1. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

0 10 20 40
HORIZONTAL SCALE

know what's below. Call before you dig.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

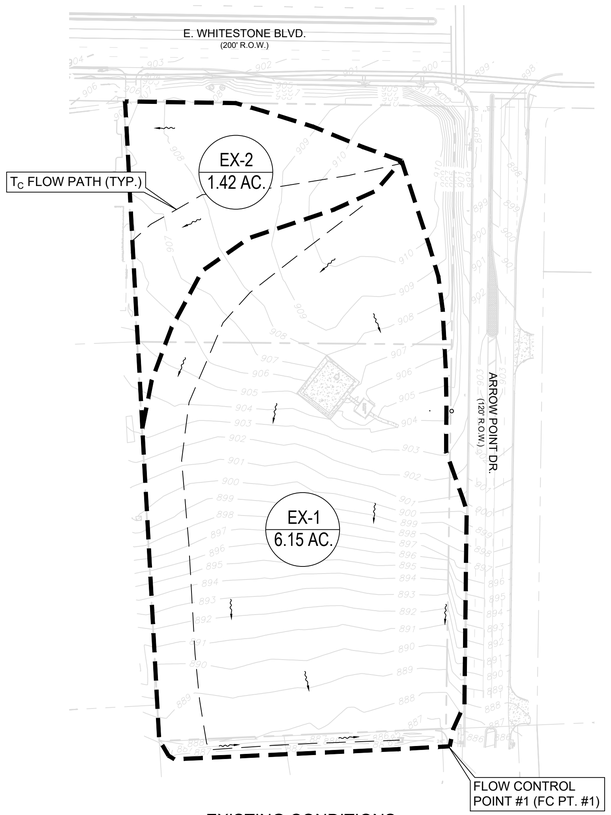
GRADING PLAN
(5 OF 5)

WP PROJECT NO.:
073-030

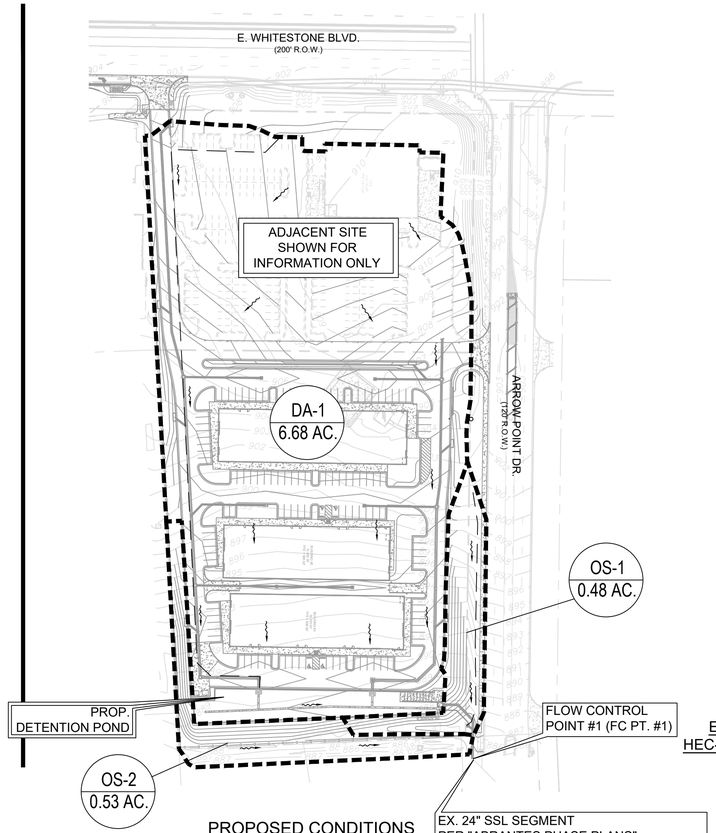
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-43

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 GRAD.dwg, 7/31/2025 1:27:57 PM, _DWG To PDF.pc3, 1:1, JRW

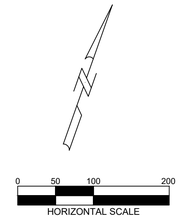


EXISTING CONDITIONS
1" = 100'



PROPOSED CONDITIONS
1" = 100'

EX. 24" SSL SEGMENT
PER "ABRANTES PHASE PLANS"
DATED 13 JANUARY 2014 AS PREPARED
BY *CARLSON, BRIGANCE & DOERING, INC.*
$Q_{25\ EXISTING}$ = 8.80 cfs
$Q_{25\ PROPOSED}$ = 22.83 cfs
$Q_{25\ CAPACITY}$ = 38.66 cfs
$Q_{100\ EXISTING}$ = 14.20 cfs
$Q_{100\ PROPOSED}$ = 35.89 cfs
$Q_{100\ CAPACITY}$ = 38.66 cfs

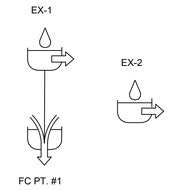


LEGEND

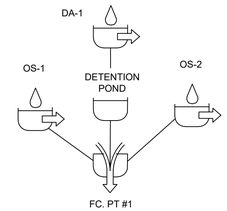
- EX. DRAINAGE BOUNDARY
- PROP. DRAINAGE BOUNDARY
- FLOW DIRECTION

NOTE:

1. HEC-HMS 4.12 UTILIZED FOR HYDRAULIC MODELING.
2. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.



EXISTING CONDITIONS
HEC-HMS MODEL SCHEMATIC



PROPOSED CONDITIONS
HEC-HMS MODEL SCHEMATIC

HEC-HMS SUMMARY & INPUT VARIABLES:

DRAINAGE AREA BOUNDRY CONDITIONS SUMMARY:

	SUB-BASIN [ID]	AREA [mi²]	AREA [ac]	CURVE #	IMP. COVER [%]	Tc [min]	Tc lag [min]	
EX. CONDITIONS:	EX-1	0.0096094	6.15	80.0	5.00	11.86	7.12	
	EX-2	0.0022188	1.42	80.0	0.00	9.70	5.82	
PROP. CONDITIONS:	DA-1	0.0104375	6.68	80.0	80.4	10.75	6.45	
	OS-1	0.0007500	0.48	80.0	5.00	5.00	3.00	*
	OS-2	0.0008281	0.53	80.0	0.00	6.07	3.64	

* NOTE: MINIMUM Tc LAG USED = 3 MINUTES.

RAINFALL DEPTH:

STORM EVENT DURATION	ATLAS-14 STORM EVENT 2 year [in]	10 year [in]	25 year [in]	100 year [in]
5-min	0.51	0.77	0.95	1.26
10-min	0.82	1.23	1.52	2.02
15-min	1.03	1.54	1.89	2.51
30-min	1.45	2.15	2.64	3.48
1-hr	1.90	2.84	3.50	4.65
2-hr	2.32	3.62	4.57	6.30
3-hr	2.57	4.11	5.26	7.42
6-hr	3.01	4.93	6.39	9.17
12-hr	3.47	5.68	7.36	10.55
24-hr	3.96	6.44	8.30	11.76

* NOTE: THE PERCIPITATION DEPTHS ARE DERIVED FROM THE CITY OF CEDAR PARK ATLAS-14 RAINFALL DEPTH REVISIONS AND IDF CURVES - MEMORANDUM DATED 28FEB2020.

SUMMARY OF EXISTING VS. PROPOSED CONDITIONS RUNOFF AT SPECIFIED FLOW CONCENTRATION POINTS:

EVENT	Ex Peak Discharge FC PT 1 [cfs]	Prop. Peak Discharge FC PT 1 [cfs]
2 year	15.64	9.97
10 year	29.36	17.80
25 year	38.98	22.83
100 year	55.53	35.89

SUMMARY OF DRAINAGE BOUNDARY RUNOFF:

WATERSHED [ID]	PEAK DISCHARGE PER EVENT 2YR [cfs]	10YR [cfs]	25YR [cfs]	100YR [cfs]
EX-1	15.64	29.36	38.98	55.53
EX-2	3.65	6.91	9.16	13.06
DA-1	25.73	39.87	49.63	66.66
OS-1	1.80	3.47	4.67	6.72
OS-2	1.56	2.94	3.92	5.58

DETENTION POND STAGE - STORAGE - DISCHARGE

STAGE [msl]	AREA [ft²]	AVG. AREA [ft²]	Δ ELEV. [ft]	STORAGE [ft³]	CUMULATIVE [ft³]	CUMULATIVE [ac-ft]	RECTANGULAR ORIFACE [cfs]	RECTANGULAR WEIR [cfs]	EMERGENCY RECTANGULAR WEIR [cfs]	TOTAL DISCHARGE [cfs]	
885.00	0	0	0	0	0	0	0.00	0.00	0.00	**0.00**	
886.00	11105	5,553	1.00	5,553	5,553	0.127	0.00	0.00	0.00	**0.00**	
887.00	11045	11,075	1.00	11,075	16,628	0.382	0.00	0.00	0.00	**0.00**	
888.00	11090	11,068	1.00	11,068	27,695	0.636	0.00	0.00	0.00	**0.00**	WQV = 887.98
888.50	11135	11,113	0.50	5,556	33,251	0.763	0.00	0.00	0.00	**0.00**	
889.00	11180	11,158	0.50	5,579	38,830	0.891	4.81	0.00	0.00	**4.81**	2yr = 889.86
890.00	11225	11,203	1.00	11,203	50,033	1.149	9.63	0.00	0.00	**9.63**	
891.00	11270	11,248	1.00	11,248	61,280	1.407	13.61	0.00	0.00	**13.61**	10yr = 891.56
892.00	11315	11,293	1.00	11,293	72,573	1.666	16.67	0.00	0.00	**16.67**	25yr = 892.51
893.00	11360	11,338	1.00	11,338	83,910	1.926	19.25	4.16	0.00	**23.41**	100yr = 893.89
894.00	11405	11,383	1.00	11,383	95,293	2.188	21.52	11.17	0.00	**32.69**	
895.00	11450	11,428	1.00	11,428	106,720	2.450	23.58	21.63	75.00	**120.21**	

Rectangular Oriface --> FL = 888.50', Length = 2.00', Height = 1.00'
Rectangular Weir --> FL = 892.00', Length = 1.25', Height = 3.00'
Emergency Rectangular Weir --> FL = 894.00', Length = 25.00', Height = 1.00'

SUMMARY TABLE DETENTION POND

DETENTION POND

Storm Event SCS	Peak Inflow DET PND [cfs]	Peak Discharge DET PND [cfs]	Peak Storage DET PND [ac-ft]	Peak Elevation DET PND [ft]
2 year	25.73	8.98	1.11	889.86
10 year	39.87	15.32	1.55	891.56
25 year	49.63	20.09	1.80	892.51
100 year	66.66	31.63	2.16	893.89

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

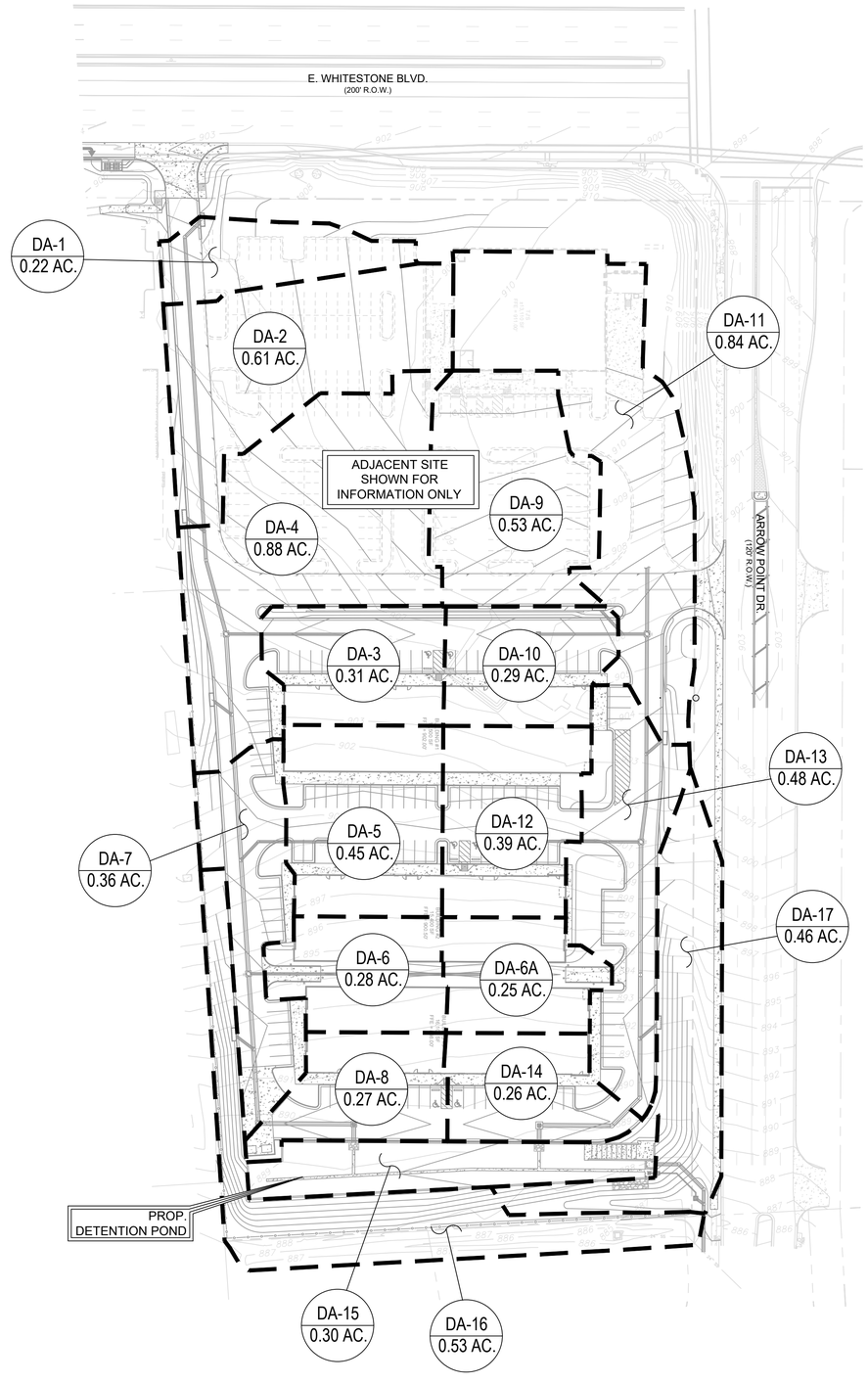
EXISTING AND PROPOSED DRAINAGE AREA MAP

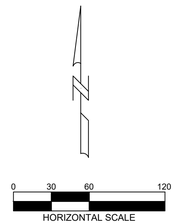
WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-44

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DA-MAP.dwg, 7/31/2025 12:02:59 PM, _DWG To PDF.pc3, 1:1, JRW





know what's **below.**
Call before you dig.

LEGEND

ON-SITE DRAINAGE BOUNDARY

FLOW DIRECTION

NOTE:

1. RATIONAL METHOD ATLAS-14 CALCULATIONS WERE UTILIZED TO SIZE STORM SEWER SYSTEMS & CONVEYANCE ELEMENTS.
2. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

PROPOSED CONDITIONS DRAINAGE TABLE (RATIONAL METHOD - ATLAS 14):

SUB-BASIN DESIGNATION	AREA [acres]	T_c [min.]	ESTIMATED IMPERV. +/- [%]	C_2	C_{10}	C_{25}	C_{100}	I_2 [in/hr]	I_{10} [in/hr]	I_{25} [in/hr]	I_{100} [in/hr]	Q_2 [cfs]	Q_{10} [cfs]	Q_{25} [cfs]	Q_{100} [cfs]
DA-1	0.22	5.0	70	0.61	0.69	0.73	0.82	6.17	9.25	11.40	15.14	0.83	1.40	1.83	2.73
DA-2	0.61	5.0	90	0.70	0.78	0.83	0.92	6.17	9.25	11.40	15.14	2.63	4.40	5.77	8.50
DA-3	0.31	5.0	90	0.70	0.78	0.83	0.92	6.17	9.25	11.40	15.14	1.34	2.24	2.93	4.32
DA-4	0.88	5.0	85	0.68	0.76	0.81	0.89	6.17	9.25	11.40	15.14	3.69	6.19	8.13	11.86
DA-5	0.45	5.0	95	0.73	0.81	0.86	0.94	6.17	9.25	11.40	15.14	2.03	3.37	4.41	6.40
DA-6	0.28	5.0	75	0.64	0.71	0.76	0.84	6.17	9.25	11.40	15.14	1.11	1.84	2.43	3.56
DA-6A	0.28	5.0	75	0.64	0.71	0.76	0.84	6.17	9.25	11.40	15.14	1.11	1.84	2.43	3.56
DA-7	0.36	5.0	80	0.66	0.73	0.78	0.87	6.17	9.25	11.40	15.14	1.47	2.43	3.20	4.74
DA-8	0.27	5.0	95	0.73	0.81	0.86	0.94	6.17	9.25	11.40	15.14	1.22	2.02	2.65	3.84
DA-9	0.53	5.0	95	0.73	0.81	0.86	0.94	6.17	9.25	11.40	15.14	2.39	3.97	5.20	7.54
DA-10	0.29	5.0	90	0.70	0.78	0.83	0.92	6.17	9.25	11.40	15.14	1.25	2.09	2.74	4.04
DA-11	0.84	5.0	80	0.66	0.73	0.78	0.87	6.17	9.25	11.40	15.14	3.42	5.67	7.47	11.06
DA-12	0.39	5.0	95	0.73	0.81	0.86	0.94	6.17	9.25	11.40	15.14	1.76	2.92	3.82	5.55
DA-13	0.48	5.0	70	0.61	0.69	0.73	0.82	6.17	9.25	11.40	15.14	1.81	3.06	3.99	5.96
DA-14	0.26	5.0	95	0.73	0.81	0.86	0.94	6.17	9.25	11.40	15.14	1.17	1.95	2.55	3.70
DA-15	0.30	5.0	0	0.29	0.35	0.39	0.46	6.17	9.25	11.40	15.14	0.54	0.97	1.33	2.09
DA-16	0.53	5.0	0	0.29	0.35	0.39	0.46	6.17	9.25	11.40	15.14	0.95	1.72	2.36	3.69
DA-17	0.46	5.0	5	0.31	0.37	0.41	0.49	6.17	9.25	11.40	15.14	0.88	1.57	2.15	3.41

* CALCULATIONS ASSUME FULLY DEVELOPED CONDITIONS FOR LOTS 1 & 2, BLOCK 'A', CSW ARROW POINT SUBDIVISION.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

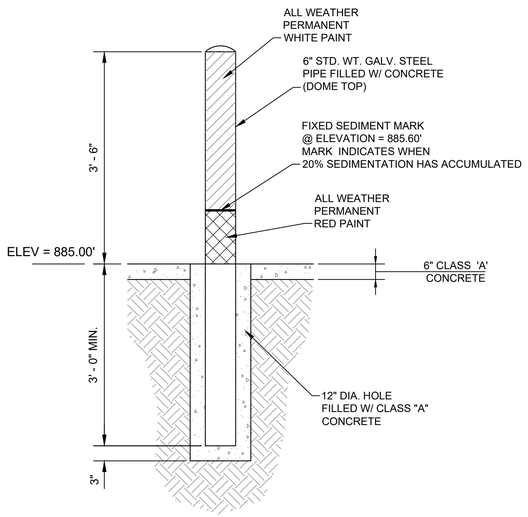
ON-SITE DRAINAGE AREA MAP

WP PROJECT NO.:
073-030

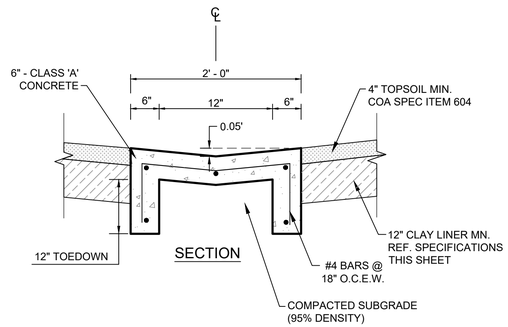
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-45

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DA-MAP.dwg, 7/31/2025 12:06:57 PM, _DWG To PDF.pc3, 1:1, RW



FIXED CONCRETE
SEDIMENT MARKER
NTS

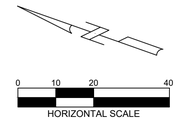


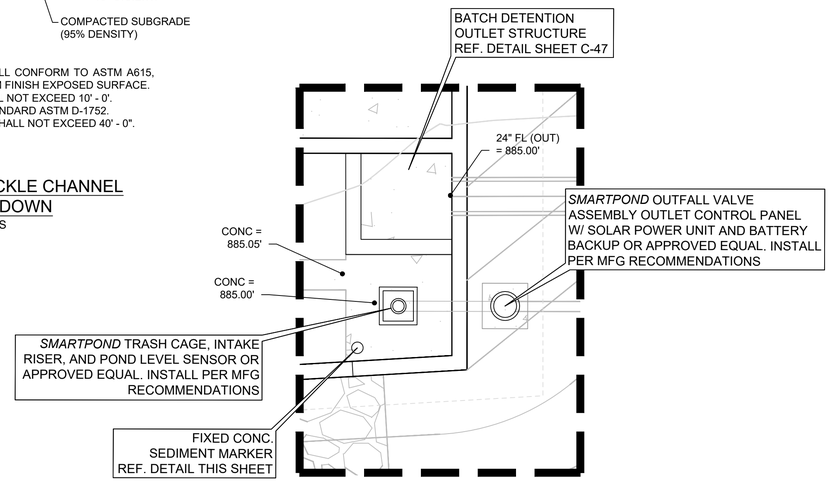
1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309 AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTROL JOINT SPACING SHALL NOT EXCEED 10' - 0'.
3. EXPANSION JOINTS AS PER STANDARD ASTM D-1752.
4. EXPANSION JOINT INTERVALS SHALL NOT EXCEED 40' - 0".

CONCRETE TRICKLE CHANNEL
W/ TOEDOWN
NTS

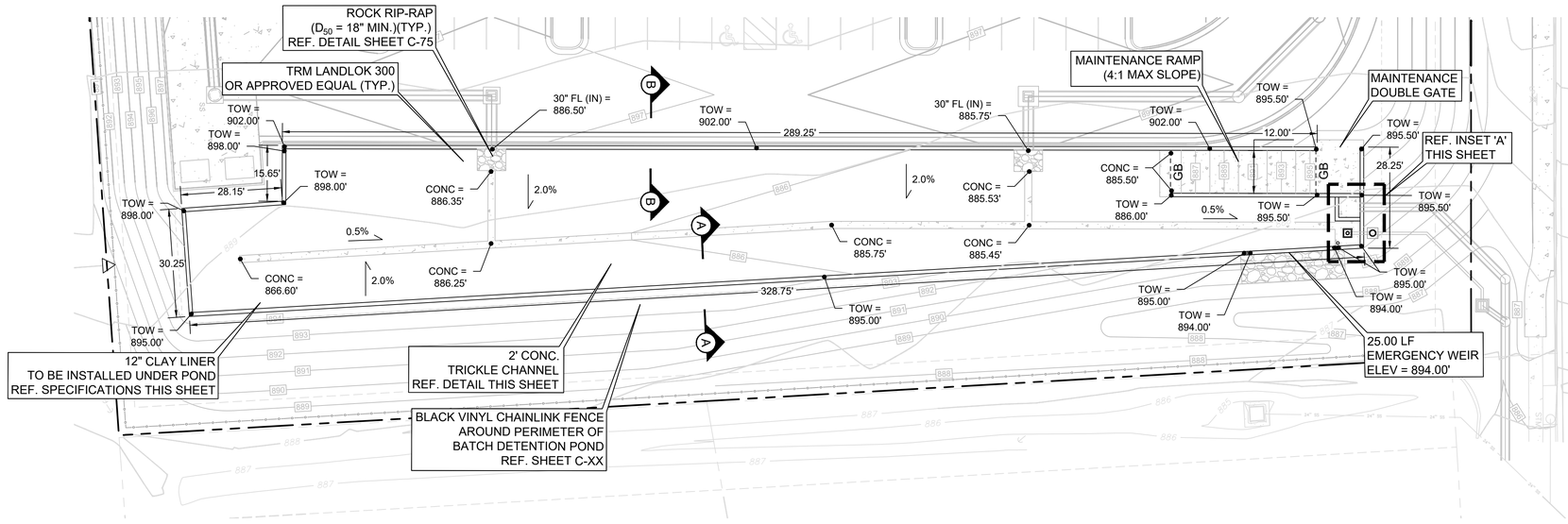
CLAY LINER SPECIFICATIONS

Property	Test Method	Unit	Specification
Permeability	ASTM D-2434	Cm/Sec	1 x 10 $^{-6}$
Plasticity Index of Clay	ASTM D-423 & D-424	%	Not less than 15
Liquid Limit of Clay	ASTM D-2216	%	Not less than 30 Clay
Particles Passing	ASTM D-422	%	Not less than 30 Clay
Compaction	ASTM D-2216	%	95% of Standard Proctor Density





INSET 'A'
SCALE: 1" = 5'



NOTE:

1. 12" CLAY LINER SHOULD BE INSTALLED IN LIFTS NO GREATER THAN 6" AND AS RECOMMENDED BY A LICENSED GEOTECHNICAL ENGINEER AND SHALL BE KEPT MOIST AT ALL TIMES TO AVOID CRACKING. THE GEOTECHNICAL ENGINEER SHALL MONITOR THE INSTALLATION OF THE CLAY LINER AND TEST IT TO CERTIFY THAT IT WILL NOT LEAK. SPECIFICATIONS ARE LISTED ON THE SHEET.
2. POND SHALL BE SOD-COVERED OR HYDRO-MULCHED.

BATCH DETENTION POND NOTES:

1. POWER – THE SYSTEM SHALL BE LINE OR SOLAR POWERED, AND THE VOLTAGE OF THE CONTROLLER AND ACTUATOR SHALL BE 120 VOLTS. A BATTERY BACKUP SYSTEM SHALL BE PROVIDED TO RESPOND TO A LOSS OF POWER IN THE MIDDLE OF A CYCLE.
2. LOGIC CONTROLLER – THE CONTROLLER SHALL BE PROGRAMMED TO BEGIN DRAINING STORMWATER RUNOFF FROM THE BASIN 12 HOURS AFTER THE FIRST STORMWATER RUNOFF IS SENSED. THE SYSTEM SHALL BE PROGRAMMED TO HAVE THE VALVE REMAIN OPEN FOR TWO HOURS AFTER THE LEVEL SENSOR INDICATES THE BASIN IS EMPTY TO ALLOW ANY REMAINING SHALLOW WATER TO BE DISCHARGED. THE SYSTEM SHALL PROVIDE THE FOLLOWING: A TEST SEQUENCE, BE ABLE TO DEAL WITH LOW BATTERY/POWER OUTAGES, AN ON/OFF/RESET SWITCH, MANUAL OPEN/CLOSE SWITCHES (MAINTENANCE/SPILL), CLEARLY VISIBLE EXTERNAL INDICATOR TO INDICATE A CYCLE IS IN PROGRESS WITHOUT OPENING THE BOX, AND ABILITY TO EXERCISE THE VALVE TO PREVENT SEIZING.
3. PARTS ENCLOSURE – THE ENCLOSURE SHALL BE LOCKABLE.
4. CIRCUIT – REFERENCE SHEET C-49 FOR BATCH DETENTION POND CONTROLLER LOGIC AND CIRCUIT BLOCK DIAGRAMS.
5. NATURE OF EVENT SENSING – THE SENSOR SHALL BE LOCATED ON A CONCRETE PAD OR OTHER LOCATION WHERE VEGETATION AND DEBRIS WILL NOT AFFECT ITS OPERATION. MERCURY FREE FLOAT SWITCHES ARE AN APPROPRIATE CHOICE.
6. VALVE – A MANUAL OVERRIDE SHALL BE PROVIDED. A BALL VALVE CAN BE APPROPRIATE FOR SMALLER PIPES (NOTHING TO IMPEDE THE FLOW OR TO CAPTURE TRASH AND DEBRIS. ON LARGER PIPES COMPRESSED AIR DRIVEN BLADDER VALVES CAN BE USED.
7. TEMPERATURE/WEATHER – THE SYSTEM SHALL OPERATE AT 0 TO 130ºF, AND 1 TO 90% HUMIDITY.
8. RELIABILITY — 40,000 HOURS (APPROXIMATELY 4.6 YEARS) OR GREATER.
9. SAFETY PRECAUTIONS – ALARM SYSTEM SHALL BE CLEARLY VISIBLE TO INDICATE SYSTEM MALFUNCTION, WITH SIGN POSTED WITH PHONE NUMBERS OF THE OWNER AND APPROPRIATE TCEQ REGIONAL OFFICE. ALARM SYSTEM TO FEATURE SUNLIGHT VISIBLE LED ALARM LIGHT.
10. POWER CONSUMPTION - TOTAL WATTAGE AND W-HOURS OF ACTUATOR, CONTROLLER, AND RELAY TO BE PROVIDED BY MANUFACTURER.
11. SEE TXDOT SPECIAL SPECIFICATION 7130 FOR BATCH DETENTION MATERIAL, EQUIPMENT, AND CONSTRUCTION. A COPY OF TXDOT SPECIAL SPECIFICATION 7130 IS INCLUDED IN THE WPAP FOR THE IRONWOOD CONNECTION FACILITY.

know what's **below.**
Call before you dig.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.31.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

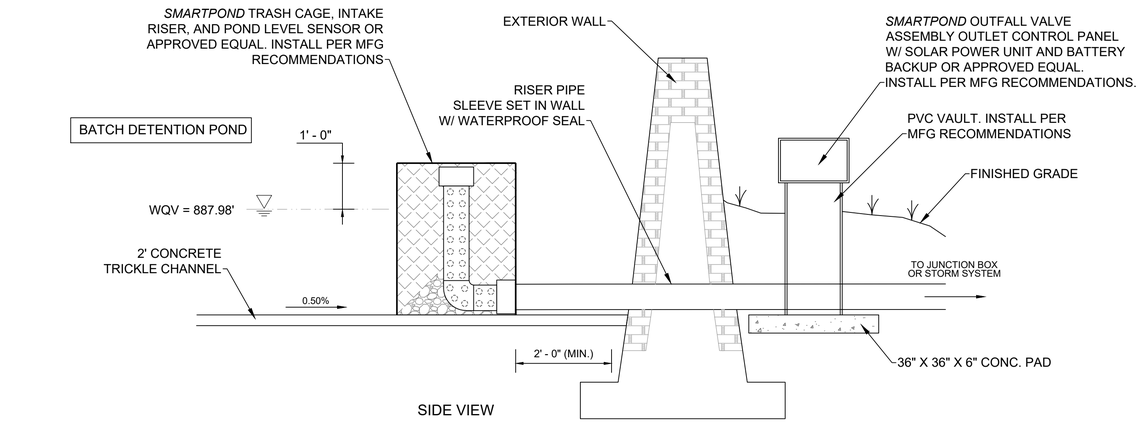
BATCH DETENTION POND PLAN

WP PROJECT NO.:
073-030

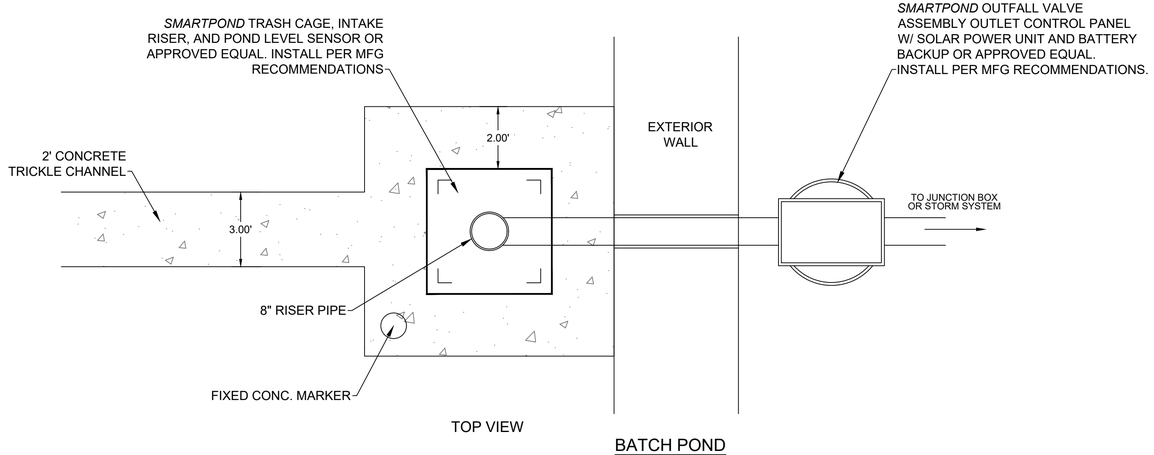
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-46

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 POND.dwg, 7/31/2025 12:06:36 PM, _DWG To PDF.pc3, 1:1, JRW

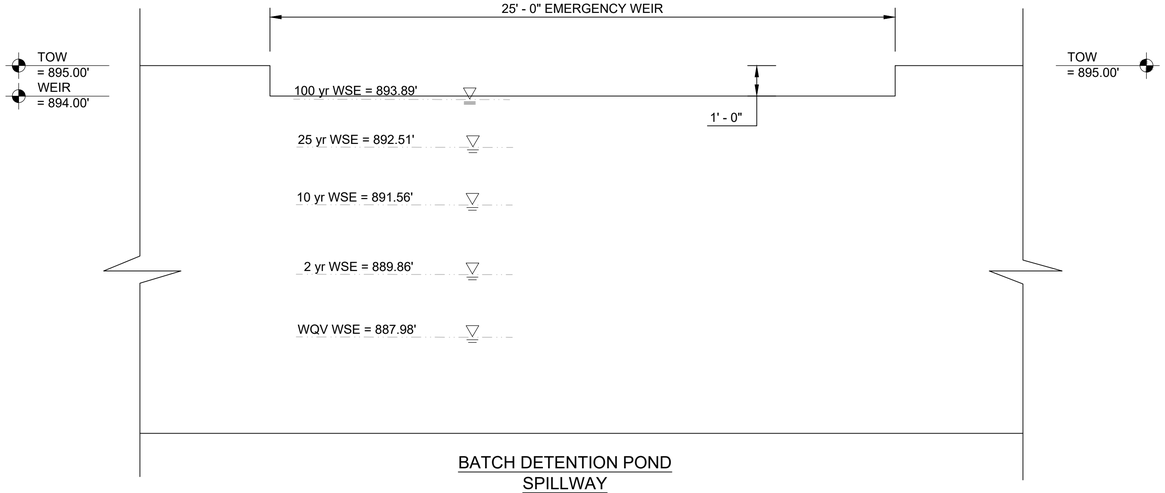


SIDE VIEW

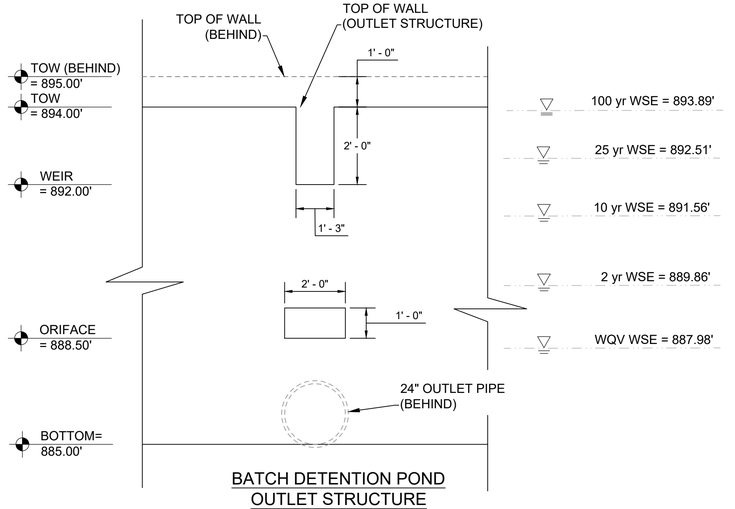


TOP VIEW

BATCH POND
VALVE OUTFALL DETAIL
NTS



BATCH DETENTION POND
SPILLWAY
NTS



BATCH DETENTION POND
OUTLET STRUCTURE
NTS

NOTE TO CONTRACTOR:
DETENTION POND WALL SECTIONS ARE SHOWN FOR INFORMATION ONLY.
REF. STRUCTURAL PLANS FOR WALL DESIGN, DIMENSIONS, NOTES, & DETAILS.

NOTES:

1. CONTROL VALVE TO BE MOTOR ACTUATED VALVE. VALVE SHALL BE WIRED TO A CONTROLLER THAT OPENS VALVE 12 HOURS AFTER RAINFALL EVENT AND CLOSES VALVE ONCE POND HAS DRAINED DRY. CONTROLLER SHALL INCLUDE PROVISION FOR A MANUAL OVERRIDE SWITCH.
2. 8" PERFORATED RISER PIPE SHALL INCLUDE PERFORATIONS AT THE FLOWLINE OF THE PIPE.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.21.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

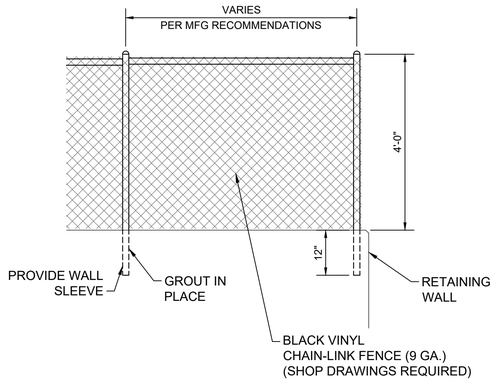
BATCH DETENTION POND DETAILS (1 OF 3)

WP PROJECT NO.:
073-030

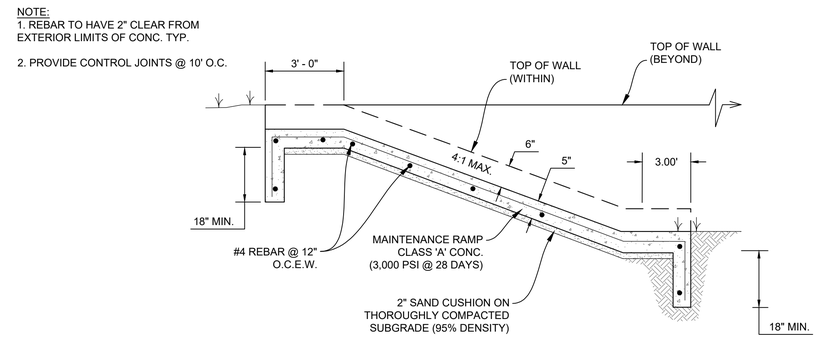
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-47

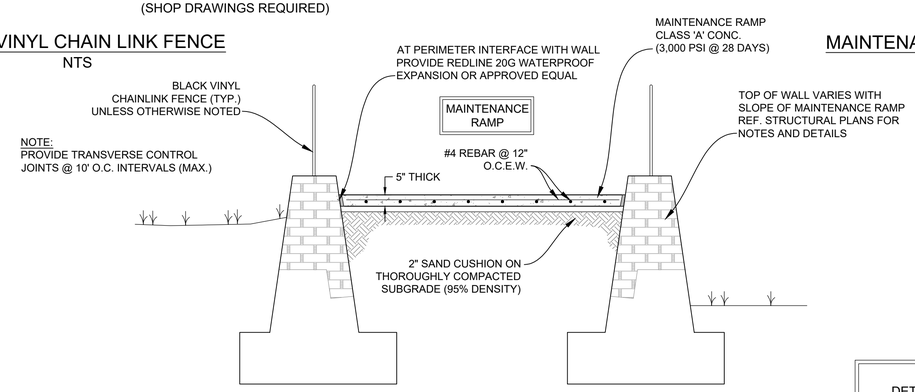
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 POND.dwg, 7/31/2025 12:00:54 PM, _DWG To PDF.pc3, 1:1, IRW



BLACK VINYL CHAIN LINK FENCE
NTS

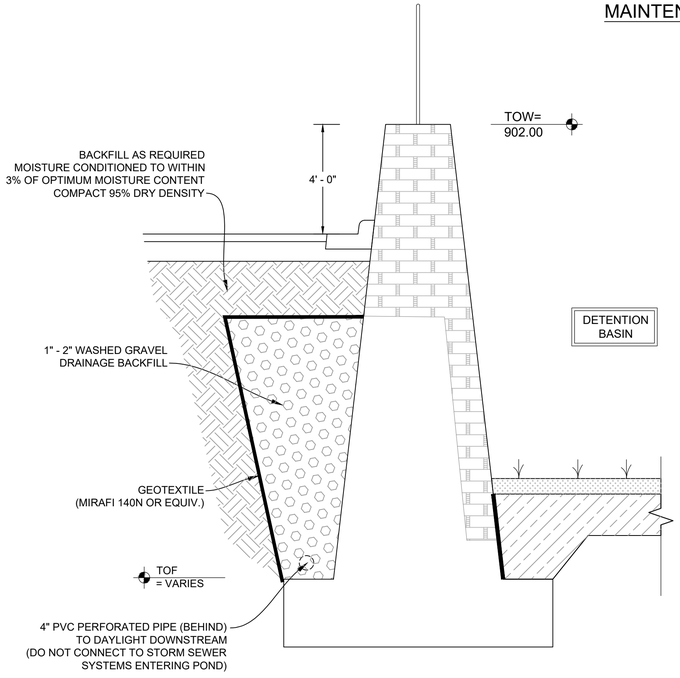


MAINTENANCE RAMP TOEDOWN
NTS

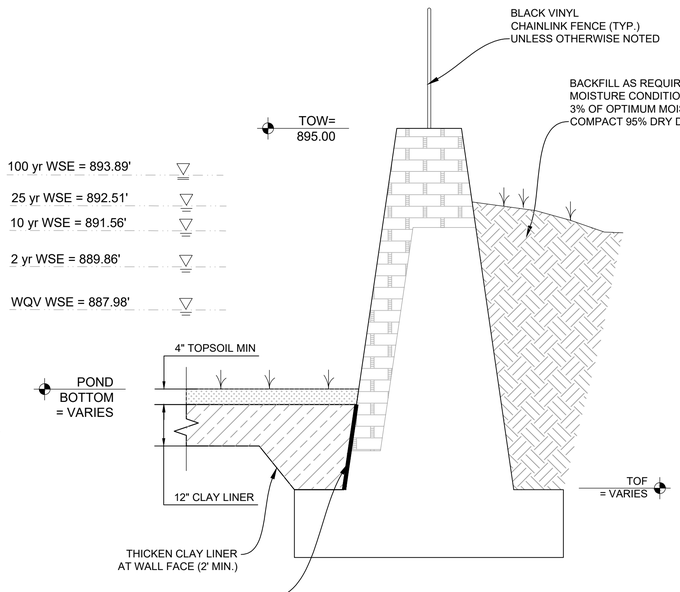


MAINTENANCE RAMP
NTS

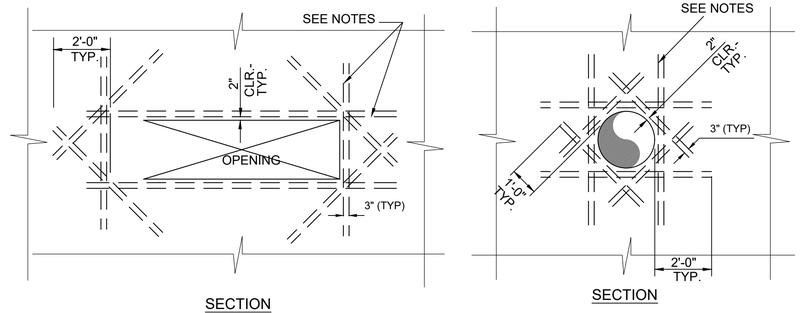
NOTE TO CONTRACTOR:
DETENTION POND WALL SECTIONS ARE SHOWN FOR INFORMATION ONLY.
REF. STRUCTURAL PLANS FOR WALL DESIGN, DIMENSIONS, NOTES, & DETAILS.



SECTION A-A
POND WALL SECTION
NTS



SECTION B-B
TYPICAL POND WALL SECTION
NTS



SECTION

SECTION

NOTES:
1. USE SAME NUMBER OF MATTES AS NORMAL WALL REINFORCING.
2. BAR SIZE TO BE SAME AS LARGEST DIAMETER BAR IN NORMAL REINFORCING.

EXTRA REINFORCEMENT AT OPENINGS
NTS

RETAINING WALL NOTES & SPECIFICATIONS

GENERAL NOTES:

1. ANY CONCRETE CONSTRUCTION OF THE RETAINING WALL SHALL COMPLY WITH THE CITY OF ROUND ROCK SPECIFICATIONS, SERIES 400, "CONCRETE STRUCTURES AND MISCELLANEOUS CONCRETE".
2. THE CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCE FOR PROCEDURE OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS.
3. JOB SITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL, AT A MINIMUM, ADHERE TO OCCUPATIONAL SAFETY AND HEALTH (OSHA) REGULATIONS TO PROTECT PERSONNEL.
4. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDA.
5. OPTIONS ARE FOR THE CONTRACTOR'S CONVENIENCE, IF AN OPTION IS CHOSEN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES AND SHALL COORDINATE ALL DETAILS.
6. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, NOTES, AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
7. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE POND. MEASURES SHALL BE TAKEN TO PREVENT PONDING OF WATER WITHIN THE FOUNDATION AREA.
8. FINAL SUBGRADE SHALL BE PROOFROLLED WITH A 15 TON PNEUMATIC ROLLER OR EQUIVALENT EQUIPMENT TO IDENTIFY WEAK AREAS. WEAK AREAS SHALL BE REMOVED AND REPLACED WITH SOILS WITH SIMILAR CLASSIFICATION, MOISTURE CONTENT AND DENSITY, AS THE ADJACENT IN-SITU SOILS. EXPOSED LIMESTONE FILLED WITH CRUSHED LIMESTONE BASE MATERIAL. PRIOR TO FOOTING CONSTRUCTION, THE SUBGRADE PREPARATION SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER.
9. OVER EXCAVATIONS SHALL BE BROUGHT TO THE CORRECT LINES AND GRADES WITH CONCRETE. THIS WILL BE AT THE CONTRACTOR'S EXPENSE.
10. BACKFILL SHALL COMPLY WITH THE GEOTECHNICAL INVESTIGATION. BACKFILLING SHALL NOT BEGIN UNTIL THE WALL HAS CURED FOR 7 DAYS AND REACHED 75% OF THE TOTAL 28 DAY COMPRESSIVE STRENGTH. FORMS SHALL REMAIN IN PLACE DURING THE CURING PERIOD.
11. BACKFILL PLACEMENT SHALL BE CONTROLLED TO PREVENT OVER COMPACTION OR DAMAGE TO THE STRUCTURE.
12. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH SCI 318, UNLESS OTHERWISE NOTED.
13. LAP SPLICES SHALL BE 36 BAR DIAMETERS, UNLESS OTHERWISE NOTED.
14. A TREMIE SHALL BE USED TO PLACE CONCRETE WHERE THE FALL IS GREATER THAN 5 FEET.
15. REINFORCING STEEL SHALL BE ASTM 615 (FY =60 KSI), GRADE 60.
16. REBAR SHALL BE SUPPORTED OR PLACED ON CHAIRS AT THE POSITION REQUIRED BY THE DRAWINGS.
17. NO FIELD CUTTING REINFORCEMENT BY TORCH WILL BE ALLOWED. ACCEPTABLE CUTTING SHALL BE SHEARING OR SAWING.
18. WATERSTOPS SHALL COMPLY WITH THE CORR SPEC ITEM 416.
19. ALL VISIBLE CONCRETE SURFACES SHALL RECEIVE A GRADE I, CLASS A FINISH, IN ACCORDANCE WITH CORR SPEC ITEM 411.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
8/31/25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

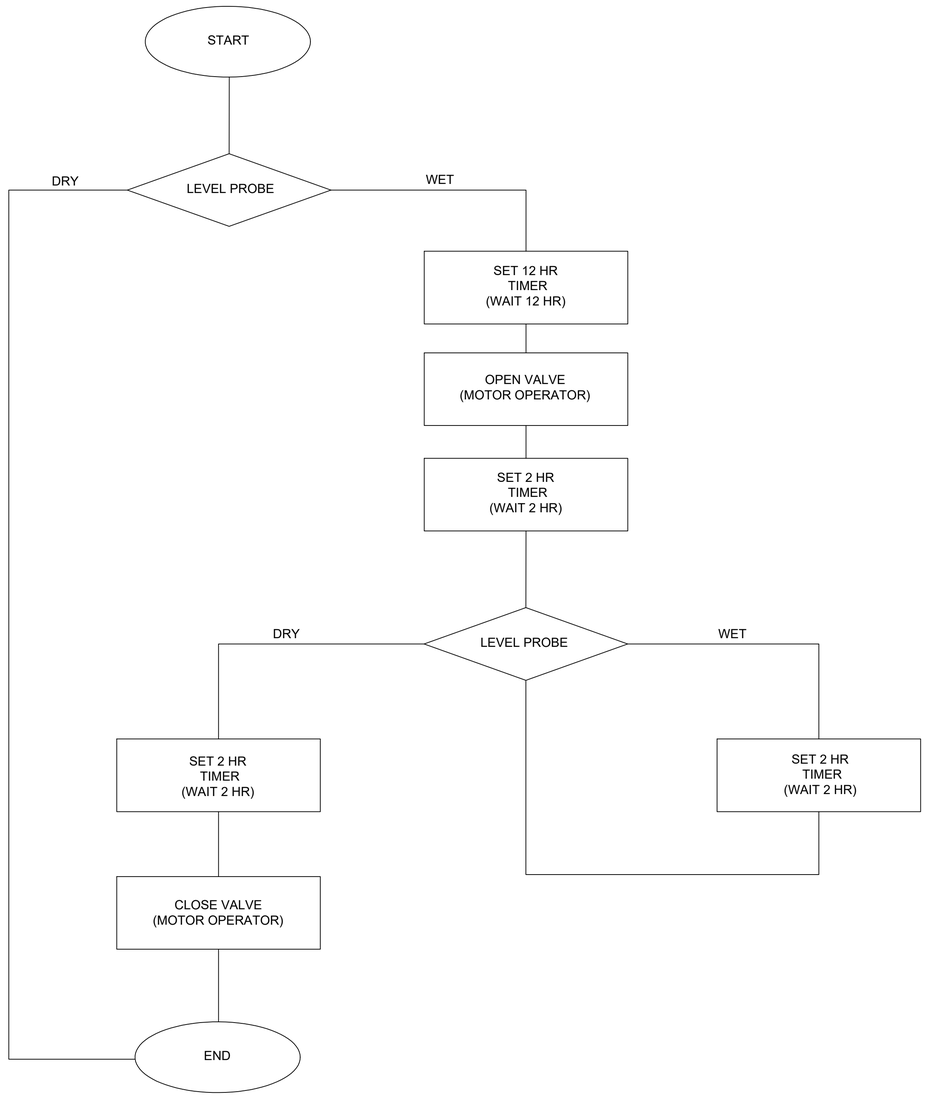
No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:
BATCH DETENTION POND DETAILS (2 OF 3)

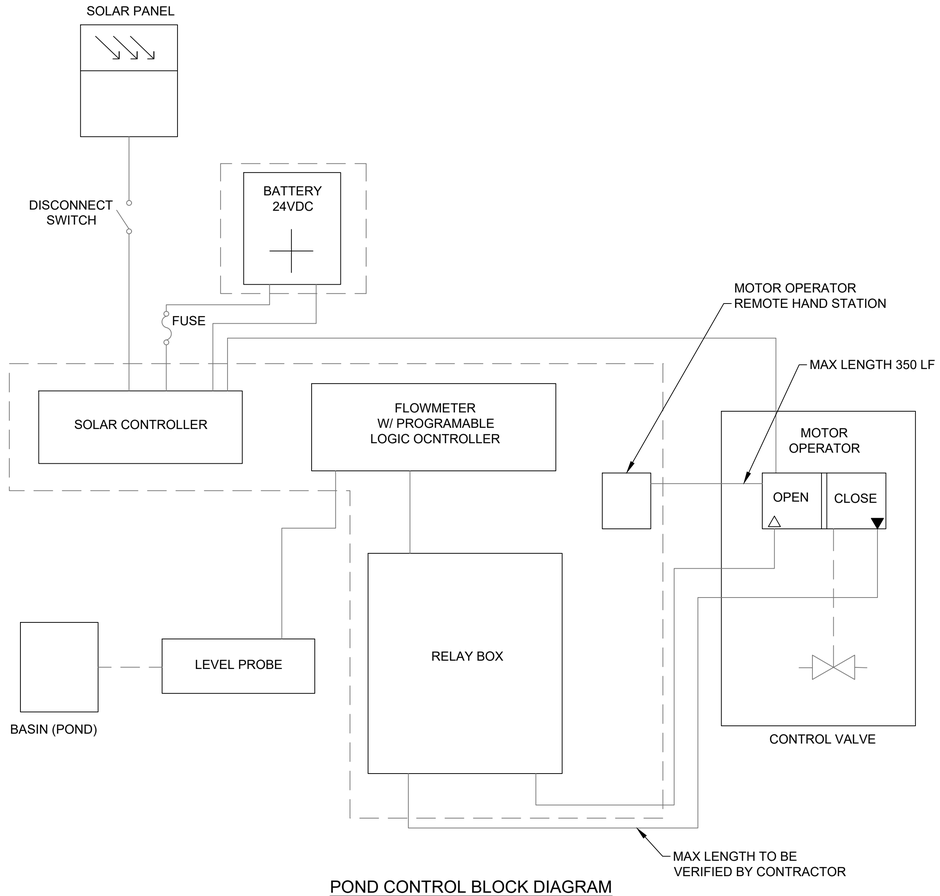
WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-48

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 POND.dwg, 7/31/2025 12:03:52 PM, _DWG To PDF.pc3, 1:1, JRW



POND LEVEL CONTROL FLOW DIAGRAM
NTS



POND CONTROL BLOCK DIAGRAM
NTS

NOTE:

1. INSTALL COMPONENTS FOR SOLAR PHOTOVOLTAIC SYSTEM IN ACCORDANCE WITH NEC.
2. INSTALL ALL ABOVE GRADE CABLING IN RIGID METALLIC UNLESS OTHERWISE SPECIFICALLY IDENTIFIED BY THE MANUFACTURER AS DETRIMENTAL TO SIGNAL STRENGTH.
3. EQUIPMENT WITHIN DASHED LINES IS CONTAINED WITHIN THE SOLAR CONTROL PANEL OR BATTERY ENCLOSURE.
4. REFER TO SPECIAL SPECIFICATIONS 1012BATCH DETENTION POND FOR SOLAR CONTROL PANEL EQUIPMENT REQUIREMENTS.
5. REFER TO TXDOT STANDARD DETAILS BDS(1) AND TS-FD-12 FOR POLE MOUNTED SOLAR POWER SYSTEM.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

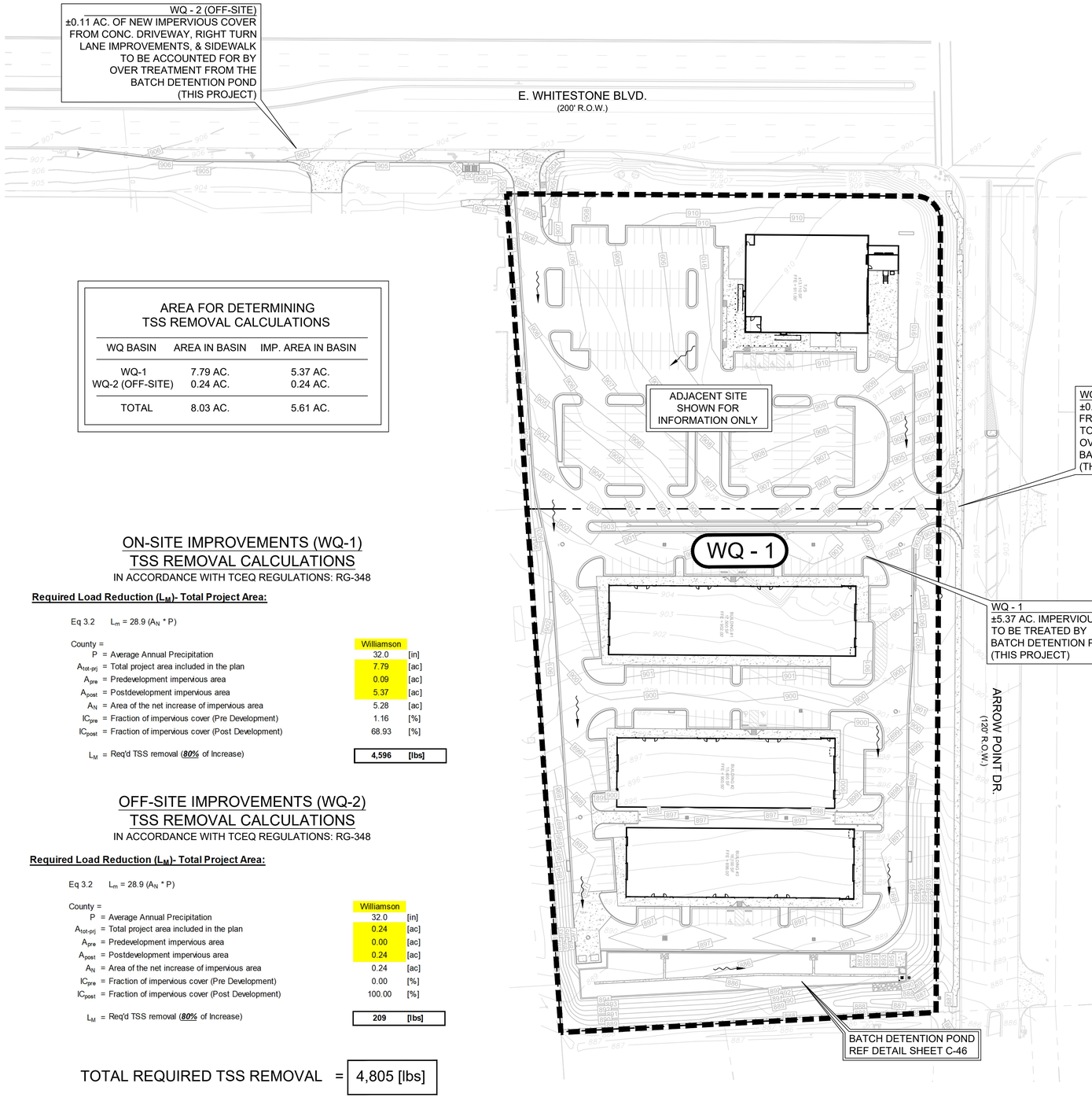
BATCH
DETENTION POND
DETAILS (3 OF 3)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-49

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 POND.dwg, 7/31/2025 12:05:24 PM, _DWG To PDF.pc3, 1:1, JRW



AREA FOR DETERMINING TSS REMOVAL CALCULATIONS		
WQ BASIN	AREA IN BASIN	IMP. AREA IN BASIN
WQ-1	7.79 AC.	5.37 AC.
WQ-2 (OFF-SITE)	0.24 AC.	0.24 AC.
TOTAL	8.03 AC.	5.61 AC.

ON-SITE IMPROVEMENTS (WQ-1) TSS REMOVAL CALCULATIONS

IN ACCORDANCE WITH TCEQ REGULATIONS: RG-348

Required Load Reduction (L_M)- Total Project Area:

Eq 3.2 $L_m = 28.9 (A_N * P)$

		Williamson	
P	= Average Annual Precipitation	32.0	[in]
$A_{tot-prj}$	= Total project area included in the plan	7.79	[ac]
A_{pre}	= Predevelopment impervious area	0.09	[ac]
A_{post}	= Postdevelopment impervious area	5.37	[ac]
A_N	= Area of the net increase of impervious area	5.28	[ac]
IC_{pre}	= Fraction of impervious cover (Pre Development)	1.16	[%]
IC_{post}	= Fraction of impervious cover (Post Development)	68.93	[%]
L_M	= Req'd TSS removal (***80%*** of Increase)	**4,596**	**[lbs]**

OFF-SITE IMPROVEMENTS (WQ-2) TSS REMOVAL CALCULATIONS

IN ACCORDANCE WITH TCEQ REGULATIONS: RG-348

Required Load Reduction (L_M)- Total Project Area:

Eq 3.2 $L_m = 28.9 (A_N * P)$

		Williamson	
P	= Average Annual Precipitation	32.0	[in]
$A_{tot-prj}$	= Total project area included in the plan	0.24	[ac]
A_{pre}	= Predevelopment impervious area	0.00	[ac]
A_{post}	= Postdevelopment impervious area	0.24	[ac]
A_N	= Area of the net increase of impervious area	0.24	[ac]
IC_{pre}	= Fraction of impervious cover (Pre Development)	0.00	[%]
IC_{post}	= Fraction of impervious cover (Post Development)	100.00	[%]
L_M	= Req'd TSS removal (***80%*** of Increase)	**209**	**[lbs]**

TOTAL REQUIRED TSS REMOVAL = 4,805 [lbs]

0 30 60 120
HORIZONTAL SCALE

know what's **below.** **Call** before you dig.

LEGEND

FLOW DIRECTION

NOTE:

1. REFERENCE SHEET C-2 FOR ABBREVIATIONS AND MASTER LEGEND.

BATCH DETENTION POND REMOVAL CALCULATIONS

IN ACCORDANCE WITH TCEQ REGULATIONS: RG-348

Load Removed by BMP (L_R):

Eq 3.8 $L_R = (BMP\ Eff) * P\ (A_I * 34.6 + A_P * 0.54)$

$A_{tot-sub}$	= Total area treated in the BMP subbasin	6.68	[ac]
A_I	= Impervious area proposed in BMP subbasin	5.37	[ac]
A_p	= Pervious area remaining in the BMP subbasin	1.31	[ac]
IC	= Impervious cover (Post Development)	80.39	[%]
BMP Type	=	Batch Detention	
BMP Eff	= BMP TSS Removal Efficiency	0.91	
L_R	= TSS Load Removed From Subbasin by BMP	**5,431**	**[lbs]**

Fraction of Annual Runoff to Treat the subbasin (F):

Eq 3.9 $F = L_M / \Sigma L_R$

Desired L_M	= Req'd TSS removal (80% of Increase typical)	4,805	[lbs]
L_R	= Load removed from *each* BMP	5,431	[lbs]
F	= Fraction of the Annual Rainfall treated by BMP	**0.88**	

Water Quality Volume Required (WQV_{req}):

Eq 3.10 $WQV = d * R_V * A$

Eq 3.11 $R_v = 1.72(IC)^3 - 1.97(IC)^2 + 1.23(IC) + .02$

$WQV_{req} = WQV + S$

F	= Fraction of the Annual Rainfall treated by BMP	0.88	
d	= Rainfall Depth required to capture	1.50	[in]
A	= Portion of Site contributing to BMP	6.68	[ac]
IC	= Fraction of Impervious Cover	0.80	
R_v	= Runoff Coefficient	0.63	
WQV	= Water quality volume	22,887	[ft^3]
S	= 20% Increase for Sediment Storage	4,577	[ft^3]
WQV_{req}	= Water quality volume required (With 20% increase)	**27,465**	**[ft^3]**

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/7/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOM'D
REVISIONS
DATE
No.

SHEET TITLE:

WATER QUALITY SUMMARY

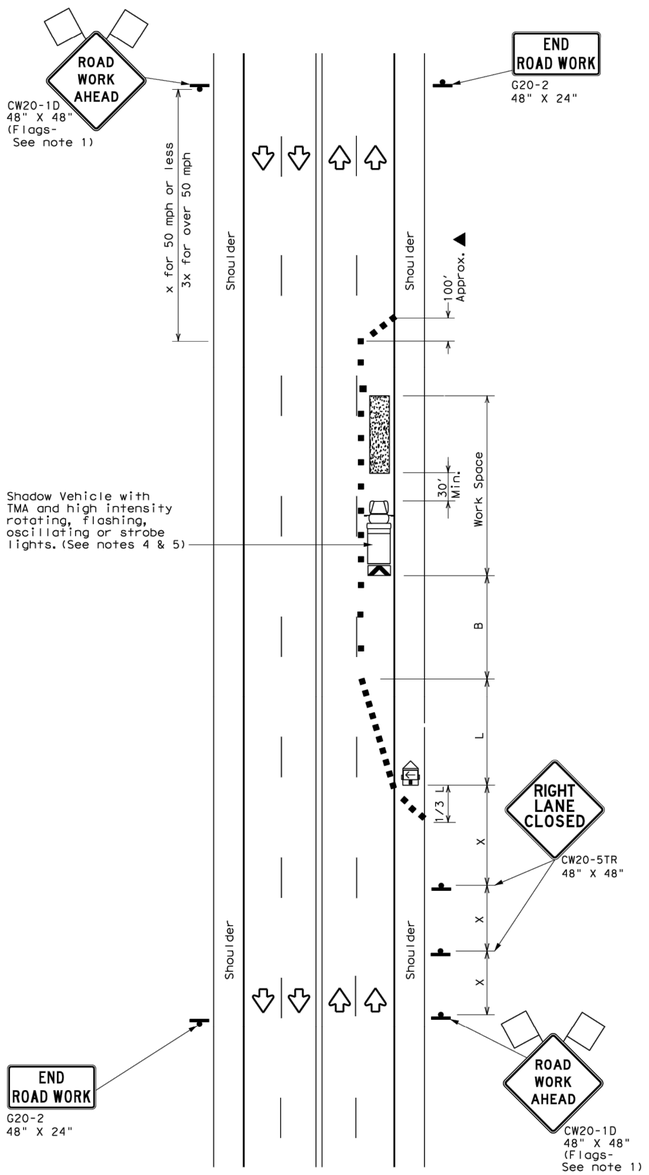
WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-50

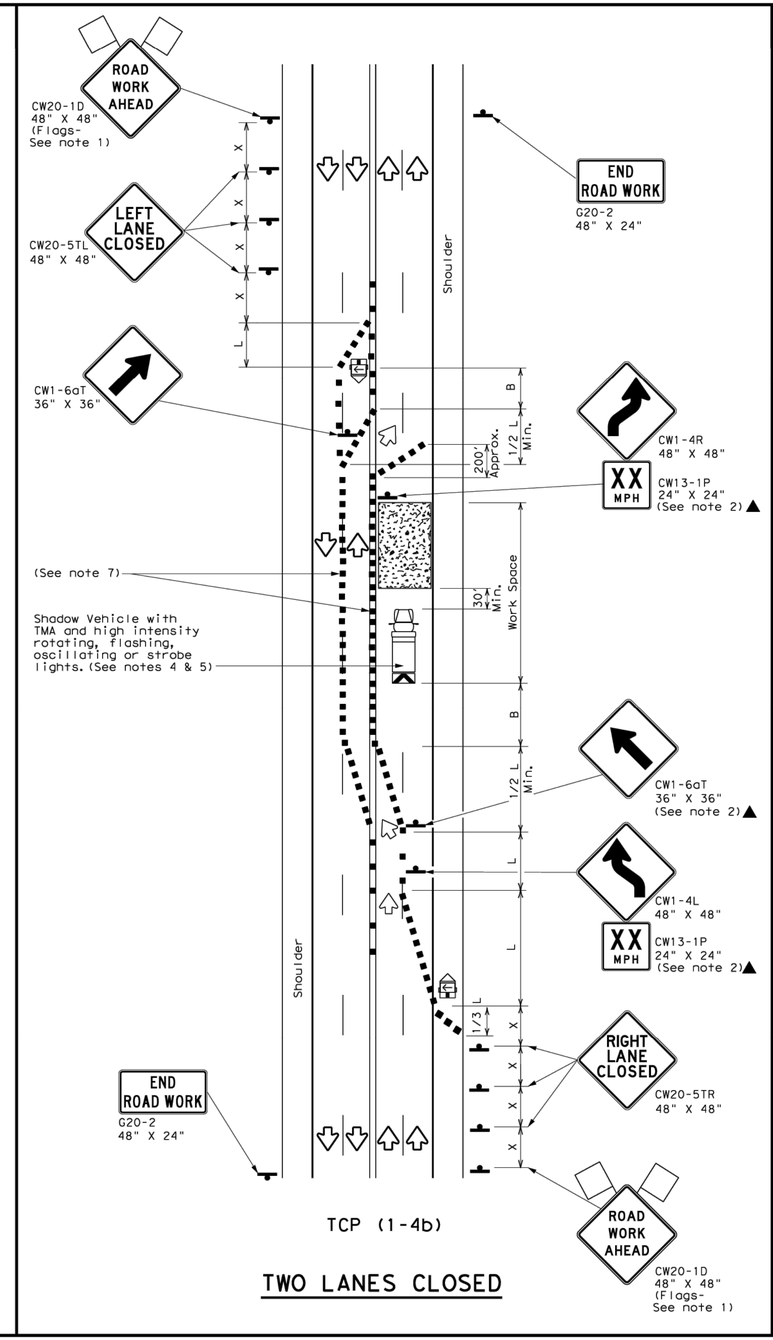
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 WQ.dwg, 7/31/2025 12:08:44 PM, _DWG To PDF.pc3, 1:1, RW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



TCP (1-4a)

ONE LANE CLOSED



TCP (1-4b)

TWO LANES CLOSED

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-4a)

6. If this TCP is used for a left lane closure , CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.

TCP (1-4b)

7. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

Texas Department of Transportation — Traffic Operations Division Standard

TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP(1-4)-18

FILE: tcp1-4-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS				
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 2-12				
1-97 2-18				

154

DATE:
FILE:

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8/7/25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOM'D
REVISIONS
No. DATE

SHEET TITLE:
TXDOT STANDARD
TCP (1-4) - 18

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-51

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:01:22 PM, _DWG To PDF.pc3, 1:1, RW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatever. TxDOT disclaims responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

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

SHEET 1 OF 12

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	DIST	COUNTY		SHEET NO.
9-07 8-14				
5-10 5-21				

95

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOM'D | REVISIONS | DATE | No.

SHEET TITLE:

TXDOT STANDARD BC(1) - 21

WP PROJECT NO.:
073-030

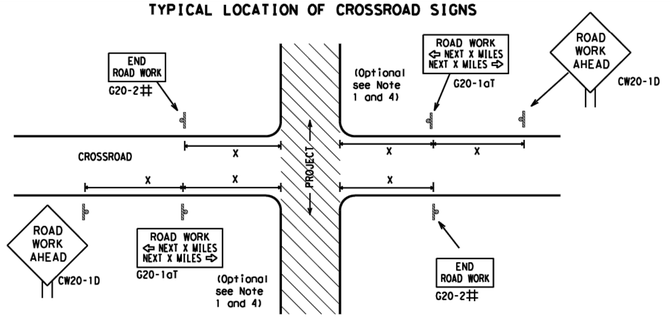
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-52

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:03:22 PM, _DWG To PDF.pc3, 1:1, RW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

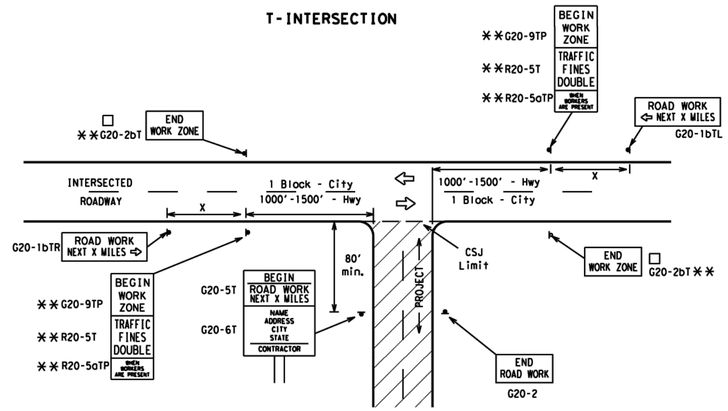
TYPICAL LOCATION OF CROSSROAD SIGNS



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]

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]

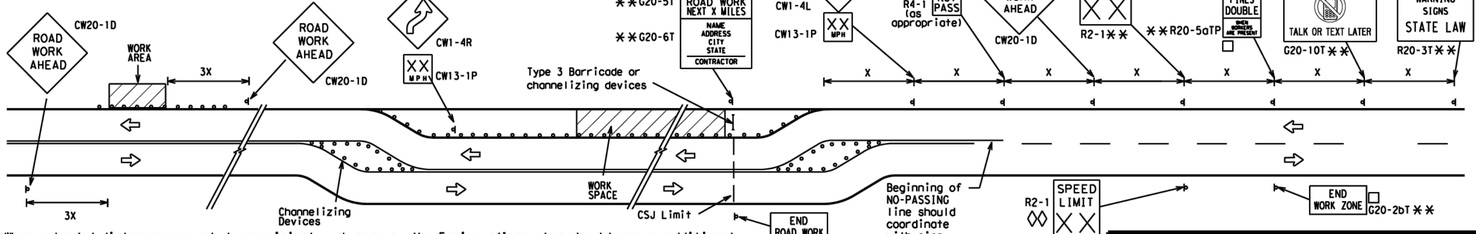
✱ For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ 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.

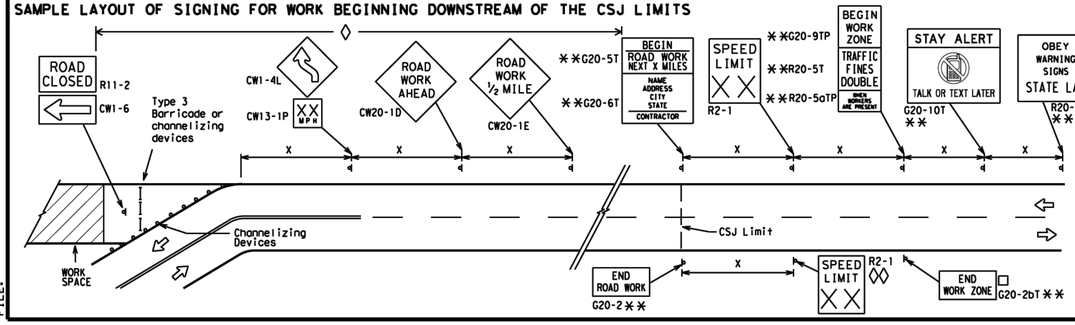
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



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

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF 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.

SHEET 2 OF 12

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				
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21				

96

DATE:
FILE:

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8.7.25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD / REVISIONS / DATE / No.

SHEET TITLE:
TXDOT STANDARD BC(2) - 21

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

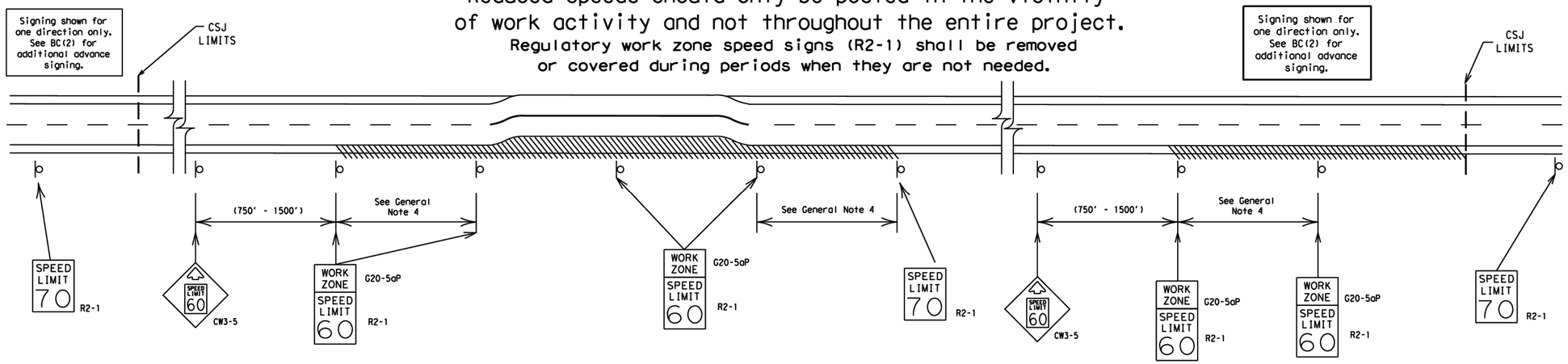
SHEET NO.:
C-53

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:11:55 PM, , DWG To PDF.pc3, 1:1, JRW

TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Zones," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project.
Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

a) rough road or damaged pavement surface
b) substantial alteration of roadway geometrics (diversions)
c) construction detours
d) grade
e) width
f) other conditions readily apparent to the driver

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 10 feet of the traveled way or actually in the traveled way.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered.
(See Removing or Covering on BC(4)).

GENERAL NOTES

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. Frequency of work zone speed limit signs should be:
   40 mph and greater 0.2 to 2 miles
   35 mph and less 0.2 to 1 mile
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. Fabrication, erection and maintenance of the"ADVANCE SPEED LIMIT"(CW3-5)sign, "WORK ZONE"(G20-5aP) plaque and the "SPEED LIMIT"(R2-1)signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
7. Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
8. Techniques that may help reduce traffic speeds include but are not limited to:
   A. Law enforcement.
   B. Flagger stationed next to sign.
   C. Portable changeable message sign (PCMS).
   D. Low-power (drone) radar transmitter.
   E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.
10. For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT form #1204 in the TxDOT e-form system.

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

SHEET 3 OF 12

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

BC(3)-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		SHEET NO.
7-13 5-21				

97

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOM'D
REVISIONS
DATE
No.

SHEET TITLE:
TXDOT STANDARD BC(3) - 21

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

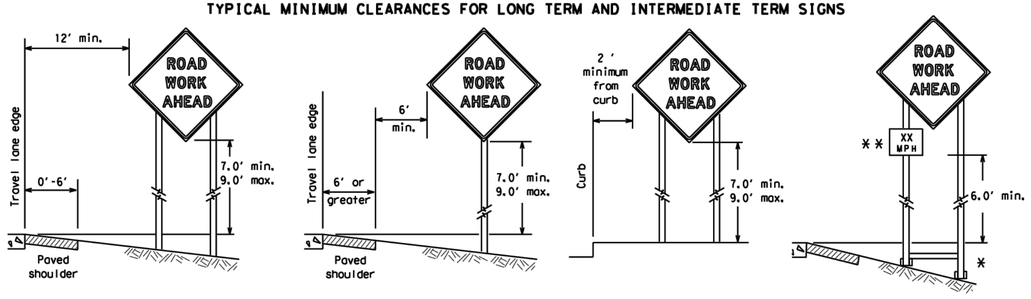
SHEET NO.:
C-54

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:05:37 PM, DWG To PDF.pc3, 1:1, JRW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

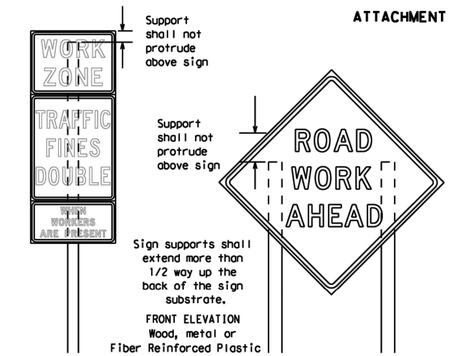
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



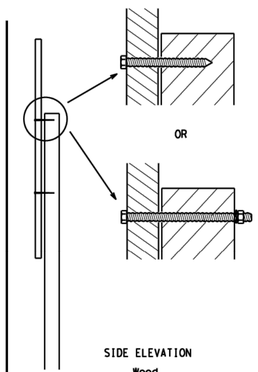
* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** 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



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.

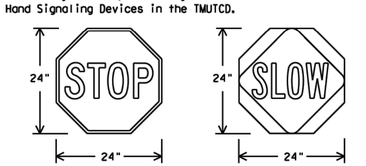


Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

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.

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

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

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		SHEET NO.
7-13 5-21				

98

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD | REVISIONS | DATE | No.

SHEET TITLE:

TXDOT STANDARD BC(4) - 21

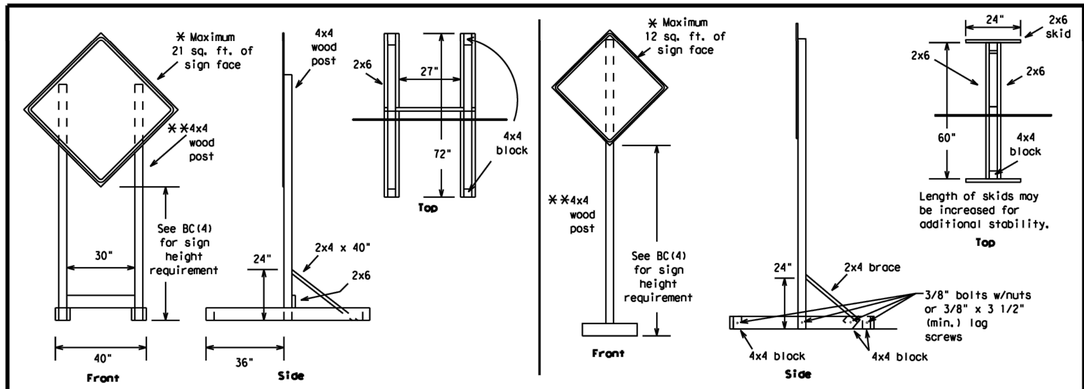
WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-55

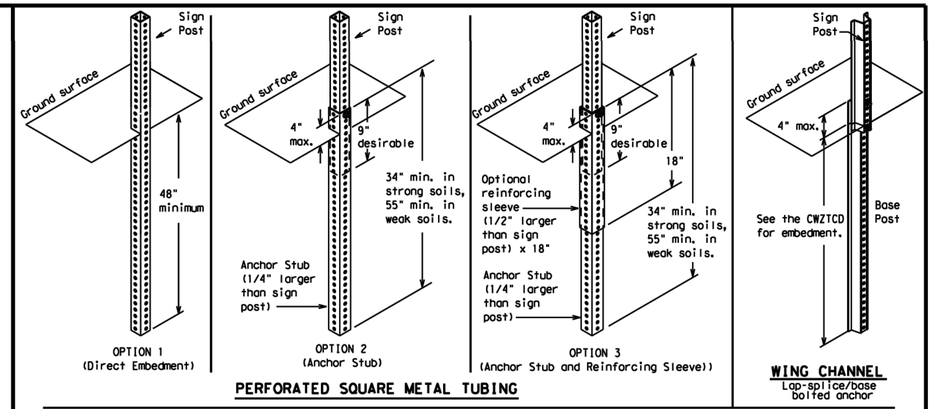
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:04:07 PM, _DWG To PDF.pc3, 1:1, JRW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any use of this standard, either express or implied, for its conversion to other formats or for incorrect results or damages resulting from its use.



SKID MOUNTED WOOD SIGN SUPPORTS

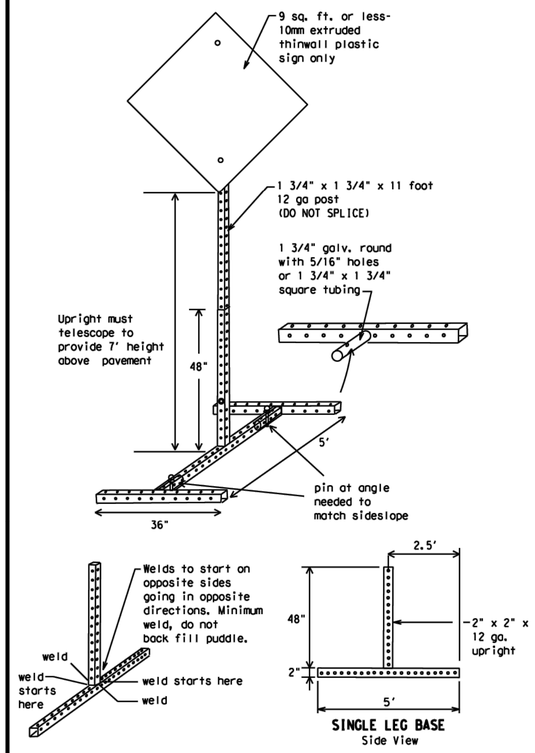
* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

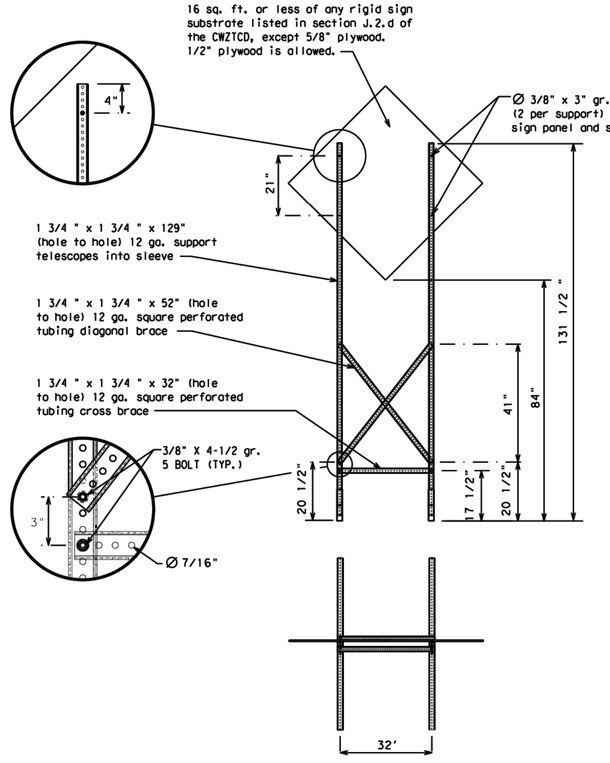


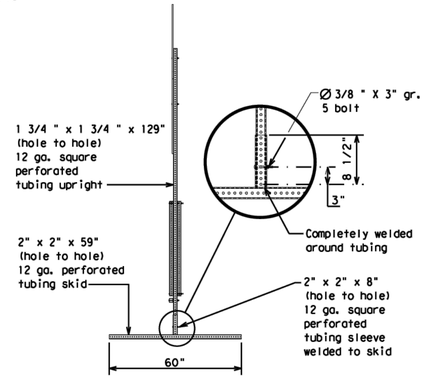
PERFORATED SQUARE METAL TUBING

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

DATE:
FILE:

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.

SHEET 5 OF 12

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-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		SHEET NO.
7-13 5-21				

99

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

ANTONIO A. PRETE 93759 LICENSED PROFESSIONAL ENGINEER 8.31.25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOM'D | REVISIONS | DATE | No.

SHEET TITLE:
TXDOT STANDARD BC(5) - 21

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-56

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:06:46 PM, _DWG To PDF.pc3, 1:1, RW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use, the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated, unless shown in the TMUTCD.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 600 feet at night and 800 feet in daylight. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

WORD OR PHRASE	ABBREVIATION
Access Road	ACCS RD
Alternate	ALT
Avenue	AVE
Best Route	BEST RTE
Boulevard	BLVD
Bridge	BRDG
Cannot	CANT
Center	CTR
Construction Ahead	CONST AHD
CROSSING	XING
Detour Route	DETOUR RTE
Do Not	DONT
East	E
Eastbound	(route) E
Emergency	EMER
Emergency Vehicle	EMER VEH
Entrance, Enter	ENT
Express Lane	EXP LN
Expressway	EXPWY
XXXX Feet	XXXX FT
Fog Ahead	FOG AHD
Freeway	FRWY, FWY
Freeway Blocked	FWY BLKD
Friday	FRI
Hazardous Driving	HAZ DRIVING
Hazardous Material	HAZMAT
High-Occupancy	HOV
Vehicle Highway	HWY
Hour(s)	HR, HRS
Information	INFO
It Is	ITS
Junction	JCT
Left	LFT
Left Lane	LFT LN
Lane Closed	LN CLOSED
Lower Level	LWR LEVEL
Maintenance	MAINT

WORD OR PHRASE	ABBREVIATION
Major	MAJ
Miles	MI
Miles Per Hour	MPH
Minor	MNR
Monday	MON
Normal	NORM
North	N
Northbound	(route) N
Parking	PKING
Road	RD
Right Lane	RT LN
Saturday	SAT
Service Road	SERV RD
Shoulder	SHLDR
Slippery	SLIP
South	S
Southbound	(route) S
Speed	SPD
Street	ST
Sunday	SUN
Telephone	PHONE
Temporary	TEMP
Thursday	THURS
To Downtown	TO DWNTN
Traffic	TRAF
Travelers	TRVLRS
Tuesday	TUES
Time Minutes	TIME MIN
Upper Level	UPR LEVEL
Vehicles (s)	VEH, VEHS
Warning	WARN
Wednesday	WED
Weight Limit	WT LIMIT
West	W
Westbound	(route) W
Wet Pavement	WET PVMT
Will Not	WONT

Roadway designation # IH-number, US-number, SH-number, FM-number

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

FREEWAY CLOSED X MILE	FRONTAGE ROAD CLOSED
ROAD CLOSED AT SH XXX	SHOULDER CLOSED XXX FT
ROAD CLSD AT FM XXXX	RIGHT LN CLOSED XXX FT
RIGHT X LANES CLOSED	RIGHT X LANES OPEN
CENTER LANE CLOSED	DAYTIME LANE CLOSURES
NIGHT LANE CLOSURES	I-XX SOUTH EXIT CLOSED
VARIOUS LANES CLOSED	EXIT XXX CLOSED X MILE
EXIT CLOSED	RIGHT LN TO BE CLOSED
MALL DRIVEWAY CLOSED	X LANES CLOSED TUE - FRI
XXXXXXXX BLVD CLOSED	

Other Condition List

ROADWORK XXX FT	ROAD REPAIRS XXXX FT
FLAGGER XXXX FT	LANE NARROWS XXXX FT
RIGHT LN NARROWS XXXX FT	TWO-WAY TRAFFIC XX MILE
MERGING TRAFFIC XXXX FT	CONST TRAFFIC XXX FT
LOOSE GRAVEL XXXX FT	UNEVEN LANES XXXX FT
DETOUR X MILE	ROUGH ROAD XXXX FT
ROADWORK PAST SH XXXX	ROADWORK NEXT FRI-SUN
BUMP XXXX FT	US XXX EXIT X MILES
TRAFFIC SIGNAL XXXX FT	LANES SHIFT *

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List		Location List	Warning List	** Advance Notice List
MERGE RIGHT	FORM X LINES RIGHT	AT FM XXXX	SPEED LIMIT XX MPH	TUE-FRI XX AM- X PM
DETOUR NEXT X EXITS	USE XXXXX RD EXIT	BEFORE RAILROAD CROSSING	MAXIMUM SPEED XX MPH	APR XX-XX X PM-X AM
USE EXIT XXX	USE EXIT I-XX NORTH	NEXT X MILES	MINIMUM SPEED XX MPH	BEGINS MONDAY
STAY ON US XXX SOUTH	USE I-XX E TO I-XX N	PAST US XXX EXIT	ADVISORY SPEED XX MPH	BEGINS MAY XX
TRUCKS USE US XXX N	WATCH FOR TRUCKS	XXXXXXX TO XXXXXXX	RIGHT LANE EXIT	MAY X-X XX PM - XX AM
WATCH FOR TRUCKS	EXPECT DELAYS	US XXX TO FM XXXX	USE CAUTION	NEXT FRI-SUN
EXPECT DELAYS	PREPARE TO STOP		DRIVE SAFELY	XX AM TO XX PM
REDUCE SPEED XXX FT	END SHOULDER USE		DRIVE WITH CARE	NEXT TUE AUG XX
USE OTHER ROUTES	WATCH FOR WORKERS			TONIGHT XX PM- XX AM
STAY IN LANE *				

** See Application Guidelines Note 6.

APPLICATION GUIDELINES

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limited to two phases, and should be understandable by themselves.
6. For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work.

WORDING ALTERNATIVES

1. The words RIGHT, LEFT and ALL can be interchanged as appropriate.
2. Roadway designations IH, US, SH, FM and LP can be interchanged as appropriate.
3. EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
4. Highway names and numbers replaced as appropriate.
5. ROAD, HIGHWAY and FREEWAY can be interchanged as needed.
6. AHEAD may be used instead of distances if necessary.
7. FT and MI, MILE and MILES interchanged as appropriate.
8. AT, BEFORE and PAST interchanged as needed.
9. Distances or AHEAD can be eliminated from the message if a location phase is used.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS, WHEN EXPOSED TO ONE DIRECTION OF TRAFFIC. WHEN EXPOSED TO TWO WAY TRAFFIC, THE FOUR DRUMS SHOULD BE PLACED WITH ONE DRUM AT EACH OF THE FOUR CORNERS OF THE UNIT.

FULL MATRIX PCMS SIGNS

1. When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
2. When symbol signs, such as the "Flagger Symbol"(CW20-7) are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
3. When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
4. A full matrix PCMS may be used to simulate a flashing arrow board provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

SHEET 6 OF 12

Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

BC(6)-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		SHEET NO.
7-13 5-21				

100

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8/7/25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD | REVISIONS | DATE | No.

SHEET TITLE:
TXDOT STANDARD BC(6) - 21

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

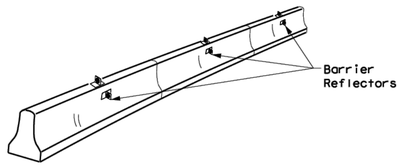
SHEET NO.:
C-57

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:03:31 PM, .DWG To PDF.pc3, 1:1, JRW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

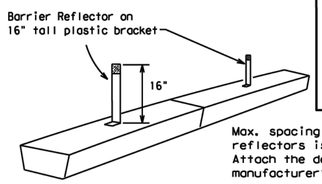
DATE:
FILE:

1. Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.



CONCRETE TRAFFIC BARRIER (CTB)

3. Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
4. Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional)while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
5. When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
6. Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
7. Maximum spacing of Barrier Reflectors is forty (40) feet.
8. Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
9. Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
10. Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
11. Single slope barriers shall be delineated as shown on the above detail.

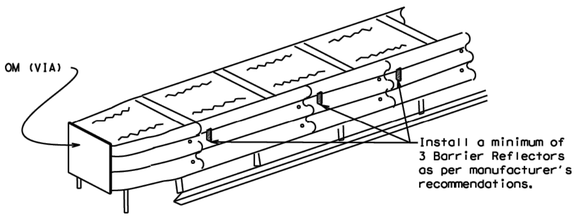


Max. spacing of barrier reflectors is 20 feet.
Attach the delineators as per manufacturer's recommendations.

LOW PROFILE CONCRETE BARRIER (LPCB)

LOW PROFILE CONCRETE BARRIER (LPCB) USED IN WORK ZONES

LPCB is approved for use in work zone locations, where the posted speed is 45mph, or less. See Roadway Standard Sheet LPCB.

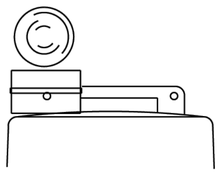


DELINEATION OF END TREATMENTS

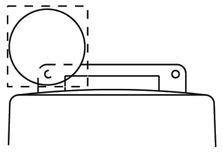
END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet the apppropriate crashworthy standards as defined in the Manual for Assessing Safety Hardware (MASH). Refer to the CWZTCD List for approved end treatments and manufacturers.

BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS



Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.



Warning reflector may be round or square.Must have a yellow reflective surface area of at least 30 square inches

WARNING LIGHTS

1. Warning lights shall meet the requirements of the TMUTCD.
2. Warning lights shall NOT be installed on barricades.
3. Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type B_{FL} or C_{FL} Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
4. Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
7. When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
8. The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

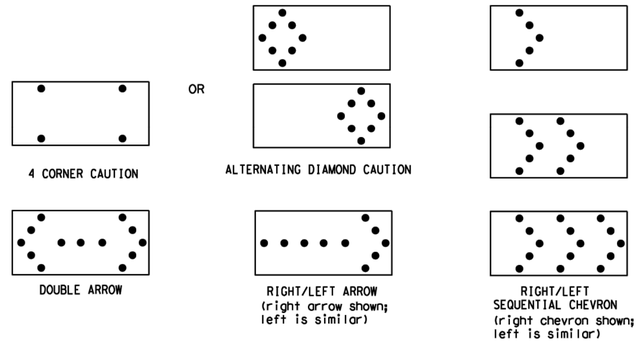
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
4. Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
5. Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
6. Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
7. The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

1. A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
2. The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
3. The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
4. Round reflectors shall be fully reflectorized, including the area where attached to the drum.
5. Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
6. The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type B or Type C.
7. When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
8. The warning reflector should be mounted on the side of the handle nearest approaching traffic.
9. The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

Arrow Boards may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

1. The Flashing Arrow Board should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
2. Flashing Arrow Boards should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
3. The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Board.
4. The Flashing Arrow Board should be able to display the following symbols:



5. The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
6. The straight line caution display is NOT ALLOWED.
7. The Flashing Arrow Board shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
8. Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
9. The sequential arrow display is NOT ALLOWED.
10. The flashing arrow display is the TxDOT standard; however, the sequential chevron display may be used during daylight operations.
11. The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
12. A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
13. A full matrix PCMS may be used to simulate a Flashing Arrow Board provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
14. Minimum mounting height of trailer mounted Arrow Boards should be 7 feet from roadway to bottom of panel.

REQUIREMENTS			
TYPE	MINIMUM SIZE	MINIMUM NUMBER OF PANEL LAMPS	MINIMUM VISIBILITY DISTANCE
B	30 x 60	13	3/4 mile
C	48 x 96	15	1 mile

ATTENTION

Flashing Arrow Boards shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW BOARD FROM THE RIGHT-OF-WAY OR PLACE THE ARROW BOARD BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

FLASHING ARROW BOARDS

SHEET 7 OF 12

TRUCK-MOUNTED ATTENUATORS

1. Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the Manual for Assessing Safety Hardware (MASH).
2. Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
3. Refer to the CWZTCD for a list of approved TMAs.
4. TMAs are required on freeways unless otherwise noted in the plans.
5. A TMA should be used anytime that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
6. The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.

Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR

BC(7)-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		SHEET NO.
7-13 5-21				

TGT

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD
REVISIONS
DATE
No.

SHEET TITLE:

TXDOT STANDARD BC(7) - 21

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-58

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:00:40 PM, _DWG To PDF.pc3, 1:1, JRW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

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:

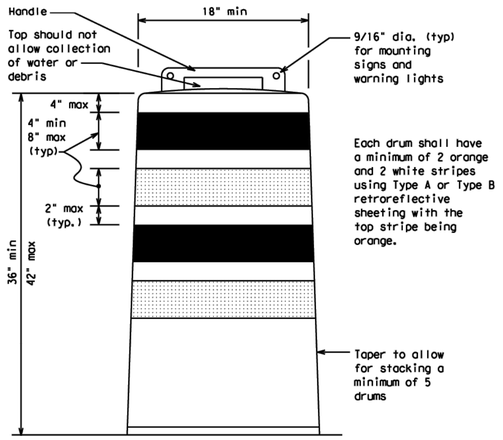
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents 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.

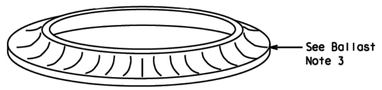
RETROREFLECTIVE SHEETING

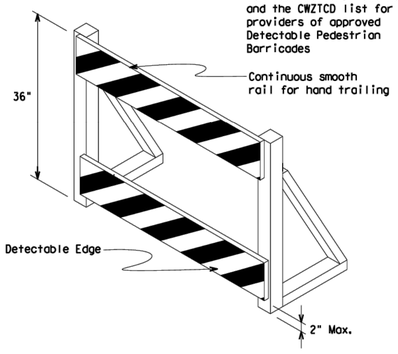
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall 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.

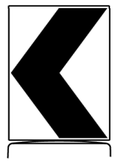




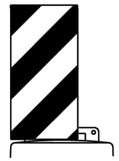


DETECTABLE PEDESTRIAN BARRICADES

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.

SHEET 8 OF 12

Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21				
7-13				
102				

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8.7.25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD | REVISIONS | DATE | No.

SHEET TITLE:
TXDOT STANDARD BC(8) - 21

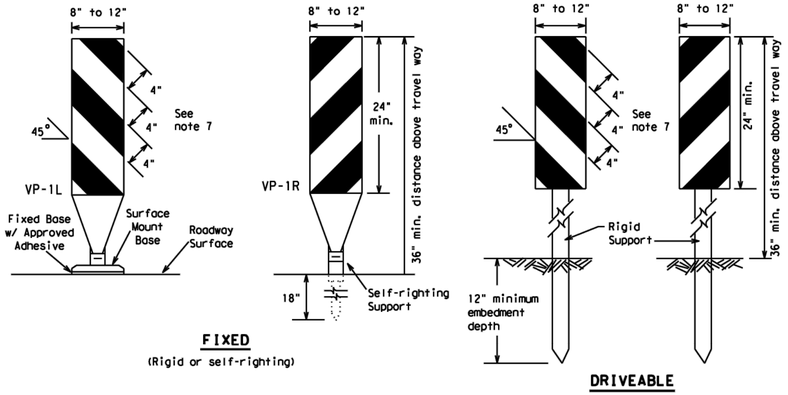
WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-59

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:03:58 PM, _DWG To PDF.pc3, 1:1, JRW

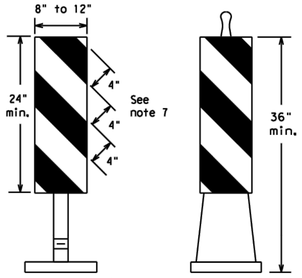
DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



FIXED

(Rigid or self-righting)

DRIVEABLE

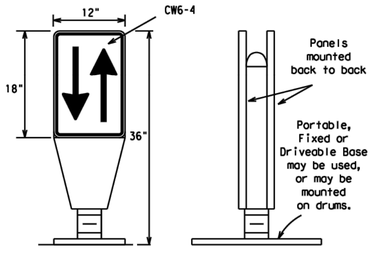


(Rigid or self-righting)

PORTABLE

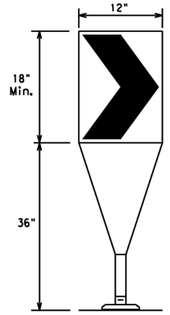
1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is 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)



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.

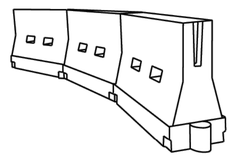
OPPOSING TRAFFIC LANE DIVIDERS (OTLD)



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



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

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.

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

SHEET 9 OF 12

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		SHEET NO.
7-13 5-21				

103

DATE:
FILE: K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:09:30 PM, DWG To PDF.pc3, 1:1, JRW

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 7/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD
REVISIONS
DATE
No.

SHEET TITLE:

TXDOT STANDARD BC(9) - 21

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-60

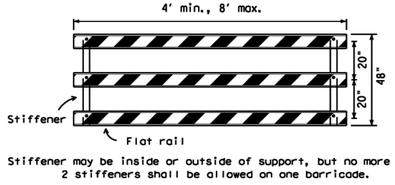
DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

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.

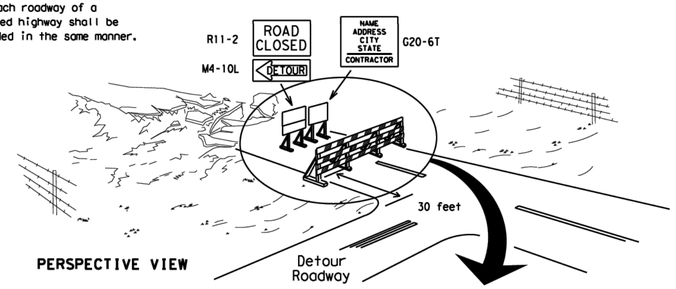
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

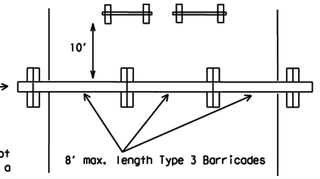
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

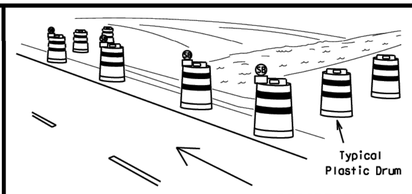
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

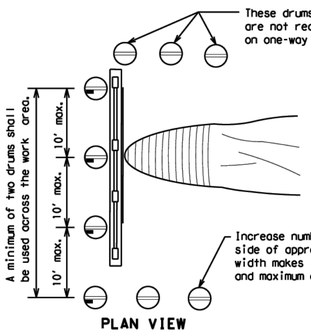
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

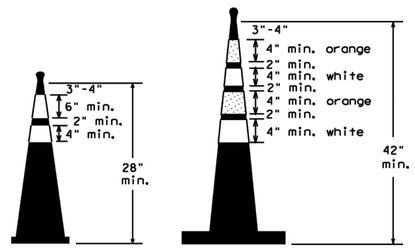
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder 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.



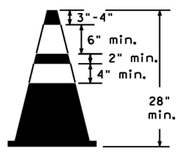
PLAN VIEW

LEGEND	
	Plastic drum
	Plastic drum with steady burn light or yellow warning reflector
SB	Steady burn warning light or yellow warning reflector

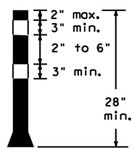
CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



Two-Piece cones



One-Piece cones

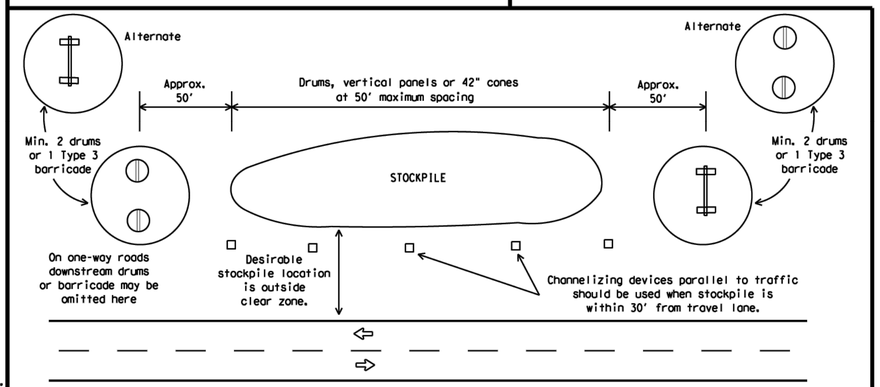


Tubular Marker

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

DATE:
FILE:

SHEET 10 OF 12

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
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21				

104

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8/7/25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD | REVISIONS | DATE | No.

SHEET TITLE:
TXDOT STANDARD BC(10) - 21

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - _____

SHEET NO.:
C-61

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:12:04 PM, DWG To PDF.pc3, 1:1, JRW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

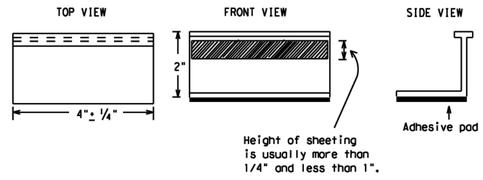
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than three days, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway as described in Item 677.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
   A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
   B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:
YELLOW - (two amber reflective surfaces with yellow body).
WHITE - (one silver reflective surface with white body).

DEPARTMENTAL MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
TRAFFIC BUTTONS	DMS-4300
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY REMOVABLE, PREFABRICATED PAVEMENT MARKINGS	DMS-8241
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS	DMS-8242

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

SHEET 11 OF 12

Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

BC(11)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-98 9-07 5-21 / 1-02 7-13 / 11-02 8-14	DIST	COUNTY		SHEET NO.

105

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8/31/25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:
TXDOT STANDARD BC(11) - 21

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-62

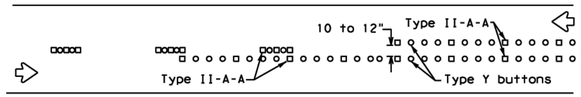
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:08:52 PM, _DWG To PDF.pc3, 1:1, JRW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

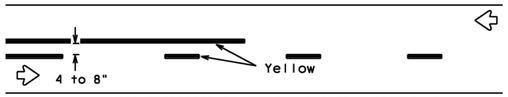
DATE:
FILE:

PAVEMENT MARKING PATTERNS

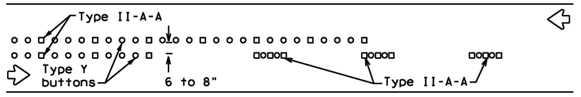
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



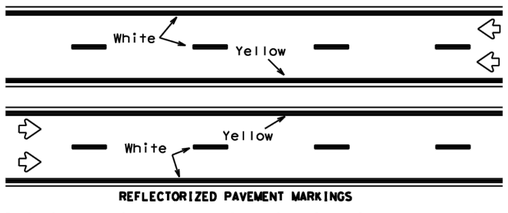
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



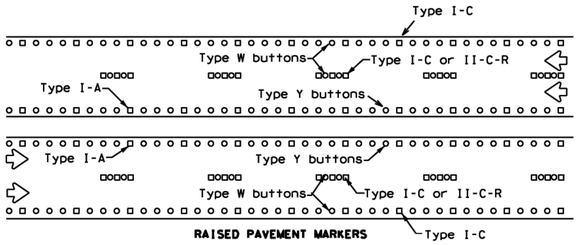
RAISED PAVEMENT MARKERS - PATTERN B

Pattern A is the TXDOT Standard, however Pattern B may be used if approved by the Engineer.
Prefabricated markings may be substituted for reflectorized pavement markings.

CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



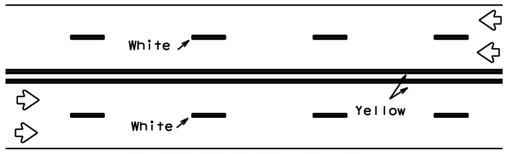
REFLECTORIZED PAVEMENT MARKINGS



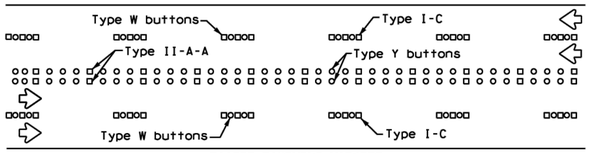
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



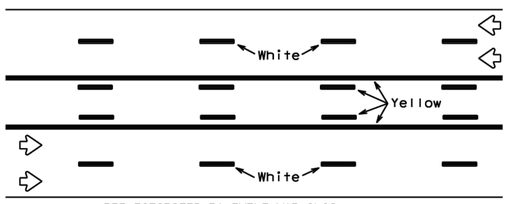
REFLECTORIZED PAVEMENT MARKINGS



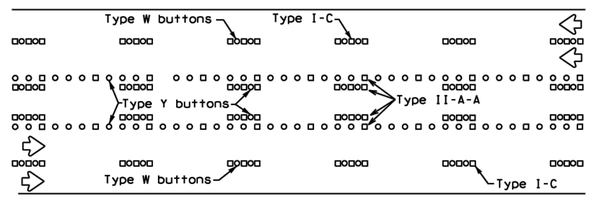
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS

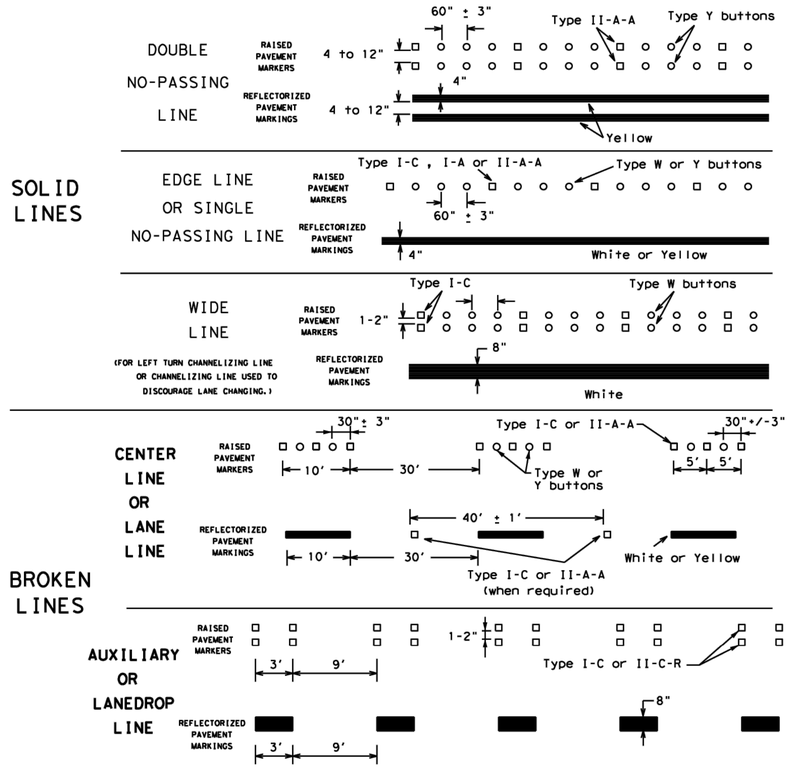


RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

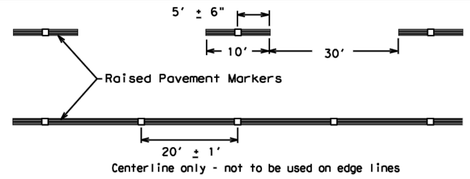
TWO-WAY LEFT TURN LANE

STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



Centerline only - not to be used on edge lines

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

SHEET 12 OF 12

Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC(12)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS 1-97 9-07 5-21 2-98 7-13 11-02 8-14	DIST	COUNTY		SHEET NO.

T06

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8.31.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOM'D
REVISIONS
DATE
No.

SHEET TITLE:

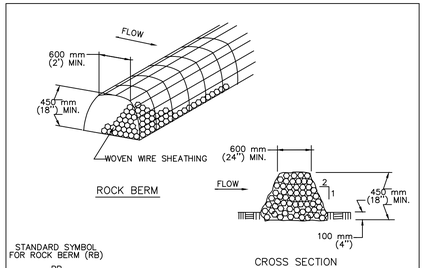
TXDOT STANDARD BC(12) - 21

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-63

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 TCP.dwg, 7/31/2025 12:10:08 PM, _DWG To PDF.pc3, 1:1, R/W

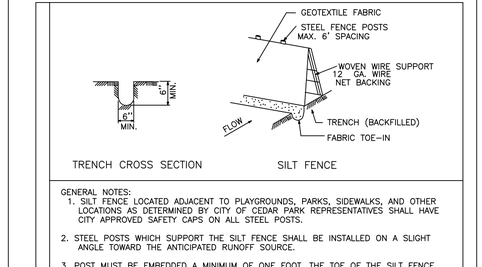


NOTES:

1. USE ONLY OPEN GRADED ROCK 100 to 200 mm (4 to 8") DIAMETER FOR STREAM FLOW CONDITIONS. USE OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR OTHER CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE), ROCK BERMS IN CHANNEL APPLICATIONS SHALL BE ANCHORED FIRMLY INTO THE SUBSTRATE A MINIMUM OF 150 mm (6 ") WITH T-POSTS OR WITH 15M OR 20M (#5 OR #6) REBAR, WITH MAXIMUM SPACING APART OF 1.2 m (48") ON CENTER.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE-SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 150 mm (6").
6. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		ROCK BERM	
RECORD COPY SIGNED BY J. PATRICK MURPHY	5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 639S-1

ROCK BERM
NTS



GENERAL NOTES:

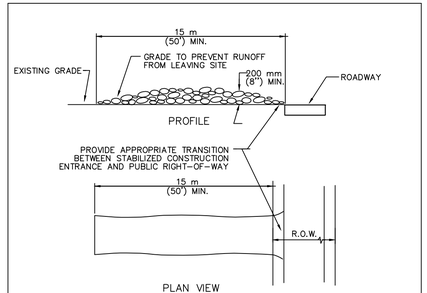
1. SILT FENCE LOCATED ADJACENT TO PLAYGROUNDS, PARKS, SIDEWALKS, AND OTHER LOCATIONS AS DETERMINED BY CITY OF CEDAR PARK REPRESENTATIVES SHALL HAVE CITY APPROVED SAFETY CAPS ON ALL STEEL POSTS.
2. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
3. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
4. WHERE FENCE CAN NOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE. 6 INCHES DEEP AND 6 INCHES WIDE TO THE TRENCH MUST BE A MINIMUM OF ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
6. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
7. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES.
8. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

STANDARD SYMBOL SF / L=

REV. DATE: 09/13/01

CITY OF CEDAR PARK ENGINEERING DEPARTMENT		SILT FENCE	
DARWIN MARCHELL 09/13/2001		ADOPTED: 09/13/2001 SCALE: N.T.S.	
APPROVED	DATE	INITIAL:	

SILT FENCE
NTS

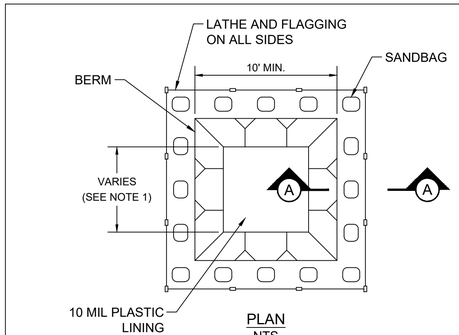


NOTES:

1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		STABILIZED CONSTRUCTION ENTRANCE	
RECORD COPY SIGNED BY J. PATRICK MURPHY	5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1

STABILIZED CONSTRUCTION ENTRANCE
NTS



INSTALLATION NOTES:

1. 10' MIN. OR AS REQUIRED TO CONTAIN WASTE CONCRETE.
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
4. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

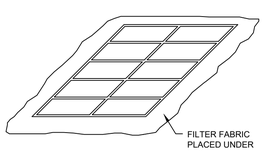
MAINTENANCE NOTES:

1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.
4. INSPECT WEEKLY, DURING AND AFTER EVERY STORM EVENT.

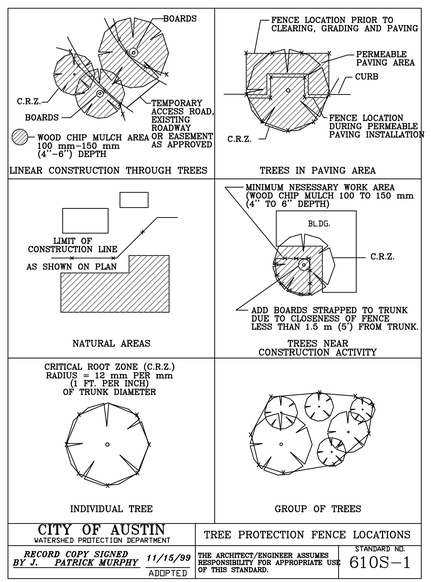
TEMPORARY CONCRETE TRUCK WASH OUT AREA
NTS

GENERAL NOTES:

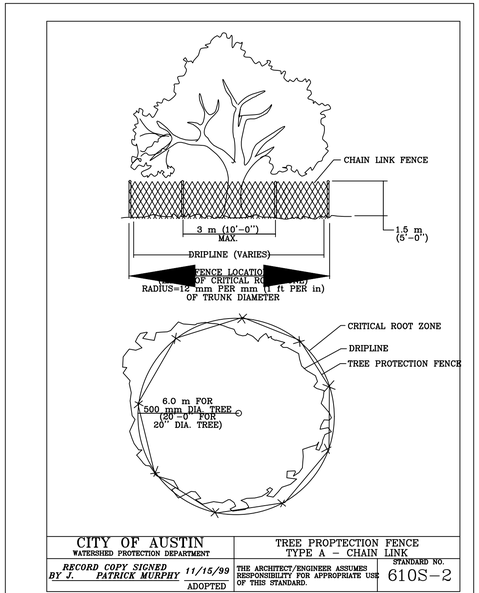
1. INSTALL FILTER FABRIC ACROSS PARTIALLY CONSTRUCTED AND FULLY CONSTRUCTED INLETS, AS WORK PROGRESSES.
2. CONTRACTOR SHALL REPLACE FILTER FABRIC FOLLOWING EACH SILTING EVENT. (REPLACE - NOT CLEAN)



INLET PROTECTION
NTS



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE LOCATIONS	
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-1



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROPTECTION FENCE TYPE A - CHAIN LINK	
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-2

TREE PROTECTION DETAILS
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/7/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD
REVISIONS
DATE
No.

SHEET TITLE:

ESC DETAILS (1 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-64

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:11:27 PM, _DWG To PDF.pc3, 1:1, RW

TREE PRESERVATION NOTES

1. ALL TREES SHOWN ON THIS PLAN TO BE RETAINED OR REPLANTED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY CHAIN LINK FENCING.
2. TREE PROTECTION FENCES SHALL BE ERECTED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.
3. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
4. FENCES SHALL COMPLETELY SURROUND THE TREE OR CLUSTERS OF TREES; SHALL BE LOCATED AT THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIPLINE); AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   a. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS
   b. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL) OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY ARBORIST
   c. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT
   d. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CONCRETE TRUCK CLEANING, AND FIRES.
5. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   a. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   b. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING.
   c. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE CITY INSPECTOR 258-2530 TO DISCUSS ALTERNATIVES.
6. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE THAT IS CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUCK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
7. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES (UNDER DRIPLINES) THOSE AREAS SHOULD BE COVERED WITH 4 INCHES OF ORGANIC MULCH OR GRAVEL TO MINIMIZE SOIL COMPACTION.
8. ALL GRADING WITHIN PROTECTED ROOT ZONE AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCING TO 2 FEET BEHIND THE GRADE CHANGE AREA.
9. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
10. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, A CLEAN CUT SHALL BE MADE BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE DAMAGE TO REMAINING ROOTS.
11. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES WILL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS ARE TO BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
12. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE ROOT ZONE.
13. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
14. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
15. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND CONSTRUCTION EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS (BEFORE DAMAGE OCCURS). ALL FINISHED PRUNING MUST BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY; REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES, CLASS IV OF PRUNING.
16. ALL WOUNDS WHICH OCCUR TO TREE TRUNKS AND LIMBS MUST BE REPAIRED WITHIN 24 HOURS OF OCCURRENCE BY BARK TRACING TO REMOVE DAMAGED WOOD AND BARK AND THOROUGHLY SEALED WITH AN ACCEPTABLE TREE WOUND DRESSING. THIS SPECIFICALLY APPLIES TO WOUNDS CREATED BY CONSTRUCTION VEHICLES AND EQUIPMENT, INSTALLATION OF TOWERS AND PIERS, AND STRINGING OF ELECTRICAL LINES.
17. TREES APPROVED FOR REMOVAL OR REPLANTING SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.

REVEGETATION NOTES FOR PERMANENT RESTORATION

1. ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW.
2. A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK) AND BETWEEN THE CURB AND RIGHT-OF-WAY LINE. THERE SHALL BE NO ROCKS LARGER THAN 3/4".
3. THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE APPLIED OVER AREAS DISTURBED BY CONSTRUCTION AS FOLLOWS:

BROADCAST SEEDING:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 2 POUNDS PER 1000 SF OF UNHULLED BERMUDA AND 7 POUNDS PER 1000 SF OF OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 2 POUNDS PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION.
   A. FERTILIZER SHALL BE A PELLETED OR GRANULAR SLOW RELEASE WITH AN ANALYSIS OF 15-15-15 TO BE APPLIED ONCE AT PLANTING AND ONCE DURING THE PERIOD OF ESTABLISHMENT AT A RATE OF 1 POUND PER 1000 SF.
   B. MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000 SF.

HYDRAULIC SEEDING:

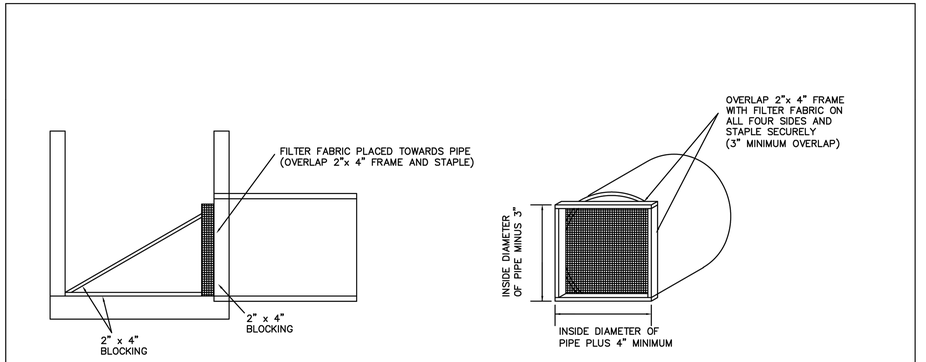
1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 1 POUND PER 1000 SF OF UNHULLED BERMUDA AND 7 POUNDS PER 1000 SF OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 3 POUNDS PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION.
   A. FERTILIZER SHALL BE A WATER SOLUBLE FERTILIZER WITH AN ANALYSIS OF 15-15-15 AT A RATE OF 1.5 POUNDS PER 1000 SF.
   B. MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000 SF, WITH SOIL TACKIFIER AT A RATE OF 1.4 POUNDS PER 1000 SF.
   C. THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL. BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX INCHES. THE IRRIGATION SHALL OCCUR AT TEN-DAY INTERVALS DURING THE FIRST TWO MONTHS. RAINFALL OCCURRENCES OF 1/2 INCH OR MORE SHALL POSTPONE THE WATERING SCHEDULE FOR ONE WEEK.
   D. RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1 1/2 INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.

SOD:

1. AT THE OPTION OF THE OWNER, DISTURBED AREAS CAN BE SODDED WITH SOLID SOD OF NURSERY QUALITY.
2. SOD SHALL BE SUITABLE TO THE AREA AND SEASON IN WHICH IT IS LAID.

TEMPORARY EROSION/SEDIMENTATION CONTROL NOTES

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION/SEDIMENTATION CONTROL PLAN.
3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING PLAN.
4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR IN ACCORDANCE WITH SEQUENCE OF CONSTRUCTION.
5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE CITY. MAJOR REVISIONS MUST BE APPROVED BY THE PUBLIC WORKS DEPARTMENT. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE CITY INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
6. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
7. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
8. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS; ONE SQUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IMMEDIATELY CONTACT A CITY INSPECTOR FOR FURTHER INVESTIGATIONS.
9. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED AND IN ACCORDANCE WITH THE REVEGETATION NOTES.
10. ROCK BERMS, SILT FENCES, SEDIMENTATION BASIN AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY OF CEDAR PARK FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.



NOTES:
STORM INLET SEDIMENT TRAPS SHALL BE PLACED IN ALL PROPOSED CURB INLETS AND AREA INLETS AS DIRECTED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

THE LATERAL BRACING SHALL BE PLACED IN A MANNER AS TO ADEQUATELY SECURE THE FILTER FRAME TO THE SIDE OF THE INLET, INSURING THE PROPER FUNCTION OF THE SEDIMENT TRAP.

FILTER FABRIC MAY BE IDENTICAL TO THAT SPECIFIED AS "TEMPORARY SEDIMENT CONTROL FENCE". OTHER MATERIAL MAY BE USED UPON APPROVAL OF THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

THE "STORM INLET SEDIMENT TRAPS" SHALL BE INSTALLED UPON COMPLETION OF THE PROPOSED INLET WALLS OR AS DIRECTED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

THE CONTRACTOR WILL BE REQUIRED TO PERFORM PERIODIC MAINTENANCE OF THE SEDIMENT TRAP AND REMOVE ACCUMULATED SILT AS DIRECTED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

"STORM INLET SEDIMENT TRAPS" SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE PROPOSED INLET DECK BEGINS.

ALL WOOD SHALL BE PRESSURE TREATED.

STORM INLET SEDIMENT TRAP

CITY OF CEDAR PARK PUBLIC WORKS ENGINEERING	STANDARD DETAIL STORM INLET SEDIMENT TRAP
DARWIN MARCHELL, P.E.	ADOPTED: 01/02/01 SCALE: NTS INITIAL:

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
7/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

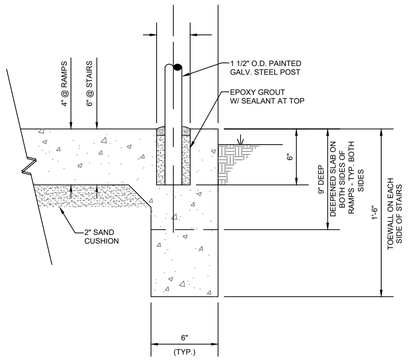
ESC DETAILS (2 OF 2)

WP PROJECT NO.:
073-030

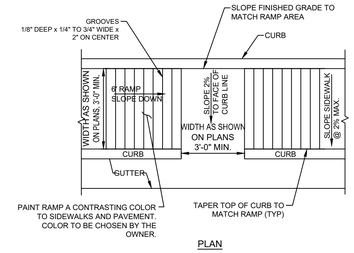
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-65

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:05:45 PM, , DWG To PDF.pc3, 1:1, JRW

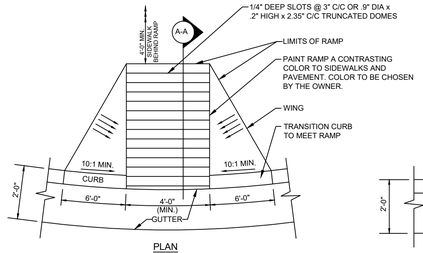


DETAIL
NTS
3 AA

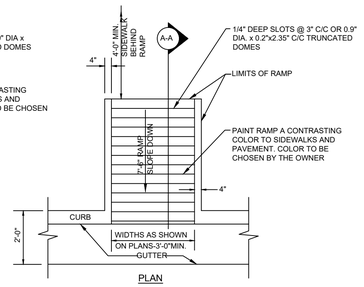


PLAN

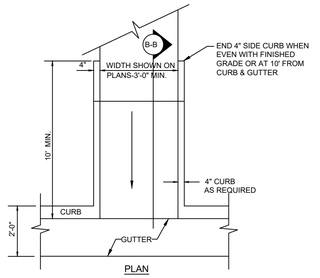
LAYDOWN CURB RAMP
PRIVATE PROPERTY
NTS
8 AA



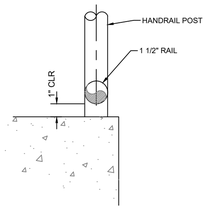
PLAN



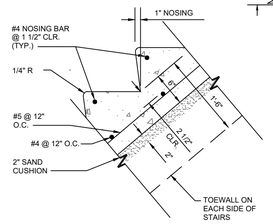
PLAN



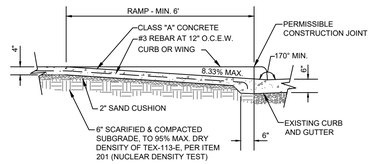
PLAN



EDGE
PROTECTION DETAIL
NTS
7 AA

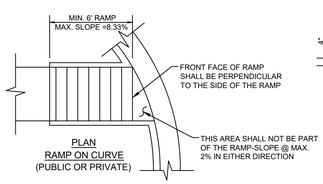


STEP DETAIL
NTS
2 AA

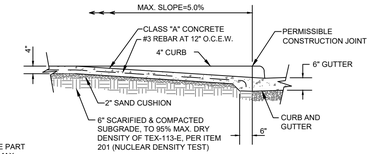


SECTION A-A

CURB RAMP DETAIL
PRIVATE PROPERTY
NTS

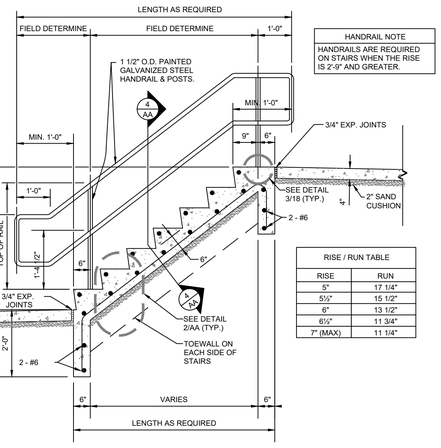


PLAN
RAMP ON CURVE
(PUBLIC OR PRIVATE)



SECTION B-B

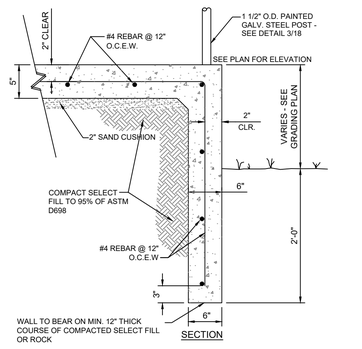
SIDEWALK SLOPING TO PAVEMENT
PRIVATE PROPERTY
NTS



HANDRAIL NOTE
HANDRAILS ARE REQUIRED ON STAIRS WHEN THE RISE IS 2'-9" AND GREATER.

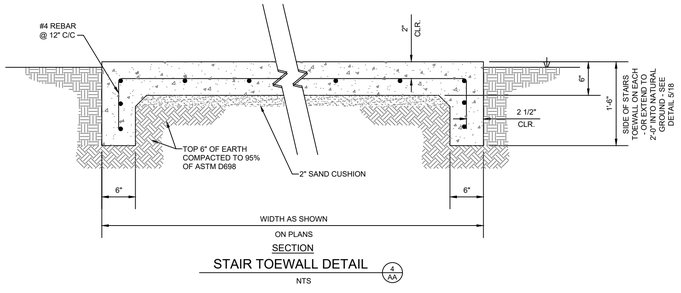
RISE / RUN TABLE	
RISE	RUN
5"	17 1/4"
5½"	15 1/2"
6"	13 1/2"
6½"	11 3/4"
7" (MAX)	11 1/4"

STAIR DETAIL
NTS
1 AA



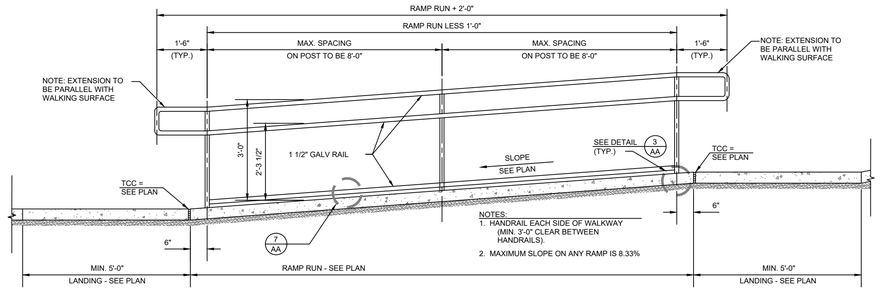
SECTION

RAMP/ STAIRWAY WALL CONSTRUCTION DETAIL
NTS
5 AA



SECTION

STAIR TOEWALL DETAIL
NTS
4 AA



SIDEWALK RAMP DETAIL
NTS
6 AA

ADA / TAS DESIGN - GENERAL

THE CONTRACTOR IS FULLY RESPONSIBLE FOR CONSTRUCTION OF SIDEWALKS, LANDINGS, PORCHES, RAMPS & PARKING SPACES THAT MEET ADA/TAS REQUIREMENTS. THE CONTRACTOR SHALL HAVE FULL KNOWLEDGE OF THE DETAILS ON THESE PLANS AND OF ADA/TAS REGULATIONS. SHOULD THE CONTRACTOR FIND AN ELEVATION OR CONDITION THAT IS DIFFERENT THAN SHOWN ON THE PLANS, IT IS THE CONTRACTORS FINAL RESPONSIBILITY TO CONTACT THE CIVIL ENGINEER AND WORK OUT A DESIGN THAT MEETS ADA & TAS, PRIOR TO CONSTRUCTION, NOT AFTER THE WORK IS COMPLETED.

ADA SIDEWALK RAMP/ CURB RAMP SLOPES

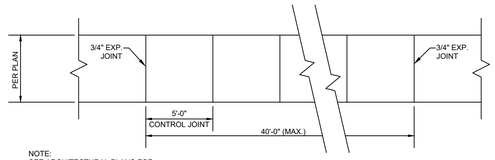
DETERMINE THE LENGTH OF A RAMP BY CHECKING THE ELEVATIONS AT THE TOP AND BOTTOM OF THE RAMP. THE SLOPE SHALL NOT EXCEED 8.33%.

ADA CROSSWALKS, SIDEWALKS AND ACCESSIBILE ROUTES

NO CROSS SLOPE SHALL EXCEED 2.00%.
NO RUNNING SLOPE SHALL EXCEED 5.00%.

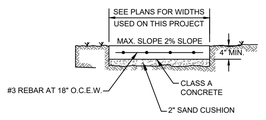
ADA HANDICAP PARKING SPACES

NO SLOPE WITHIN A PARKING SPACE OR A STRIPED AISLE SHALL EXCEED 2.00% IN ANY DIRECTION.



NOTE:
SEE ARCHITECTURAL PLANS FOR LOCATIONS OF CONSTRUCTION JOINTS AND EXPANSION JOINTS THAT DEVIATE FROM THIS DETAIL.

PLAN



SECTION

CONCRETE SIDEWALK DETAIL
PRIVATE PROPERTY
NTS

NOTE TO CONTRACTOR:
THIS IS A STANDARD DETAIL SHEET WHICH SHOWS MULTIPLE STANDARD CONSTRUCTION DETAILS. DETAILS MAY OR MAY NOT BE APPLICABLE.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
8/31/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOM'D
REVISIONS
DATE
No.

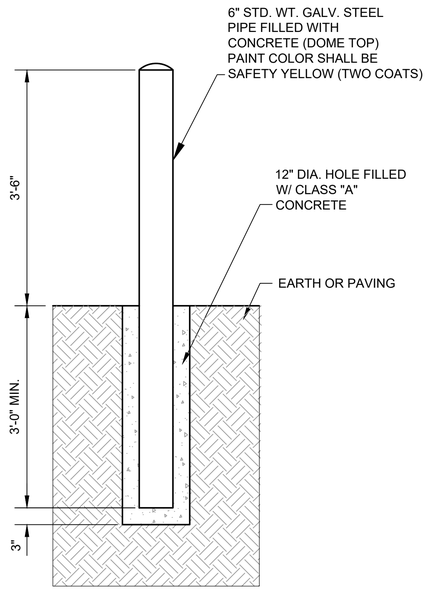
SHEET TITLE:

SITE DETAILS (1 OF 5)

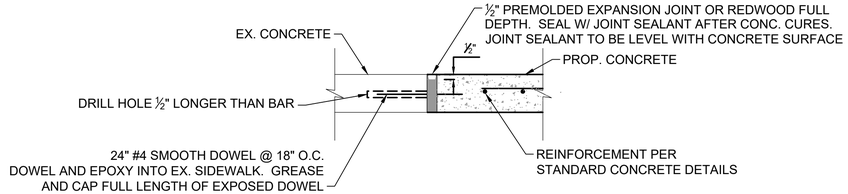
WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-66

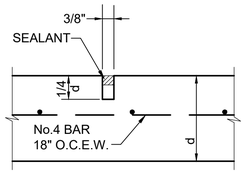
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:06:28 PM, DWG To PDF.pc3, 1:1, JRW



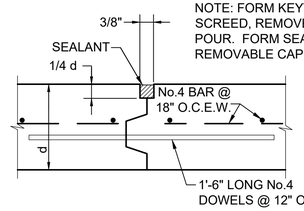
BOLLARD
NTS



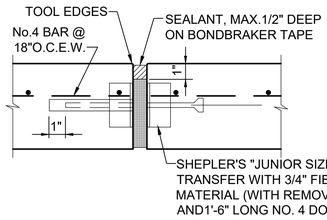
TYPICAL EXPANSION JOINT AT EXISTING CONCRETE CONNECTION



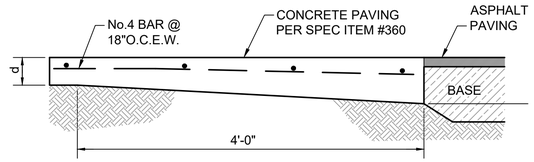
PAVING CONTROL JOINT



PAVING CONSTRUCTION JOINT

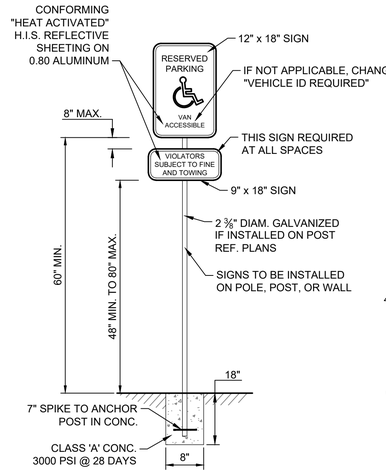


PAVING EXPANSION JOINT

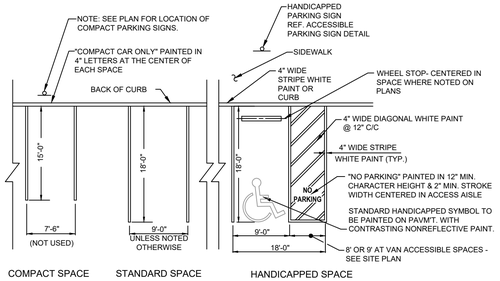


ASPHALT/CONCRETE TRANSITION

RIGID PAVEMENT DETAILS
NTS

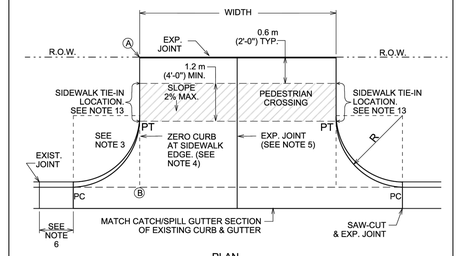


ACCESSIBLE PARKING SIGN
NTS



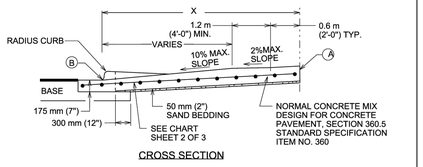
NOTES:
1. DRIVE AISLE IS MIN. 26' WIDE
2. RAMP ACCESS AND SURFACE SLOPES SHALL COMPLY WITH ADA/TAS REQUIREMENTS.
3. EACH HANDICAPPED PARKING SPACE SHALL BE SIGNED IN ACCORDANCE WITH ADA REQUIREMENTS.

TYPICAL PARKING SPACE LAYOUT
NTS



PLAN

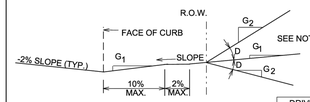
NOTE: ALL DRIVEWAYS SHALL BE SLOPED TOWARDS THE STREET FROM THE R.O.W. LINE. ELEVATION OF POINT (A) ABOVE POINT (B) IS, TYPICALLY A MINIMUM OF 150 mm (6") PLUS 20 mm/m (¼" RISE/FOOT) OVER DISTANCE "X" IN METERS (FEET).



CROSS SECTION

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPE II DRIVEWAY	
RECORD COPY SIGNED BY CUONG TRAN	*02/24/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 1 OF 2

USE	THICKNESS	REINFORCEMENT
DRIVEWAYS FOR PASSENGER VEHICLE PARKING LOTS	150 mm (6") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS
ALL OTHERS	175 mm (7") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS



ALLOWABLE GRADES

DRIVEWAY VOLUME (ADT)	D=GRADE CHANGE STD.	MAX.
>1500	0%	3%
500-1500	3%	6%
< 500	6%	15%

NOTES:
1. ALL TYPE II DRIVEWAYS SHALL HAVE RADIUS ENDS.
2. DRIVEWAY WIDTHS AND RADII DIMENSIONS, ONE/TWO WAY TRAVEL REQUIREMENTS, AND GEOMETRIC LAY-OUT ARE HIGHLY VARIABLE, SUBJECT TO SITE SPECIFIC CONDITIONS AND REQUIREMENTS. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 "DRIVEWAYS".
3. THE DRIVEWAY EDGE SHALL BE SMOOTHLY TRANSITITIONED INTO THE SIDEWALK TIE-IN LOCATION BEGINNING AT THE RADIUS PC LINE.
4. "ZERO" CURB AT PT OR SIDEWALK EDGE, WHICHEVER IS ENCOUNTERED FIRST.
5. PLACE AN EXPANSION JOINT DOWN THE CENTER OF DRIVEWAY ALL DRIVEWAYS.
6. IF DIMENSION IS LESS THAN 1.5 METERS (5 FEET), REMOVE CURB AND GUTTER TO EXISTING JOINT AND POUR MONOLITHICALLY WITH DRIVEWAY.
7. IF THE BASE IS OVER-EXCAVATED WHERE THE CURB AND GUTTER WERE REMOVED, BACKFILL WITH CONCRETE MONOLITHICALLY WITH THE DRIVEWAY.
8. TYPE II DRIVEWAYS ARE TO BE LOCATED NO CLOSER TO THE CORNER OF INTERSECTING RIGHT OF WAY THAN 60% OF PARCEL FRONTAGE AT 30 METERS (100 FEET); WHICHEVER IS LESS.
9. DRIVEWAY SHALL NOT BE CONSTRUCTED WITHIN THE CURB RETURN OF A STREET INTERSECTION.
10. WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, THE FIRE DEPARTMENT SHALL BE CONSULTED WHERE THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS AND "G2 IS GREATER THAN 15%.
11. USE 12 MM (1/2") ASPHALT BOARD OR OTHER APPROVED MATERIAL FOR CURB AND GUTTER EXPANSION JOINTS. SIDEWALK, AT THE R.O.W. LINE AND AT MIDWIDTH, SEE NOTE 5.
12. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 FOR OTHER DRIVEWAY REQUIREMENTS.
13. THE SIDEWALK, REGARDLESS OF ITS LOCATION WITH RESPECT TO THE CURB OR PROPERTY LINE, SHALL BE CONNECTED TO THE DRIVEWAY AT THESE LOCATIONS.
14. WATER METER BOXES AND WASTEWATER CLEAN OUTS ARE PROHIBITED FROM BEING LOCATED IN DRIVEWAY AREAS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPE II DRIVEWAY	
RECORD COPY SIGNED BY CUONG TRAN	*02/24/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 2 OF 2

CITY OF AUSTIN COMMERCIAL DRIVEWAY DETAIL
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

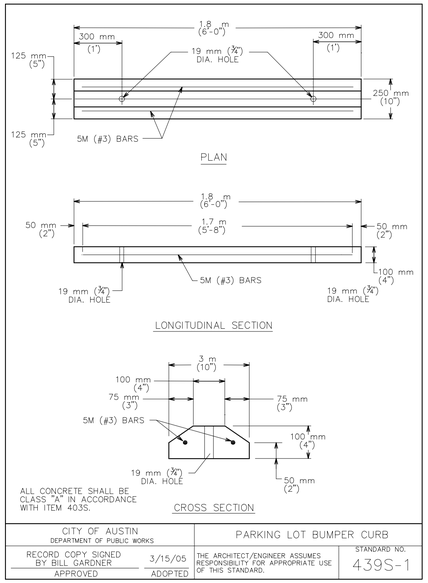
SHEET TITLE:
SITE DETAILS (2 OF 5)

WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-67

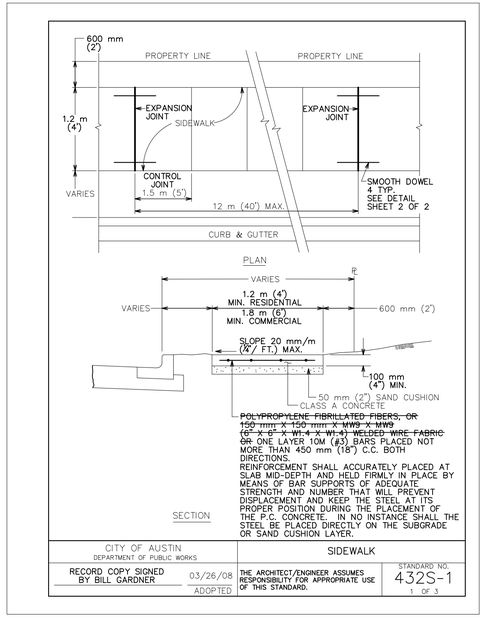
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:02:03 PM, .DWG To PDF.pc3, 1:1, RW

✱ DETAIL HAS BEGEN MODIFIED BY WAELTZ & PRETE, INC.

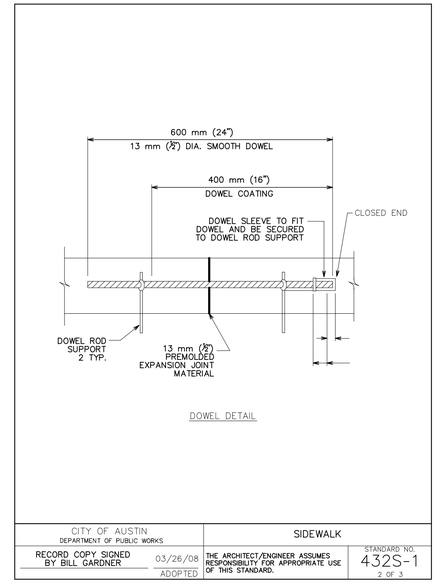


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		PARKING LOT BUMPER CURB	
RECORD COPY SIGNED BY BILL GARDNER	3/15/05	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 439S-1
APPROVED	ADOPTED		

CONCRETE WHEEL STOP
NTS

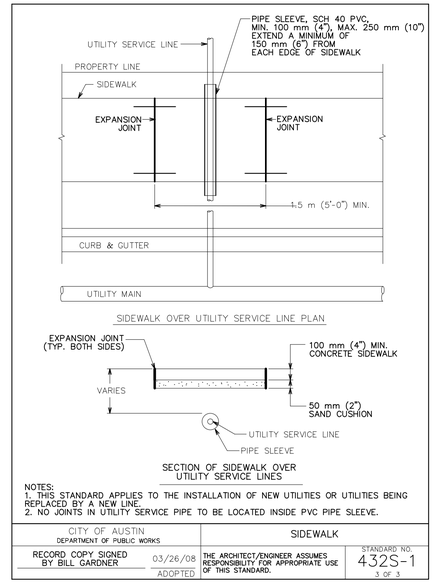


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	03/26/08	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 1 OF 3
ADOPTED			

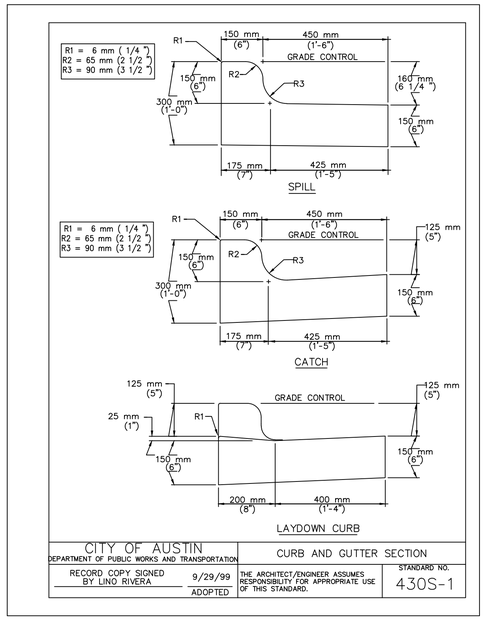


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	03/26/08	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 2 OF 3
ADOPTED			

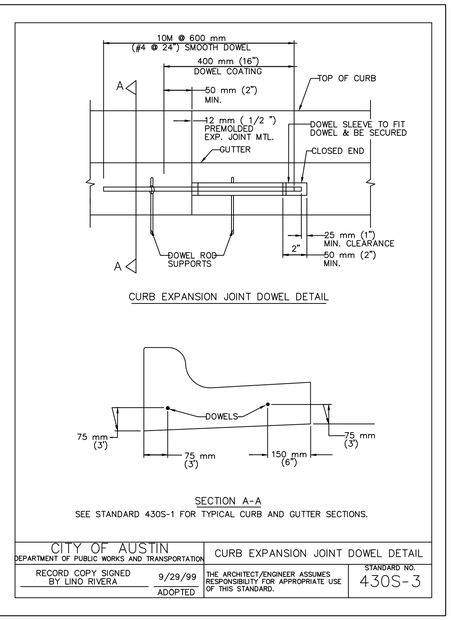
SIDEWALK
NTS



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	03/26/08	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 3 OF 3
ADOPTED			



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION		CURB AND GUTTER SECTION	
RECORD COPY SIGNED BY LINO RIVERA	9/29/99	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-1
ADOPTED			



SEE STANDARD 430S-1 FOR TYPICAL CURB AND GUTTER SECTIONS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION		CURB EXPANSION JOINT DOWEL DETAIL	
RECORD COPY SIGNED BY LINO RIVERA	9/29/99	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-3
ADOPTED			

CURB AND GUTTER
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
10-31-25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

SITE DETAILS (3 OF 5)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - _____

SHEET NO.:
C-68

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:05:52 PM, DWG To PDF.pc3, 1:1, JRW

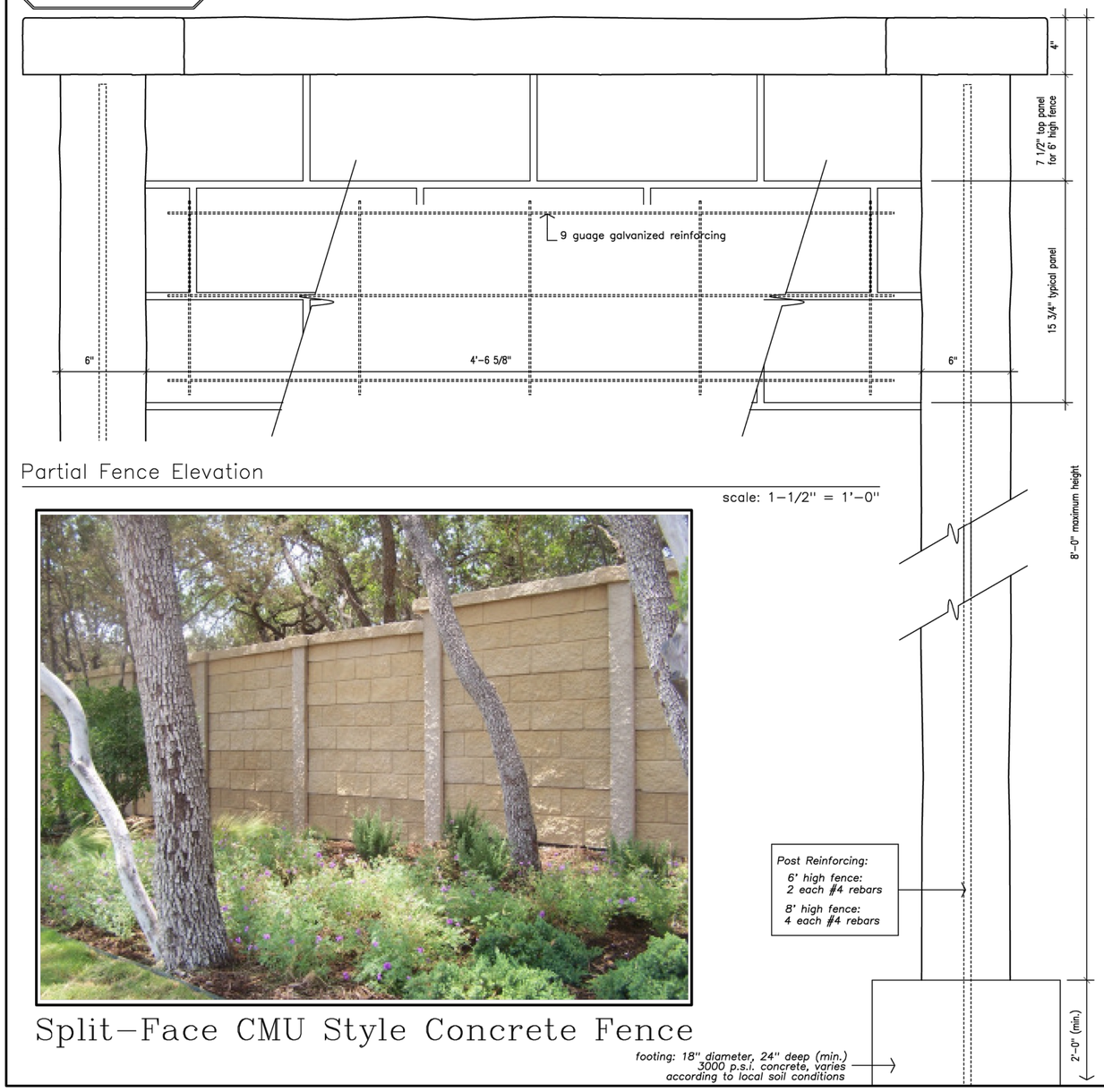
NOTE TO CONTRACTOR:

1. PROVIDE A 4" TO 6" GAP BETWEEN THE BOTTOM FENCE BOARD AND FINISH GRADE FOR DRAINAGE.
2. COMPATIBILITY FENCE MATERIAL: SPLIT-FACE CMU-44.

FENCECRETE AMERICA, INC.

manufacturers of precast concrete fencing and masonry wall systems

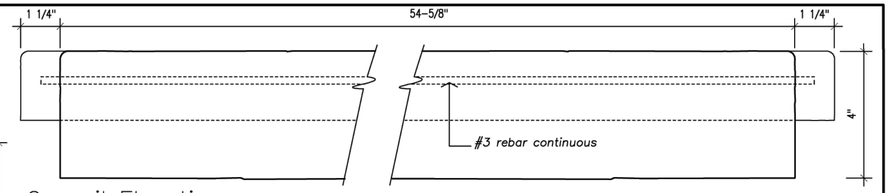
15089 tradesmen drive san antonio, texas 78249 210-492-7911 800-229-7811 www.fencecrete.com



Partial Fence Elevation

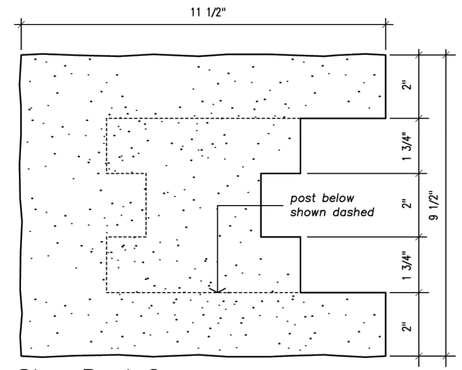
scale: 1-1/2" = 1'-0"

Split-Face CMU Style Concrete Fence



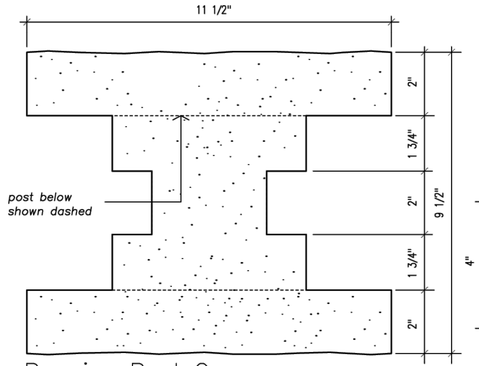
Caprail Elevation

scale: 3" = 1'-0"



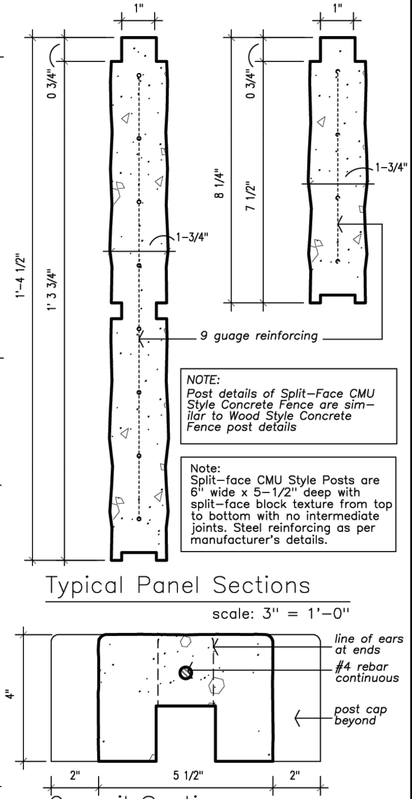
Stop Post Cap

scale: 3" = 1'-0"



Running Post Cap

scale: 3" = 1'-0"



NOTE:
Post details of Split-Face CMU Style Concrete Fence are similar to Wood Style Concrete Fence post details

Note:
Split-face CMU Style Posts are 6" wide x 5-1/2" deep with split-face block texture from top to bottom with no intermediate joints. Steel reinforcing as per manufacturer's details.

Typical Panel Sections

scale: 3" = 1'-0"

Caprail Section

scale: 3" = 1'-0"

notes:

1. The column height can be from 0 to a maximum of 10'-0". Additional heights are available upon special order.
2. All fence concrete shall be 5000 p.s.i.
3. All reinforcement shall be A.S.T.M. 615 grade 60. Special reinforcement is available upon special order.
4. Concrete Footing: 12" - 18" diameter, 24" deep (min.), 3,000 p.s.i. concrete, depth varies according to local soil conditions.
5. Split-face CMU Style panels can be provided in a variety of colors.
6. Texture: All exposed sides have split-face block-like texture.
7. Gates: Shall have additional steel supports adjacent to concrete columns.
8. All steel reinforcement is prewelded with steel spacers so as to allow for maximum concrete coverage.
9. A special silicone sealant is used to lock the caprail and post caps in place. This sealant requires special tools for removal.

We reserve the right to alter the design or specifications without incurring any obligation, all rights reserved.
Fencecrete America, Inc.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8/7/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOM'D
REVISIONS
No. DATE

SHEET TITLE:

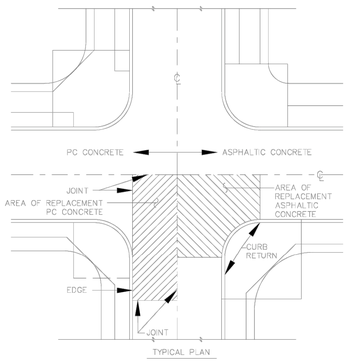
SITE DETAILS (4 OF 5)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-69

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:02:20 PM, _DWG To PDF.pc3, 1:1, JRW



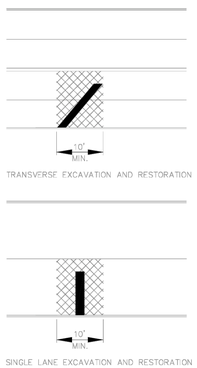
TRENCH REPAIRS WITHIN PORTLAND CEMENT CONCRETE PAVEMENTS NOTE:

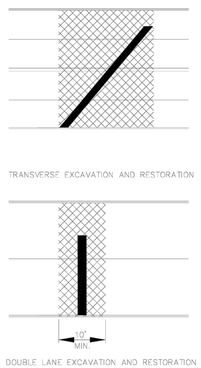
1. IF ANY PART OF THE TRENCH REPAIR FALLS WITHIN AN INTERSECTION, THEN THE ENTIRE CONCRETE SLAB FROM JOINT TO JOINT AND JOINT TO EDGE SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED IN WRITING BY THE DIRECTOR.

TRENCH REPAIRS WITHIN ASPHALTIC CONCRETE PAVEMENTS NOTES:

1. IF ANY PART OF THE TRENCH REPAIR FALLS WITHIN AN INTERSECTION, DEFINED FROM CURB RETURN TO CURB RETURN, THE ENTIRE QUADRANT OF THE EXISTING SURFACE SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
2. A QUADRANT IS DEFINED AS THE CROSS-HATCHED AREA IN THE ABOVE DETAIL.

1 TYPICAL RESTORATION FOR EXCAVATION IN INTERSECTIONS
SCALE: NOT TO SCALE



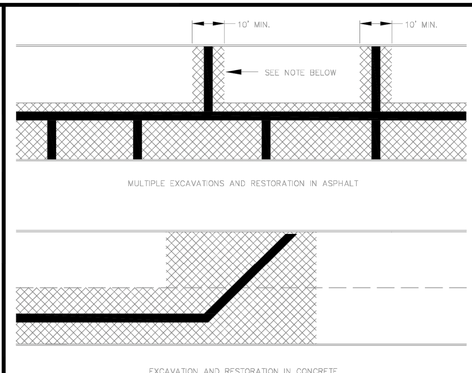


NOTES:

1. PROJECTS THAT DO NOT HAVE AN ACCEPTABLE STREET REPAIR, APPROVED BY PUBLIC WORKS, WILL NOT RECEIVE A WATER METER UNTIL CORRECTED. CONTACT CONSTRUCTION INSPECTOR / ENGINEERING CONTACT FOR DETAILS.
2. IN ASPHALT, RESTORATION MUST BE A MINIMUM OF 10' CURB LENGTH BY THE WIDTH OF EACH LANE EXCAVATED.

AREA OF EXCAVATION
LIMITS OF RESTORATION

2 TYPICAL RESTORATION FOR EXCAVATION IN STREETS
SCALE: NOT TO SCALE



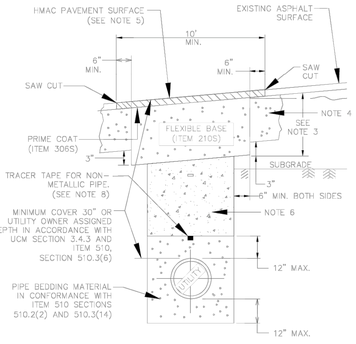
NOTES:

1. ACTUAL RESTORATION LIMITS ARE DETERMINED BY JOINT LOCATIONS. IN ASPHALT, RESTORATION MUST BE A MINIMUM OF 10' CURB LENGTH BY THE WIDTH OF EACH LANE EXCAVATED.
2. IN ASPHALT, RESTORATION MUST BE A MINIMUM OF 10' CURB LENGTH BY THE WIDTH OF EACH LANE EXCAVATED.

AREA OF EXCAVATION
LIMITS OF RESTORATION

3 TYPICAL RESTORATION FOR EXCAVATION IN STREETS
SCALE: NOT TO SCALE

FOR PARKING LOTS AND PRIVATE PROPERTY ONLY

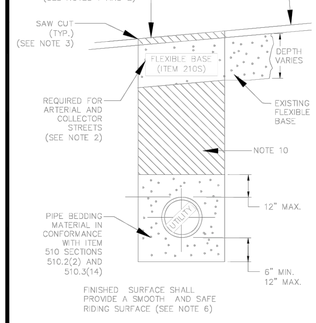


NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12" WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX AC OR TEMPORARY HMAC. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
3. ROAD BASE SHALL BE REPLACED IN KIND WITH BASE THICKNESS EQUAL TO EXISTING BASE THICKNESS PLUS 3", BUT IN NO CASE LESS THAN 12".
4. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A BASE THICKNESS OF 10" OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
5. REPLACEMENT AC SURFACE LAYER SHALL MATCH EXISTING BUT NOT LESS THAN 2"
6. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
7. TACK COAT ALL EXPOSED EDGES AND SURFACES (SPEC ITEM 307S). CRACK SEAL SAW-CUT LINES
8. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON-METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" BELOW THE SUBGRADE, OR A MINIMUM OF 18" BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.

FOR PARKING LOTS AND PRIVATE PROPERTY ONLY

4 TRENCH REPAIR IN ASPHALTIC SURFACE OVER FLEXIBLE BASE (UCM SECTION 5.8.0)
SCALE: NOT TO SCALE

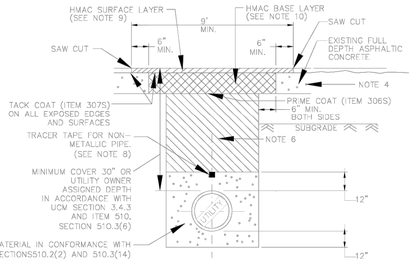


NOTES:

1. TEMPORARY PAVEMENT REPAIRS SHALL BE ALLOWED NO LONGER THAN 90 DAYS AFTER PASSING THE WATER PRESSURE AND/OR WASTEWATER MANDREL TESTS. IF TEMPORARY PAVEMENT REPAIRS ARE TO REMAIN IN PLACE FOR A PERIOD EXCEEDING 90 DAYS, ON ANY SINGLE TRENCH LINE OR INDIVIDUAL STREET, SUCH TEMPORARY PAVEMENT SHALL BE HMAC, PLACED AND COMPACTED SUFFICIENTLY TO WITHSTAND THE ANTICIPATED TRAFFIC LOADS OVER THE DURATION OF THE TEMPORARY REPAIR.
2. IF EXCAVAITON AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE USING COLD MIX AC IN ACCORDANCE WITH TXDOT "DMS-9203, RAPID CURING ASPHALT CONCRETE PATCHING MATERIAL" OR TEMPORARY HMAC PER COA ITEM "340S HOT MIX ASPHALTIC CONCRETE PAVEMENT". A MINIMUM OF TWO INCHES (2") OF TEMPORARY COLD MIX OR HMAC SHALL BE PLACED OVER COMPACTED BACKFILL. FLEXIBLE BASE SHALL ALSO BE REQUIRED, FOR ALL COLLECTOR OR ARTERIAL STREETS.
3. THE EXISTING CONCRETE OR ASPHALT PAVING SURFACE SHALL BE SAW CUT. SAW CUTS SHALL BE IN A STRAIGHT LINE, ALONG THE SIDES OF THE TRENCH (OR MANHOLE EXCAVATION) AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION. ANY DAMAGED EDGES SHALL BE RE-SAW CUT IF REQUIRED BY THE OWNER.
4. HMAC OR COLD MIX SHALL BE FREE OF CONTAMINATION, AS DETERMINED BY A VISUAL INSPECTION BY THE OWNER'S REPRESENTATIVE, REFERENCE ITEM 340S SECTION 340S.10 A.
5. TEMPORARY PAVING MATERIAL MUST BE COMPACTED WITH A SMOOTH DRUM VIBRATORY ROLLER.
6. THE FINISHED SURFACE SHALL BE MAINTAINED DUST FREE AND PROVIDE A SMOOTH AND SAFE RIDING SURFACE FOR ALL VEHICLES ALONG THE ROUTE, INCLUDING, BUT NOT LIMITED TO SMALL CARS, MOTORCYCLES, MOPEDS AND BICYCLES. THE TEMPORARY SURFACE SHALL BE MAINTAINED BY THE CONTRACTOR THE ENTIRE TIME THE TEMPORARY SURFACE IS IN PLACE. DAILY MAINTENANCE SHALL BE PERFORMED BASED ON FIELD CONDITIONS AND AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE, UNTIL THE FINAL PAVEMENT SURFACE IS PLACED.
7. THE TEMPORARY PAVEMENT SURFACE SHALL HAVE A MAXIMUM ALLOWABLE DEVIATION OF ¼" ABOVE OR BELOW THE EXISTING PAVEMENT SURFACE DIRECTLY ADJACENT TO THE PATCH.
8. ANY PORTIONS OF THE TEMPORARY PAVEMENT SURFACE THAT HAVE SETTLED, BECOME DAMAGED, OR DETERIORATED MUST BE REPAIRED BY REMOVING THE EXISTING TEMPORARY SURFACE MATERIAL TO A MINIMUM DEPTH OF 2" BELOW THE SURFACE ELEVATION PRIOR TO REPLACING AND RECOMPACTING NEW COLD MIX/HOT MIX IN THE EXCAVATION AREA.
9. IF IT IS DETERMINED DURING CORRECTIVE ACTION THAT SOFT, SATURATED AND/OR UNSTABLE SUBSURFACE SOILS ARE CONTRIBUTING TO THE FAILURE OF THE TEMPORARY PAVEMENT SECTION, THE UNSUITABLE MATERIALS MUST BE REMOVED AND REPLACED WITH BACKFILL SOILS FREE OF ORGANICS, STONES OR ROCKS OVER 8 INCHES, AND HAVING A PLASTICITY INDEX OF 20 OR LESS, AND SHALL HAVE A MC WITHIN 2% OF OPTIMUM, PRIOR TO REPLACING THE TEMPORARY PAVEMENT SURFACE.
10. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
11. ALL EXISTING ROADWAY STRIPING AND PAVEMENT MARKINGS REMOVED OR DAMAGED BY THE CONTRACTOR'S WORK SHALL BE RESTORED PRIOR TO OPENING THE STREET TO TRAFFIC.
12. TEMPORARY TRENCH REPAIR OPEN TO THE PUBLIC IS LIMITED TO 14 DAYS.

5 TEMPORARY TRENCH REPAIR IN ASPHALTIC SURFACE ITEM 510 SECTION 510.3 (25)(h)
SCALE: NOT TO SCALE

FOR PUBLIC ROADS



NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12" WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX AC OR TEMPORARY HMAC. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
3. ROAD BASE SHALL BE REPLACED IN KIND WITH BASE THICKNESS EQUAL TO EXISTING BASE THICKNESS PLUS 3", BUT IN NO CASE LESS THAN 12".
4. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A BASE THICKNESS OF 10" OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
5. REPLACEMENT AC SURFACE LAYER SHALL MATCH EXISTING BUT NOT LESS THAN 2"
6. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
7. TACK COAT ALL EXPOSED EDGES AND SURFACES (SPEC ITEM 307S).
8. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON-METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" BELOW THE SUBGRADE, OR A MINIMUM OF 18" BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.
9. REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
   a) MIN. 2" HMAC TYPE "D" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
   b) MIN. 3" HMAC TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS.
   SEE ITEM 340S, SECTION 340S.4.
10. THE COMBINED THICKNESS OF THE REPLACEMENT AC SURFACE AND BASE LAYERS SHALL MATCH THE THICKNESS OF EXISTING FULL DEPTH AC LAYER. HOWEVER, THE REPLACEMENT AC BASE LAYER SHALL BE A MINIMUM THICKNESS OF 6" OF TYPE A OR B HMA. A BASE LAYER TYPE THAT MATCHES THE NEW HMA SURFACE LAYER (SEE NOTE 1) MAY BE USED, IF THE TOTAL REPAIR AREA IS LESS THAN 300 SQUARE YARDS.
11. SEE PAVEMENT RESTORATION DETAIL 2 FOR LIMITS OF RESTORATION. SEE DETAIL 1 IF IN INTERSECTION. CRACK SEAL SAW-CUT LINES.

6 REPAIR OF FULL DEPTH ASPHALTIC CONCRETE (UCM SECTION 5.5.13) FOR PUBLIC ROADS
SCALE: NOT TO SCALE

CITY OF CEDAR PARK
DEPARTMENT OF PUBLIC WORKS

TEMPORARY AND FINAL REPAIR OF STREETS AND PUBLIC TRAFFIC AREAS

SHEET 1 OF 1

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
8/7/25

PROJECT:
ARROW POINT
FM 1431

CLIENT:
CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

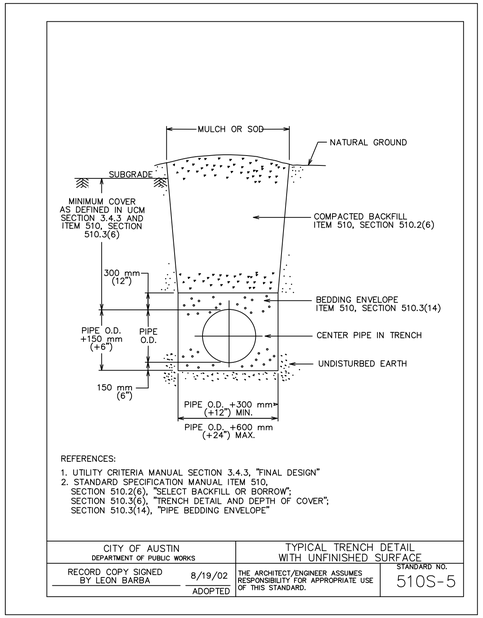
SHEET TITLE:
SITE DETAILS (5 OF 5)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-70

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:01:56 PM, _DWG To PDF.pc3, 1:1, RW

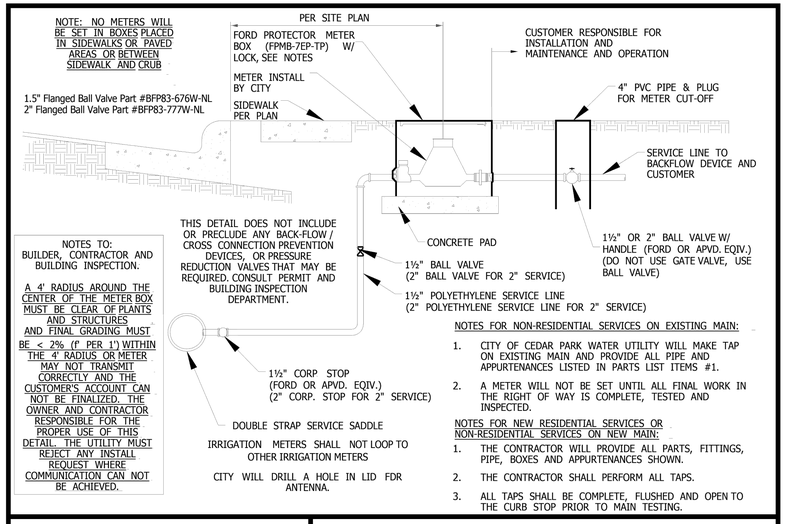


REFERENCES:

1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510, SECTION 510.2(6), "SELECT BACKFILL OR BORROW"; SECTION 510.3(6), "TRENCH DETAIL AND DEPTH OF COVER"; SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE	STANDARD NO.
RECORD COPY SIGNED BY LEON BARBA	8/19/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	510S-5

TYPICAL TRENCH W/ UNFINISHED SURFACE
NTS



NOTES TO: BUILDER, CONTRACTOR AND BUILDING INSPECTION.

A 4' RADIUS AROUND THE CENTER OF THE METER BOX MUST BE CLEAR OF PLANTS AND STRUCTURES AND FINAL GRADING MUST BE < 2% (1" PER 1') WITHIN THE 4' RADIUS OR METER MAY NOT TRANSMIT CORRECTLY AND THE CUSTOMER'S ACCOUNT CAN NOT BE FINALIZED. THE OWNER AND CONTRACTOR RESPONSIBLE FOR THE PROPER USE OF THIS DETAIL. THE UTILITY MUST REJECT ANY INSTALL REQUEST WHERE COMMUNICATION CAN NOT BE ACHIEVED.

NOTES FOR NON-RESIDENTIAL SERVICES ON EXISTING MAIN:

1. CITY OF CEDAR PARK WATER UTILITY WILL MAKE TAP ON EXISTING MAIN AND PROVIDE ALL PIPE AND APPURTENANCES LISTED IN PARTS LIST ITEMS #1.
2. A METER WILL NOT BE SET UNTIL ALL FINAL WORK IN THE RIGHT OF WAY IS COMPLETE, TESTED AND INSPECTED.

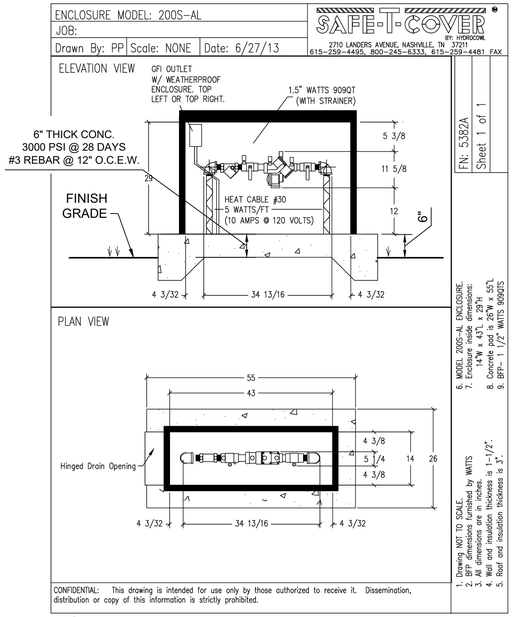
NOTES FOR NEW RESIDENTIAL SERVICES OR NON-RESIDENTIAL SERVICES ON NEW MAIN:

1. THE CONTRACTOR WILL PROVIDE ALL PARTS, FITTINGS, PIPE, BOXES AND APPURTENANCES SHOWN.
2. THE CONTRACTOR SHALL PERFORM ALL TAPS.
3. ALL TAPS SHALL BE COMPLETE, FLUSHED AND OPEN TO THE CURB STOP PRIOR TO MAIN TESTING.

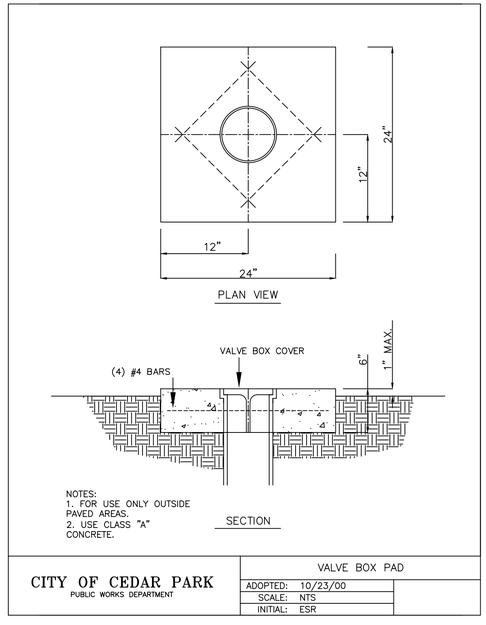
CITY OF CEDAR PARK DEPARTMENT OF PUBLIC WORKS VER: 200918	STANDARD DETAIL FOR 1½" OR 2" WATER METER SERVICE

WATER METER DETAIL
NTS

* OR APPROVED EQUAL



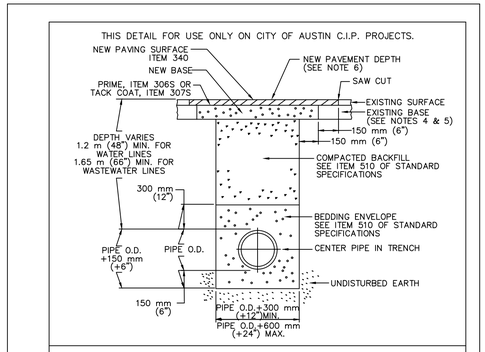
NOTE:
CONTRACTOR SHALL PROVIDE CONCRETE BASE AS SHOWN IN DETAIL



NOTES:
1. FOR USE ONLY OUTSIDE PAVED AREAS.
2. USE CLASS "A" CONCRETE.

CITY OF CEDAR PARK PUBLIC WORKS DEPARTMENT	VALVE BOX PAD
	ADOPTED: 10/23/00
	SCALE: NTS
	INITIAL: ESR

VALVE BOX PAD
NTS



NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 300 mm (12") WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. ANY CONCRETE PAVING SHALL BE SAW CUT 150 mm (6") WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
3. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX ASPHALTIC CONCRETE.
4. ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND OF EQUAL THICKNESS, OR MINIMUM BASE THICKNESS OF 250 mm (10"), WHICHEVER IS GREATER.
5. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 200 mm (8") OF BASE OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER.
6. SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 50 mm (2"), WHICHEVER IS GREATER.

CITY OF AUSTIN WATER AND WASTEWATER UTILITY		TYPICAL TRENCH WITH PAVED SURFACE	STANDARD NO.
RECORD COPY SIGNED BY KATHI L. FLOWERS	8/19/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	510S-3

TYPICAL TRENCH W/ PAVED SURFACE
NTS

ES-909S

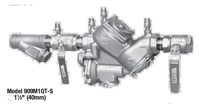
For Health Hazard Applications

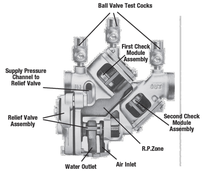
Job Name _____ Contractor _____
Job Location _____ Approval _____
Engineer _____ Contractor's P.O. No. _____
Approval _____ Representative _____

Series 909
Reduced Pressure Zone Assemblies

909 Sizes: ¾", 1" (20, 25mm)
909M1 Sizes: 1¼", 1½", 2" (32, 40, 50mm)

Series 909 Reduced Pressure Zone Assemblies are designed to provide superior cross-connection control protection of the potable water supply in accordance with national plumbing codes and containment control for water authority requirements. This series can be utilized in a variety of installations, including health hazard cross-connections in plumbing systems or for containment at the service line entrance. With its exclusive, design incorporating the patented "air-in/water-out" principle it provides maximum relief valve discharge during the emergency conditions of combined backsiphonage and backpressure with both checks fouled. Model 909QT, standardly furnished with full port, resilient seated and bronze ball valve shutoffs. Sizes ¾" and 1" (20 and 25mm) shutoffs have tee handles.


Model 909M1QT-S 1½" (40mm)



Features

- Modular design
- Replaceable seats
- Compact for installation ease
- Horizontal or vertical (up or down) installation
- No special tools required for servicing

Specifications

A Reduced Pressure Zone Assembly shall be installed at each cross-connection to prevent backsiphonage and backpressure of hazardous materials into the potable water supply. The assembly shall consist of a pressure differential relief valve located in a zone between two positive seating check valves. Backsiphonage protection shall include provision to admit air directly into the reduced pressure zone via a separate channel from the water discharge channel, or directly into the supply pipe via a separate vent. The assembly shall include two tightly closing shutoff valves before and after the assembly, test cocks and a protective strainer upstream of the No. 1 shutoff valve. The assembly (specify Model 909 for temperatures up to 140°F (60°C) or Model 909HW for temperatures up to 210°F (99°C)) shall meet the requirements of ASSE Std. 1013; AWWA Std. C-511-92 CSA B64.4; FCCCHR of USC Manual Section 10. Listed by IAPMO (UPC), SBCCI (Standard Plumbing code). The assembly shall be a Watts Regulator Company Series 909QTS or 909QTSHW.

Now Available
WattsBox Insulated Enclosures.
For more information, send for literature ES-WB.

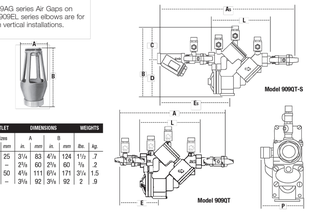
Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

WATTS®

2" RPZ BACKFLOW PREVENTION ASSEMBLY
NTS

Dimensions — Weights

When installing a drain line use 909AG series Air Gaps on Series 909 backflow preventers. "909EL series elbows are for air gaps on backflow preventers in vertical installations.



Series 909AG Air Gaps

Iron Body No.	909 DRAIN Size Desc.	OUTLET Size in.	OUTLET Size mm	DIMENSIONS A in.	DIMENSIONS A mm	DIMENSIONS B in.	DIMENSIONS B mm	WEIGHTS lbs.	WEIGHTS kg.
909-AG-C	Air Gap	¾,1	20,25	1	25	3⅛	83	4⅞	124	1⅛	.7
909-EL-C	Elbow*	¾,1	20,25	–	–	2⅜	60	2⅜	60	⅜	.2
909-AG-F	Air Gap	1¼-2	32-50	2	50	4⅜	111	6⅛	171	3¾	1.5
909-EL-F	Elbow*	1¼-2	32-50	–	–	3⅝	92	3⅝	92	2	.9

Suffix HC - Fire Hydrant Fittings dimension "A" = 23¼" (603mm)

SIZE (IN)	DIMENSIONS A in.	A mm	Ae in.	Ae mm	B in.	B mm	C in.	C mm	D in.	D mm	E in.	E mm	Ea in.	Ea mm	L in.	L mm	P in.	P mm	WEIGHT QT lbs.	QT kgs.	QT-S lbs.	QT-S kgs.
*909QT, 909QT-S Dimensions																						
¾"	14⅞	365	18⅛	459	8⅛	222	4	102	4¾	121	6¾	171	10¼	259	7⅛	186	3⅛	98	14	6.4	15.6	7.1
1"	15⅜	391	19⅝	498	8⅛	222	4	102	4¾	121	7	178	11	279	7⅛	186	3⅛	98	15	6.8	17.5	7.9
1¼"M1	18½	470	23⅛	595	11⅝	295	5½	140	6½	165	7½	191	12⅝	321	10⅜	264	5¼	133	40	18.1	42.8	19.4
1½"M1	19	483	24⅛	619	11⅝	295	5½	140	6½	165	7½	191	12⅝	321	10⅜	264	5¼	133	40	18.1	44.0	20.0
2"M1	18½	486	25⅛	659	11⅝	295	5½	140	6½	165	7¾	197	13⅝	354	10⅜	264	5¼	133	40	18.1	47.4	21.5
*U909QT Dimensions - with integral body unions (Prefix "U")																						
¾"	14⅞	371	19¼	484	8⅛	222	4	102	4¼	121	6¼	171	10⅛	259	7⅛	186	3⅛	98	14	6.4	15.6	7.1
1"	15⅝	397	20⅛	532	8⅛	222	4	102	4¼	121	7	178	11	279	7⅛	186	3⅛	98	15	6.8	17.5	7.9
*FAE909QT - Dimensions with flanged adapter ends (Prefix "FAE")																						
1¼"	19	483	24⅛	622	11⅝	295	5½	140	6½	165	7½	191	12⅝	310	10⅜	264	5¼	133	40	18.1	42.8	19.4
1½	19⅝	502	26⅛	664	11⅝	295	5½	140	6½	165	7½	191	12⅝	321	10⅜	264	5¼	133	40	18.1	44.0	20.0
2"	21	533	28⅛	721	11⅝	295	5½	140	6½	165	7¾	197	13⅝	354	10⅜	264	5¼	133	40	18.1	47.4	21.5

Subscript "S" = strainer model

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8.21.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

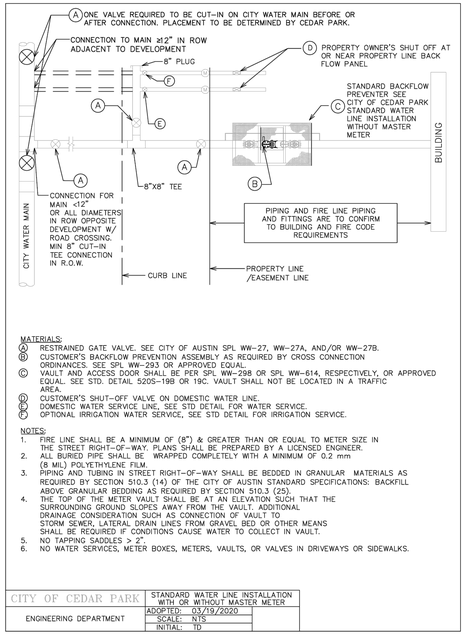
WATER DETAILS (1 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-71

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:03:41 PM, .DWG To PDF.pc3, 1:1, RW



MATERIALS:

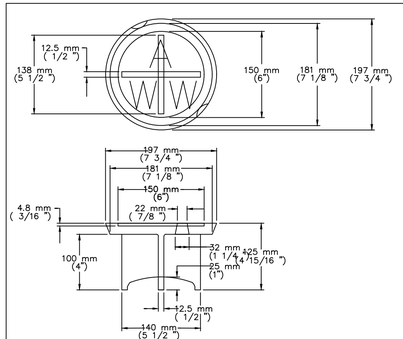
(A) RESTRAINED GATE VALVE. SEE CITY OF AUSTIN SPL WW-27, WW-27A, AND/OR WW-27B.
(B) CUSTOMER'S BACKFLOW PREVENTION ASSEMBLY AS REQUIRED BY CROSS CONNECTION ORDINANCES. SEE SPL WW-293 OR APPROVED EQUAL.
(C) VAULT AND ACCESS DOOR SHALL BE PER SPL WW-298 OR SPL WW-614, RESPECTIVELY, OR APPROVED EQUAL. SEE STD. DETAIL S2OS-19B OR 19C. VAULT SHALL NOT BE LOCATED IN A TRAFFIC AREA.
(D) CUSTOMER'S SHUT-OFF VALVE ON DOMESTIC WATER LINE.
(E) DOMESTIC WATER SERVICE LINE, SEE STD DETAIL FOR WATER SERVICE.
(F) OPTIONAL IRRIGATION WATER SERVICE, SEE STD DETAIL FOR IRRIGATION SERVICE.

NOTES:

1. FIRE LINE SHALL BE A MINIMUM OF (8") & GREATER THAN OR EQUAL TO METER SIZE IN THE STREET RIGHT-OF-WAY. PLANS SHALL BE PREPARED BY A LICENSED ENGINEER.
2. ALL BURIED PIPE SHALL BE WRAPPED COMPLETELY WITH A MINIMUM OF 0.2 mm (8 MIL) POLYETHYLENE FILM.
3. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
4. THE TOP OF THE METER VAULT SHALL BE AT AN ELEVATION SUCH THAT THE SURROUNDING GROUND SLOPES AWAY FROM THE VAULT. ADDITIONAL DRAINAGE CONSIDERATION SUCH AS CONNECTION OF VAULT TO STORM SEWER, LATERAL DRAIN LINES FROM GRAVEL BED OR OTHER MEANS SHALL BE REQUIRED IF CONDITIONS CAUSE WATER TO COLLECT IN VAULT.
5. NO TAPPING SADDLES ≥ 2".
6. NO WATER SERVICES, METER BOXES, METERS, VAULTS, OR VALVES IN DRIVEWAYS OR SIDEWALKS.

CITY OF CEDAR PARK	STANDARD WATER LINE INSTALLATION WITH OR WITHOUT MASTER METER
ENGINEERING DEPARTMENT	ADOPTED: 03/19/2020
	SCALE: N.T.S.
	INITIAL: TD

COCP STANDARD WTR LN INSTALLATION DETAIL
NTS

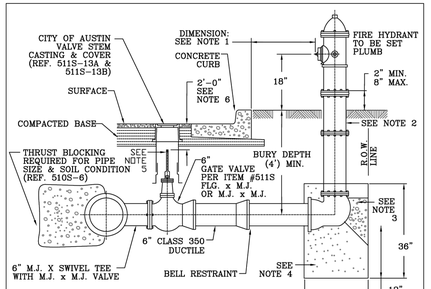


NOTES:

1. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. TYPICAL FILLET IS 4.8 mm (3/16 ") RADIUS
3. LETTERING SHALL BE 38 mm (1 1/2 ") HEIGHT AND LOCATED AS SHOWN.
4. THIS LID REQUIRES TWO (2) PICK SLOTS.
5. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID.
6. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORD WITH NORMAL FOUNDRY PRACTICE.
7. FINISH BY REMOVING FINS AND FLASHING; PAINT WITH BLACK ASPHALT COATING.
8. WEIGHT: APPROXIMATELY 6 kg (13 lbs).

CITY OF AUSTIN WATER AND WASTEWATER UTILITY		VALVE BOX CASTING C-7 LID	
RECORD COPY SIGNED BY KATHI F. PAYNE	4/5/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511S-12

VALVE BOX CASTING C-7 LID
NTS

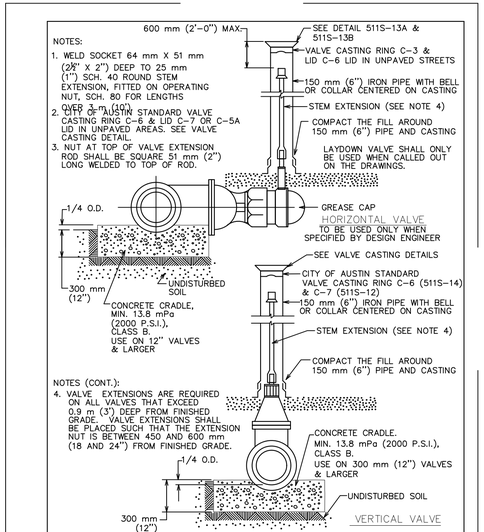


NOTES:

1. ONLY 4.5 INCH NST HYDRANTS ARE ALLOWED.
2. HYDRANTS MUST BE PLACED TO FACE THE FIRE LANE.
3. IN RIGHT OF WAY AREAS, PLACE HYDRANTS AT ROW LINE. HYDRANTS ARE NOT TO BE PLACED ON SIDEWALK AREAS. HYDRANTS SHOULD NOT BE PLACED CLOSER THAN 6 FOOT OR FURTHER THAN 9 FOOT FROM THE BACK OF CURB. WHERE POSSIBLE, PLACE VALVE IN PAVEMENT. IF NOT POSSIBLE, PLACE A VALVE BOX PAD (DETAIL FROM CEDAR PARK WEBSITE) AROUND VALVE. NO VALVES ARE TO BE PLACED IN CONFLICT WITH PROPOSED/EXISTING CURBS OR GUTTERS.
4. FOR BURY DEPTHS GREATER THAN 5', ONE BARREL EXTENSION NOT EXCEEDING 2 FOOT IN LENGTH SHALL BE INSTALLED DIRECTLY BELOW THE FIRE HYDRANT.
5. ALL PIPE AND FITTINGS SHALL HAVE JOINT RESTRAINT FROM MAIN TO FIRE HYDRANT, ALL INCLUSIVE. THRUST BLOCKING SHALL BE CLASS A CONCRETE WITH A MINIMUM 1.5 SQUARE FOOT SURFACE AREA AGAINST PIPE. DO NOT BLOCK DRAIN HOLES.
6. CRUSHED STONE OR GRAVEL SHALL BE PLACED AROUND THE BOTTOM OF THE HYDRANT FOR A RADIUS OF AT LEAST 12" AND EXTEND AT LEAST 12" ABOVE THE OUTLET. DO NOT BLOCK DRAIN HOLES.
7. WELD SOCKET 2-½" X 2" DEEP TO 1" SCH. 40 ROUND STEM EXTENSION, FITTED ON OPERATING NUT, SCH. 80 FOR LENGTHS OVER 10'.
8. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 18" AND 24" FROM FINISHED GRADE.
9. VALVE SPECIFICATION PER CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 511.

CITY OF CEDAR PARK	STANDARD FIRE HYDRANT INSTALLATION
ISSUED: JULY 8, 2014 REVISED: FEBRUARY 8, 2021	THE ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

FIRE HYDRANT
NTS



NOTES:

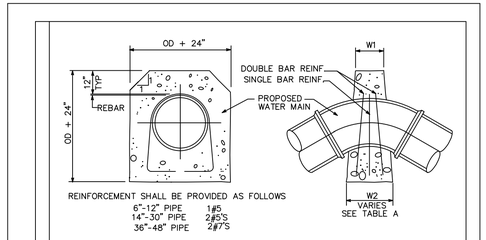
1. WELD SOCKET 64 mm X 51 mm (2½" X 2") DEEP TO 25 mm (1") SCH. 40 ROUND STEM EXTENSION, FITTED ON OPERATING NUT, SCH. 80 FOR LENGTHS OVER 3 m (10').
2. CITY OF AUSTIN STANDARD VALVE CASTING RING C-6 & LID C-7 OR C-5A LID IN UNPAVED AREAS. SEE VALVE CASTING DETAIL.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE SQUARE 51 mm (2") LONG WELDED TO TOP OF ROD.

NOTES (CONT.):

4. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 0.9 m (3') DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 450 AND 600 mm (18 AND 24") FROM FINISHED GRADE.

CITY OF AUSTIN AUSTIN WATER UTILITY		TYPICAL GATE VALVE 100 mm–600 mm (4" 24")	
RECORD COPY SIGNED BY KATHI L. FLOWERS	3/9/04 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511S-7

GATE VALVE
NTS



REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS

6"-12" PIPE	1#5
14"-30" PIPE	2#5'S
36"-48" PIPE	2#7'S

VERTICAL DOWN BEND

TABLE A
UPWARD THRUST GRAVITY BLOCKS

PIPE DIA.	MIN. TOP WIDTH W1	ANGLE (degrees)	BOTTOM WIDTH W2 (in)
6"	6"	0-5	NOTE 2
		5-15	24
		15-25	48
		► 25	NOTE 1
8"	6"	0-5	NOTE 2
		5-9	30
		9-15	36
		►15	NOTE 1
12"	6"	0-5	NOTE 2
		5-15	48
		► 15	NOTE 1
16"	12"	0-5	NOTE 2
		5-10	60
		10-15	96
		► 15	NOTE 1
24" THRU 36" DIA.		►5.0	NOTE 1
42" THRU 48" DIA.		►3.0	NOTE 1

NOTES:

1- FOR ANGLES GREATER THAN THOSE INDICATED RESTRAINED JOINTS SHALL BE INSTALLED

2- FOR JOINT DEFLECTIONS LESS THAN 5 DEGREES, NO HORIZONTAL OR VERTICAL THRUST RESTRAINT IS REQUIRED FOR PIPES LESS THAN 42" IN DIAMETER.

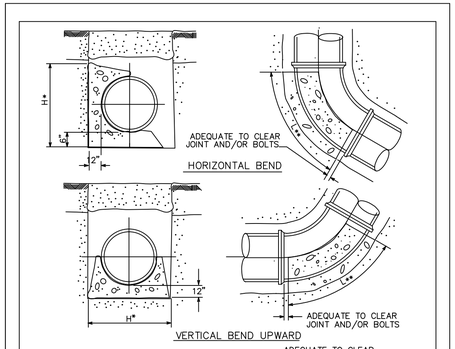
THRUST BLOCK DESIGN AS FOLLOWS
A. PRESSURE OF 150 P.S.I. (ACTUAL IF HIGHER) + 50 % SURGE ALLOWANCE
B. MAXIMIM SOIL BEARING SEE TABLE BELOW

SOIL TYPES	PRESSURE
LOOSE OR SPONGY SOIL	1500 Lb/Sq.Ft.
UNDISTURBED SOIL, CALICHE	2000 Lb/Sq.Ft.
LIMESTONE ROCK	4000 Lb/Sq.Ft.

CITY OF AUSTIN WATER AND WASTEWATER UTILITY		CONCRETE THRUST BLOCKING	
RECORD COPY SIGNED BY JAMES E. THOMPSON	2/11/86	ADOPTED: 2/11/86	STANDARD NO. 510-6
APPROVED	DATE	SCALE: N.T.S.	1 OF 2
		INITIAL:	

REV. DATE: 2-27-97 DESCRIPTION: STANDARD MANUAL

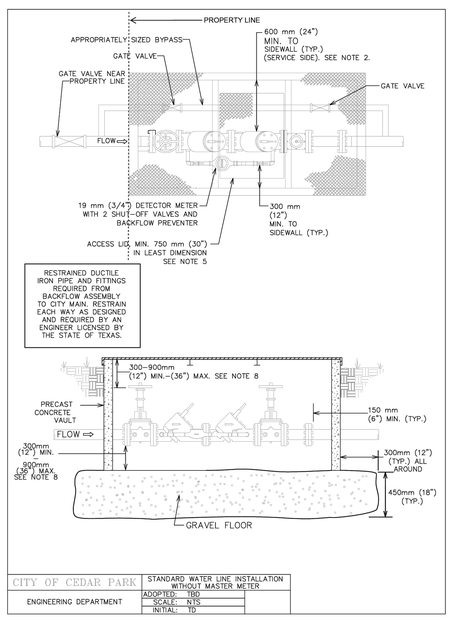
THRUST BLOCKING
NTS



* THE DIMENSION FOR "H" MUST BE GREATER THAN DIAMETER OF THE PIPE
** LENGTH "L" ALONG THE BEND MUST BE GREATER THAN "H" AND LESS THAN 2 TIMES "H"

CITY OF AUSTIN WATER AND WASTEWATER UTILITY		CONCRETE THRUST BLOCKING	
RECORD COPY SIGNED BY JAMES E. THOMPSON	2/11/86	ADOPTED: 2/11/86	STANDARD NO. 510-6
APPROVED	DATE	SCALE: N.T.S.	2 OF 2
		INITIAL:	

THRUST BLOCKING
NTS



CITY OF CEDAR PARK	STANDARD WATER LINE INSTALLATION WITHOUT MASTER METER
ENGINEERING DEPARTMENT	ADOPTED: TBD
	SCALE: NTS
	INITIAL: TD

NOTES:

1. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL HAVE LAB AND FIELD APPROVAL FROM THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH.
2. ALL TEST PORTS SHALL BE DIRECTED UPWARD AND PLUGGED. TEST PORTS ARE LOCATED ON SERVICE SIDE. PLUGS SHALL BE NON-FERROUS.
3. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IN THE UPRIGHT HORIZONTAL POSITION, UNLESS OTHERWISE APPROVED. BACKFLOW PREVENTION ASSEMBLIES SHALL NOT BE ROTATED ON THEIR AXIS.
4. CLEARANCE SHALL BE AS INDICATED,AND IN THE STANDARD CROSS CONNECTION ORDINANCES AND UCM.
5. ACCESS OPENING MUST BE LARGE ENOUGH TO REMOVE LARGEST PORTION OF BACKFLOW PREVENTER, BUT NOT LESS THAN 750 mm (30") IN LEAST DIMENSION.
6. TEST AND MAINTENANCE REPORT SHALL BE RECEIVED BY AUSTIN WATER UTILITY'S SPECIAL SERVICE DIVISION WITHIN 5 DAYS AFTER BEING INSTALLED.
7. VAULT SHALL NOT BE INSTALLED IN TRAFFIC AREA.
8. VAULT DEPTH MAY NOT EXCEED 1.8m (72"), BOTTOM OF LID TO TOP OF FLOOR.
9. HAND WHEELS SHALL BE HORIZONTALLY LOCATED WITHIN 300mm (12") OF ACCESS OPENING.
10. FOR ACCESS DOORS SEE SPL WW-614 OR APPROVED EQUAL (H20 LOADING REQUIRED).
11. FOR VAULT SEE SPL WW-298 OR APPROVED EQUAL (H20 LOADING REQUIRED).
12. VAULT PIPE WALL VOIDS SHALL BE SEALED WITH NON-SHRINK GROUT OR SEALANT PER SPL WW-146A OR APPROVED EQUAL.
13. THE TOP OF THE METER VAULT SHALL BE AT AN ELEVATION SUCH THAT THE SURROUNDING GROUND SLOPES AWAY FROM THE VAULT. ADDITIONAL DRAINAGE CONSIDERATION SUCH AS CONNECTION OF VAULT TO STORM SEWER, LATERAL DRAIN LINES FROM GRAVEL BED OR OTHER MEANS SHALL BE REQUIRED IF CONDITIONS CAUSE WATER TO COLLECT IN VAULT.
14. Detector water meter shall be a Sensus SR II 3/4" meter with AMI radio read capability. The City of Cedar Park will provide this meter.

CITY OF CEDAR PARK	STANDARD WATER LINE INSTALLATION WITHOUT MASTER METER
ENGINEERING DEPARTMENT	ADOPTED: TBD
	SCALE: NTS
	INITIAL: TD

BACKFLOW PREVENTER DETAIL
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8/7/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

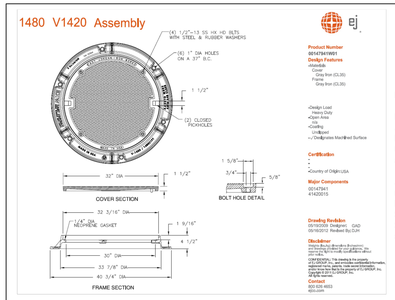
WATER DETAILS (2 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-72

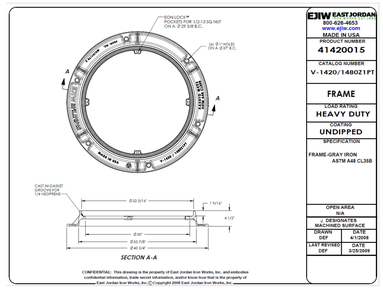
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:08:15 PM, DWG To PDF.pc3, 1:1, IRW



Notes:

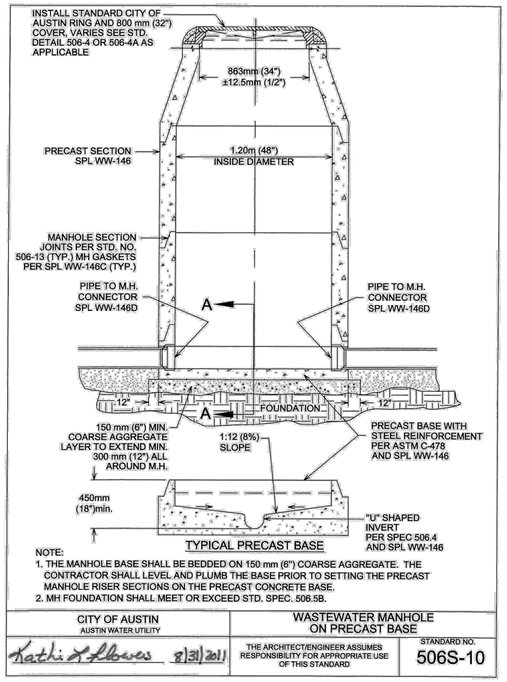
Product shall be East Jordan Iron Works V-1420, Product Number 00147941W01, or approved equal.

All Manhole covers shall read "CITY OF CEDAR PARK" and "SANITARY SEWER" or "STORM SEWER", whichever is appropriate.



CITY OF CEDAR PARK ENGINEERING DEPARTMENT		MANHOLE RING AND COVER OUTSIDE OF PAVED AREAS
DARWIN MARCHELL	09/02/16	ADOPTED: 09/02/2016 SCALE: N.T.S. INITIAL:
APPROVED	DATE	1 OF 1

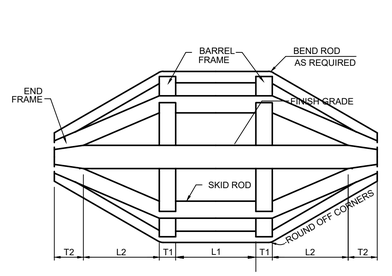
BOLTED MANHOLE COVER
NTS

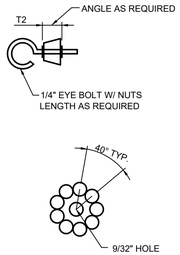


NOTE:
1. THE MANHOLE BASE SHALL BE BEDDED ON 150 mm (6") COARSE AGGREGATE. THE CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.
2. MH FOUNDATION SHALL MEET OR EXCEED STD. SPEC. 506.5B.

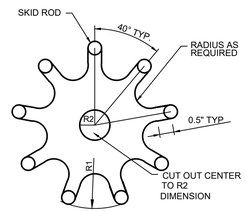
CITY OF AUSTIN AUSTIN WATER UTILITY	WASTEWATER MANHOLE ON PRECAST BASE
Kathi A Reeves 8/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD STANDARD NO. 506S-10

WASTEWATER MANHOLE
NTS





END FRAME
TYPICAL BOTH ENDS



BARREL FRAME

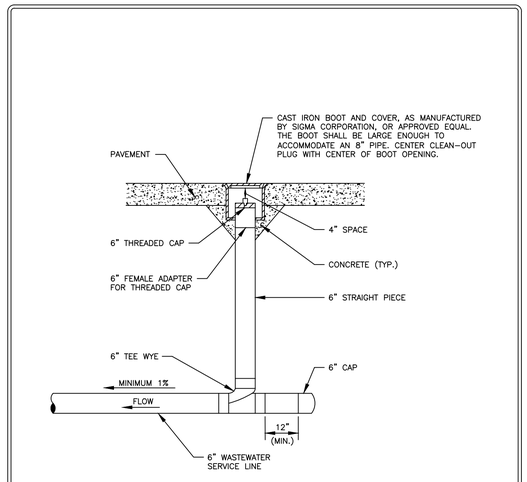
SIZE	TYPE	O.D. AVERAGE	MIN. WALL THICKNESS	R1	R2	L1	L2	T1	T2	ROD DIAMETER
6"	D3034 SDR35	6.275	0.180	2.810	0.750	4.500	6.000	0.375	1.000	0.375
6"	D3034 SDR26	6.275	0.241	2.750	1.750	4.500	6.000	0.375	1.000	0.375
6"	D2241 SDR26	6.625	0.255	2.900	0.750	4.500	6.000	0.375	1.000	0.375
8"	D3034 SDR35	8.400	0.241	3.760	1.250	6.000	6.000	0.375	1.000	0.375
8"	D3034 SDR26	8.400	0.323	3.680	1.250	6.000	6.000	0.375	1.000	0.375
8"	D2241 SDR26	8.625	0.331	3.780	1.250	6.000	6.000	0.375	1.000	0.375
10"	D3034 SDR35	10.50	0.300	4.700	1.500	7.500	6.000	0.375	1.000	0.375
10"	D3034 SDR26	10.50	0.404	4.600	1.500	7.500	6.000	0.375	1.000	0.375
10"	D2241 SDR26	10.75	0.413	4.710	1.500	7.500	6.000	0.375	1.000	0.375
12"	D3034 SDR35	12.50	0.357	5.600	1.750	9.000	6.000	0.375	1.000	0.375
12"	D3034 SDR26	12.50	0.481	5.480	1.750	9.000	6.000	0.375	1.000	0.375
12"	D2241 SDR26	12.75	0.490	5.590	1.750	9.000	6.000	0.375	1.000	0.375
15"	D3034 SDR35	15.30	0.437	6.850	2.000	11.250	6.000	0.375	1.000	0.375
15"	D3034 SDR26	15.30	0.588	6.710	2.000	11.250	6.000	0.375	1.000	0.375
16"	D2241 SDR26	16.0	0.615	7.010	2.000	11.250	6.000	0.375	1.000	0.375
18"	F679 T-1	18.701	0.536	8.060	2.500	13.500	9.000	0.500	1.500	0.500
21"	F679 T-1	22.047	0.632	9.500	3.000	150.750	9.000	0.500	1.500	0.500
24"	F679 T-1	24.803	0.711	10.680	3.500	18.000	9.000	0.500	1.500	0.500
27"	F679 T-1	27.953	0.801	12.030	4.000	20.25	9.000	0.500	1.500	0.500

*MANDRELL SHALL HAVE AN OUTSIDE DIAMETER (O.D.) EQUAL TO 95% OF THE INSIDE DIAMETER (I.D.) OF THE PIPE.

NOTES:

1. MANDREL SHALL BE CONSTRUCTED OF METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200PSI WITHOUT BEING DEFORMED.
2. AFTER WELDING IS COMPLETED, TRUE THE OUTSIDE DIAMETER DIMENSION. FOR THE FULL LENGTH OF "B" TO 0.010".
3. A PROVING RING SHALL BE PROVIDED AND USED FOR EACH SIZE MANDREL IN USE.
4. MANDREL OD MUST BE EQUAL TO 95% OF THE ID OF THE PIPE
5. MANDREL BARREL LENGTH 'B' MUST BE EQUAL TO 75% OF THE ID OF THE PIPE
6. ADJUSTABLE MANDREL IS NOT ACCEPTABLE.

WASTEWATER MANDREL
NTS

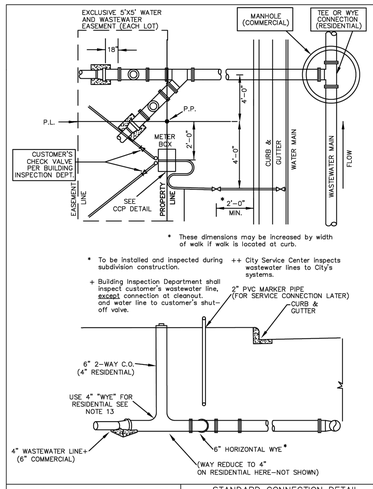


NOTES:

1. ALL PIPE TO BE SDR 26.
2. ALL FITTINGS TO BE SDR 35 SOLVENT WELD FITTINGS.

	WASTEWATER SERVICE CLEAN-OUT DETAIL (PAVED SURFACE)	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		

CLEANOUT
NTS



CITY OF CEDAR PARK ENGINEERING DEPARTMENT	STANDARD CONNECTION DETAIL FOR WASTE WATER SERVICE ADOPTED: 2-14-2020 SCALE: NTS INITIAL: TD

1. UTILITY CONTRACTOR LEAVE ONE 6" HORIZONTAL WYE AS SHOWN FOR DOUBLE SERVICE CONNECTION – OPENINGS PLUGGED. FOR DOUBLE SERVICE AND NEW INSTALLS OF METER BOX, WATER PIPE, FITTINGS AND VALVE TO INLET SIDE OF METER(S) IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STANDARD DETAIL SHEET. INSTALLATION TO BE COMPLETED DURING SUBDIVISION CONSTRUCTION – INSPECTION BY WATER AND WASTEWATER CONSTRUCTION INSPECTION PERSONNEL.

2. CUSTOMER IS RESPONSIBLE FOR METER BOX AND PIPING SYSTEMS UNTIL METER IS INSTALLED AND WASTEWATER IS CONNECTED. ANY MISSING OR DAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GUARANTEE, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE, THAT CONNECTIONS TO CITY SYSTEMS ARE FREE FROM DEFECTS IN WORKMANSHIP OR MATERIALS. CUSTOMER HAS THE RESPONSIBILITY TO ASSURE THAT ALL VALVES AND STOPS, METER BOX AND VERTICAL WYE REMAIN CLEAR OF SIDEWALKS AND OTHER OBSTRUCTIONS

3. CITY OF CEDAR PARK ACTIVITY IS LIMITED TO INSTALLATION OF THE WATER METER AND INSPECTION OF CONNECTIONS TO THE CITY'S WATER AND WASTEWATER SYSTEMS FOR MAINTENANCE PURPOSES, THE CITY'S RESPONSIBILITY ENDS AT THE METER BOX AND AT THE WASTEWATER CONNECTION TO THE HORIZONTAL WYE.

4. ALL WASTEWATER SERVICE LATERALS SHALL SLOPE 1 PERCENT (1/8 INCH PER FOOT) MINIMUM TO MAIN.

5. PIPE IN STREET RIGHT-OF-WAY AND IN EASEMENT AREAS SHALL BE BEDDED WITH MATERIALS REQUIRED BY CITY OF AUSTIN SPECIFICATIONS; AND TO HAVE A MINIMUM COVER BELOW FINAL GRADE OF 42 INCHES. THE ENGINEERING DEPARTMENT MUST SPECIFICALLY APPROVE ANY EXCEPTION.

6. CUSTOMER TO PROVIDE CLEANOUT WITHIN 5' P.U.E.

7. CONTRACTOR SHALL PROVIDE ALL MATERIALS & LABOR UNLESS DIRECTED OTHERWISE BY THE CITY UTILITY INSPECTOR.

8. FOR COMMERCIAL SITES, COORDINATE ALL W/WW TAPS WITH THE UTILITY INSPECTOR. 512-401-5550.

9. DO NOT USE DOUBLE WYE OR 4"X6"X4" WYE. SINGLE SERVICES SHALL NOT HAVE ANY WYE INSTALLED.

10. ALL WW FITTINGS UPSTREAM OF THE SERVICE LATERAL FROM THIS POINT TO BE SOLVENT WELD. DO NOT USE GASKET-TYPE OR PUSH ON FITTINGS FOR SERVICE LATERALS.

11. GENERAL CONTRACTOR/HOME OR COMMERCIAL BUILDER/PLUMBER SHALL INSTALL AND MAINTAIN A PLUG ON THE CITY SIDE OF THE SERVICE LATERAL AT ALL TIMES UNTIL FINISHED DEVELOPMENT IS APPROVED AND CONNECTED TO THE WASTE WATER SYSTEM.

12. INSTALL A 6-INCH INSPECTION PORTAL AT EACH SERVICE CONNECTION FOR EACH NON-RESIDENTIAL BUILDING AT LEAST FIVE FEET OFF THE BUILDING. CLEAN OUT REQUIRED AT PROPERTY LINE OF NON-RESIDENTIAL DEVELOPMENT SHALL MEET INSPECTION PORT CRITERIA. DEPICT THE INSPECTION PORTAL AS A SINGLE "STAR" SYMBOL ON THE WASTEWATER LINE, LABEL AS AN "INSPECTION PORTAL". THE INSPECTION PORTAL SHALL NOT BE INSTALLED AT A CHANGE IN HORIZONTAL OR VERTICAL ALIGNMENT OF THE SEWER LINE AND NOT ON THE EDGE OF A CURB, SIDEWALK OR OTHER HARDSCAPE. AN INSPECTION PORTAL LOCATED IN A TRAFFIC AREA WILL NEED TO HAVE AN APPROPRIATE TRAFFIC BEARING CAST IRON LID COVERING THE "PVC" THREADED CAP. AN "INSPECTION PORTAL" IS A SINGLE RISER WITH A "TWO-WAY" CLEANOUT AT THE BOTTOM, NOT A DOUBLE CLEANOUT WHICH HAS TWO RISERS.

13. RESIDENTIAL TO USE 4"(MIN) VERTICAL WYE FITTING FACING THE MAIN IN PLACE OF THE 6" 2-WAY CO REQUIRED BY THE IPT PROGRAM AND COMMERCIAL CODE.

14. CONNECTIONS CLASSIFIED AS "HEALTH HAZARD" BY INDUSTRIAL PRETREATMENT PROGRAM SHALL HAVE REDUCED PRESSURE ZONE ASSEMBLY (RPZ) AS REQUIRED BY 30 TAC 290.47(f) REF TO 18.09.

15. SITE THAT UTILIZES AN AUXILIARY WATER SOURCE (WELL, RAINWATER HARVESTER, ETC.) ARE CLASSIFIED AS HIGH HAZARD AND SHALL INSTALL AN RPZ ON ALL WATER SERVICES TO THE SITE (DOMESTIC AND IRRIGATION). WELLS SHALL BE PLUGGED IN ACCORDANCE WITH 16 TAC SECTION 17.104 AND LISTED IN THE STATE WELL DATABASE.

16. COMMERCIAL DEVELOPMENT REQUIRING A GRINDER PUMP SHALL LOCATE THE GRINDER PUMP INSIDE THE BUILDING.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.31.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

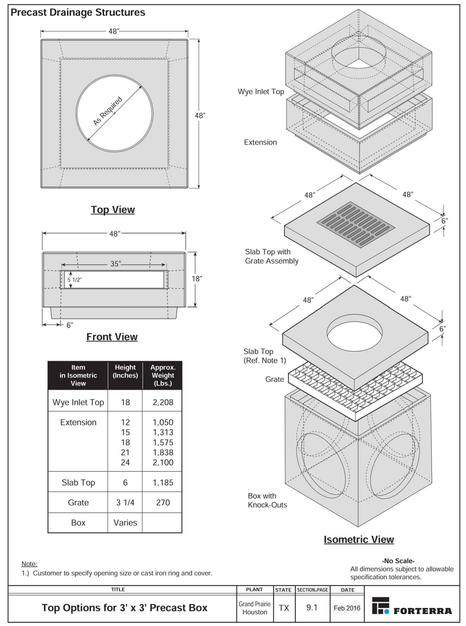
WASTEWATER DETAILS

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - _____

SHEET NO.:
C-73

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:01:47 PM, DWG To PDF.pc3, 1:1, RW

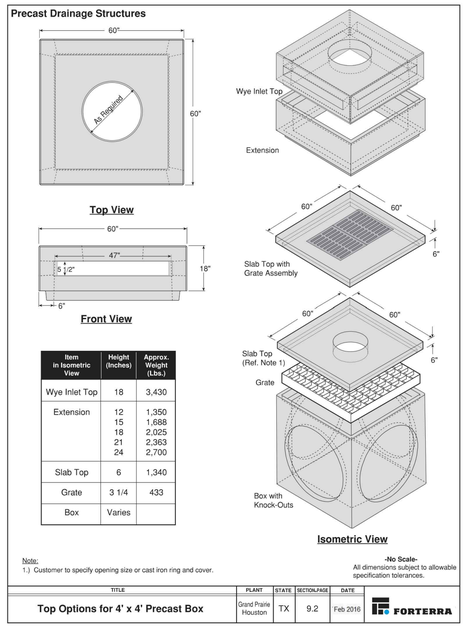


Item in Isometric View	Height (Inches)	Approx. Weight (Lbs.)
Wye Inlet Top	18	2,208
Extension	12 15 18 21 24	1,050 1,313 1,575 1,838 2,100
Slab Top	6	1,185
Grate	3 1/4	270
Box	Varies	

TITLE	PLANT	STATE	SECTION/PAGE	DATE
Top Options for 3' x 3' Precast Box	Grand Prairie Houston	TX	9.1	Feb 2016

FORTERRA

3' X 3' JUNCTION BOX
NTS

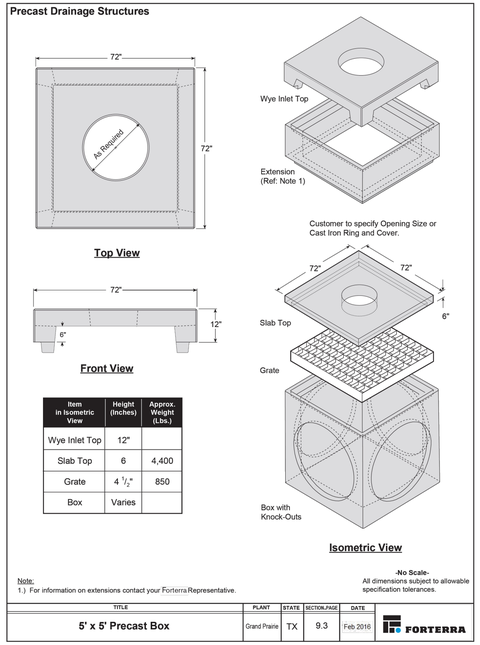


Item In Isometric View	Height (Inches)	Approx. Weight (Lbs.)
Wye Inlet Top	18	3,430
Extension	12 15 18 21 24	1,350 1,688 2,025 2,363 2,700
Slab Top	6	1,340
Grate	3 1/4	433
Box	Varies	

TITLE	PLANT	STATE	SECTION/PAGE	DATE
Top Options for 4' x 4' Precast Box	Grand Prairie Houston	TX	9.2	Feb 2016

FORTERRA

4' X 4' JUNCTION BOX
NTS

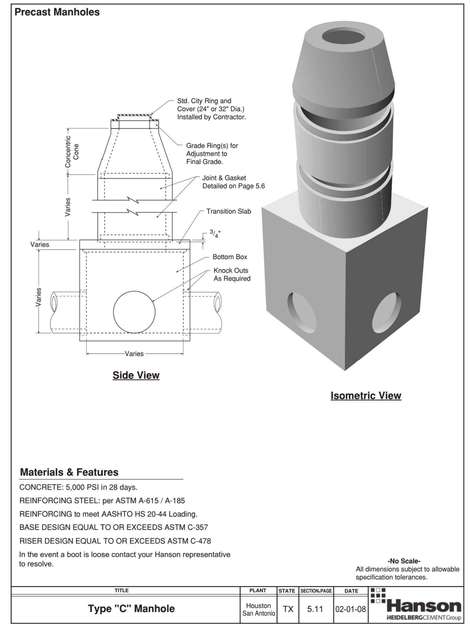


Item in Isometric View	Height (Inches)	Approx. Weight (Lbs.)
Wye Inlet Top	12"	
Slab Top	6	4,400
Grate	4 1/2"	850
Box	Varies	

TITLE	PLANT	STATE	SECTION/PAGE	DATE
5' x 5' Precast Box	Grand Prairie	TX	9.3	Feb 2016

FORTERRA

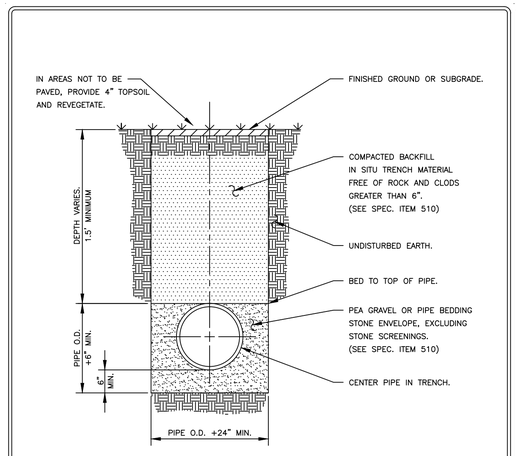
5' X 5' JUNCTION BOX
NTS



TITLE	PLANT	STATE	SECTION/PAGE	DATE
Type "C" Manhole	Houston San Antonio	TX	5.11	02-01-08

Hanson HEIDELBERGCEMENT Group

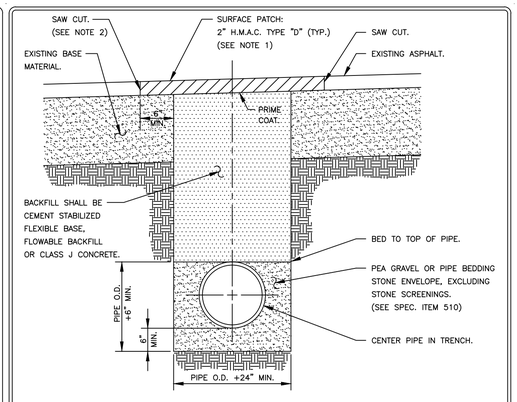
4' STORM SEWER MANHOLE
NTS



NOTE:

ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 08-21-03 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK STORM SEWER LINE BEDDING DETAIL (NON-PAVED SURFACE)	DRAWING NO: DR-02



NOTES:

1. H.M.A.C. SHOWN IN THIS DETAIL IS SEPARATE FROM ANY ADDITIONAL THICKNESS CREATED BY ANY OVERLAY ITEM IN CONTRACT.
2. THE CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE EXISTING PAVEMENT A MINIMUM OF 6" BEYOND EITHER THE EDGE OF THE STORM SEWER TRENCH OR THE POINT WHERE EXISTING PAVEMENT IS DAMAGED DUE TO TRENCHING OPERATIONS, WHICHEVER IS GREATER.
3. INSTALLATION OF BACKFILL, SAW CUTTING AND REMOVAL OF EXISTING PAVEMENT AND SURFACE PATCH, SHALL NOT BE PAID FOR SEPARATELY. COSTS FOR THESE ITEMS SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
4. THE CONTRACTOR SHALL PROVIDE STEEL PLATES TO SPAN THE TRENCH AS NECESSARY OR TO ALLOW BACKFILL TO CURE. SUCH PLATES SHALL BE SUITABLE FOR VEHICLE PASSAGE OVER THE TRENCH AND SHALL BE SATISFACTORILY ANCHORED IN PLACE. COSTS FOR THIS ITEM SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
5. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	STORM SEWER LINE BEDDING DETAIL (EXISTING PAVED SURFACE)	

STORM SEWER LINE BEDDING DETAIL
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

No.	DATE	REVISIONS	RECOMD

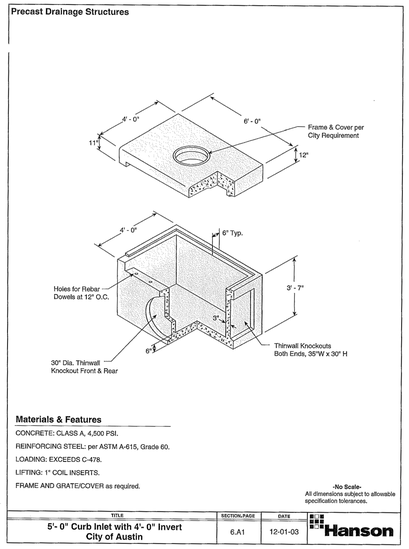
SHEET TITLE:

STORM SEWER
DETAILS (1 OF 2)

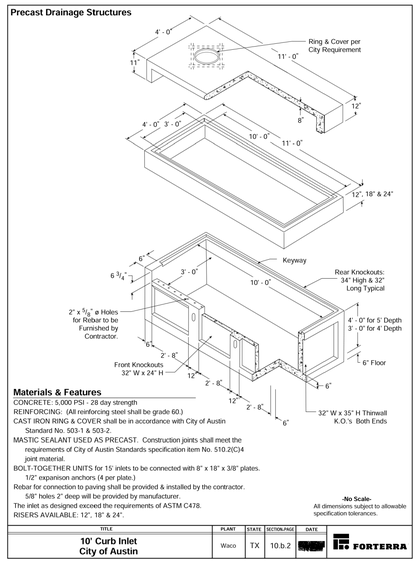
WP PROJECT NO.:
073-030
COCP PROJECT NO.:
SD - __ - _____

SHEET NO.:
C-74

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:04:37 PM, DWG To PDF.pc3, 1:1, JRW



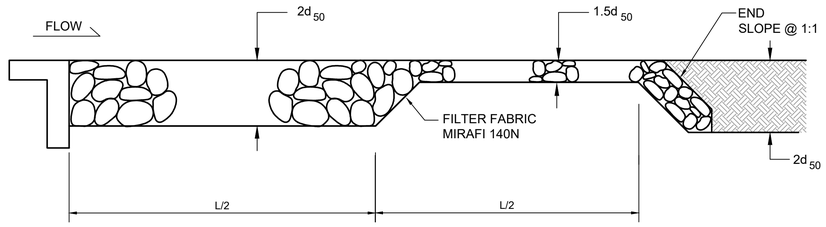
5 ' CURB INLET DETAILS
NTS



10 ' CURB INLET DETAILS
NTS

NOTE TO CONTRACTOR:
SEE PLAN FOR LOCATIONS
OF RIP-RAP INSTALLATION
& SPECIFIED ROCK SIZING

TYPE	% SMALLER BY WEIGHT	ROCK SIZE IN.	ROCK SIZE MM	MEDIAN SIZE, d_{50} IN.	MEDIAN SIZE, d_{50} MM
VL	70 - 100 50 - 70 35 - 50 2 - 10	12 9 6 2	300 230 150 50	6	150
L	70 - 100 50 - 70 35 - 50 2 - 10	15 12 9 3	380 300 230 80	9	230
M	70 - 100 50 - 70 35 - 50 2 - 10	21 18 12 4	530 460 300 100	12	300
H	100 50 - 70 35 - 50 2 - 10	30 24 18 6	760 610 460 150	18	460
VH	100 50 - 70 35 - 50 2 - 10	42 33 24 9	1070 840 610 230	24	610



ROCK RIP-RAP
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
8.7.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL
SOUTHWEST TEXAS
DEVELOPMENT, LLC

DESIGNED: JRW
DRAWN: JRW
APPROVED: AAP
DATE: 7/31/2025

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

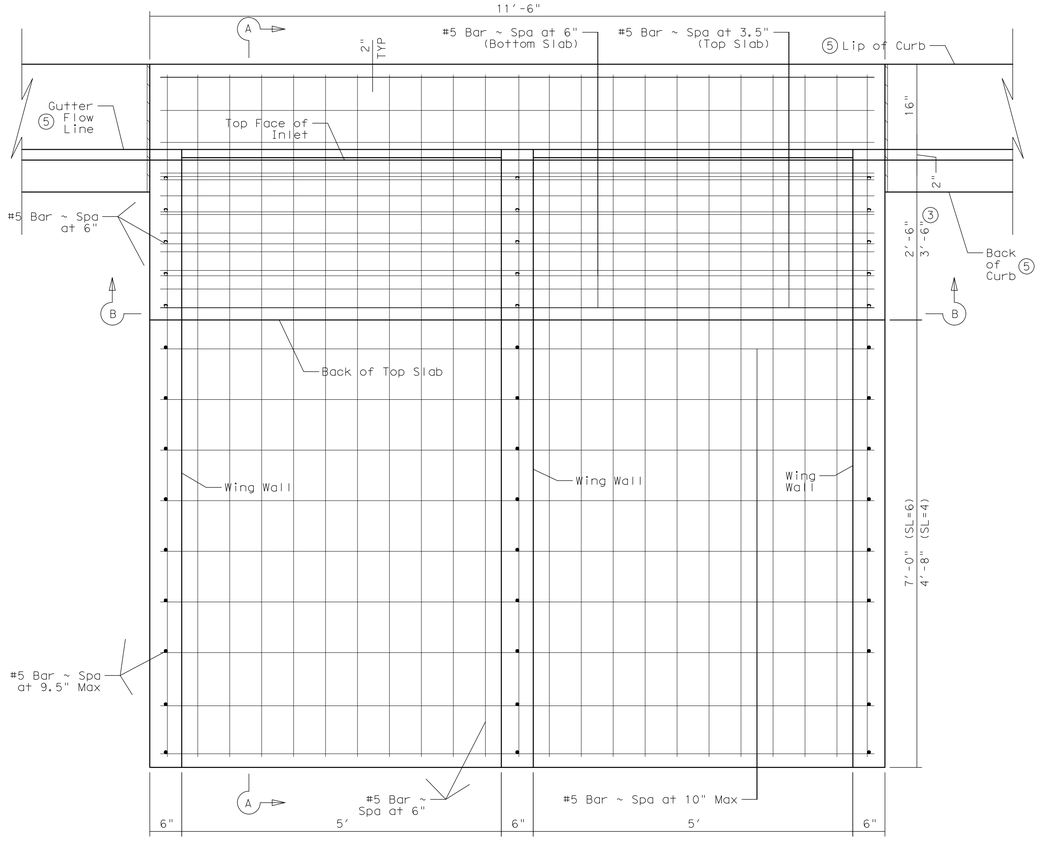
STORM SEWER
DETAILS (2 OF 2)

WP PROJECT NO.:
073-030

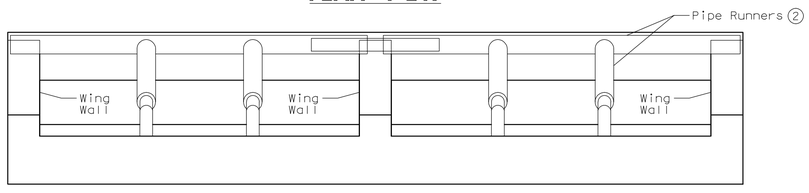
COCP PROJECT NO.:
SD - __ - _____

SHEET NO.:
C-75

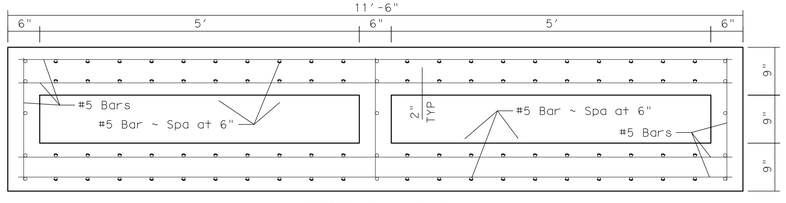
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:10:42 PM, _DWG To PDF.pc3, 1:1, JRW



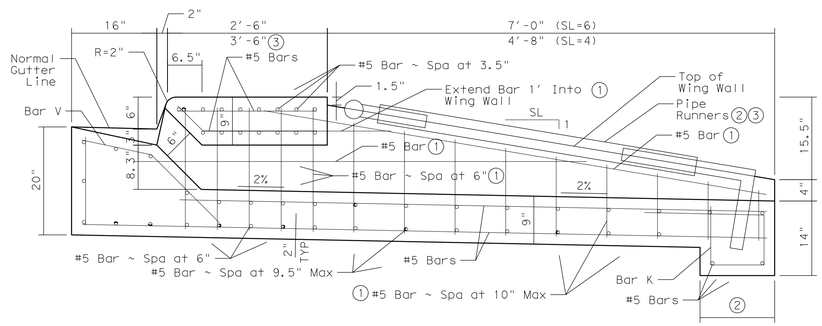
PLAN V EW



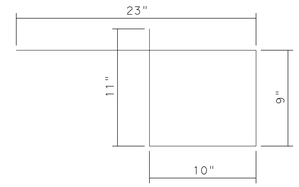
ELEVAT ◎N V EW (BACK ◎F NLET)



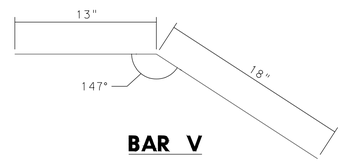
SECT ◎N B B



SECT ◎N A A



BAR K



BAR V

General Notes

1. All concrete shall be Class "A".
2. Backless Inlet to be paid for by the each, complete in place, under Item 465, "Junction Boxes, Manholes, and Inlets". Includes all concrete, reinfocement, pipe runners, and other materials as well as all equipment, labor, tools, and incidentals.
3. Curb and gutter transitions to be paid in accordance with Item 529 "Concrete Curb, Gutter, and Cobmined Curb and Gutter".

① Bars only for wing walls.

② See SETB-CD standard for pipe runner details.

③ When inlet is placed under metal beam guard fence, adjust top width of inlet to match width of mow strip. Omit pipe runners in this case.

④ See CGT-PCO standard for curb transition details adjacent to backless inlet.

HL93 LOADING

NO.	DATE	REVISION	APPROVED

WILLIAMSON COUNTY, TEXAS

Texas Department of Transportation

INTERIOR DRAINAGE BACKLESS INLET DETAILS

NOT TO SCALE SHEET 1 OF 1

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK				
CHECK	CONTROL	SECTION	JOB	

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8/7/25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD
REVISIONS
DATE
No.

SHEET TITLE:

TXDOT STANDARD - BACKLESS CURB INLET

WP PROJECT NO.:
073-030

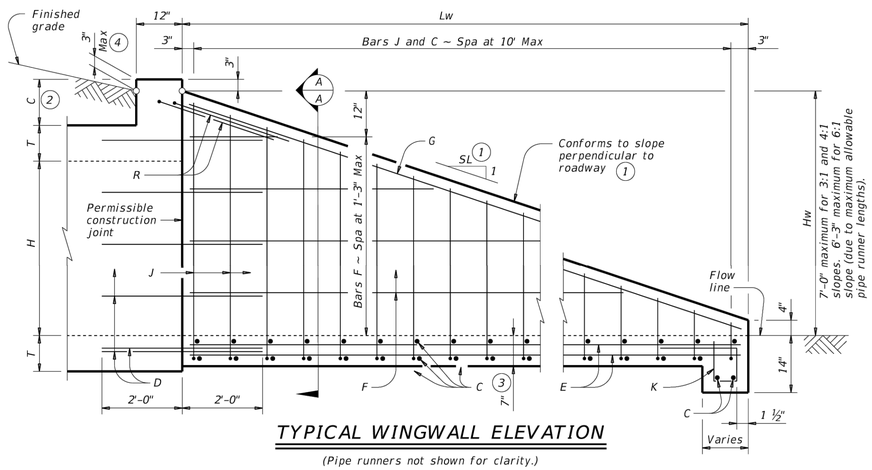
COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-76

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:07:20 PM, _DWG To PDF.pc3, 1:1, JRW

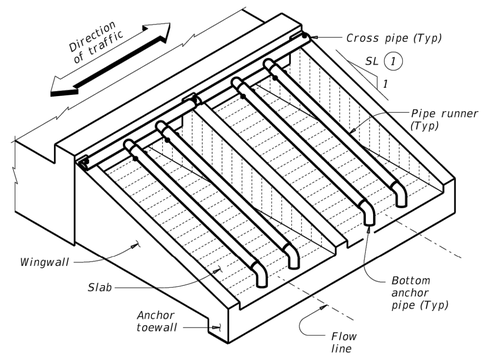
DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:



TYPICAL WINGWALL ELEVATION

(Pipe runners not shown for clarity.)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

WING DIMENSION CALCULATIONS:

Hw = H + T + C – 0.250'
Lw = (Hw – 0.333') (SL)

For cast-in-place culverts:
Atw = (N) (S) + (N + 1) (U)
For precast culverts:
Atw = (N) (2U + S) + (N – 1) (0.500')

Total Wingwall Area (SF)
= (0.5) (Hw + 0.333') (Lw) (N + 1)
Total Concrete Volume (CY)
= [(Wingwall Area) (0.583') +
(Lw) (Atw) (0.583') +
(Atw) (1.167') (1.167' – 0.583')] ÷ (27)

PIPE RUNNER DIMENSION CALCULATIONS:

Pipe Runner Length
= (Lw) (K1) – (1.917')
Total Reinforcing (Lb)
= (1.55) (Lw) (Atw) +
(4.43) (Atw) +
(K2) (Hw) (N + 1) ($\sqrt{Lw}$)

C = Height of curb above top of top slab (feet)
Hw = Height of wingwall (feet)
K = Constant value for use in formulas

Slope SL:1	K1	K2
3:1	~ 1.054 ~	7.45
4:1	~ 1.031 ~	8.49
6:1	~ 1.014 ~	10.30

Atw = Anchor toewall length (feet)
Lw = Length of wingwall (feet)
N = Number of culvert barrels
SL:1 = Side slope ratio (horizontal : 1 vertical)

See applicable box culvert standard for H, S, T, and U values.

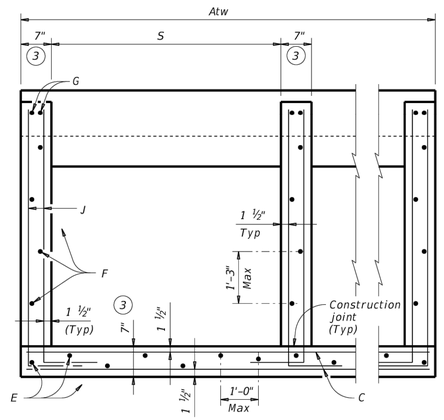
MATERIAL NOTES:

Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
Adjust reinforcing as necessary to provide a minimum clear cover of 1 ½".
Provide Class "C" concrete (f'c = 3,600 psi).
Provide pipe runners, cross pipes, and anchor pipes meeting the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5LX52.
Provide ASTM A307 bolts.
Galvanize all steel components, except the concrete reinforcing, unless required elsewhere in the plans, after fabrication.
Repair galvanizing damaged during transport or construction in accordance with the Item 445, "Galvanizing."

GENERAL NOTES:

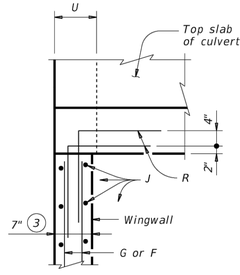
Designed according to AASHTO LRFD Bridge Design Specifications.
The safety end treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the pipe runners.
Pipe runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.
The quantities for pipe runners, reinforcing steel, and concrete resulting from the formulas given herein are for Contractor's information only.
See the Box Culvert Supplement (BCS) standard sheet for additional dimensions and information.
Alternate design drawings bearing the seal of a professional engineer will be acceptable for precast construction of the safety end treatments.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.



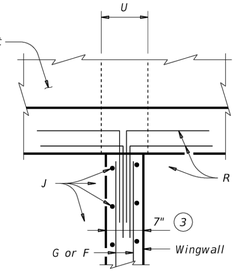
SECTION A-A

(Showing typical wingwall and wing slab reinforcing. Pipe runners not shown for clarity.)



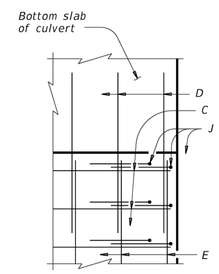
AT TOP OF EXTERIOR WINGWALL

(Cast-in-place culvert)



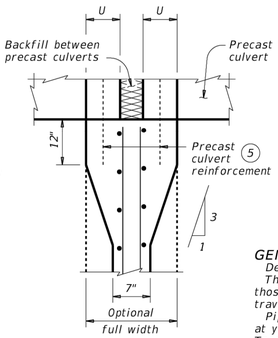
AT TOP OF INTERIOR WINGWALL

(Cast-in-place culvert)



AT OUTSIDE OF BOTTOM SLAB

(Cast-in-place culvert)



AT INTERIOR WINGWALL

(Precast culvert)

PLAN VIEWS OF CORNER DETAILS

(1) *Recommended values of slope are: 3:1, 4:1, and 6:1. Provide 3:1 or flatter slope.*

(2) *0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures without railing and curbs taller than 1'-0", refer to the Extended Curb Details (ECD) standard sheet.*

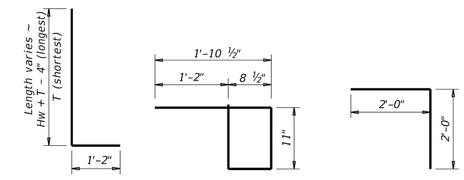
(3) *Wingwall and slab thicknesses may be the same as the adjacent culvert wall and slab thicknesses (7" minimum). If thicknesses greater than the minimum (7") are used, no changes will be made in quantities and no additional compensation will be allowed.*

(4) *For vehicle safety, reduce curb height, if necessary, to provide a maximum 3" projection. No changes will be made in quantities and no additional compensation will be allowed for this work.*

(5) *For culverts with C = 0", the precast culvert reinforcing may extend 1'-0" minimum into wingwall. Wingwall Bars D and R may be omitted. Otherwise, refer to the Wingwall Connection detail on the Box Culvert Precast Miscellaneous Details (SCP-MD) standard sheet.*

TABLE OF REINFORCING BAR SIZES AND SPACING

Bar	Size	Spacing
C	#4	10" Max
D	#4	Match F and E
E	#4	1'-0" Max
F	#4	1'-3" Max
G	#6	As shown
J	#4	10" Max
K	#4	1'-0" Max
R	#4	As shown



BARS J | BARS K (Length = 4'-3") | BARS R

SHEET 1 OF 2

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT
FOR 0° SKEW BOX CULVERTS (MAXIMUM Hw = 7'-0")
TYPE I ~ CROSS DRAINAGE
SETB-CD

FILE: CD-SETBCD-20.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8.21.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD | REVISIONS | DATE | No.

SHEET TITLE:

TXDOT STANDARD - SET-CB (1 OF 2)

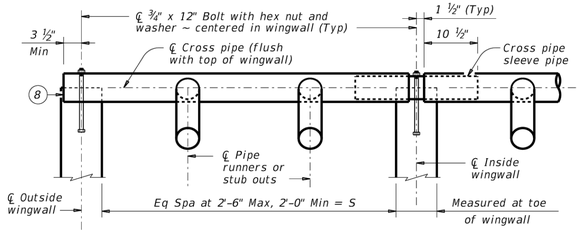
WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-77

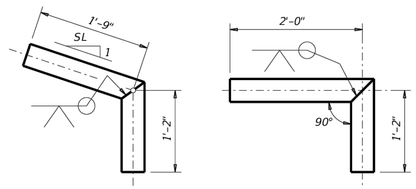
K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:10:51 PM, , DWG To PDF.pc3, 1:1, JRW

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



NOTE: At Contractor's option, make the cross pipe continuous across the inside wingwalls. If option is selected, omit the sleeve pipe and make a $^{15}/_{16}$" diameter through hole in the cross pipe to accept the anchor bolt at the centerline of each inside wingwall.

CROSS PIPE INSTALLATION DETAILS



OPTION A OPTION B

BOTTOM ANCHOR PIPE DETAILS (10)

(6) Cross pipe is the same size as the pipe runner. Cross pipe stub out is the same size as the anchor pipe.

(7) Note that actual slope of safety pipe runner may vary slightly from side slope.

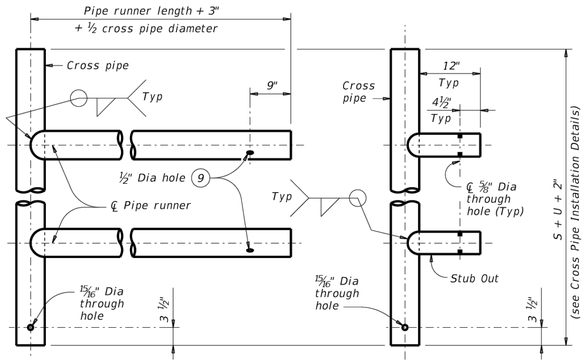
(8) Take care to ensure that riprap concrete does not flow into the cross pipe so as to permit disassembly of the bolted connection to allow cleanout access.

(9) After installation, inspect the 1#2" hole to ensure that the lap of the safety pipe runner with the bottom anchor pipe is adequate.

(10) At fabricator's option, a heat bend to a smooth 5" radius or a manufactured elbow (of the same material as the runner) may be substituted for the mitered and welded joint in the bottom anchor pipe.

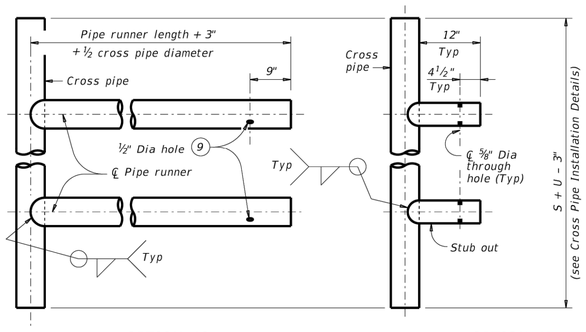
MAXIMUM PIPE RUNNER LENGTHS AND (6) REQUIRED PIPE RUNNER AND ANCHOR PIPE SIZES

Maximum Pipe Runner Length	Required Pipe Runner Size			Required Anchor Pipe Size		
	Pipe Size	Pipe O.D.	Pipe I.D.	Pipe Size	Pipe O.D.	Pipe I.D.
10'- 0"	3" STD	3.500"	3.068"	2" STD	2.375"	2.067"
19'- 8"	4" STD	4.500"	4.026"	3" STD	3.500"	3.068"
34'- 2"	5" STD	5.563"	5.047"	4" STD	4.500"	4.026"



OPTION A2 OPTION A1

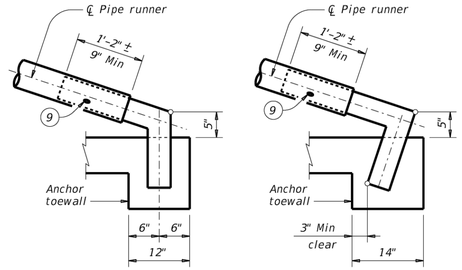
FOR USE IN OUTSIDE CULVERT BAY



OPTION A2 OPTION A1

FOR USE IN INSIDE CULVERT BAY

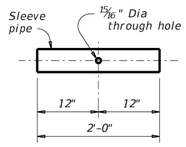
CROSS PIPE AND CONNECTIONS DETAILS



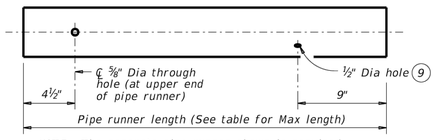
OPTION B1 OPTION B2

BOTTOM ANCHOR TOEWALL DETAILS

(Wingwall not shown for clarity.)

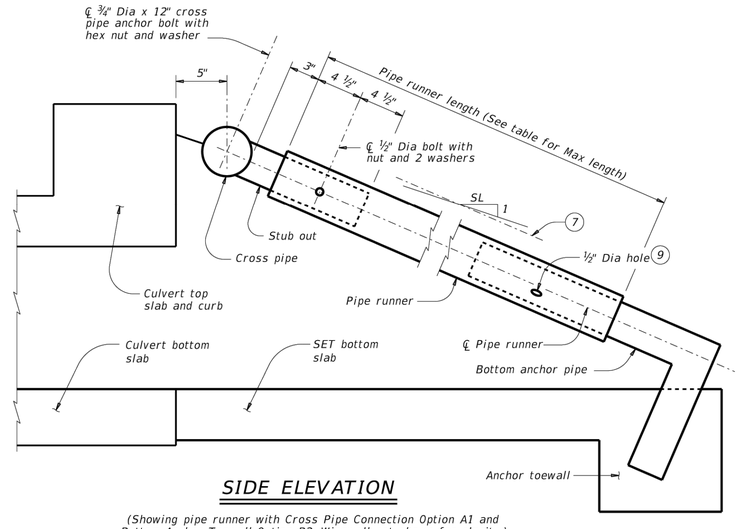


CROSS PIPE SLEEVE PIPE DETAILS



NOTE: The separate pipe runner shown is required when Cross Pipe Connection Option A1 is used.

PIPE RUNNER DETAILS



SIDE ELEVATION

(Showing pipe runner with Cross Pipe Connection Option A1 and Bottom Anchor Toewall Option B2. Wingwall not shown for clarity.)

SHEET 2 OF 2

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT
FOR 0° SKEW BOX CULVERTS (MAXIMUM Hw = 7'-0") TYPE I ~ CROSS DRAINAGE
SETB-CD

FILE: CD-SETBCD-20.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

DATE:
FILE:

K:\CAD\073-030 CSW Arrow Point\4-CAD\PLANS\073-030 DETAILS.dwg, 7/31/2025 12:02:13 PM, _DWG To PDF.pc3, 1:1, JRW

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS — ANTONIO A. PRETE — 93759 — LICENSED PROFESSIONAL ENGINEER — 8.31.25

PROJECT:

ARROW POINT

FM 1431

CLIENT:

CENTRAL SOUTHWEST TEXAS DEVELOPMENT, LLC

DESIGNED: JRW APPROVED: AAP
DRAWN: JRW DATE: 7/31/2025

RECOMD
REVISIONS
DATE
No.

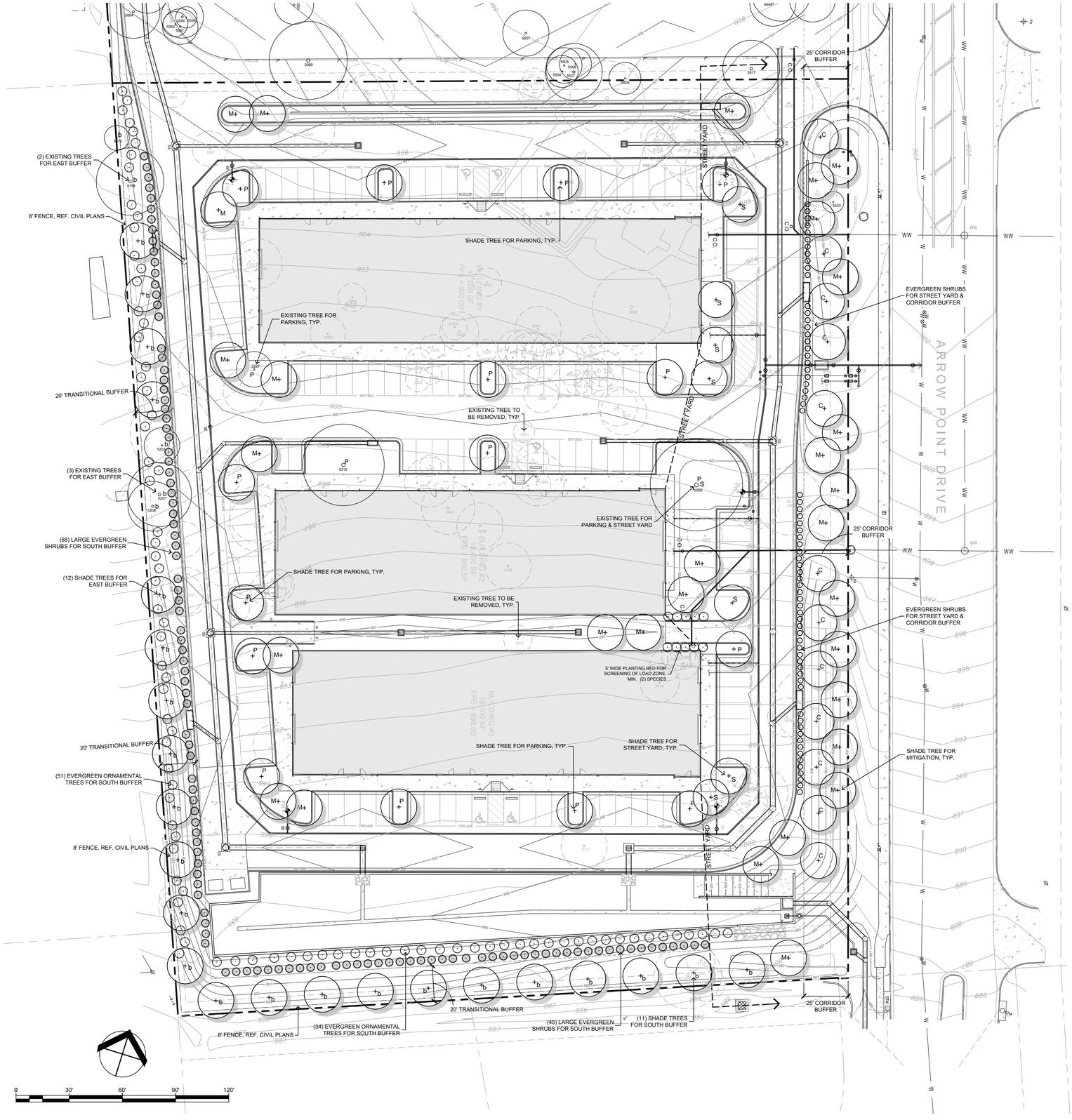
SHEET TITLE:

TXDOT STANDARD - SET-CB (2 OF 2)

WP PROJECT NO.:
073-030

COCP PROJECT NO.:
SD - __ - ____

SHEET NO.:
C-78



LANDSCAPE CALCULATIONS

	Required	Provided
TREE COVERAGE		
TOTAL PREFERRED SPECIES TREE INCHES ON-SITE	N/A	1,188.5"
TOTAL PREFERRED SPECIES TREE INCHES REMOVED	N/A	1,044"
% OF PREFERRED SPECIES TREES TO REMAIN	50%	88%
STREET YARD REQUIREMENTS	**Required**	**Provided**
TOTAL STREET YARD AREA	N/A	44,365 sf
TOTAL STREET YARD LANDSCAPE AREA	8,873 sf (20%)	16,500 sf (37%)
STREET YARD TREES	9	9
8,873 / 1,000 = 9 Shade Trees		
(1) Existing Trees >6" = 2 Shade Trees #5006		
(7) Proposed Shade Trees		
STREET YARD SHRUBS	27	27
8,873 / 1,000 = 27 Shrubs		
PARKING REQUIREMENTS	**Required**	**Provided**
STREET YARD PARKING	N/A	12
(90 sf x 16)/12 = 120 sf	120 sf	450 sf
NON STREET YARD PARKING	N/A	520
(60 sf x 106)/12 = 530 sf	530 sf	600 sf
MAJOR CORRIDOR BUFFER	**Required**	**Provided**
Arrow Point Drive		
12,174 s.f. of Landscape Buffer		
Shade Trees: 12,174' / 1,000' = 12.2 Trees	12	12
(12) Proposed Shade Trees = 12 Trees		
(0) Proposed Ornamental Trees = 0 Trees		
Shrubs: 12,174' / 1,000' = 12.2 x 3 = 37 shrubs	37	37
BUFFER YARD	**Required**	**Provided**
Level Two Transitional Buffer: SOUTH 335 LF	N/A	335 LF
Shade Trees: (335' / 30') (1) = 11	11	11
Evergreen Orn. trees: (335'/30')(3) = 34	34	34
Evergreen Shrubs:(335'/30')(4) = 45	45	45
Level Two Transitional Buffer: EAST 508 LF	N/A	508 LF
Shade Trees: (508' / 30') (1) = 17	17	17
Evergreen Orn. trees: (508'/30')(3) = 51	51	51
Evergreen Shrubs:(508'/30')(3) = 68	68	68

LEGEND

SYMBOL	CALLOUT	DESCRIPTION
S	**Street Tree**	Tree that counts towards the Street requirements
P	**Parking Lot Tree**	Tree that counts towards the parking lot requirements
b	**Buffer Tree**	Tree that counts towards the Transistional buffer requirements
M	**Mitigation Tree**	Tree that counts towards mitigation
C	**Major Corridor**	Tree that counts towards Major Corridor requriements

REVISIONS

DATE:	DESCRIPTION

REGISTERED LANDSCAPE ARCHITECT
BRADLEY T. VONS
2858
STATE OF TEXAS
07/21/25

ARROW POINT INDUSTRIAL

ARROW POINT DRIVE, TX 78613

LANDSCAPE SUBMITTAL PLAN

DATE: 07-21-25

SCALE: 1" = 30'

ECOLAND DESIGN GROUP
2008 S. IH 35 FRONTAGE RD, SUITE 110 AUSTIN, TEXAS 78704
WWW.ECOLANDDESIGNGROUP.COM | 512-344-0264

L1 / L2

JOB#: 125-46

LARGE SHADE TREES

SYMBOL	QUANTITY	COMMON NAME	SCIENTIFIC NAME	SIZE AND CONDITION
+	87	Cedar Elm	Ulmus crassifolia	4" caliper / 10' height minimum
		Lacey Oak	Quercus laceyi	4" caliper / 10' height minimum
		Live Oak	Quercus virginiana	4" caliper / 10' height minimum
		Mexican Sycamore	Platanus mexicana	4" caliper / 10' height minimum
		Monterrey Oak	Quercus polymorpha	4" caliper / 10' height minimum
		Texas Red Oak	Texas shumardi 'Buckleyi'	4" caliper / 10' height minimum

EVERGREEN SMALL TREES

SYMBOL	QUANTITY	COMMON NAME	SCIENTIFIC NAME	SIZE AND CONDITION
·	95	Evergreen Sumac	Rhus virens	15 gallon, minimum
		Texas Mountain Laurel	Sophora secudiflorum	15 gallon, minimum
		Yaupon Holly	Ilex vomitoria	15 gallon, minimum

EVERGREEN SHRUBS

SYMBOL	QUANTITY	COMMON NAME	SCIENTIFIC NAME	SIZE AND CONDITION
·	69	Big Muhly	Muhlenbergia lindheirmeri	5 gallon, minimum
		Dwarf Wax Myrtle	Myrica pusilla	5 gallon, minimum
		Dwarf Yaupon	Ilex vomitoria 'Nana'	5 gallon, minimum
		Gulf Muhly	Muhlenbergia capillaris	5 gallon, minimum
·	113	Texas Sage	Leucophyllum frutescens	5 gallon, minimum
		Golden Shower Thyrallis	Galphimia glauca	5 gallon, minimum
		Pineapple Guava	Feijoa sellowiana	5 gallon, minimum
		Bush Germander	Teucrium fruticans	5 gallon, minimum

TURF GRASS

QUANTITY	SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE AND CONDITION
+/- TBD		Tiffway 419 Bermuda Grass	Cynodon dactylon var. "Tifway 419"	S.F. Solid Sod free of weeds
+/- TBD		Bermuda Grass	Cynodon dactylon	S.F. Hydromulch (contractor to confirm areas suitable on site).

MISCELLANEOUS

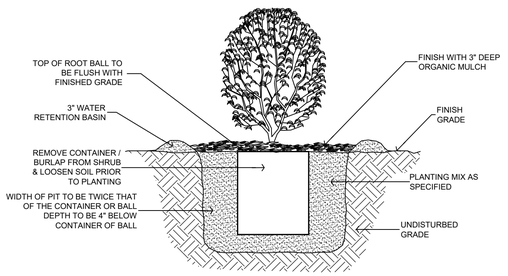
QUANTITY	CALLOUT	DESCRIPTION
+/- TBD		SF 3" depth Native Hardwood mulch, dark. All planting areas, not called out as gravel
+/- TBD		S.F. Brazos Gravel, 2-4" DIA. applied a minimum depth of 3"
+/- TBD		S.F. Limestone, ¾" DIA. applied a minimum depth of 3"
+/- TBD		SF commercial grade weed cloth. Under all gravel areas, typ.
+/- TBD		L.F. Bender board, poly edging 1/8" x 5" with 12" stakes. Finish: Black-Note: bottom 1/2 of edging to be installed below grade, typ.
+/- N/A		L.F. Shovel-Cut Edging

LANDSCAPE NOTES

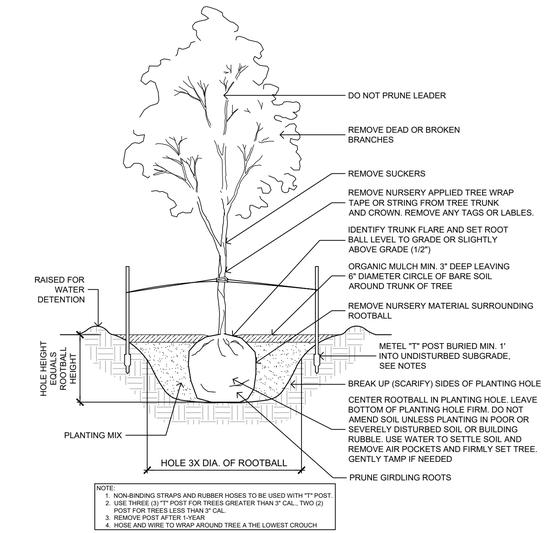
- These plans are in full compliance with the Landscape and Tree ordinance of the City of Cedar Park, Texas.
- All trees overhanging a drive aisle, fire lane or loading zone shall be limbed up 13.5'. All trees overhanging a pedestrian walk way or sidewalk shall be limbed up 8'.
- Do not exceed 4" maximum cut or fill within the 1/2 CRZ of any preserved tree.
- For outdoor condensers, utility huts, and other building service equipment, such equipment shall be completely screened from view on all sides using a vegetative screen with at least two (2) varieties of plant material from the preferred plant list that, at maturity, is at least the height of the equipment to be screened.
- All mulched areas shall have at least three (3) inches of shredded mulch. Gravel shall not be used as a mulch for plantings or in planting beds. Extensive unplanted stone or mulch beds shall be prohibited.
- All new plant material shall meet the latest requirements of the American Standard for Nursery Stock (ANSI Z60.1).
- All new plant material shall be planted and maintained in accordance with the latest edition of the American National Standards Institute requirements for Tree, Shrub, and Other Woody Plant Maintenance (ANSI A300 Parts 1 through 6).
- All landscaping and irrigation shall be installed according to the City of Cedar Park Code requirements.
- Fences, landscaping and other items will not be installed in locations where they will obstruct the visibility of, or access to, fire hydrants or Fire Department Connections (FDC).

IRRIGATION NOTES

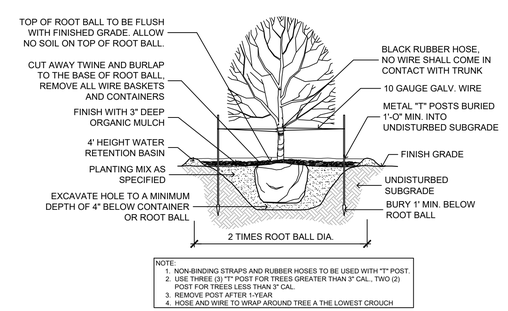
- An automatic irrigation system shall be installed. All automatic irrigation systems shall be equipped with an electronic controller capable of dual or multiple programming.
- All irrigation equipment (i.e. heads, bubblers, driplines etc.) shall be equipped with a rain sensor that turns off the system when it has rained sufficiently.
- Controller(s) shall have multiple cycle start capacity and a flexible calendar program, including the capability of being set to water every five days.
- The irrigation system shall be designed by a licensed irrigator.
- Tree irrigation zones shall not share the same irrigation zones, including valves and circuits, as shrubs and plants due to different watering requirements.
- A minimum of one (1) bubbler shall be provided for all newly planted trees. Trees larger than 3 inches in caliper shall have two (2) bubblers. The bubbler(s) shall be installed at each tree, located 12-18 inches from the trunk, and shall operate on valves separate from the spray zones.
- No trenching or boring shall occur within the tree protection fencing or CRZ without prior approval from the City.
- Irrigation plans shall be submitted and approved prior to irrigation installation and final site inspection.



A SHRUB PLANTING DETAIL
SECTION — SCALE: N.T.S.



B TREE PLANTING DETAIL
SECTION — SCALE: N.T.S.



C SMALL TREE PLANTING DETAIL
SECTION — SCALE: N.T.S.

INDUSTRIAL SITE TREE LIST

TAG #	CALIPER	MULT-TRUNK	SPECIES	CONDITION	REMOVE DEAD	REMOVE 6-8	REMOVE 8-18	REMOVE 19-25	REMOVE 26+	6-8" SAVED
5000	20		LIVE OAK	FAIR				20		
5003	15		CEDAR ELM	EXCELLENT			15			
5006	27		LIVE OAK	GOOD						
5009	22.5		LIVE OAK	GOOD				22.5		
5011	12		LIVE OAK	FAIR			12			
5012	13.5		LIVE OAK	FAIR			13.5			
5016	10		LIVE OAK	GOOD			10			
5017	6.5		LIVE OAK	FAIR		6.5				
5018	9		LIVE OAK	FAIR			9			
5019	7.5		LIVE OAK	FAIR		7.5				
5020	7.5		LIVE OAK	FAIR		7.5				
5021	8		LIVE OAK	FAIR			8			
5022	6		LIVE OAK	FAIR		6				
5024	9.5		CEDAR ELM	FAIR			9.5			
5025	14.5	11 X 7	CEDAR ELM	FAIR			14.5			
5026	10.5		LIVE OAK	FAIR			10.5			
5032	8.5		CEDAR ELM	FAIR			8.5			
5040	16		LIVE OAK	FAIR			16			
5069	8.5		CEDAR ELM	GOOD			8.5			
5075	7		LIVE OAK	FAIR						7
5081	10		CEDAR ELM	FAIR			10			
5092	16.5		LIVE OAK	GOOD			16.5			
5093	14.5		LIVE OAK	GOOD			14.5			
5099	23	15.5 X 15	LIVE OAK	GOOD				23		
5112	10.5		LIVE OAK	FAIR						
5113	9	15.5 X 15	LIVE OAK	FAIR						
5114	19.5		LIVE OAK	FAIR						
5121	14.5	11X6.5	CEDAR ELM	FAIR			14.5			
5158	16.5	12.5X8	CEDAR ELM	FAIR						
5169	14		CEDAR ELM	GOOD			14			
5170	6		ASHE JUNIPER	FAIR		6				
5202	22.5	15.5X14	LIVE OAK	FAIR				22.5		
5203	9.5		LIVE OAK	VERY POOR						
5207	17.5		LIVE OAK	GOOD						
5208	14		LIVE OAK	GOOD						
5211	11.5	7.5X7.5	LIVE OAK	FAIR			11.5			
5214	12.5		LIVE OAK	FAIR			12.5			
5216	8		LIVE OAK	VERY POOR			8			
5227	10.5		CEDAR ELM	EXCELLENT			10.5			
5228	19		LIVE OAK	FAIR				19		
5231	12		LIVE OAK	FAIR						
5233	16		LIVE OAK	GOOD			16			
5234	11		ASHE JUNIPER	FAIR			11			
5236	10.5		LIVE OAK	FAIR			10.5			
5239	9.5		LIVE OAK	FAIR			9.5			
5241	14.5		LIVE OAK	FAIR			14.5			
5242	11		LIVE OAK	FAIR			11			
5261	9.5		LIVE OAK	FAIR			9.5			
5262	7.5		LIVE OAK	FAIR		7.5				
5264	9.5		LIVE OAK	FAIR			9.5			
5283	6.5		CEDAR ELM	FAIR						6.5
5284	8		CEDAR ELM	FAIR						
5295	11		CEDAR ELM	VERY POOR			11			
5315	26		LIVE OAK	GOOD						
5322	8		LIVE OAK	FAIR			8			
5323	8		LIVE OAK	POOR			8			
5324	7		LIVE OAK	FAIR		7				
5325	8		LIVE OAK	POOR			8			
5327	11.5	8X6.5	LIVE OAK	FAIR			11.5			
5328	8		LIVE OAK	FAIR			8			
5332	7		LIVE OAK	POOR		7				
5334	11		LIVE OAK	FAIR			11			
5335	11		LIVE OAK	FAIR			11			
5336	15.5	10.5X9.5	LIVE OAK	FAIR			15.5			
5337	11.5	8.5X6	LIVE OAK	FAIR			11.5			
5339	10		LIVE OAK	POOR			10			
5342	7.5		LIVE OAK	FAIR		7.5				
5354	11		LIVE OAK	FAIR			11			
5361	7		LIVE OAK	FAIR		7				
5363	9.5		LIVE OAK	VERY POOR			9.5			
5364	9		ASHE JUNIPER	FAIR			9			
5394	9.5		LIVE OAK	FAIR			9.5			
5395	8.5		LIVE OAK	POOR			8.5			
5396	8		LIVE OAK	FAIR			8			
5397	9		LIVE OAK	FAIR			9			
5402	20.5	14X12.5	LIVE OAK	FAIR						
5404	11		LIVE OAK	FAIR			11			
5410	12		LIVE OAK	FAIR			12			
5425	15.5		CEDAR ELM	GOOD			15.5			
5426	11.5		CEDAR ELM	FAIR			11.5			
5427	14.5		CEDAR ELM	POOR						
5435	14		LIVE OAK	FAIR			14			
5436	14	9.5X8.5	ASHE JUNIPER	FAIR			14			
5441	8		LIVE OAK	FAIR			8			
5447	6		LIVE OAK	FAIR		6				
5448	14		LIVE OAK	FAIR			14			
5452	16		LIVE OAK	FAIR			16			
5464	10.5		CEDAR ELM	GOOD			10.5			
5466	8.5		CEDAR ELM	DEAD			8.5			
5482	18.5		LIVE OAK	GOOD			18.5			
5501	8.5		LIVE OAK	DEAD	8.5					
5502	7		LIVE OAK	DEAD	7					
5503	6.5		LIVE OAK	DEAD	6.5					
5504	8.5		LIVE OAK	DEAD	8.5					
5505	10		LIVE OAK	DEAD	10					
5506	9		LIVE OAK	DEAD	9					
5507	16		LIVE OAK	DEAD	16					
5509	9		LIVE OAK	FAIR			9			
5510	20.5	13.5X13.5	LIVE OAK	GOOD				20.5		
5511	9		LIVE OAK	FAIR			9			
5512	8		LIVE OAK	FAIR			8			
5513	16		LIVE OAK	GOOD			16			
5514	14		LIVE OAK	GOOD			14			
5515	21		LIVE OAK	EXCELLENT				21		
5516	15		LIVE OAK	GOOD			15			
5517	16		LIVE OAK	GOOD			16			
5518	13.5		LIVE OAK	FAIR			13.5			
5519	13		LIVE OAK	FAIR			13			
5520	22	13X9.5X8.5	LIVE OAK	FAIR				22		
5521	10.5		LIVE OAK	FAIR						
5523	6		LIVE OAK	POOR						6
5524	6		LIVE OAK	POOR						6
5612	9		ASHE JUNIPER	VERY POOR			9			
5624	11		LIVE OAK	FAIR			11			
	1355.5	TOTAL INCHES	TOTAL REMOVED			75.5	803.5	170.5	0	25.5
114		TOTAL TREES								

TREE REPLACEMENT CALCULATIONS

TREE SIZE	8-18"	19-25"	26"+
TOTAL REMOVED	803.5	170.5	0
RATIO	1:1	2:1	3:1
INCHES TO BE REPLACED	803.5	341	0
SAVED 6-7" TREES: 25.5/2 = 12.25	0	12.25	0
MITIGATION INCHES REPLACED ON-SITE	0	167	0
MITIGATION OWED	803.5	161.75	0
MITIGATION RATE: $150/INCH			$ 120,525.00
MITIGATION RATE: $300/INCH			$ 48,525.00
MITIGATION RATE: $450/INCH			$ -
TOTAL MITIGATION PAYMENT			**$ 169,050.00**
TOTAL CALIPER INCHES REPLACED ON-SITE	167		

TOTAL CALIPER INCHES REPLACED ON SITE: 167"
(30) Canopy Trees x 4" = 120"
(47) Split Canopy Trees x 1" = 47"

REVISIONS
DESCRIPTION
DATE:

REGISTERED LANDSCAPE ARCHITECT
BRADLEY T. JONES
2858
STATE OF TEXAS
07/21/25

ARROW POINT INDUSTRIAL
ARROW POINT DRIVE, TX 78613

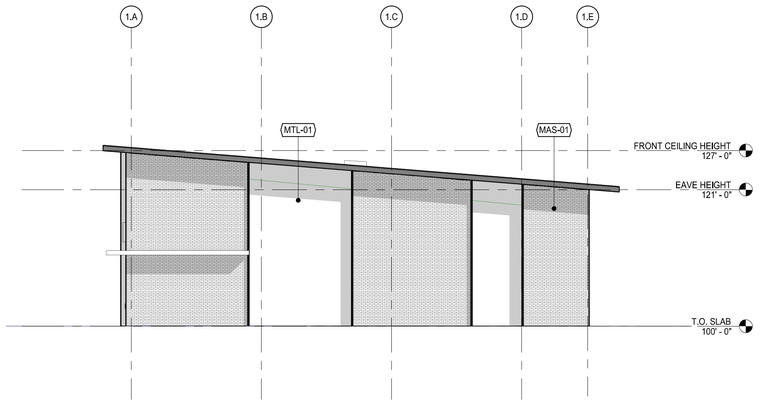
LANDSCAPE NOTES & DETAILS

DATE: 07-21-25
SCALE: AS SHOWN

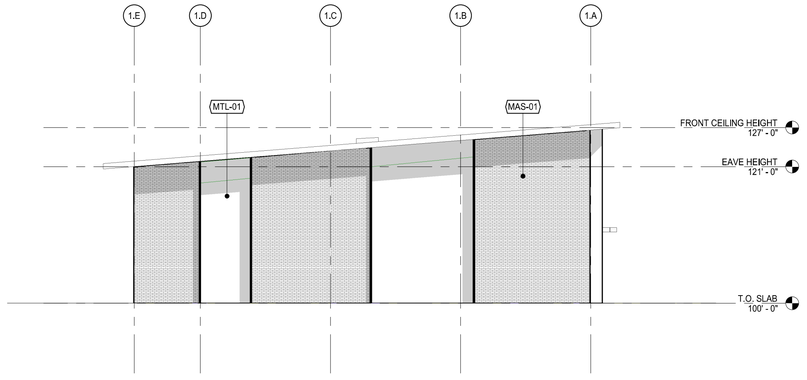
ECOLAND DESIGN
2808 S. IH 35 FRONTAGE RD., SUITE 119 AUSTIN, TEXAS 78704
WWW.ECOLANDDESIGN.COM (512) 544-0104

L2 / L2

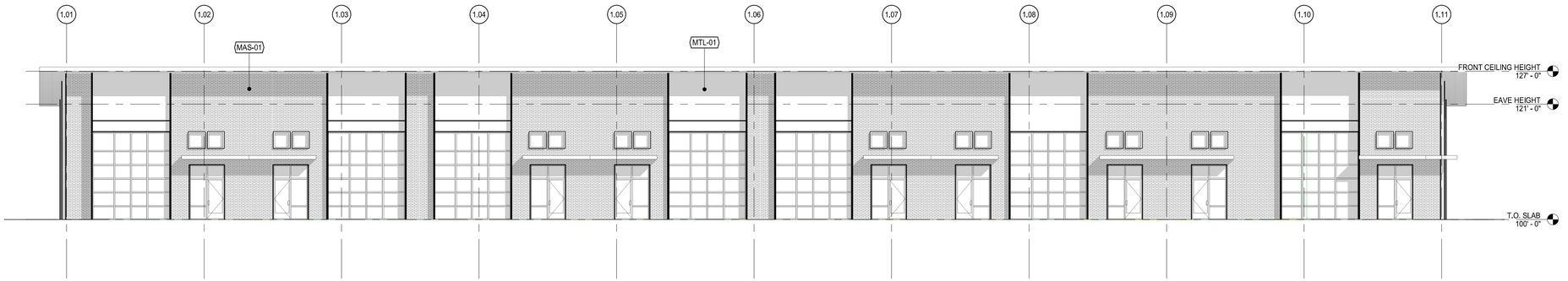
JOB#: 125-46



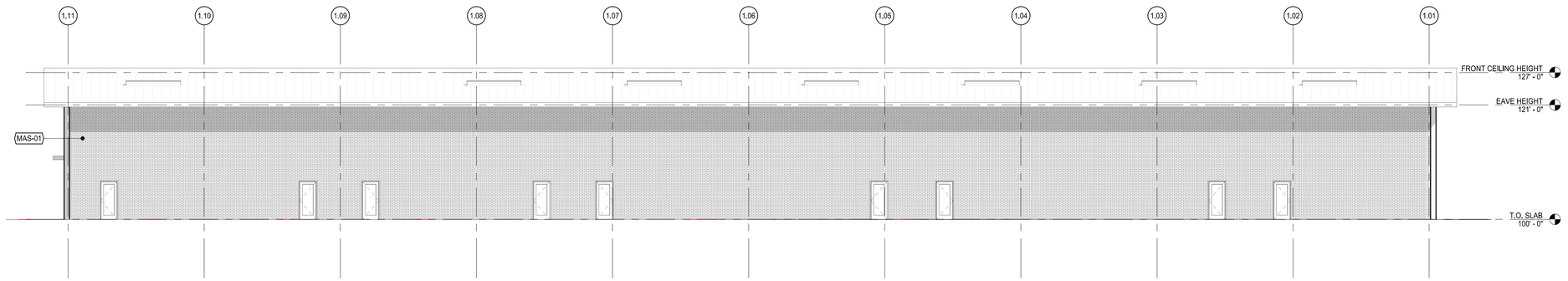
4 EXTERIOR ELEVATION PLAN EAST
3/32" = 1'-0"



3 EXTERIOR ELEVATION PLAN WEST
3/32" = 1'-0"



2 EXTERIOR ELEVATION PLAN SOUTH
3/32" = 1'-0"

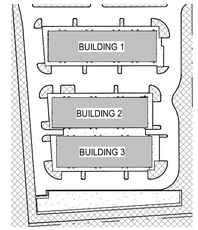


1 EXTERIOR ELEVATION PLAN NORTH
3/32" = 1'-0"

GENERAL NOTES - EXTERIOR ELEVATIONS

1	REFER TO SHEET A8.51 FOR EXTERIOR FINISH SCHEDULE
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

KEY PLAN



MATERIAL KEY

MTL 01 - METAL SIDING

MAS 01 - MASONRY BRICK

mpa architecture & interiors
merriman pitt anderson
208 WEST 4TH STREET
STE #3A
AUSTIN, TX 78701
512.472.1111
www.mpaaustin.com

REGISTERED ARCHITECT
ROBERT B. PITT
17809
STATE OF TEXAS

7/22/2025

JLL ARROWPOINT FLEXWAREHOUSE
SCHEMATIC DESIGN
PARCEL R413089, FM 1431, CEDAR PARK, TX 78613

© 2025 MERRIMAN PITT / ANDERSON, INC.

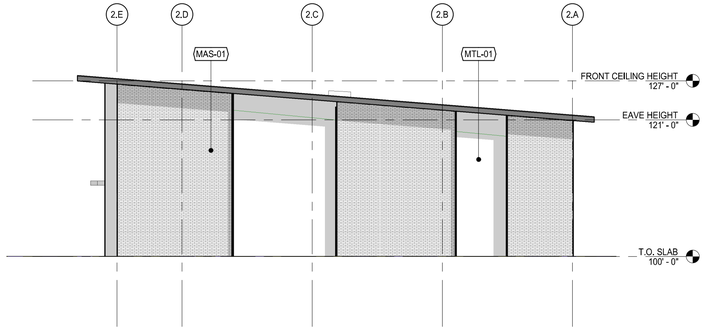
ISSUE		
REV #	DATE	ISSUANCE

PROJECT NUMBER:
24-091

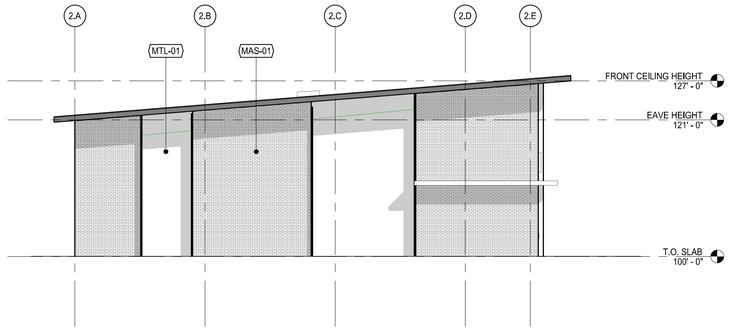
ORIGINAL ISSUE DATE:
#####/#####

SHEET NAME:
OVERALL EXTERIOR ELEVATIONS - BLDG 1

SHEET:
A3.01

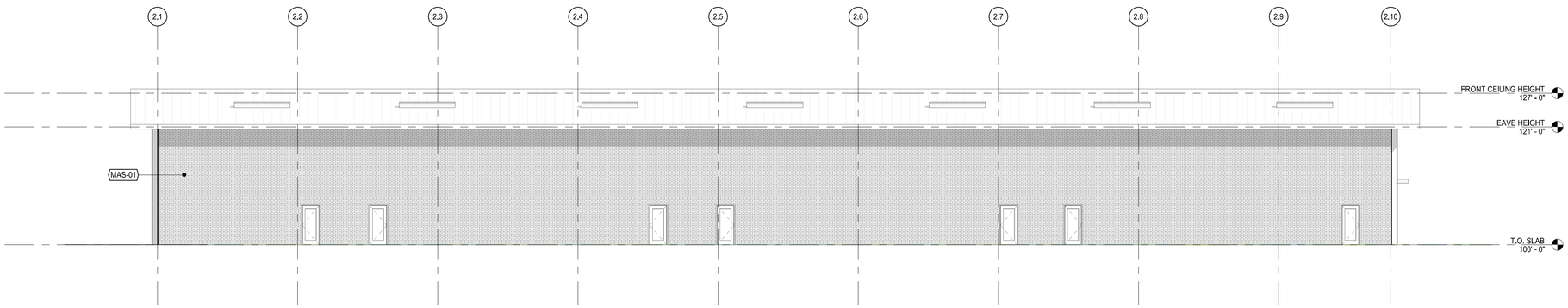


4 EXTERIOR ELEVATION PLAN WEST
3/32" = 1'-0"



3 EXTERIOR ELEVATION PLAN EAST
3/32" = 1'-0"

2 EXTERIOR ELEVATION PLAN NORTH
3/32" = 1'-0"

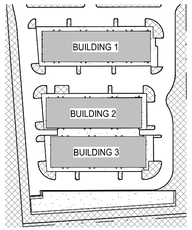


1 EXTERIOR ELEVATION PLAN SOUTH
3/32" = 1'-0"

GENERAL NOTES - EXTERIOR ELEVATIONS

1	REFER TO SHEET A8.51 FOR EXTERIOR FINISH SCHEDULE
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

KEY PLAN



MATERIAL KEY

MTL 01 - METAL SIDING

MAS 01 - MASONRY BRICK

mpa architecture & interiors
merriman pitt anderson
208 WEST 4TH STREET
STE #3A
AUSTIN, TX 78701
512.472.1111
www.mpaustin.com

REGISTERED ARCHITECT
ROBERT B. PITT
17809
STATE OF TEXAS

7/22/2025

JLL ARROWPOINT FLEXWAREHOUSE
SCHEMATIC DESIGN
PARCEL R413089, FM 1431, CEDAR PARK, TX 78613

© 2025 MERRIMAN PITT / ANDERSON, INC.

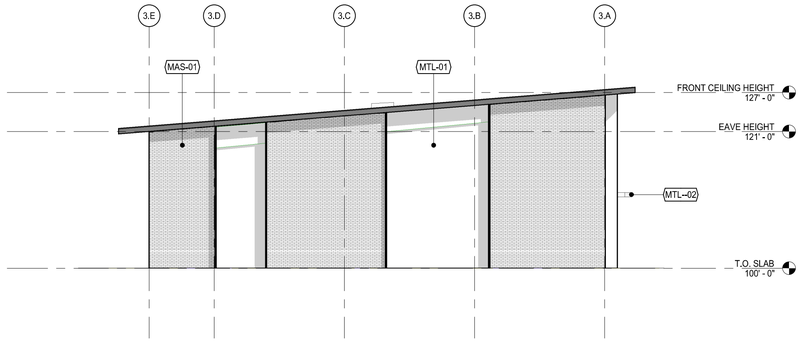
ISSUE		
REV #	DATE	ISSUANCE

PROJECT NUMBER:
24-091

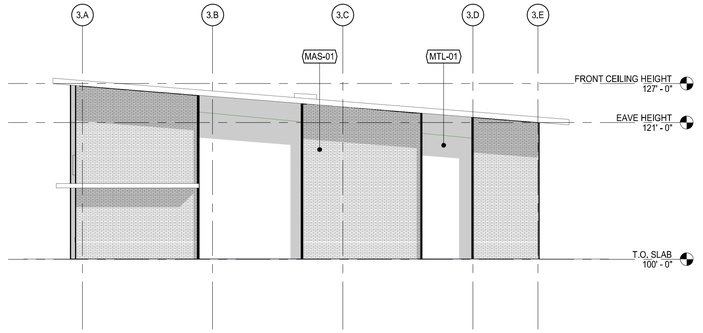
ORIGINAL ISSUE DATE:
########

SHEET NAME:
OVERALL EXTERIOR ELEVATIONS - BLDG 2

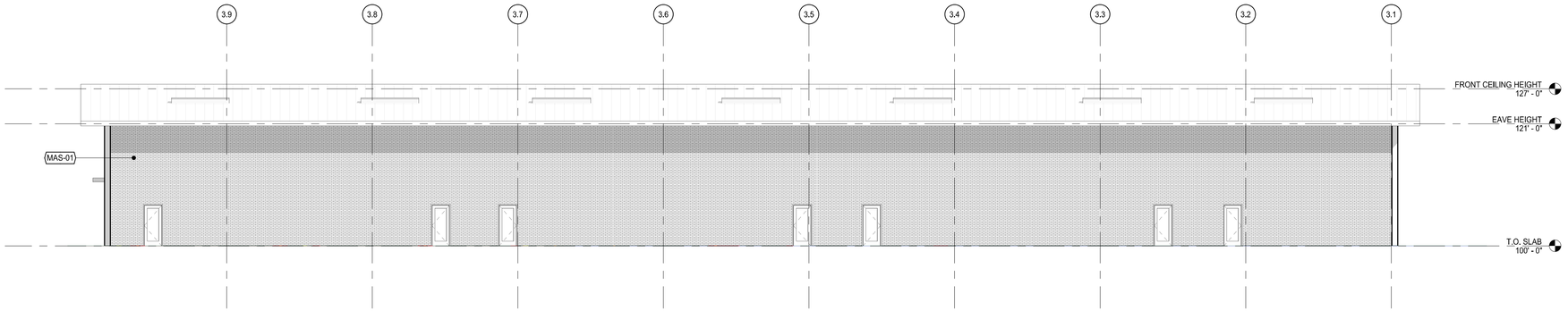
SHEET:
A3.02



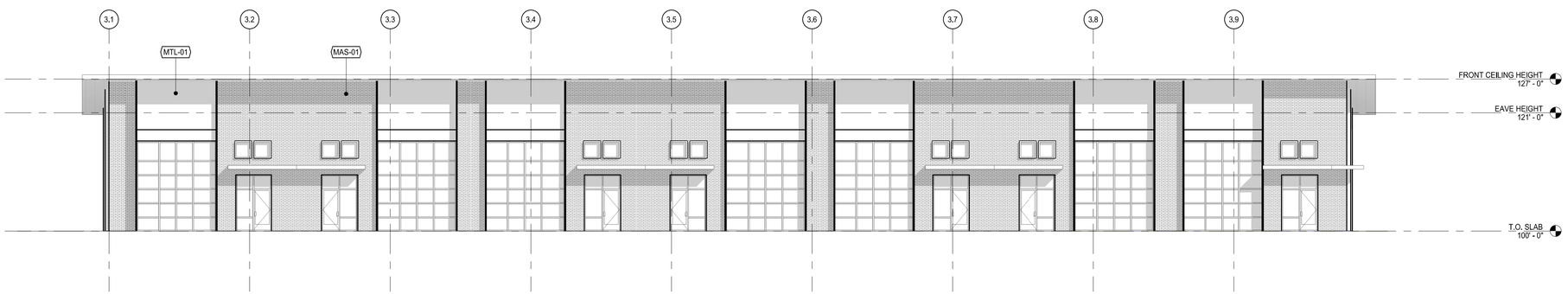
4 EXTERIOR ELEVATION PLAN EAST
3/32" = 1'-0"



3 EXTERIOR ELEVATION PLAN WEST
3/32" = 1'-0"



2 EXTERIOR ELEVATION PLAN NORTH
3/32" = 1'-0"

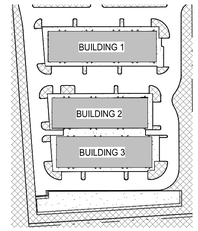


1 EXTERIOR ELEVATION PLAN SOUTH
3/32" = 1'-0"

GENERAL NOTES - EXTERIOR ELEVATIONS

1	REFER TO SHEET A8.51 FOR EXTERIOR FINISH SCHEDULE
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

KEY PLAN



MATERIAL KEY

MTL 01 - METAL SIDING

MAS 01 - MASONRY BRICK

mpa architecture & interiors
merriman pitt anderson
208 WEST 4TH STREET
STE #3A
AUSTIN, TX 78701
512.472.1111
www.mpaustin.com

REGISTERED ARCHITECT
ROBERT B. PITT
17809
STATE OF TEXAS

7/22/2025

JLL ARROWPOINT FLEXWAREHOUSE
SCHEMATIC DESIGN
PARCEL R413089, FM 1431, CEDAR PARK, TX 78613

© 2025 MERRIMAN PITT / ANDERSON, INC.

ISSUE		
REV #	DATE	ISSUANCE

PROJECT NUMBER:
24-091

ORIGINAL ISSUE DATE:
########

SHEET NAME:
OVERALL EXTERIOR ELEVATIONS - BLDG 3

SHEET:
A3.03