



LONE STAR LANDING PHASE 1 CONTRIBUTING ZONE PLAN

Submitted to:

**Texas Commission on Environmental Quality
Region 11 Field Office (Austin)
12100 Park 35 Circle, Bldg. A, Rm 179
Austin TX 78753**

Submitted by / Agent:

**Eli Engineering, PLLC
700 Theresa Cove
Cedar Park, TX 78613
Office: (512) 658-8095
Attn: Gary Eli Jones, P.E.**

Owner / Applicant:

**LONE STAR LANDING TEXAS, LLC
3320 PRENTISS LANE
LEANDER, TX 78641
Voice: 512-761-8025
Attn: Mr. Mallik Gillakatulla**



A handwritten signature in black ink, appearing to read "Gary Eli Jones", written over the right side of the professional engineer seal.

2/17/2024

Registration No. F-17877

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.

1. Regulated Entity Name: Lone Star Landing Phase 1				2. Regulated Entity No.:					
3. Customer Name: Texas Lone Star Landing, LLC				4. Customer No.:					
5. Project Type: (Please circle/check one)	<input checked="" type="radio"/> New	Modification		Extension		Exception			
6. Plan Type: (Please circle/check one)	<input type="radio"/> WPAP	<input checked="" type="radio"/> CZP	<input type="checkbox"/> SCS	<input type="checkbox"/> UST	<input type="checkbox"/> AST	<input type="checkbox"/> EXP	<input type="checkbox"/> EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	<input checked="" type="radio"/> Residential		Non-residential		8. Site (acres):		15.366 Ac		
9. Application Fee:	\$4,000		10. Permanent BMP(s):			<Batch Detention			
11. SCS (Linear Ft.):	N/A		12. AST/UST (No. Tanks):			N/A			
13. County:	Williamson		14. Watersheds:			Brushy Creek			

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.

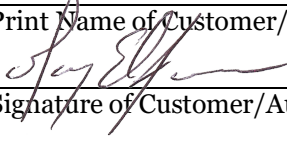
Austin Region			
County:	Hays	Travis	Williamson
Original (1 req.)	—	—	—
Region (1 req.)	—	—	—
County(ies)	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input checked="" type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)	—	—	—	—	—
Region (1 req.)	—	—	—	—	—
County(ies)	—	—	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Trinity-Glen Rose	<input type="checkbox"/> Edwards Aquifer Authority	<input type="checkbox"/> Kinney	<input type="checkbox"/> EAA <input type="checkbox"/> Medina	<input type="checkbox"/> EAA <input type="checkbox"/> Uvalde
City(ies) Jurisdiction	<input type="checkbox"/> Castle Hills <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Helotes <input type="checkbox"/> Hill Country Village <input type="checkbox"/> Hollywood Park <input type="checkbox"/> San Antonio (SAWS) <input type="checkbox"/> Shavano Park	<input type="checkbox"/> Bulverde <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Garden Ridge <input type="checkbox"/> New Braunfels <input type="checkbox"/> Schertz	NA	<input type="checkbox"/> 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.

Gary Eli Jones, P.E.

Print Name of Customer/Authorized Agent



2/17/2024

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: Gary Eli Jones, P.E.

Date: 2/17/2024

Signature of Customer/Agent:



Regulated Entity Name: Lone Star Landing Phase 1

Project Information

1. County: Williamson
2. Stream Basin: Brushy Creek
3. Groundwater Conservation District (if applicable): N/A
4. Customer (Applicant):

Contact Person: Mallik Gilakatulla

Entity: Lone Star Landing Texas, LLC

Mailing Address: 3220 Prentiss Lane

City, State: Leander, TX

Telephone: 512-761-8025

Email Address: mallik246@gmail.com

Zip: 78641

Fax: N/A

5. Agent/Representative (If any):

Contact Person: Gary Eli Jones, P.E.

Entity: Eli Engineeing, PLLC

Mailing Address: 700 Theresa Cove

City, State: Cedar Park, TX

Zip: 78613

Telephone: 512-658-8095

Fax: N/A

Email Address: gejtexas@gmail.com

6. Project Location:

- The project site is located inside the city limits of Leander.
- 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.

800 CR 177, Leander, TX 78641

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: 48
- Residential: # of Living Unit Equivalents: _____
- Commercial
- Industrial
- Other: _____

13. Total project area (size of site): 15.366 Acres

Total disturbed area: 15.366 Acres

14. Estimated projected population: 48 Single Family homes

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

Table 1 - Impervious Cover

<i>Impervious Cover of Proposed Project</i>	<i>Sq. Ft.</i>	<i>Sq. Ft./Acre</i>	<i>Acres</i>
Structures/Rooftops	168000	÷ 43,560 =	3.86
Parking		÷ 43,560 =	
Other paved surfaces	91960	÷ 43,560 =	2.11
Total Impervious Cover	259,960	÷ 43,560 =	5.97

Total Impervious Cover 5.97 ÷ Total Acreage 15.366 X 100 = 39% 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.

$L \times W = \text{_____ Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} = \text{_____ acres.}$

21. Pavement Area:

Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

$L \times W = \text{_____ Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} = \text{_____ acres.}$

Pavement area _____ acres \div R.O.W. area _____ acres $\times 100 = \text{_____ \%}$ 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 Leander (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

<i>AST Number</i>	<i>Size (Gallons)</i>	<i>Substance to be Stored</i>	<i>Tank Material</i>
1			
2			
3			
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

<i>Length (L)(Ft.)</i>	<i>Width(W)(Ft.)</i>	<i>Height (H)(Ft.)</i>	<i>L x W x H = (Ft3)</i>	<i>Gallons</i>

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" = 50'.
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 FIRM Map / Map Service Center / 48491C0460F Eff. 12/20/2019.
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

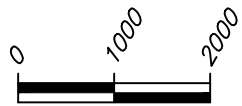
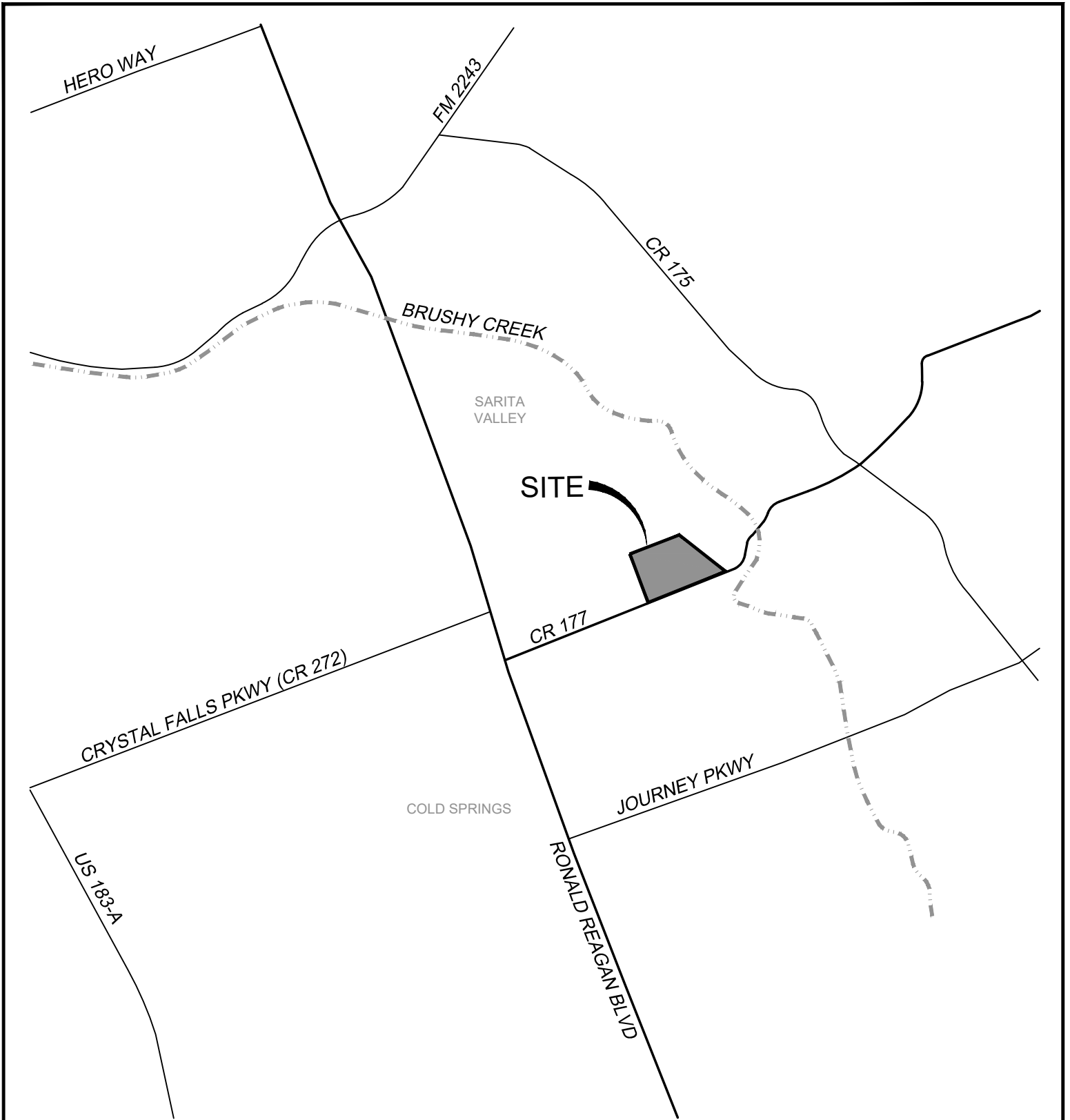
Responsibility for Maintenance of Permanent BMPs and Measures after Construction is Complete.

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

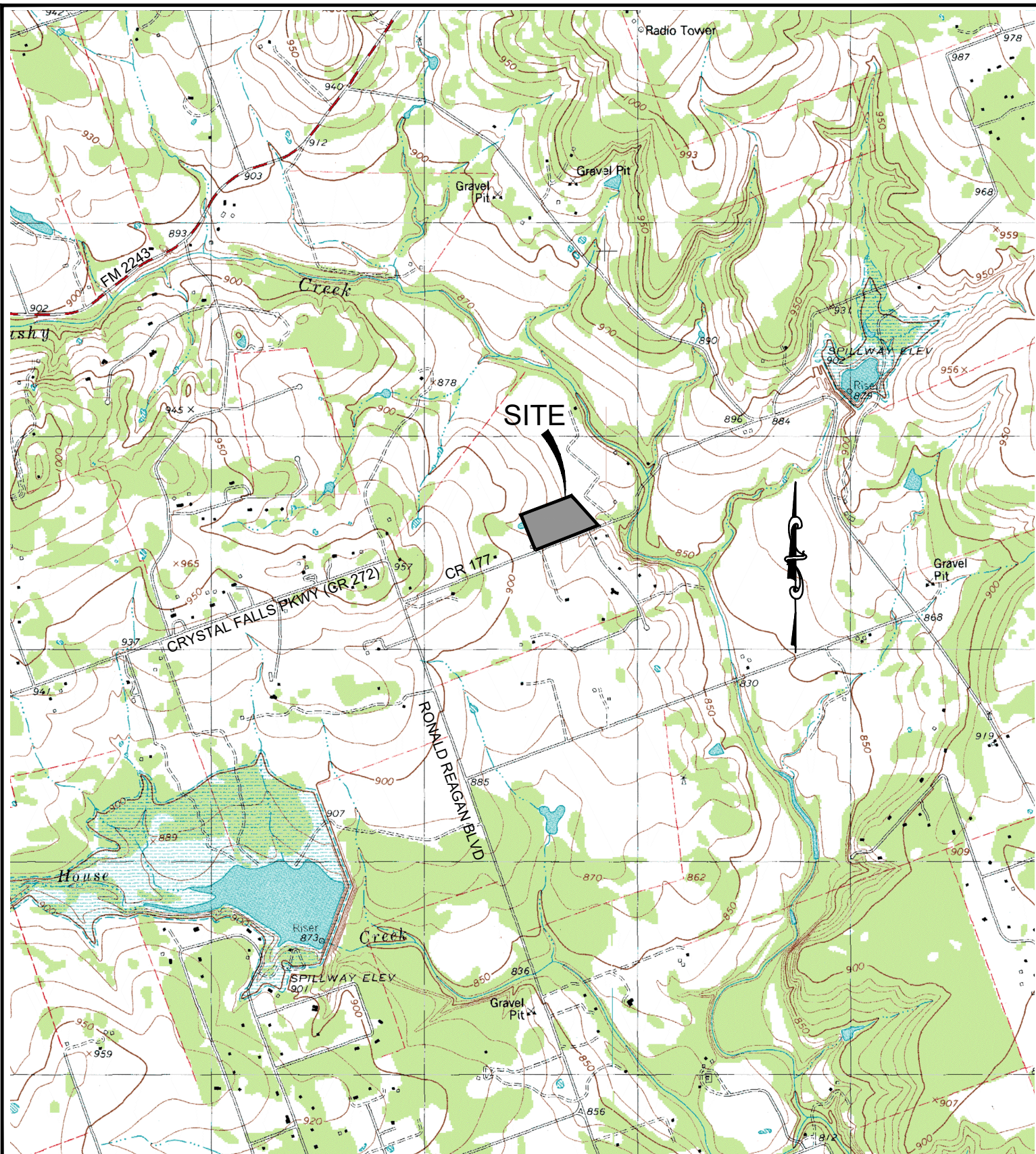
- 61. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.
- 62. Any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




(SCALE IN FEET)
SCALE: 1"=2000



ATTACHMENT 'A' ROAD MAP	LONE STAR LANDING PHASE 1	SHEET 1 of 1	
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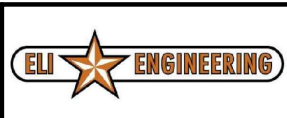


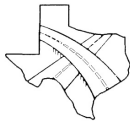

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 SCALE: 1"=2000

ATTACHMENT 'B'
USGS QUAD MAP

LONE STAR LANDING
PHASE 1

SHEET
1 of 1





April 8, 2024

Texas Commission on Environmental Quality
 Region 11 Field Office (Austin)
 2800 S. IH 35, Suite 100
 Austin, Texas 78704

**Re: Lone Star Landing Phase 1 Subdivision
 Contributing Zone Permit
 Attachment C-Project Narrative**

To Whom It May Concern:

The application for the Contributing Zone Permit for this project located on the north side of CR 177 in Leander, Tx, west and upstream of Brushy Creek. The project includes 48 single family lots that are a minimum of 9000 SF each. The project is in the city limits of Leander, TX. There is 15.366 acres included in the subdivision consisting of the following:

<u>Description</u>	<u>Lots</u>	<u>Area (Ac)</u>
Single Family Lots (9000 SF Min)	48	10.58
Open Space / HOA Lots	4	2.11
ROW		2.68
Totals	52	15.37

Impervious cover for the entire project is summarized in the chart below.

Table 1 - Impervious Cover

<i>Impervious Cover of Proposed Project</i>	<i>Sq. Ft.</i>	<i>Sq. Ft./Acre</i>	<i>Acres</i>
Structures/Rooftops	168000	÷ 43,560 =	3.86
Parking		÷ 43,560 =	
Other paved surfaces	91960	÷ 43,560 =	2.11
Total Impervious Cover	259,960	÷ 43,560 =	5.97

The project has an upgradient drainage area of 36.5 acres that is conveyed through the property and bypassing the proposed batch detention pond. There is also an onsite area of 1.31 acres on the eastern boundary that will be released untreated to the adjacent property. This area will be the back side of the houses that fall away from the collection system in the roadway. The impervious cover accounted for in this area is compensated for in the proposed pond. There is a proposed stormwater collection system in the subdivision that will collect the site drainage and convey to a proposed batch detention pond in the SE corner of the property. The outlet for the pond will discharge just upstream of the FEMA Floodplain that is part of the Brushy Creek watershed. The project

includes water and wastewater lines to serve the subdivision which will all be dedicated to the City of Leander for maintenance. Temporary erosion control is included in the plan during construction. The SWPPP will be included in the construction phase with the required inspections until permanent vegetation is established. The project requires a total of 27,908 CF of water quality storage for the proposed Batch Detention pond. Calculations for the project are included in this report as well as the full construction plans.

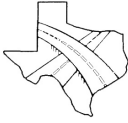
On Sheet 24 of 52 in the Construction Plan set, we have included an exhibit showing the initial Phase 1 limits of construction to be 4.48 acres. The streets, utilities, batch detention pond will all be construction initially. The lot grading will be done with the home construction after the pond is constructed and in place. Therefore a settling pond is not required for the project.

If you have any questions or need further assistance, please call me at 512-658-8095.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary Eli Jones", with a long horizontal flourish extending to the right.

Gary Eli Jones, P.E.
Authorized Agent



Firm # 17877

February 17, 2024

Texas Commission on Environmental Quality
Region 11 Field Office (Austin)
2800 S. IH 35, Suite 100
Austin, Texas 78704

**Re: Lone Star Landing Phase 1
Contributing Zone Permit
Attachment D-Factors Affecting Surface Water Quality**

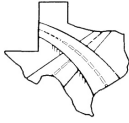
To Whom It May Concern:

Factors which could affect the quality of surface water and groundwater are the parking and use of motor vehicles on the streets and homes on the site. This includes the emission of certain hydrocarbon based substances as well as the tracking of silt. Also, the maintenance of irrigated areas could affect the quality of surface and groundwater through runoff of chemical fertilizers or pesticides.

If you have any questions or need further assistance, please call me at 512-658-8095.

Sincerely,

Gary Eli Jones, P.E.
Authorized Agent



February 18, 2024

Texas Commission on Environmental Quality
 Region 11 Field Office (Austin)
 2800 S. IH 35, Suite 100
 Austin, Texas 78704

**Re: Lone Star Ranch Phase 1
 Contributing Zone Permit
 Attachment E-Volume and Character of Stormwater**

To Whom It May Concern:

The 36.5 acre offsite area will be conveyed through the property via a series of box culverts and channels. The volume of offsite conveyance which bypasses the proposed Batch Detention pond is summarized as follows:

Drainage Area	EXISTING		IMPERVIOUS			GRASS		
	Total Area (Ac)	Total Area (sf)	Area Impervious (sf)	Area Impervious (Ac)	Area Impervious (%)	Area Grass (sf)	Area Grass (Ac)	Area Grass (%)
OFFSITE	36.48	1,589,069	0	0.00	0.0%	1,589,069	36.48	100.0%

	Existing Conditions			
	2yr	10yr	25yr	100yr
OFFSITE	64.28	116.83	155.92	225.89

The onsite drainage conveyed to the batch pond will include 13.22 acres and the bypass area is 2.16 acres. The existing and proposed summary of the onsite drainage is summarized below:

Drainage Basin Characteristics - Existing Conditions								
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
EX DA-1	15.37	0.0%	65	16.07	18.04	49.55	74.00	119.20

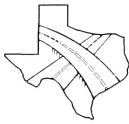
Drainage Basin Characteristics - Proposed Conditions								
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
PR DA-1	13.22	43.68%	65	5.00	42.28	76.95	102.50	148.32
PR DA 2	2.16	9.35%	65	5.00	4.85	11.60	16.70	26.14
AP-1	ANALYSIS POINT				17.29	46.72	72.16	118.51

The proposed pond mitigates peak flow rates for the 2, 10, 25 and 100 year storm events. As required, the batch detention system will detain the water quality volume for a 12-hour period from when rain is detected before the valve is opened to release the remaining storm water in the pond within 48 hours. The proposed 6-inch line drains the 28,000 CF of WQ volume in just over 5 hours (5.34 calculated).

If you have any questions or need further assistance, please contact me at 512-658-8095.

A handwritten signature in black ink, appearing to read "Gary Eli Jones". The signature is fluid and cursive, with a long horizontal stroke at the end.

Gary Eli Jones, P.E.
Authorized Agent



Firm # 17877

February 18, 2024

Texas Commission on Environmental Quality
Region 11 Field Office (Austin)
2800 S. IH 35, Suite 100
Austin, Texas 78704

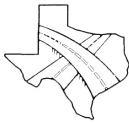
**Re: Lone Star Landing Phase 1
Contributing Zone Permit
Attachment J-BMPs for Upgradient Stormwater**

To Whom It May Concern:

The drainage areas upstream of the project will be conveyed through the property via a series of box culverts and channels to the SE corner of the property just upstream of the Brushy Creek floodplain. The upstream area draining through the property is 36.5 acres which results in peak flow rates of 156 cfs for the 25 year storm and 226 cfs for the 100 year storm. There are no BMP's proposed for the upstream drainage area. The entire area will bypass the proposed batch detention pond.

If you have any questions or need further assistance, please contact me at 512-658-8095.

Gary Eli Jones, P.E.
Authorized Agent



February 18, 2024

Texas Commission on Environmental Quality
 Region 11 Field Office (Austin)
 2800 S. IH 35, Suite 100
 Austin, Texas 78704

**Re: Lone Star Landing Phase 1
 Contributing Zone Permit
 Attachment K-BMPs for On-site Stormwater**

To Whom It May Concern:

The proposed BMP for this project is a batch detention pond in the lower southeast corner of the property just upstream of the FEMA 100 year floodplain. The total project area is 15.37 acres with 5.97 acres of impervious cover. The impervious cover calculations are shown below for reference. Per RG-348, 3500 SF of impervious cover per lot less than 10,000 SF was used for the single family lots.

IC CALCULATIONS FYI				TOTAL
				IC
48 SF Lots<10,000 SF	3500	168000		
Streets	2420	72600		
Sidewalks	2420	19360		
		259960		5.97

BYPASS IC CALCS				TOTAL
LOT 8,BLK A	50%	3500	1750	
Lot 8, Blk D	25%	3500	875	
Lot 9, Blk D	50%	3500	1750	
Lot 10, Blk D	50%	3500	1750	
Lot 11, Blk D	50%	3500	1750	
Lot 12, Blk D	75%	3500	2625	
Total IC Bypass:			10500	0.24
Total Area Bypass				2.15

The project also has a 2.15 acre drainage area that will drain to the eastern property line and bypass the BMP. This is basically the back of the lots. The front of the lot will be graded to the street. The impervious cover calculations for the bypass area is shown above. Although there is some benefit the back yards will provide via vegetative buffer, it is hard to predict what homeowners will do, therefore, the bypass area is being compensated for in the batch detention pond. The total drainage area to the batch detention pond is 13.22 acres with 5,73 acres of impervious cover. The entire 5196 lbs of TSS removal calculated for the project is used as the Desired Lm for the pond volume calculations.

The total capture volume required for the BMP is 27,906 CF of storage. The proposed pond provides 28,000 CF of storage. Calculations for reference are attached and included in the Construction Plan set.

If you have any questions or need further assistance, please contact me at 512-658-8095.

A handwritten signature in black ink, appearing to read "Gary Eli Jones". The signature is fluid and cursive, with a long horizontal stroke at the end.

2/18/2024

Gary Eli Jones, P.E.
Authorized Agent



Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.

Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.

Characters shown in red are data entry fields.

Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:

L_M TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County = **Williamson**
Total project area included in plan = **15.37** acres
Predevelopment impervious area within the limits of the plan = **0.00** acres
Total post-development impervious area within the limits of the plan = **5.97** acres
Total post-development impervious cover fraction = **0.39**
P = **32** inches

L_M TOTAL PROJECT = **5196** lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = **1**

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = **1** "PR DA-1"

Total drainage basin/outfall area = **13.22** acres
Predevelopment impervious area within drainage basin/outfall area = **0.00** acres
Post-development impervious area within drainage basin/outfall area = **5.73** acres
Post-development impervious fraction within drainage basin/outfall area = **0.43**
 L_M THIS BASIN = **4987** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**
Removal efficiency = **91** percent

IC CALCULATIONS FYI			TOTAL
		IC	IC
48 SF Lots<10,000 SF	3500	168000	
Streets	2420	72600	
Sidewalks	2420	19360	
		259960	5.97

BYPASS IC CALCS

		TOTAL	
LOT 8, BLK A	50%	3500	1750
Lot 8, Blk D	25%	3500	875
Lot 9, Blk D	50%	3500	1750
Lot 10, Blk D	50%	3500	1750
Lot 11, Blk D	50%	3500	1750
Lot 12, Blk D	75%	3500	2625
Total IC Bypass:		10500	0.24
Total Area Bypass			2.15

- Aqualogic Cartridge Filter
- Bioretention
- Contech StormFilter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (BMP \text{ efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where:

A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **13.22** acres
 A_i = **5.73** acres
 A_p = **7.49** acres
 L_R = **5891** lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired L_M THIS BASIN = **5196** lbs.

F = **0.88**

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = **1.50** inches
Post Development Runoff Coefficient = **0.32**
On-site Water Quality Volume = **23257** cubic feet

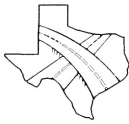
Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = **0.00** acres
Off-site Impervious cover draining to BMP = **0.00** acres
Impervious fraction of off-site area = **0**
Off-site Runoff Coefficient = **0.00**
Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **4651** cubic feet
Total Capture Volume (required water quality volume(s) x 1.20) = **27908** cubic feet



2/18/2024



Firm # 17877

February 18, 2024

Texas Commission on Environmental Quality
Region 11 Field Office (Austin)
2800 S. IH 35, Suite 100
Austin, Texas 78704

**Re: Lone Star Landing Phase 1
Contributing Zone Permit
Attachment M-Construction Plans**

To Whom It May Concern:

Construction plans and design calculations for the proposed subdivision 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 subdivision are attached and include: TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

If you have any questions or need further assistance, please contact me at 512-658-8095.

Gary Eli Jones, P.E.
Authorized Agent

LONE STAR LANDING

PHASE ONE

PUBLIC IMPROVEMENT CONSTRUCTION PLANS

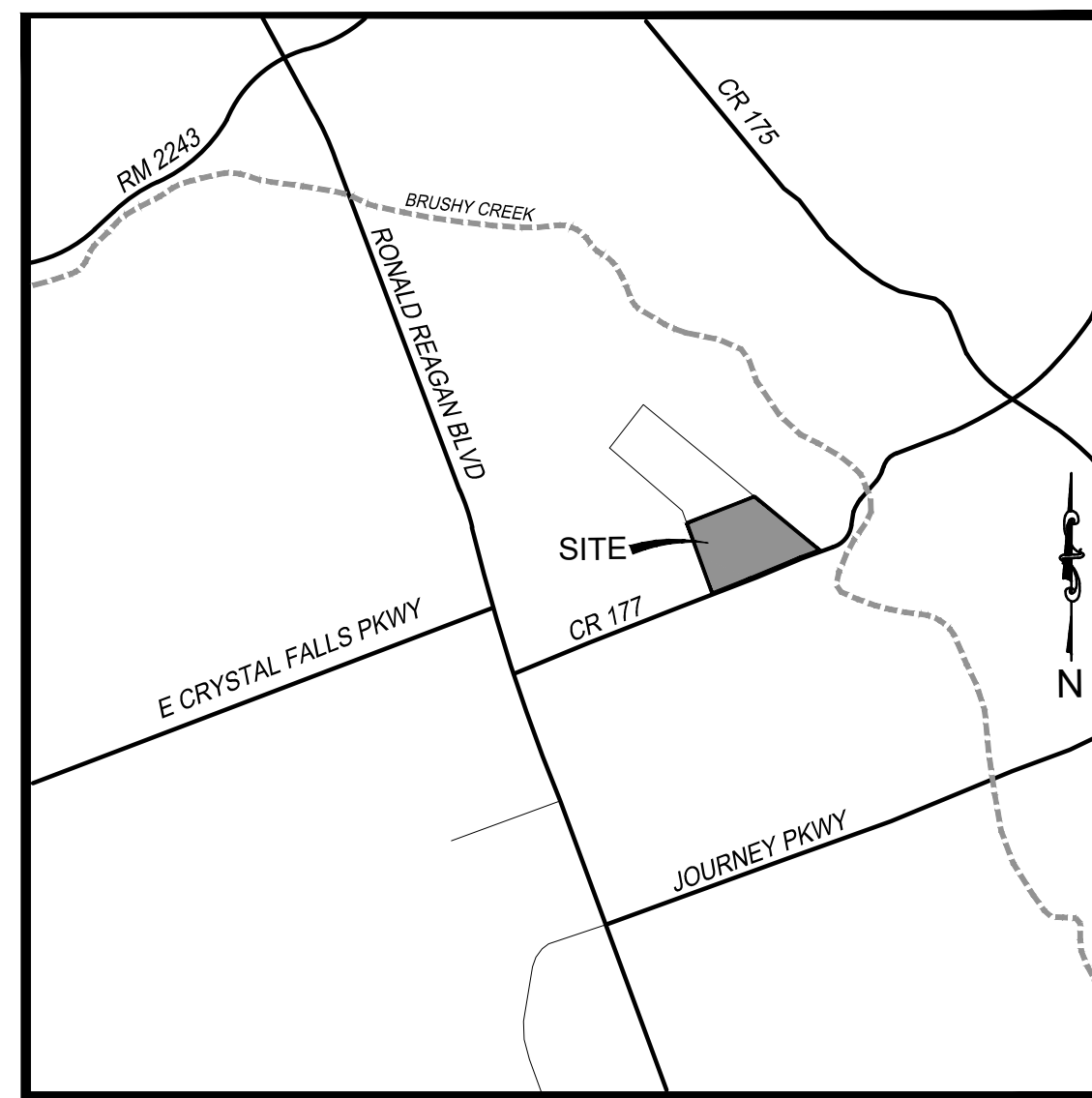
**COUNTY ROAD 177
WILLIAMSON COUNTY, TEXAS**

PROJECT NO. PICP-24-113

FILING DATE: __-__-2024

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1. COVER SHEET
2. GENERAL NOTES (1 OF 2)
3. GENERAL NOTES (2 OF 2)
4. FINAL PLAT (1 OF 2)
5. FINAL PLAT (2 OF 2)
6. OVERALL PRELIMINARY PLAT
7. APPROVED PHASING PLAN
8. EXISTING CONDITIONS & DEMOLITION PLAN
9. EROSION & SEDIMENTATION CONTROL AND TREE PROTECTION PLAN
10. VALLEY VIEW DRIVE - STA 0+00 TO END
11. SUZANNE KIMBERLY WAY - STA 0+00 TO END
12. CASSIDIE NICOLE DRIVE - STA 0+00 TO END
13. OFFSITE DRAINAGE PLAN AND CALCULATIONS
14. PROPOSED DRAINAGE AREA MAP
15. OVERALL STORM SEWER PLAN
16. STORM SEWER LINE A - STA 0+00 TO END
17. STORM SEWER LINE B - STA 0+00 TO END
18. CULVERT AND SWALE PLAN AND PROFILE (1 OF 3)
19. CULVERT AND SWALE PLAN AND PROFILE (2 OF 3)
20. CULVERT AND SWALE PLAN AND PROFILE (3 OF 3)
21. PROPOSED POND PLAN
22. PROPOSED POND PRE POST
23. STORM SEWER CALCULATIONS
24. WATER QUALITY CALCULATIONS
25. WATER QUALITY DETAILS
26. OVERALL WATER DISTRIBUTION PLAN
27. WATERLINE B - STA 0+00 TO END
28. WATERLINE C - STA 0+00 TO END
29. OVERALL WASTEWATER COLLECTION PLAN
30. WASTEWATER LINE 1 - STA 0+00 TO END
31. WASTEWATER LINE 2, 3 & 4 - STA 0+00 TO END
32. SIGNAGE, STRIPING AND SIDEWALK PLAN
33. LANDSCAPE PLAN
34. STREETLIGHTING PLAN - 1.0 ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS
35. STREETLIGHTING PLAN - 1.1 ELECTRICAL SPECIFICATIONS
36. STREETLIGHTING PLAN - 2.0 ELECTRICAL SITE LIGHTING PLAN
37. STREETLIGHTING PLAN - 3.0 ELECTRICAL SITE PHOTOMETRICS PLAN
38. STREETLIGHTING PLAN - 4.0 ELECTRICAL SCHEDULES AND DETAILS
39. STREETLIGHTING PLAN - 5.0 RESIDENTIAL ROADWAY LIGHTING STANDARDS
40. STREETLIGHTING PLAN - 5.1 RESIDENTIAL ROADWAY LIGHTING STANDARDS
41. STREETLIGHTING PLAN - 5.2 RESIDENTIAL ROADWAY LIGHTING STANDARDS
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43. CONSTRUCTION DETAILS (1 OF 10)
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49. CONSTRUCTION DETAILS (7 OF 10)
50. CONSTRUCTION DETAILS (8 OF 10)
51. CONSTRUCTION DETAILS (9 OF 10)
52. CONSTRUCTION DETAILS (10 OF 10)



LOCATION MAP
SCALE: 1"=2000'

CONTACTS & UTILITIES

<p>ENGINEER AND AGENT ELI ENGINEERING, P.L.L.C. 700 THERESA COVE CEDAR PARK, TEXAS 78613 CONTACT: GARY ELI JONES, P.E. 512-918-0819 F:512-532-0560 gejtexas@gmail.com</p>	<p>SURVEYOR ABRAM C. DASHNER, R.P.L.S. NO. 5901 6448 HWY 290 EAST, SUITE B-105 AUSTIN, TX 78723 512-244-3395 TBPELS FIRM NO. 10194754</p>
<p>APPLICANT / OWNER TEXAS LONE STAR LANDING, L.L.C. 3320 PRENTISS LANE LEANDER, TEXAS 78641 CONTACT: MALLIKARJUN GILAKATTULA 512-761-8025 mallik246@gmail.com</p>	<p>WATER CITY OF LEANDER 607 MUNICIPAL DRIVE LEANDER, TEXAS 78641 PHONE: 512-259-2640</p>
<p>ELECTRIC PEDERNALES ELECTRIC COOPERATIVE 1949 WEST WHITESTONE BLVD. CEDAR PARK, TEXAS 78613 888-554-4732</p>	<p>WASTEWATER CITY OF LEANDER 607 MUNICIPAL DRIVE LEANDER, TEXAS 78641 PHONE: 512-259-2640</p>
	<p>TELEPHONE AT&T 208 SOUTH ACKARD STREET DALLAS, TEXAS 75202 888-333-6651 CONTACT: _____</p>

* ESTIMATED FROM SERVICE AREA MAPS; THE CONTRACTOR IS ENTIRELY RESPONSIBLE FOR PROPER UTILITY NOTIFICATION OF CONSTRUCTION ACTIVITIES AND CALLING FOR "LOCATES" OF EXISTING UTILITIES WITH EACH ACTUAL UTILITY COMPANY; REGARDLESS OF WHAT IS SHOWN ON THIS SHEET OR IN THESE PLANS. NOT ALL UTILITIES PARTICIPATE IN THE TEXAS EXCAVATION SAFETY SYSTEM. CONTRACTOR TO DO HIS OWN SUB-SURFACE UTILITY RESEARCH PRIOR TO ANY CONSTRUCTION ACTIVITY.

NOTES:

1. A PORTION OF THIS DEVELOPMENT LIES WITHIN ZONE "AE" AND IS WITHIN THE 0.2% ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FEMA PANEL 48491C0460F, DATED DECEMBER 20TH, 2019.
2. THIS PROJECT LIES WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE. THIS PROJECT DOES NOT LIE WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
3. ALL EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE PROPERTY OWNER AND HIS OR HER ASSIGNS.
4. ALL UTILITY LINES MUST BE LOCATED UNDERGROUND.

ROBIN M. GRIFFIN, AICP, EXECUTIVE DIRECTOR OF DEVELOPMENT SERVICES	DATE
EMILY TRUMAN, P.E., CFM, CITY ENGINEER	DATE
GINA ELLISON, P.E., PUBLIC WORKS DIRECTOR	DATE
MARK TUMMONS, CPRP, DIRECTOR OF PARKS AND RECREATION	DATE
CHIEF JOSHUA DAVIS, FIRE MARSHAL	DATE

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

THAT I, GARY ELI JONES, DO HEREBY CERTIFY THAT THE INFORMATION ON THIS PLAN COMPLIES WITH CITY OF LEANDER SUBDIVISION ORDINANCE ARTICLE II, SECTION 21 AND THE DESIGN AND CONSTRUCTION STANDARDS ADOPTED BY THE CITY OF LEANDER, TEXAS.

GARY ELI JONES, P.E.
LICENSED PROFESSIONAL ENGINEER
ELI ENGINEERING, PLLC, FIRM #: F-17877
700 THERESA COVE
CEDAR PARK, TEXAS 78613

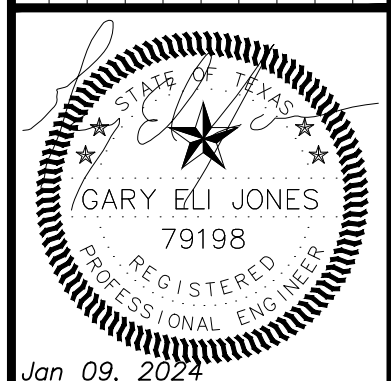


THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY, REGULATORY COMPLIANCE, AND ADEQUACY OF THESE PLANS AND/OR SPECIFICATIONS WHETHER OR NOT THE PLANS AND/OR SPECIFICATIONS WERE REVIEWED BY THE CITY ENGINEER(S)

ALL EASEMENTS OF RECORD ARE SHOWN OR NOTED ON THE PLAT AS FOUND ON THE TITLE POLICY OR DISCOVERED WITH A TITLE SEARCH PREPARED FOR THE MOST RECENT PURCHASE OF PROPERTY.

ABRAM C. DASHNER, R.P.L.S. NO. 5901
6448 E HWY 290, SUITE B-105
AUSTIN, TEXAS 78723

REVISION NUMBER	DATE	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET NO.'S	TOTAL # SHEETS IN PLAN SET	APPROVAL - DATE



ELI ENGINEERING
ELI ENGINEERING, PLLC.
700 THERESA COVE, CEDAR PARK, TX 78613
512-918-0819 (F) 512-532-0560

LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
COVER SHEET

DRAWING SCALE:	HORIZ. #	VERT. #	EEL
SURVEYED:	RR	RR	JTC
FILE NAME:	RR	JTC	EEL
DATE:	RR	JTC	EEL
DRAWN:	RR	JTC	EEL
DESIGNED:	RR	JTC	EEL

SHEET
1
OF
52

GENERAL NOTES FOR SUBDIVISIONS AND SITE DEVELOPMENT PLANS

REVISED March 27, 2023

CITY CONTACTS:
 ENGINEERING MAIN LINE: 512-528-2721
 PLANNING DEPARTMENT: 512-528-2750
 PUBLIC WORKS MAIN LINE: 512-259-2640
 STORMWATER INSPECTIONS: 512-285-0055
 UTILITIES MAIN LINE: 512-259-1142
 UTILITIES ON-CALL: 512-690-4760

GENERAL:

- CONTRACTORS SHALL HAVE AN APPROVED SET OF PLANS WITH APPROVED REVISIONS ON SITE AT ALL TIMES. FAILURE TO HAVE APPROVED PLANS ON SITE MAY RESULT IN ISSUANCE OF WORK STOPPAGE.
- CONTACT 811 SYSTEM FOR EXISTING WATER AND WASTEWATER LOCATIONS 48 HOURS PRIOR TO CONSTRUCTION.
 - REFRESH ALL LOCATES BEFORE 14 DAYS** – LOCATE REFRESH REQUESTS **MUST INCLUDE A COPY OF YOUR 811 TICKET**. TEXAS PIPELINE DAMAGE PREVENTION LAWS REQUIRE THAT A LOCATE REFRESH REQUEST BE SUBMITTED BEFORE 14 DAYS, OR IF LOCATION MARKERS ARE NO LONGER VISIBLE.
 - REPORT PIPELINE DAMAGE IMMEDIATELY** – IF YOU WITNESS OR EXPERIENCE PIPELINE EXCAVATION DAMAGE, PLEASE CONTACT THE CITY OF LEANDER BY PHONE AT 512-259-2640.
- THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR 48 HOURS BEFORE:
 - BEGINNING EACH PHASE OF CONSTRUCTION. CONTACT ASSIGNED CITY INSPECTOR.
 - ANY TESTING. CONTRACTOR SHALL PROVIDE QUALITY TESTING FOR ALL INFRASTRUCTURES TO BE ACCEPTED AND MAINTAINED BY THE CITY OF LEANDER AFTER COMPLETION.
 - PROOF ROLLING SUB-GRADE AND EVERY LIFT OF ROADWAY EMBANKMENT, IN-PLACE DENSITY TESTING OF EVERY BASE COURSE, AND ASPHALT CORES. ALL OF THIS TESTING MUST BE WITNESSED BY A CITY OF LEANDER REPRESENTATIVE.
 - CONNECTING TO THE EXISTING WATER LINES.
 - THE INSTALLATION OF ANY DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET ROW. THE METHOD OF PLACEMENT AND COMPACTION OF BACKFILL IN THE CITY'S ROW MUST BE APPROVED PRIOR TO THE START OF BACKFILL OPERATIONS.
- ALL RESPONSIBILITY FOR THE ACCURACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY MUST RELY ON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
- EXCESS SOIL SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE. NOTIFY THE CITY OF LEANDER IF THE DISPOSAL SITE IS INSIDE THE CITY'S JURISDICTIONAL BOUNDARIES.**
- BURNING IS PROHIBITED.
- NO WORK IS TO BE PERFORMED BETWEEN THE HOURS OF 9:00 P.M. AND 7:00 A.M. OR WEEKENDS. THE CITY INSPECTOR RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER ALL WORK PERFORMED WITHOUT INSPECTION.
- CONTACT THE CITY INSPECTOR 4 DAYS PRIOR TO WORK FOR APPROVAL TO SCHEDULE ANY INSPECTIONS ON WEEKENDS OR CITY HOLIDAYS.
- NO BLASTING IS ALLOWED.
- 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 SHALL USE REVISION CLOUDS TO HIGHLIGHT ALL REVISIONS AND CHANGES WITH EACH SUBMITTAL. REVISION TRIANGLE MARKERS AND NUMBERS SHALL BE USED TO MARK REVISIONS. ALL CLOUDS AND TRIANGLE MARKERS FROM PREVIOUS REVISIONS MUST BE REMOVED. REVISION INFORMATION SHALL BE UPDATED ON COVER SHEET AND AFFECTED PLAN SHEET TITLE BLOCK.
- THE CONTRACTOR AND ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF LEANDER ACCURATE "RECORD DRAWINGS" FOLLOWING THE COMPLETION OF ALL CONSTRUCTION. THESE "RECORD DRAWINGS" SHALL MEET THE SATISFACTION OF THE ENGINEERING DEPARTMENTS PRIOR TO FINAL ACCEPTANCE.
- THE CONTRACTOR WILL REIMBURSE THE CITY FOR ALL REPAIR AND/OR COST INCURRED AS A RESULT OF ANY DAMAGE TO ANY PUBLIC INFRASTRUCTURE WITHIN CITY EASEMENT OR PUBLIC RIGHT-OF-WAY, REGARDLESS OF THESE PLANS.
- WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT EASEMENTS. CLEANUP SHALL BE TO THE SATISFACTION OF THE ENGINEER OF RECORD AND CITY.
- CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS AND PROJECT ENGINEERING REFERENCE POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO THE PROPERTY OWNER.
- ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 1033 LA POSADA DR. SUITE 375, AUSTIN, TEXAS 78752-3832.
- ALL MANHOLE FRAMES/COVERS AND WATER VALVE/METER BOXES MUST BE ADJUSTED TO FINISHED GRADE AT THE OWNER'S EXPENSE BY THE CONTRACTOR FOR CITY CONSTRUCTION INSPECTOR INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING. CONTRACTOR SHALL BACKFILL AROUND MANHOLES AND VALVE BOXES WITH CLASS A CONCRETE.

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT WHERE NOT SPECIFICALLY COVERED IN THE PROJECT SPECIFICATIONS SHALL CONFORM TO ALL CITY OF LEANDER DETAILS AND CITY OF AUSTIN STANDARD SPECIFICATIONS.
- PROJECT SPECIFICATIONS TAKE PRECEDENCE OVER PLANS AND SPECIAL CONDITIONS GOVERN OVER TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR MUST OBTAIN A CONSTRUCTION WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY ALL WHO USE WATER.
- THE CONTRACTOR SHALL 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. THE CONTRACTOR WILL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE. THE CONTRACTOR SHALL KEEP THE SITE AREA CLEAN AND MAINTAINED AT ALL TIMES, TO THE SATISFACTION OF THE CITY. THE SUBDIVISION (OR SITE) WILL NOT BE ACCEPTED (OR CERTIFICATE OF OCCUPANCY ISSUED) UNTIL THE SITE HAS BEEN CLEANED TO THE SATISFACTION OF THE CITY.
- TREES IN EXISTING ROW SHOULD BE PROTECTED OR NOTED IN THE PLANS TO BE REMOVED.

CONSTRUCTION SEQUENCE NOTES

NOTE: BELOW IS GENERAL SEQUENCE OF CONSTRUCTION. THE ENGINEER OF RECORD SHALL UPDATE BELOW WITH NOTES SPECIFIC TO THE PROJECT.

- REACH OUT TO THE CITY FOR PRE-CONSTRUCTION MEETING AND CONSTRUCTION PERMIT.
- SET-UP E/S CONTROLS AND TREE PROTECTION AND REACH OUT TO CITY FOR INSPECTION.
- SET UP TEMPORARY TRAFFIC CONTROLS.
- CONSTRUCT THE DRAINAGE PONDS AND STORM WATER FEATURES.
- START UTILITY, ROAD, GRADING, FRANCHISE UTILITY AND ALL NECESSARY INFRASTRUCTURE CONSTRUCTION. [NOTE: PLEASE UPDATE AS PER THE PROJECT]
- REQUEST FINAL WALKTHROUGH AND CONDUCT WALKTHROUGH WITH ENGINEER OF RECORD AND CITY DEPARTMENT.
- ENGINEER OF RECORD IS RESPONSIBLE TO PREPARE AND SUBMIT CLOSEOUT DOCUMENTS FOR PROJECT CLOSEOUT.

EROSION CONTROL NOTES

- THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES AND SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
- THE TEMPORARY SPOILS DISPOSAL SITE IS TO BE SHOWN IN THE EROSION CONTROL MAP.
- ANY ON-SITE SPOILS DISPOSAL SHALL BE REMOVED PRIOR TO ACCEPTANCE UNLESS SPECIFICALLY SHOWN ON THE PLANS. **THE DEPTH OF SPOIL SHALL NOT EXCEED 10 FEET IN ANY AREA.**
- ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE RESTORED WITH A MINIMUM OF 6 INCHES OF TOPSOIL AND COMPOST BLEND. TOPSOIL ON SINGLE FAMILY LOTS MAY BE INSTALLED WITH HOME CONSTRUCTION. THE TOPSOIL AND COMPOST BLEND SHALL CONSIST OF 75% TOPSOIL AND 25% COMPOST.
- SEEDING FOR REESTABLISHING VEGETATION SHALL COMPLY WITH THE AUSTIN GROW GREEN GUIDE OR WILLIAMSON COUNTY'S PROTOCOL FOR SUSTAINABLE ROADSIDES (SPEC 164--WC001 SEEDING FOR EROSION CONTROL). RESEEDING VARIETIES OF BERMUDA SHALL NOT BE USED.
- STABILIZED CONSTRUCTION ENTRANCE IS REQUIRED AT ALL POINTS WHERE CONSTRUCTION TRAFFIC IS EXITING THE PROJECT ONTO EXISTING PAVEMENT. LINEAR CONSTRUCTION PROJECTS MAY REQUIRE SPECIAL CONSIDERATION. ROADWAYS SHALL REMAIN CLEAR OF SILT AND MUD.
- TEMPORARY STOP SIGNS SHOULD BE INSTALLED AT ALL CONSTRUCTION ENTRANCES WHERE A STOP CONDITION DOES NOT ALREADY EXIST.
- IN THE EVENT OF INCLEMENT WEATHER THAT MAY RESULT IN A FLOODING SITUATION, THE CONTRACTOR SHALL REMOVE INLET PROTECTION MEASURES UNTIL SUCH TIME AS THE WEATHER EVENT HAS PASSED.

WATER AND WASTEWATER NOTES

WATER AND WASTEWATER GENERAL NOTES

- ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AND ORGANIZATION ACCREDITED BY ANSI.
- ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY STAMPED AS FOLLOWS:

WATER SERVICE	"W" ON TOP OF CURB
WASTEWATER SERVICE	"S" ON TOP OF CURB
VALVE	"V" ON TOP OF CURB
- OPEN UTILITIES SHALL NOT BE PERMITTED ACROSS THE EXISTING PAVED SURFACES. WATER AND WASTEWATER LINES ACROSS THE EXISTING PAVED SURFACES SHALL BE BORED AND INSTALLED IN STEEL ENCASEMENT PIPES. BELL RESTRAINTS SHALL BE PROVIDED AT JOINTS.
- INTERIOR SURFACES OF ALL DUCTILE IRON POTABLE OR RECLAIMED WATER PIPE SHALL BE CEMENT-MORTAR LINED AND SEAL COATED AS REQUIRED BY AWWA C104.
- SAND, AS DESCRIBED IN AUSTIN SPECIFICATION ITEM 510 PIPE, SHALL NOT BE USED AS BEDDING FOR WATER AND WASTEWATER LINES. ACCEPTABLE BEDDING MATERIALS ARE PIPE BEDDING STONE, PEA GRAVEL AND IN LIEU OF SAND, A NATURALLY OCCURRING OR MANUFACTURED STONE MATERIAL CONFORMING TO ASTM C33 FOR STONE QUALITY AND MEETING THE FOLLOWING GRADATION SPECIFICATION:

SIEVE SIZE	PERCENT RETAINED BY WEIGHT
1/2"	0
3/8"	0-2
#4	40-85
#10	95-100

- DENSITY TESTING FOR TRENCH BACKFILL SHALL BE DONE IN MAXIMUM 12" LIFTS.

WATER

- SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY PERSONNEL. AT THE CONTRACTORS' REQUEST, AND IN HIS PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY OF LEANDER NOT LESS THAN 24 HOURS AFTER THE TREATED LINE HAS BEEN FLUSHED OF THE CONCENTRATED CHLORINE SOLUTION AND CHARGED WITH WATER APPROVED BY THE CITY.
- 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 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.
- THE CONTRACTOR IS HEREBY NOTIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING UTILITY LINES MAY HAVE TO OCCUR AT OFF-PEAK HOURS. SUCH HOURS ARE USUALLY OUTSIDE NORMAL WORKING HOURS AND POSSIBLY BETWEEN 12 AM AND 6 AM AFTER COORDINATING WITH CITY CONSTRUCTION INSPECTORS AND INFORMING AFFECTED PROPERTIES.
- PRESSURE TAPS OR HOT TAPS SHALL BE IN ACCORDANCE WITH CITY OF LEANDER STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION AND SHALL FURNISH, INSTALL AND AIR TEST THE SLEEVE AND VALVE. A CITY OF LEANDER INSPECTOR MUST BE PRESENT WHEN THE CONTRACTOR MAKES A TAP, AND/OR ASSOCIATED TESTS. A MINIMUM OF TWO (2) WORKING DAYS NOTICE IS REQUIRED. "SIZE ON SIZE" TAPS SHALL NOT BE PERMITTED UNLESS MADE BY THE USE OF AN APPROVED FULL-CIRCLE GASKETED TAPPING SLEEVE. CONCRETE THRUST BLOCKS SHALL BE PLACED BEHIND AND UNDER ALL TAP SLEEVES A MINIMUM OF 24 HOURS PRIOR TO THE BRANCH BEING PLACED INTO SERVICE. THRUST BLOCKS SHALL BE INSPECTED PRIOR TO BACKFILL.
- FIRE HYDRANTS ON MAINS UNDER CONSTRUCTION SHALL BE SECURELY WRAPPED WITH A BLACK POLY WRAP BAG AND TAPED INTO PLACE. THE POLY WRAP SHALL BE REMOVED WHEN THE MAINS ARE ACCEPTED AND PLACED INTO SERVICE.
- THRUST BLOCKS OR RESTRAINTS SHALL BE IN ACCORDANCE WITH THE CITY OF LEANDER STANDARD SPECIFICATIONS AND REQUIRED AT ALL FITTINGS PER DETAIL OR MANUFACTURER'S RECOMMENDATION. ALL FITTINGS SHALL HAVE BOTH THRUST BLOCKS AND RESTRAINTS.
- ALL DEAD END WATER MAINS SHALL HAVE "FIRE HYDRANT ASSEMBLY" OR "BLOW-OFF VALVE AND THRUST BLOCK" OR "BLOW-OFF VALVE AND THRUST RESTRAINTS". THRUST RESTRAINTS SHALL BE INSTALLED ON THE MINIMUM LAST THREE PIPE LENGTHS (STANDARD 20' LAYING LENGTH). ADDITIONALL THRUST RESTRAINTS MAY BE REQUIRED BASED UPON THE MANUFACTURERS RECOMMENDATION AND/OR ENGINEER'S DESIGN.

Texas Commission on Environmental Quality
 Water Pollution Abatement Plan
 General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director (ED), nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code (TAC), Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following listed "construction notes" restricts the powers of the ED, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, TAC, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the ED's approval, whether or not in contradiction of any "construction notes" is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, TAC § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following listed "construction notes" in no way represent an approved exception by the ED to any part of Title 30 TAC, Chapters 213 and 217, or any other TCEQ applicable regulation.

- A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
 - the name of the approved project;
 - the activity start date; and
 - the contact information of the prime contractor.
- All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.
- If any sensitive feature(s) (caves, solution cavity, sink hole, etc.) is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. Construction activities may not be resumed until the TCEQ has reviewed and approved the appropriate protective measures in order to protect any sensitive feature and the Edwards Aquifer from potentially adverse impacts to water quality.
- No temporary or permanent hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.
- 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 approved plans and 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.
- 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.
- Sediment must be removed from the sediment traps or sedimentation basins not later than when it occupies 50% of the basin's design capacity.
- Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.
- All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.
- 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.
- The following records shall 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.
- The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
 - any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
 - any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
 - any development of land previously identified as undeveloped in the original water pollution abatement 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
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THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

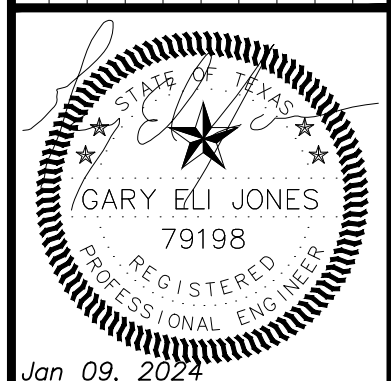
TCEQ-0562 (Rev. July 15, 2015)

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SEQUENCE OF CONSTRUCTION

- INSTALL ALL EROSION CONTROL.
- CONDUCT PRE-CONSTRUCTION CONFERENCE.
- ESTABLISH SUBGRADE ON PROJECT.
- INSTALL WASTEWATER UTILITIES.
- INSTALL WATERLINE UTILITIES.
- INSTALL STORMDRAIN.
- FINALIZE SUBGRADE.
- INSTALL BASE MATERIAL.
- INSTALL CURB AND GUTTER.
- FINALIZE BASE AND PRIME COAT.
- PAVE ROADS.
- REVEGETATE ALL DISTURBED AREAS.
- REMOVE TEMPORARY EROSION CONTROL SUBSEQUENT TO ESTABLISHMENT OF VEGETATION.

NO.	DATE	REVISION



Jan 09, 2024

TPBELS FIRM No. 17877

ELI ENGINEERING

ELI ENGINEERING, PLLC.
 700 THERESA COVE, CEDAR PARK, TX 78613
 512-810-0019 (F) 512-552-0560

elijones@gmail.com

LEANDER, TEXAS 78641 (CITY LIMITS)

LONE STAR LANDING PHASE ONE

SUBDIVISION IMPROVEMENTS

GENERAL NOTES (1 OF 2)

DRAWING SCALE:	HORIZ #	VERT #
SURVEYED:	RR	
FILE NAME:	JTC	
DATE:	EEL	
DRAWN:		
DESIGNED:		

SHEET

2

OF

52

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FINAL PLAT OF TEXAS LONE STAR LANDING SUBDIVISION

15.366 ACRES OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, WILLIAMSON COUNTY, TEXAS

OWNER'S CERTIFICATE:

STATE OF TEXAS
COUNTY OF WILLIAMSON

THAT TEXAS LONE STAR LANDING LLC, A TEXAS LIMITED LIABILITY COMPANY, BEING OWNER OF 15.366 ACRES IN THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF THAT CERTAIN 37.015 ACRE TRACT OF LAND RECORDED IN DOCUMENT NO. 2022036484, OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS DOES HEREBY CERTIFY THAT THERE ARE NO LIEN HOLDERS AND DEDICATES TO THE PUBLIC FOREVER USE OF ALL ADDITIONAL ROW, STREETS, ALLEYS, EASEMENTS, PARKS, AND ALL OTHER LANDS INTENDED FOR PUBLIC DEDICATION, OR WHEN THE SUBDIVIDER HAS MADE PROVISION FOR PERPETUAL MAINTENANCE THEREOF, TO THE INHABITANTS OF THE SUBDIVISION AS SHOWN HEREON TO BE KNOWN AS TEXAS LONE STAR LANDING SUBDIVISION.

WITNESS MY HAND THIS THE ____ DAY OF _____, 20____ A.D.

TEXAS LONE STAR LANDING, LLC A TEXAS LIMITED LIABILITY COMPANY

BY: MALLIKARJUNA GILAKATTULA, MANAGER
TEXAS LONE STAR LANDING, LLC
3220 PRENTISS LN
LEANDER, TX 78641

STATE OF TEXAS
COUNTY OF WILLIAMSON

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE,

ON THIS THE ____ DAY OF _____, 20____ PERSONALLY APPEARED, MALLIKARJUNA GILAKATTULA AS MANAGER, OF TEXAS LONE STAR LANDING LLC, A TEXAS LIMITED LIABILITY COMPANY, ON BEHALF OF SAID TEXAS LONE STAR LANDING LLC, A DULY AUTHORIZED AGENT WITH AUTHORITY TO SIGN SAID DOCUMENT, PERSONALLY KNOWN TO ME (AND PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE) TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT (S)HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE ON THIS THE ____ DAY OF _____, 20____ A.D.

NOTARY PUBLIC, STATE OF TEXAS

PRINTED NAME _____ MY COMMISSION EXPIRES _____

LIEN HOLDER'S CERTIFICATE:

THE STATE OF TEXAS
COUNTY OF _____

BY SIGNING THIS PLAT, FOR AND IN CONSIDERATION OF THE SUM OF TEN DOLLARS (\$10.00) AND OTHER GOOD AND VALUABLE CONSIDERATION, THE SUFFICIENCY AND RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, THE UNDERSIGNED HEREBY RELEASES THE RIGHTS-OF-WAY, STREETS, ALLEYS, EASEMENTS, PARKS, AND OTHER OPEN SPACES DEDICATED TO THE CITY OR TO PUBLIC USE SET FORTH ON THIS PLAT, FROM ANY DEED OF TRUST, VENDOR'S LIEN, OR OTHER TYPE OF LIEN OR NOTE ON THE PROPERTY OWNED BY THE LIEN HOLDER, INCLUDING BUT NOT LIMITED TO THE NOTE AND LIEN DESCRIBED IN THE INSTRUMENT ENTITLED SPECIAL WARRANTY DEED WITH VENDOR'S LIEN, DATED MARCH 21, 2022, FILED OF RECORD IN THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS AT DOCUMENT NO. 2022036484

GREAT CENTRAL MORTGAGE ACCEPTANCE COMPANY, LTD.

NAME: _____

TITLE: _____

THE STATE OF TEXAS
COUNTY OF _____

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS THE

____ DAY OF _____, 20____ PERSONALLY APPEARED,

____ AS _____ OF GREAT CENTRAL MORTGAGE ACCEPTANCE COMPANY, LTD., A TEXAS DOMESTIC LIMITED PARTNERSHIP, ON BEHALF OF SAID GREAT CENTRAL MORTGAGE ACCEPTANCE COMPANY, LTD., A DULY AUTHORIZED AGENT WITH AUTHORITY TO SIGN SAID DOCUMENT, PERSONALLY KNOWN TO ME (AND PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE) TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT (S)HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE ON THIS THE ____ DAY OF _____, 20____ A.D.

NOTARY PUBLIC, STATE OF TEXAS

PRINTED NAME _____ MY COMMISSION EXPIRES _____

PLAT NOTES:

- 1) THIS SUBDIVISION IS WHOLLY CONTAINED WITHIN THE CURRENT CORPORATE LIMITS OF THE CITY OF LEANDER, TEXAS.
- 2) NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO THE CITY OF LEANDER WATER DISTRIBUTION AND WASTEWATER COLLECTION FACILITIES.
- 3) A BUILDING PERMIT IS REQUIRED FROM THE CITY OF LEANDER PRIOR TO CONSTRUCTION OF ANY BUILDING OR SITE IMPROVEMENTS ON ANY LOT IN THIS SUBDIVISION.
- 4) NO BUILDINGS, FENCES, LANDSCAPING OR OTHER STRUCTURES ARE PERMITTED WITHIN DRAINAGE EASEMENTS SHOWN EXCEPT AS APPROVED BY THE CITY OF LEANDER PUBLIC WORKS DEPARTMENT.
- 5) PROPERTY OWNER SHALL PROVIDE FOR ACCESS TO DRAINAGE EASEMENTS AS MAY BE NECESSARY AND SHALL NOT PROHIBIT ACCESS BY THE CITY OF LEANDER.
- 6) ALL EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE PROPERTY OWNER OR HIS OR HER ASSIGNS.
- 7) PORTIONS OF THIS TRACT ARE WITHIN ZONE "X", ZONE "X-SHADED" AND ZONE "AE" FLOOD HAZARD AREA AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, NATIONAL FLOOD INSURANCE PROGRAM, AS SHOWN ON MAP NO. 48491C0460F, DATED DECEMBER 20, 2019, FOR WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS.
- 8) BUILDING SETBACKS NOT SHOWN HEREON SHALL COMPLY WITH THE MOST CURRENT ZONING ORDINANCE OF THE CITY OF LEANDER. ADDITIONAL RESIDENTIAL GARAGE SETBACKS MAY BE REQUIRED AS LISTED IN THE CURRENT ZONING ORDINANCE.
- 9) ALL PROPOSED UTILITY LINES MUST BE LOCATED UNDERGROUND
- 10) APPROVAL OF THIS FINAL PLAT DOES NOT CONSTITUTE THE APPROVAL OF VARIANCES OR WAIVERS TO ORDINANCE REQUIREMENTS.
- 11) IN ADDITION TO THE EASEMENTS SHOWN HEREON, A TEN (10') FOOT WIDE PUBLIC UTILITY EASEMENT, ACCESS EASEMENT AND LANDSCAPE EASEMENT IS DEDICATED ALONG AND ADJACENT TO ALL RIGHT-OF-WAY AND A TWO AND A HALF (2.5') FOOT WIDE PUBLIC UTILITY EASEMENT IS DEDICATED ALONG ALL SIDE LOT LINES.
- 12) ALL DRIVE LANES, FIRE LANES, AND DRIVEWAYS WITHIN THIS SUBDIVISION SHALL PROVIDE FOR RECIPROCAL ACCESS FOR INGRESS AND EGRESS TO ALL OTHER LOTS WITHIN THE SUBDIVISION AND TO ADJACENT PROPERTIES.
- 13) AT THE TIME OF SITE DEVELOPMENT PERMIT, THE APPLICANT WILL PROVIDE A PAYMENT TO THE CITY IN LIEU OF A TRAFFIC IMPACT ANALYSIS (TIA), UNLESS A TIA FOR THE ENTIRE DEVELOPMENT INDICATES THAT AVERAGE DAILY TRIPS ARE ESTIMATED BELOW 2,000.
- 14) SIDEWALKS SHALL BE INSTALLED ON THE SUBDIVISION SIDE OF CR 177. THOSE SIDEWALKS NOT ABUTTING A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL LOT (INCLUDING SIDEWALKS ALONG STREET FRONTAGES OF LOTS PROPOSED FOR SCHOOLS, CHURCHES, PARK LOTS, DETENTION LOTS, DRAINAGE LOTS, LANDSCAPE LOTS, OR SIMILAR LOTS), SIDEWALKS ON ARTERIAL STREETS TO WHICH ACCESS IS PROHIBITED, SIDEWALKS ON DOUBLE FRONTAGE LOTS ON THE SIDE TO WHICH ACCESS IS PROHIBITED, AND ALL SIDEWALKS ON SAFE SCHOOL ROUTES SHALL BE INSTALLED WHEN THE ADJOINING STREET IS CONSTRUCTED.
- 15) ALL EASEMENTS OF RECORD ARE SHOWN OR NOTED ON THE PLAT AS FOUND IN THE TITLE POLICY OR THROUGH DISCOVERY OF A TITLE SEARCH PREPARED FOR THE MOST RECENT PURCHASE OF PROPERTY.
- 16) TCEQ APPROVAL WILL BE PROVIDED FOR WATER QUALITY REQUIREMENTS DURING THE CONSTRUCTION PLAN SUBMITTAL.

SURVEYORS CERTIFICATE:

I, ABRAM D. DASHNER, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF LAND SURVEYING, AND HEREBY STATE THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ACCURATE ON-THE-GROUND SURVEY OF THE LAND AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH ALL CITY OF LEANDER ORDINANCE AND CODES, AND THAT ALL EXISTING EASEMENTS OF RECORD AS FOUND ON THE TITLE COMMITMENT PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, G.F. NO.: 21-4739-C, EFFECTIVE DATE: NOVEMBER 10, 2021, HAVE BEEN SHOWN OR NOTED HEREON.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL THIS ____TH DAY OF _____, 20____

ABRAM D. DASHNER
RPLS 5901

SURVEYING BY:
MANHARD CONSULTING, LTD
6448 E. HWY 290 STE. B-105
AUSTIN, TX 78723
512-244-3395

ENGINEERS CERTIFICATE:

I, GARY ELI JONES, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF ENGINEERING, AND DO HEREBY STATE THAT THIS PLAT CONFORMS WITH THE APPLICABLE ORDINANCES OF THE CITY OF LEANDER, TEXAS.

GARY ELI JONES, P.E. _____ DATE _____
ELI ENGINEERING, PLLC
(512)658-8095
TBP# FIRM# 17877

CITY CERTIFICATION

APPROVED THIS THE ____ DAY OF _____, 20____ A.D., AT A PUBLIC MEETING OF THE PLANNING AND ZONING COMMISSION OF THE CITY OF LEANDER, TEXAS AND AUTHORIZED TO BE FILED FOR RECORD BY THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

RON MAY, CHAIRMAN
PLANNING AND ZONING COMMISSION
CITY OF LEANDER, TEXAS

ELLEN COUFAL, SECRETARY
PLANNING AND ZONING COMMISSION
CITY OF LEANDER, TEXAS

WILLIAMSON COUNTY CLERK RECORDATION CERTIFICATION:

THE STATE OF TEXAS §
COUNTY OF WILLIAMSON §

THAT I, NANCY RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATION OF AUTHENTICATION, WAS FILED FOR RECORD IN MY OFFICE ON

THE ____ DAY OF _____ A.D., 20____ AT ____ O'CLOCK ____M.
AND DULY RECORDED ON THE ____ DAY OF _____ A.D., 20____ AT
____ O'CLOCK ____M. IN THE PLAT RECORDS OF SAID COUNTY, IN DOCUMENT

NO. _____, WITNESS MY HAND AND SEAL OF THE COUNTY COURT OF SAID COUNTY, AT OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST ABOVE WRITTEN.

NANCY RISTER, CLERK, COUNTY COURT
WILLIAMSON COUNTY, TEXAS

BY: _____
DEPUTY



8448 E Highway 290, Ste. B-105, Austin, TX 78723 ph:512.244.3395 manhard.com
Civil Engineers | Surveyors | Water Resource Engineers | Water & Waste Water Engineers
Construction Management | Environmental Scientists | Landscape Architects | Planners
City & County Engineers | Professional Engineers | Professional Surveyors
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Jan 09, 2024

TBP# FIRM No. 17877



ELI ENGINEERING, PLLC.
700 THERESA COVE, CEDAR PARK, TX 78613
512-918-0819 (F) 512-552-0560

TEXAS LONE STAR LANDING SUBDIVISION
800 CR 177, LEANDER, WILLIAMSON COUNTY, TX 78641

REVISED: _____
PROJ. MGR.: AD
DRAWN BY: PWP
SURVEY DATE: _____
ISSUE DATE: 12/11/23
SCALE: _____

SHEET
3 OF 3

LEANDER, TEXAS 78641 (CITY LIMITS)
LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
FINAL PLAT (2 OF 2)

DRAWING SCALE: _____
HORIZ. = _____ VERT. = _____
SURVEYED: _____
FILE NAME: RR
DATE: _____
DRAWN: JTC
DESIGNED: EEI

SHEET
5
OF
52

ADJACENT PROPERTY OWNER TABLE			
#	OWNER INFORMATION	ACRES	DEED/PLAT INFORMATION
1	LEE A. JACKSON	28.938	VOL 2536/PG 41
2	ROGER GERALD & DIANE THOMAS	47.866	VOL 1809/PG 792
3	ROGER GERALD & DIANE THOMAS	10.211	VOL 1811/PG 755
4	MARKUS M. & ALEXANDRA LAGMANSON	6.05	2016034354
5	WILLIAM M. & LENA F. SIMON	2.79	2016098746
6	KARLA T. & SCOTT WALLER	5.05	2020140279
7	MARK PIWETZ	5.0	VOL 904/PG 61
8	STANLEY JAMES & JOANNE LATRELL	10.084	VOL 2633/PG 640
9	GRADY R. & AMY J. BRUCE	0.594	2010025317
10	MARK C. LARUE	0.224	221043706
11	LARUE REAL ESTATE HOLDINGS, LP	0.919	2009020538
12	LARUE REAL ESTATE HOLDINGS, LP	3.493	2007105914
13	MARK C. LARUE	0.981	2021043706
14	LARUE REAL ESTATE HOLDINGS, LP	4.37	2007105914
15	GRADY ROBERT & AMY JACKSON BRUCE, TRUSTEES, BRUCE LIVING TRUST	19.788	2016013949
16	GRADY R. & AMY J. BRUCE	7.406	2010025317

TREE PRESERVATION PLAN
LONE STAR LANDING

TREE CALIPER INCHES

TREE SIZE (in caliper inches)	TOTAL INCHES	SAVED INCHES	SAVED INCHES %	REMOVED INCHES	REMOVED INCHES %
8" to 18"	576	207	36%	370	64%
>18" to 26"	267	108	40%	159	60%
SUBTOTAL 8" to 26"	843	315	37%	529	63%
>26"	65	65	100%	0	0%
TOTALS	908	380	42%	529	58%

TOTAL TREES

TREE SIZE (in caliper inches)	TOTAL TREES	SAVED TREES	SAVED TREES %	REMOVED TREES	REMOVED TREES %
8" to 18"	49	19	39%	30	61%
>18" to 26"	12	5	42%	7	58%
>26" HERITAGE	2	2	100%	0	0%
SUBTOTAL 8" to 26"	61	24	39%	37	61%
TOTALS	63	26	41%	37	59%

MITIGATION PLAN: 8" - 18"

TREE SIZE (in caliper inches)	>50% REMOVAL	1:1 REPLACEMENT	2:1 REPLACEMENT	3:1 REPLACEMENT	FEES
8" to 18"	81.5	82	-	-	\$12,300*

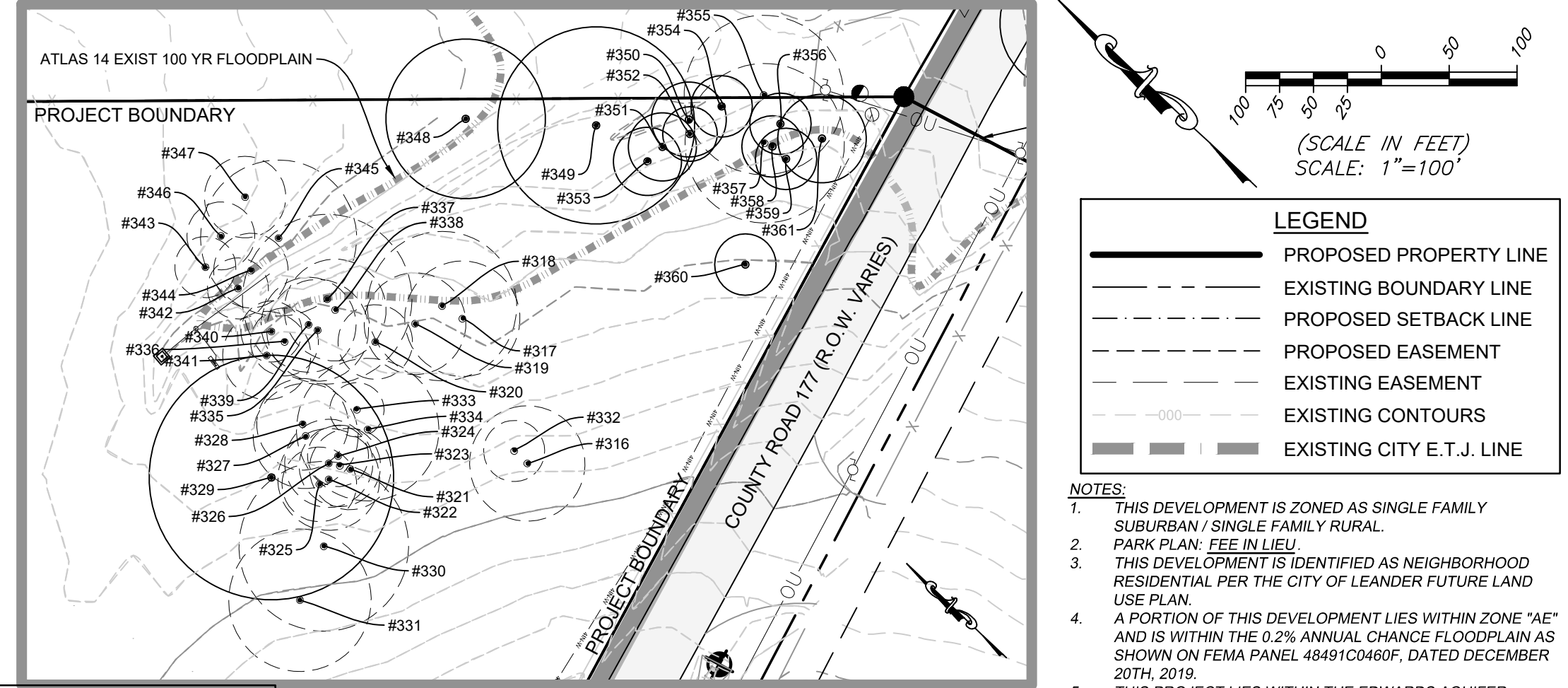
MITIGATION PLAN: Protected & Heritage Trees

TREE SIZE (in caliper inches)	Removed (total inches)	1:1 REPLACEMENT	2:1 REPLACEMENT	3:1 REPLACEMENT	FEES
>18" to 26"	159	-	318	-	\$47700*
>26" HERITAGE	0	-	-	-	\$0

*SUBJECT TO CHANGE BASED ON PICP

TREE LIST

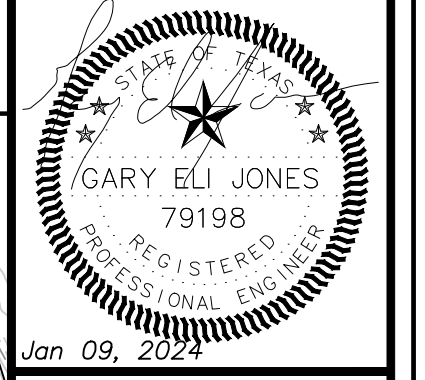
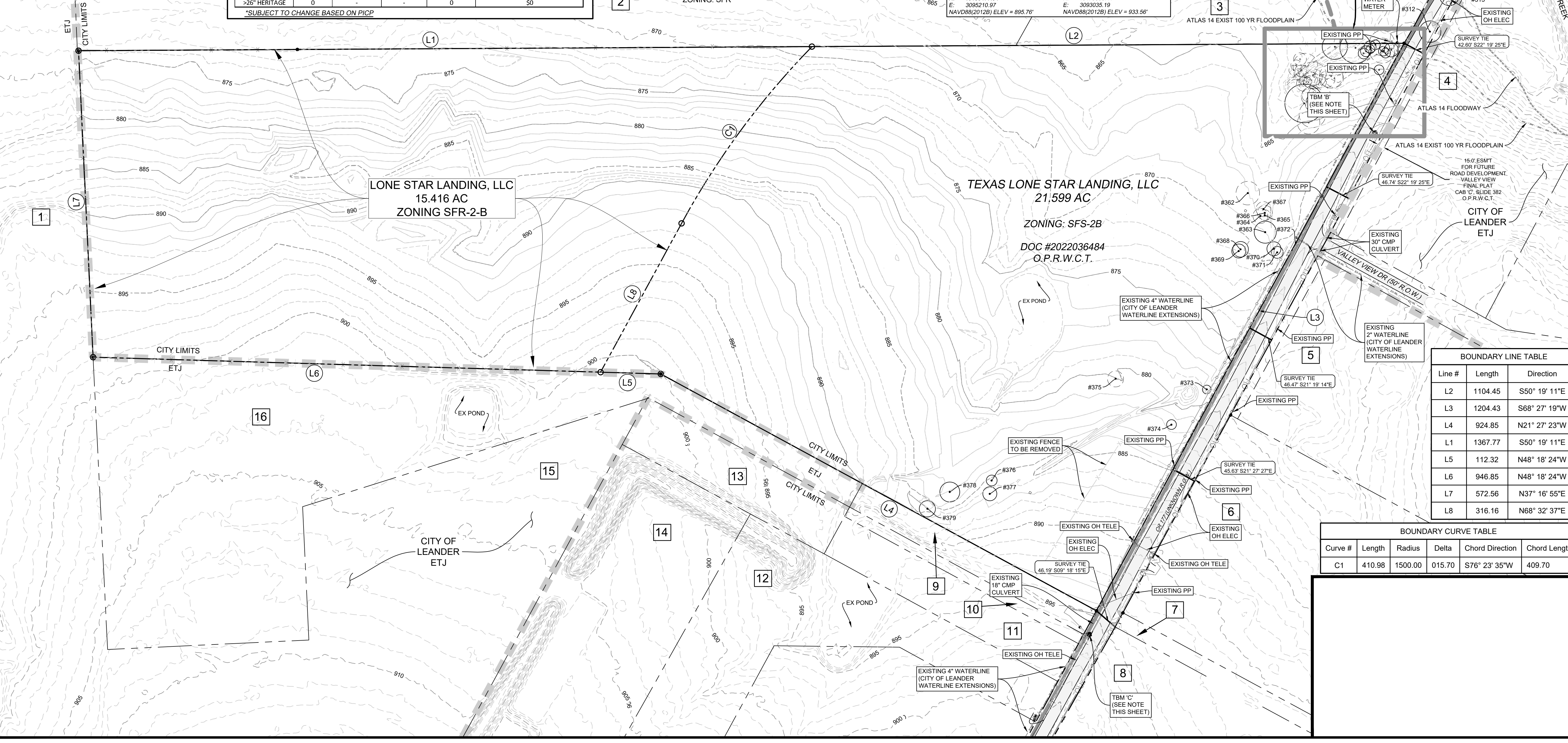
(O) TREE LOCATED OFFSITE	(S) TREE TO REMAIN	(R) TREE TO BE REMOVED	
300 (O)	9" LIVE OAK	340 (R)	9" LIVE OAK
301 (O)	9" HACKBERRY	341 (R)	13" LIVE OAK
302 (O)	MULTI-TRUNK PECAN (18", 13")	342 (R)	9" LIVE OAK
303 (O)	8" PECAN	343 (R)	9" PECAN
304 (O)	13" PECAN	344 (R)	11" PECAN
305 (O)	MULTI-TRUNK LIVE OAK (12", 11")	345 (R)	23" LIVE OAK
306 (O)	13" PECAN	346 (R)	10" LIVE OAK
307 (O)	20" LIVE OAK	347 (R)	12" LIVE OAK
308 (O)	14" CEDAR ELM	348 (S)	MULTI-TRUNK PECAN (12", 10", 9", 4")
309 (O)	18" LIVE OAK	349 (S)	29" LIVE OAK
310 (O)	14" LIVE OAK	350 (S)	11" PECAN
311 (O)	19" LIVE OAK	351 (S)	10" PECAN
312 (O)	20" CEDAR ELM	352 (S)	8" PECAN
313 (O)	18" CEDAR ELM	353 (S)	10" PECAN
314 (O)	19" CEDAR ELM	354 (S)	9" PECAN
315 (O)	11" HACKBERRY	355 (R)	MULTI-TRUNK PECAN (12", 10", 9", 4")
316 (R)	17" RED OAK	356 (S)	9" PECAN
317 (R)	17" LIVE OAK	357 (R)	MULTI-TRUNK PECAN (12", 10", 9", 4")
318 (R)	22" LIVE OAK	358 (S)	9" LIVE OAK
319 (R)	15" LIVE OAK	359 (S)	9" PECAN
320 (R)	11" LIVE OAK	360 (S)	9" LIVE OAK
321 (R)	12" LIVE OAK	361 (S)	13" PECAN
322 (R)	12" LIVE OAK	362 (R)	22" PECAN
323 (R)	9" LIVE OAK	363 (R)	17", 7" CEDAR ELM CLUSTER
324 (R)	9", 8" LIVE OAK CLUSTER	364 (R)	14" CEDAR ELM
325 (R)	15" LIVE OAK	365 (R)	10" CEDAR
326 (R)	11" LIVE OAK	366 (R)	14" CEDAR ELM
327 (R)	12", 7" LIVE OAK CLUSTER	367 (R)	14" CEDAR ELM
328 (R)	10", 7" LIVE OAK CLUSTER	368 (R)	10", 5", 4" CEDAR ELM CLUSTER
329 (S)	MULTI-TRUNK LIVE OAK (26", 20")	369 (S)	13" CEDAR ELM
330 (R)	MULTI-TRUNK LIVE OAK (16", 9", 9")	370 (S)	13" CEDAR ELM
331 (R)	MULTI-TRUNK LIVE OAK (16", 10")	371 (S)	11" CEDAR ELM
332 (R)	9" LIVE OAK	372 (R)	MULTI-TRUNK CEDAR ELM (16", 12")
333 (R)	8" LIVE OAK	373 (S)	8" CEDAR ELM
334 (R)	MULTI-TRUNK LIVE OAK (16", 10")	374 (S)	9" LIVE OAK
335 (R)	15" LIVE OAK	375 (R)	9", 5", 4", 3" CEDAR ELM CLUSTER
336 (R)	14" LIVE OAK	376 (S)	10" LIVE OAK
337 (R)	MULTI-TRUNK LIVE OAK (16", 9", 9")	377 (S)	9", 9", 7", 5" CEDAR ELM CLUSTER
338 (R)	15" LIVE OAK	378 (S)	9", 7", 7", 5" CEDAR ELM CLUSTER
339 (R)	10" LIVE OAK	379 (S)	MULTI-TRUNK CEDAR ELM (11", 8")



TREE LABEL DETAIL
SCALE: 1"=40'

PROJECT BENCHMARKS

Benchmark	Coordinates	Elevation
TBM "A" CUT SQUARE IN CONCRETE	N: 10182151.94 E: 3097679.94	NAVD88(2012B) ELEV = 878.92'
TBM "B" CUT SQUARE IN CONCRETE	N: 10179630.59 E: 3093191.27	NAVD88(2012B) ELEV = 868.12'
TBM "C" CUT SQUARE IN CONCRETE	N: 10189477.94 E: 3095210.97	NAVD88(2012B) ELEV = 895.76'
TBM "D" CUT SQUARE IN CONCRETE	N: 10179630.59 E: 3093191.27	NAVD88(2012B) ELEV = 868.12'
TBM "E" CUT SQUARE IN CONCRETE	N: 10179568.41 E: 3093035.19	NAVD88(2012B) ELEV = 933.56'



Jan 09, 2024

ELI ENGINEERING
700 THERESA COVE, CEDAR PARK, TX 78613
512-918-0819 (F) 512-552-0560

LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
EXISTING CONDITIONS & DEMOLITION PLAN

DRAWING SCALE: HORIZ. = VERT. =

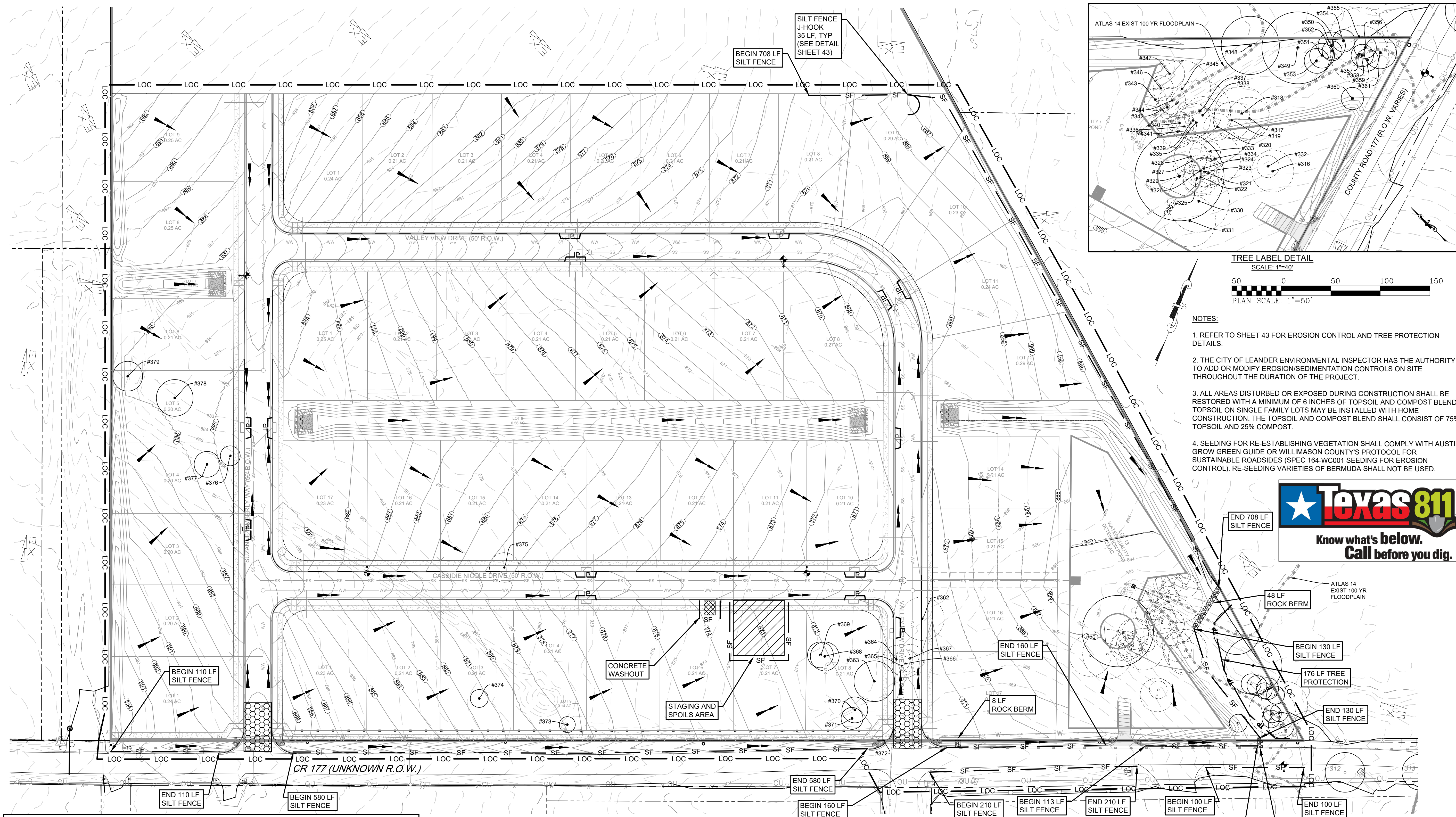
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DATE: DRAWN: JTC

DESIGNED: EEI

SHEET **8** OF **52**

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NOTES:

- REFER TO SHEET 43 FOR EROSION CONTROL AND TREE PROTECTION DETAILS.
- ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE RESTORED WITH A MINIMUM OF 6 INCHES OF TOPSOIL AND COMPOST BLEND. TOPSOIL ON SINGLE FAMILY LOTS MAY BE INSTALLED WITH HOME CONSTRUCTION. THE TOPSOIL AND COMPOST BLEND SHALL CONSIST OF 75% TOPSOIL AND 25% COMPOST.
- SEEDING FOR RE-ESTABLISHING VEGETATION SHALL COMPLY WITH AUSTIN GROW GREEN GUIDE OR WILLIAMSON COUNTY'S PROTOCOL FOR SUSTAINABLE ROADSIDES (SPEC 164-WC001 SEEDING FOR EROSION CONTROL). RE-SEEDING VARIETIES OF BERMUDA SHALL NOT BE USED.

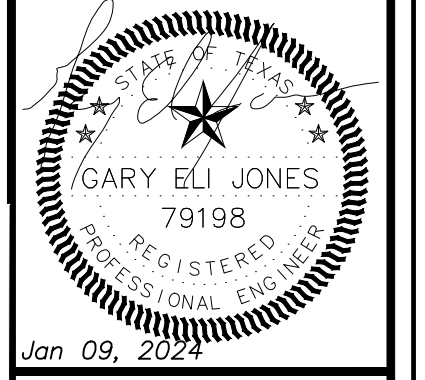


TREE LIST		
(O) TREE LOCATED OFFSITE	(S) TREE TO REMAIN	(R) TREE TO BE REMOVED
300 (O) 9" LIVE OAK	327 (R) 12" 7" LIVE OAK CLUSTER	354 (S) 9" PECAN
301 (O) 9" HACKBERRY	328 (R) 10" 7" LIVE OAK CLUSTER	355 (R) MULTI-TRUNK PECAN (12", 10", 9", 4")
302 (O) MULTI-TRUNK PECAN (18", 13")	329 (S) MULTI-TRUNK LIVE OAK (26", 20")	356 (S) 9" PECAN
303 (O) 8" PECAN	330 (R) MULTI-TRUNK LIVE OAK (16", 9", 9")	357 (R) MULTI-TRUNK PECAN (12", 10", 9", 4")
304 (O) 13" PECAN	331 (R) MULTI-TRUNK LIVE OAK (16", 10")	358 (S) 9" LIVE OAK
305 (O) MULTI-TRUNK LIVE OAK (12", 11")	332 (R) 9" LIVE OAK	359 (S) 13" PECAN
306 (O) 13" PECAN	333 (R) 8" LIVE OAK	360 (S) 9" LIVE OAK
307 (O) 20" LIVE OAK	334 (R) MULTI-TRUNK LIVE OAK (16", 10")	361 (S) 13" PECAN
308 (O) 14" CEDAR ELM	335 (R) 15" LIVE OAK	362 (R) 22" PECAN
309 (O) 18" LIVE OAK	336 (R) 14" LIVE OAK	363 (S) 17" 7" CEDAR ELM CLUSTER
310 (O) 14" LIVE OAK	337 (R) MULTI-TRUNK LIVE OAK (16", 9", 9")	364 (R) 14" CEDAR ELM
311 (O) 19" LIVE OAK	338 (R) 15" LIVE OAK	365 (R) 10" CEDAR
312 (O) 20" CEDAR ELM	339 (R) 10" LIVE OAK	366 (R) 14" CEDAR ELM
313 (O) 18" CEDAR ELM	340 (R) 9" LIVE OAK	367 (R) 14" CEDAR ELM
314 (O) 19" CEDAR ELM	341 (R) 13" LIVE OAK	368 (R) MULTI-TRUNK CEDAR ELM (16", 12")
315 (O) 11" HACKBERRY	342 (R) 9" LIVE OAK	369 (S) 13" CEDAR ELM
316 (R) 17" RED OAK	343 (R) 9" LIVE OAK	370 (S) 13" CEDAR ELM
317 (R) 17" LIVE OAK	344 (R) 11" PECAN	371 (S) 11" CEDAR ELM
318 (R) 22" LIVE OAK	345 (R) 23" LIVE OAK	372 (R) MULTI-TRUNK CEDAR ELM (16", 12")
319 (R) 15" LIVE OAK	346 (R) 10" LIVE OAK	373 (S) 8" CEDAR ELM
320 (R) 12" LIVE OAK	347 (R) 12" LIVE OAK	374 (S) 9" LIVE OAK
321 (R) 11" LIVE OAK	348 (S) MULTI-TRUNK PECAN (12", 10", 9", 4")	375 (R) 9" 5", 4", 3" CEDAR ELM CLUSTER
322 (R) 12" LIVE OAK	349 (S) 25" LIVE OAK	376 (S) 10" LIVE OAK
323 (R) 9" LIVE OAK	350 (S) 11" PECAN	377 (S) 9" 9" LIVE OAK CLUSTER
324 (R) 9", 8" LIVE OAK CLUSTER	351 (S) 10" PECAN	378 (S) 9", 7", 7", 5" CEDAR ELM CLUSTER
325 (R) 15" LIVE OAK	352 (S) 8" PECAN	379 (S) MULTI-TRUNK CEDAR ELM (11", 8")
326 (R) 11" LIVE OAK	353 (S) 10" PECAN	

LEGEND	
LIMITS OF CONSTRUCTION	LOC LOC
LIMITS OF CONSTRUCTION & SILT FENCE	LOC/SF LOC/SF
SILT FENCE (STANDARD 642S-1, SHEET 43)	SF SF
TREE PROTECTION (STANDARD 303.2, SHEET 43)	TP TP
STAGING AREA	[Hatched Box]
STABILIZED CONSTRUCTION ENTRANCE (STANDARD 641S-1, SHEET 43)	[Grid Box]
CONCRETE WASHOUT (STANDARD DETAIL 303-1, SHEET 43)	[Cross-hatched Box]
INLET PROTECTION (STANDARD 632S-1, SHEET 43)	[IP Symbol]
ROCK BERM (STANDARD 639S-1, SHEET 43)	[RB Symbol]
EXISTING DIRECTION OF STORM WATER (GRADING PLAN)	EX
PROPOSED DIRECTION OF STORM WATER (GRADING PLAN)	→
TREE (TO REMAIN)	[Tree Symbol]
TREE (TO BE REMOVED)	[Tree Symbol]
TRUNK LOCATION	[ZZZ]
CRITICAL ROOT ZONE	[Circle]

EROSION CONTROL SCHEDULE AND SEQUENCING	
1. ROUGH GRADING:	CONSTRUCTION ENTRANCE/EXIT, SILT FENCE PROTECTION, AND STONE OVERFLOW STRUCTURES SHALL BE INSTALLED PRIOR TO THE INITIATION OF ROUGH GRADING, AS NEEDED.
2. UTILITY INSTALLATION:	ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING UTILITY INSTALLATION. INLET PROTECTION SHALL BE INSTALLED AS STORM DRAINAGE SYSTEM IS CONSTRUCTED.
3. PAVING:	ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING PAVING AND THROUGHOUT THE REMAINDER OF THE PROJECT.
4. FINAL GRADING/STABILIZATION, LANDSCAPING:	ALL TEMPORARY EROSION CONTROL MEASURES TO BE REMOVED AT THE CONCLUSION OF THE PROJECT AS DIRECTED BY THE CITY OR COUNTY. SITE TO BE RESTORED PER EROSION CONTROL NOTE 6, SHEET 2)

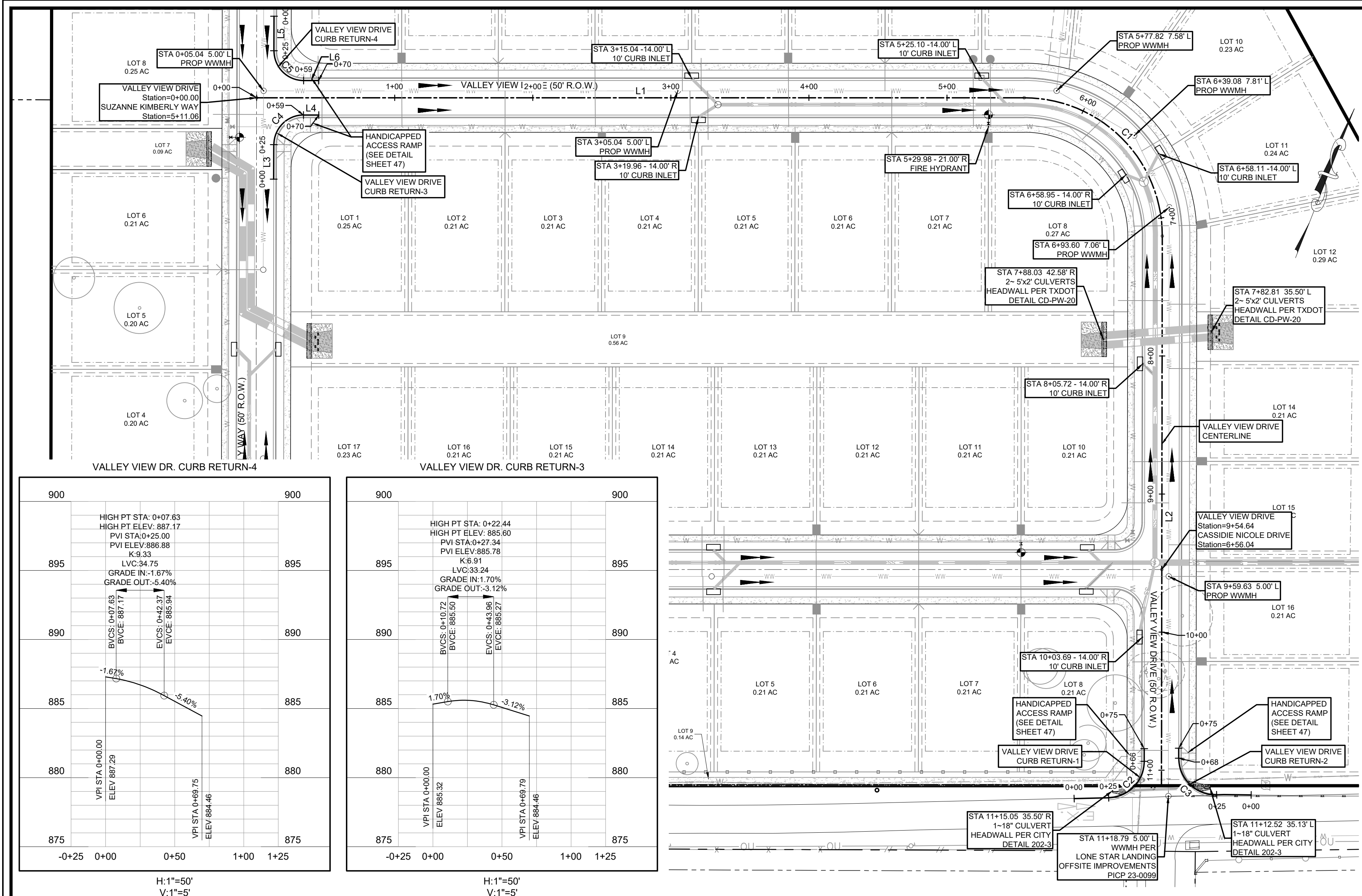
NO.	DATE	REVISION	BY



Jan 09, 2024
 TPBELS FIRM No. 17877
ELI ENGINEERING
 ELI ENGINEERING, PLLC.
 700 THERESA COVE, CEDAR PARK, TX 78613
 512-818-0818 (F) 512-532-0560
 gelijones@gmail.com

LEANDER, TEXAS 78641 (CITY LIMITS)
LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
 EROSION & SEDIMENTATION CONTROL AND TREE PROTECTION PLAN

DRAWING SCALE:	HORIZ. #	VERT. #
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	
SHEET		
9		
OF		
52		



VALLEY VIEW DRIVE

Number	Radius	Length	Line/Chord Direction	A Value
L1		555.88	N68° 27' 18.68"E	
C1	100.00	157.23	S66° 30' 02.36"E	
L2		406.22	S21° 27' 23.41"E	

VALLEY VIEW DR. CURB RETURN-3

Number	Radius	Length	Line/Chord Direction	A Value
L3		25.00	N21° 27' 23.41"W	
C4	21.50	33.74	N23° 29' 57.64"E	
L4		11.05	N68° 27' 18.68"E	

VALLEY VIEW DR. CURB RETURN-1

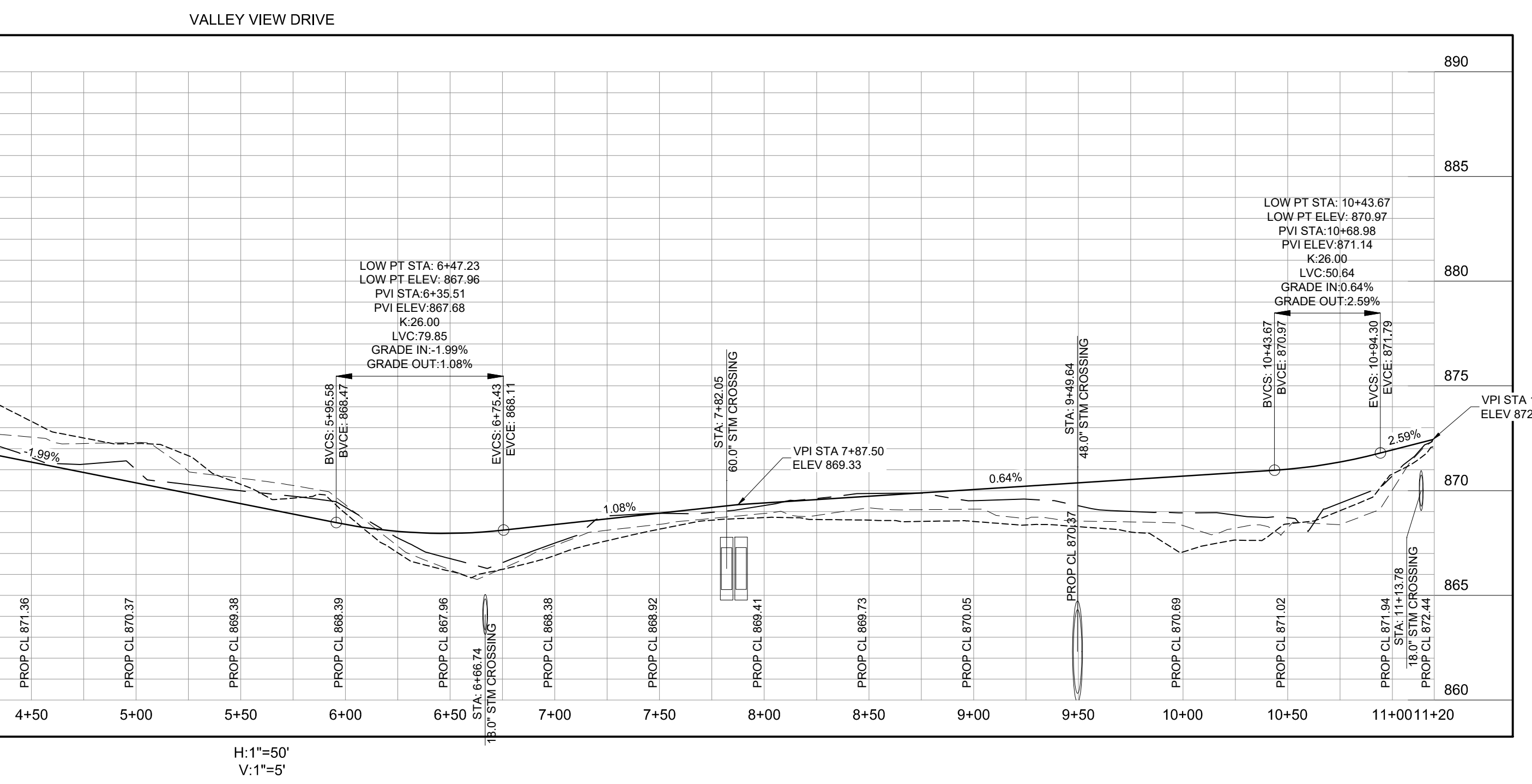
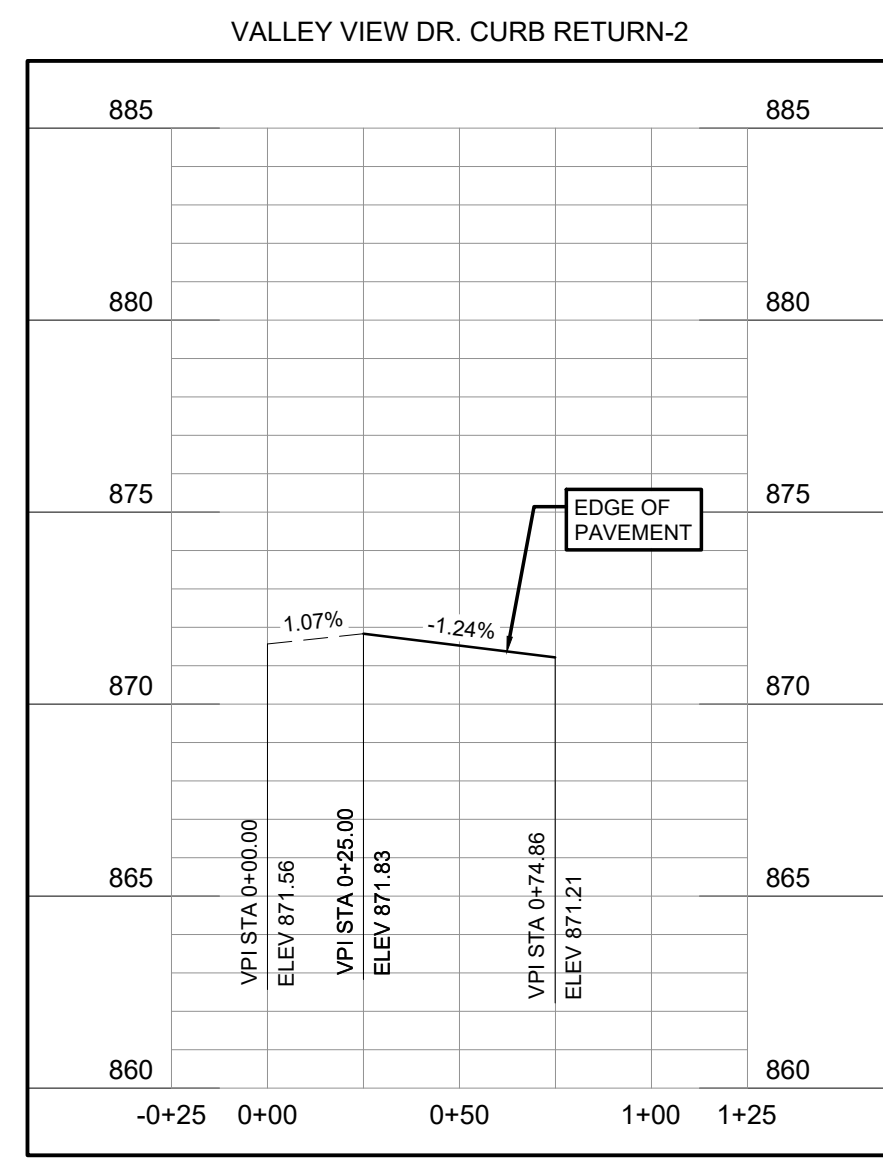
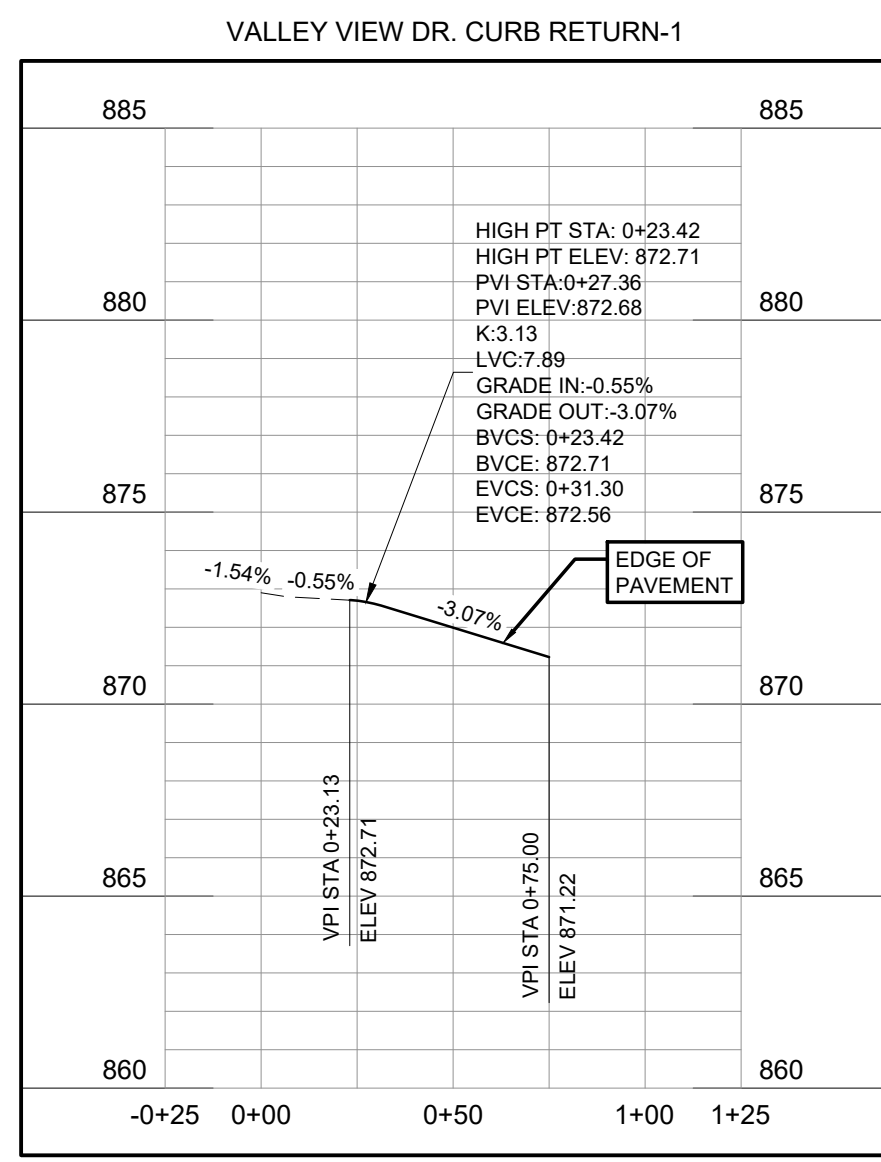
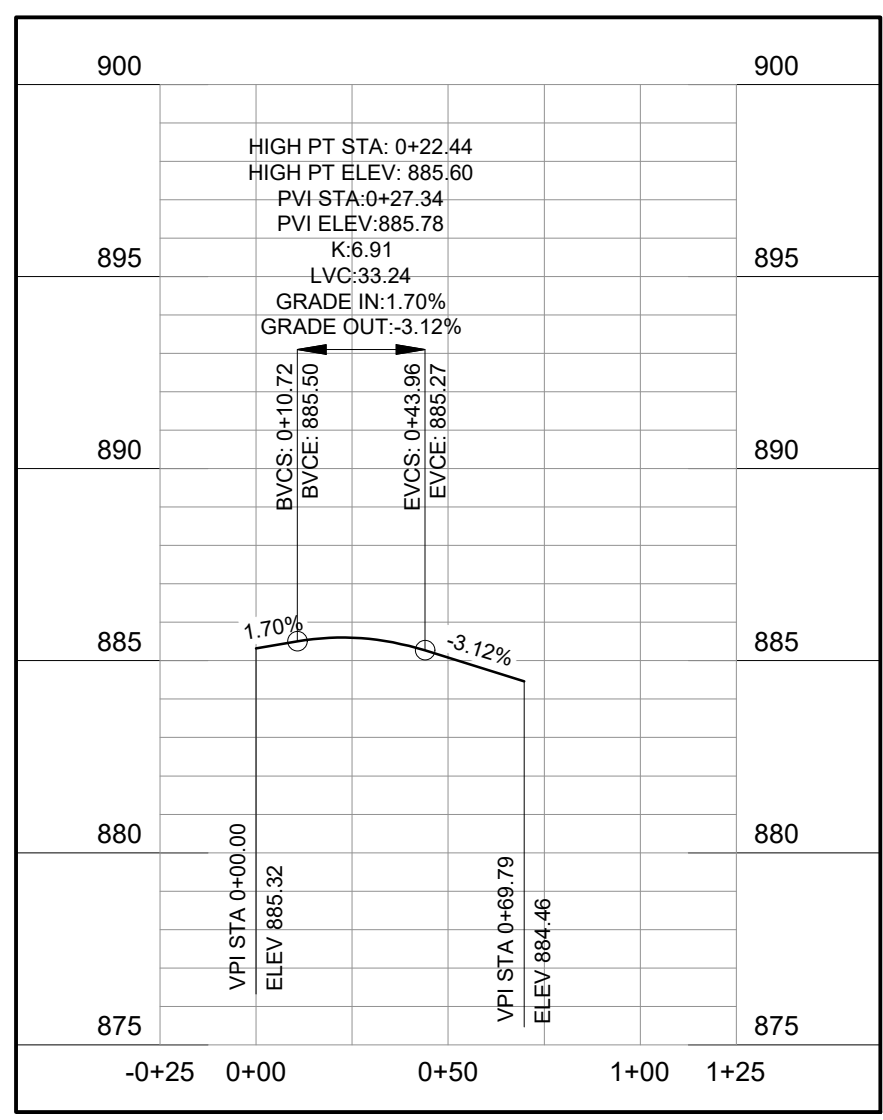
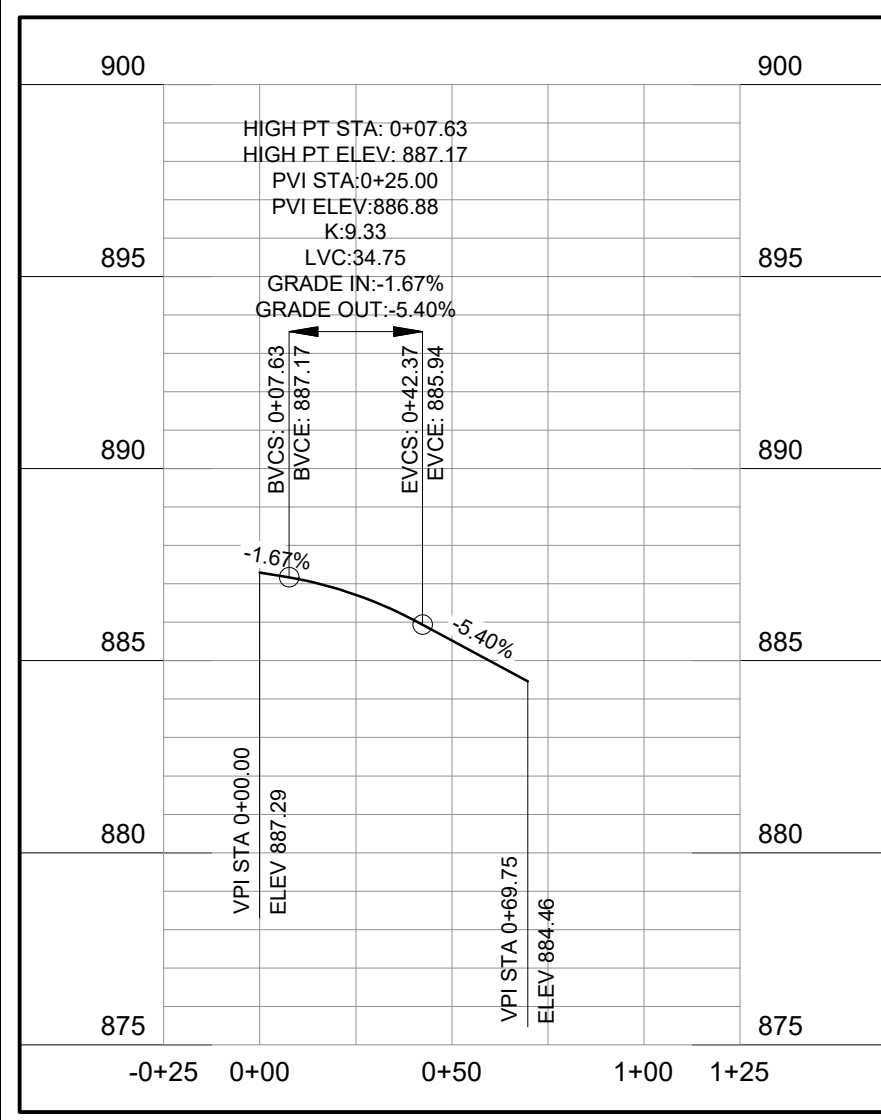
Number	Radius	Length	Line/Chord Direction	A Value
C2	26.50	40.85	N22° 42' 07.12"E	

VALLEY VIEW DR. CURB RETURN-4

Number	Radius	Length	Line/Chord Direction	A Value
L5		25.00	S21° 27' 23.41"E	
C5	21.50	33.81	S66° 30' 02.36"E	
L6		10.95	N68° 27' 18.68"E	

VALLEY VIEW DR. CURB RETURN-2

Number	Radius	Length	Line/Chord Direction	A Value
C3	26.50	42.63	N67° 32' 34.59"W	

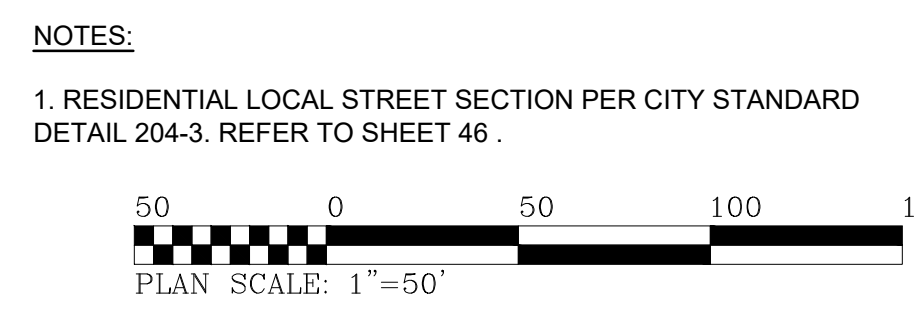


PROFILE LEGEND

- PROPOSED CENTERLINE
- EXISTING CENTERLINE
- EXISTING GROUND LEFT
- EXISTING GROUND RIGHT

PLAN LEGEND

- PROPOSED DIRECTION OF FLOW
- EXISTING DIRECTION OF FLOW



BY: _____
NO. _____ DATE: _____

Jan 09, 2024

ELI ENGINEERING
ELI ENGINEERING, PLLC.
700 THERESA COVE, CEDAR PARK, TX 78613
512-819-0819 (F) 512-532-0560

TBPELS FIRM No. 17917
g@elijones.com

LEANDER, TEXAS 78641 (CITY LIMITS)

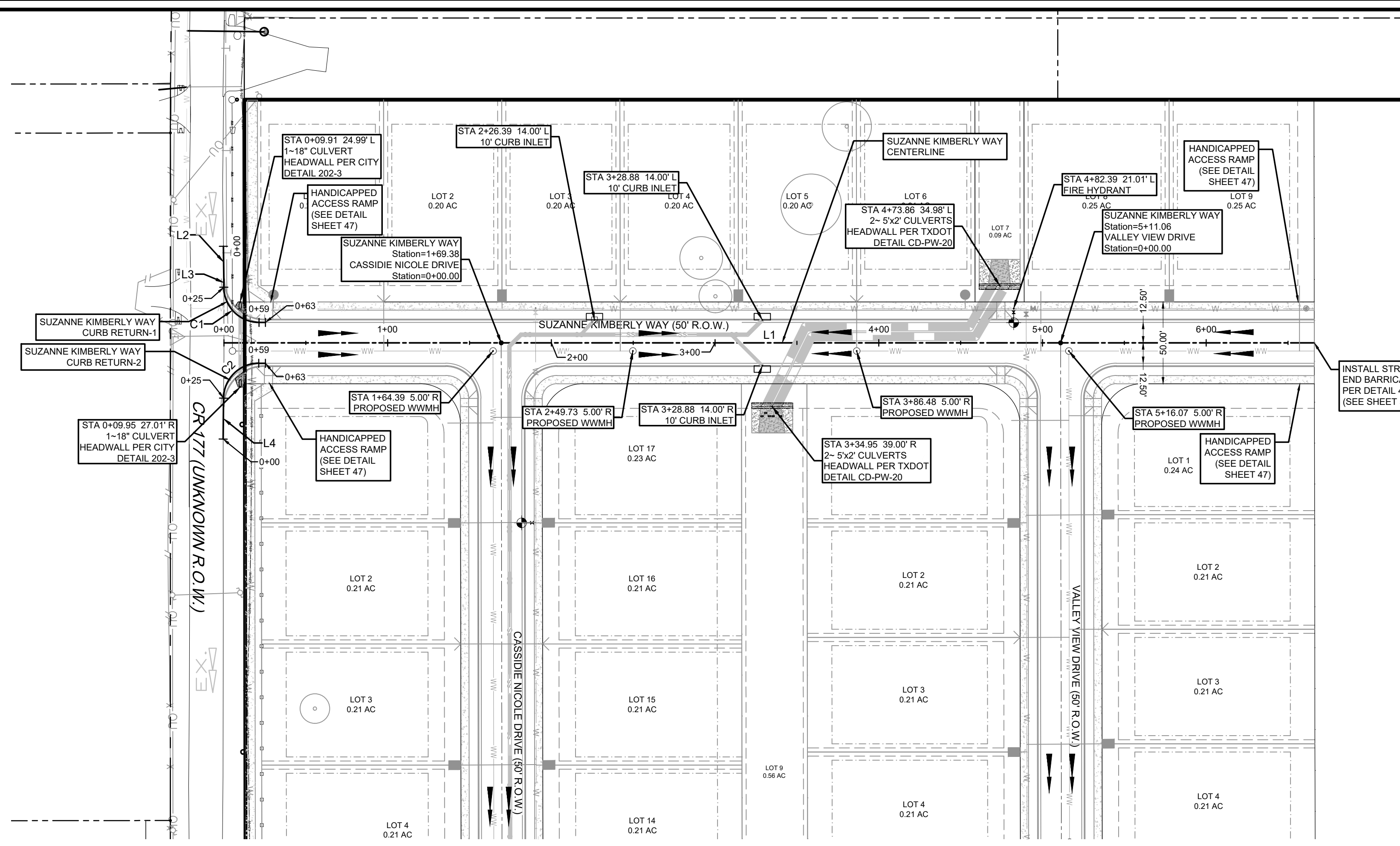
LONE STAR LANDING PHASE ONE

SUBDIVISION IMPROVEMENTS

VALLEY VIEW DRIVE - STA 0+00 TO END

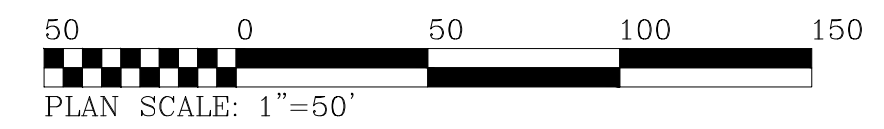
DRAWING SCALE:	HORIZ: =	VERT: =
SURVEYED:	RR	
FILE NAME:		
DATE:		
DRAWN:	JTC	
DESIGNED:	EEL	

SHEET
10
OF
52



SUZANNE KIMBERLY WAY

Number	Radius	Length	Line/Chord Direction	A Value
L1		666.06	N21° 27' 23.41"W	



SUZANNE KIMBERLY WAY CURB RETURN-1

Number	Radius	Length	Line/Chord Direction	A Value
L3		5.73	N68° 29' 46.71"E	
C1	21.50	33.75	N23° 31' 11.65"E	
L2		19.27	N67° 48' 04.65"E	

SUZANNE KIMBERLY WAY CURB RETURN-2

Number	Radius	Length	Line/Chord Direction	A Value
L4		25.00	S69° 05' 18.88"W	
C2	21.50	33.57	N66° 11' 02.26"W	

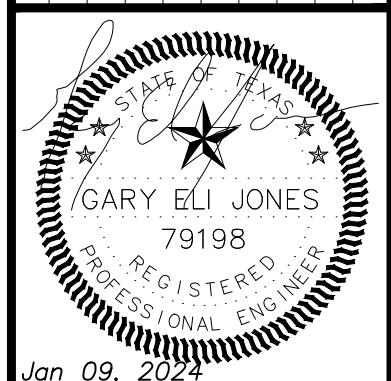
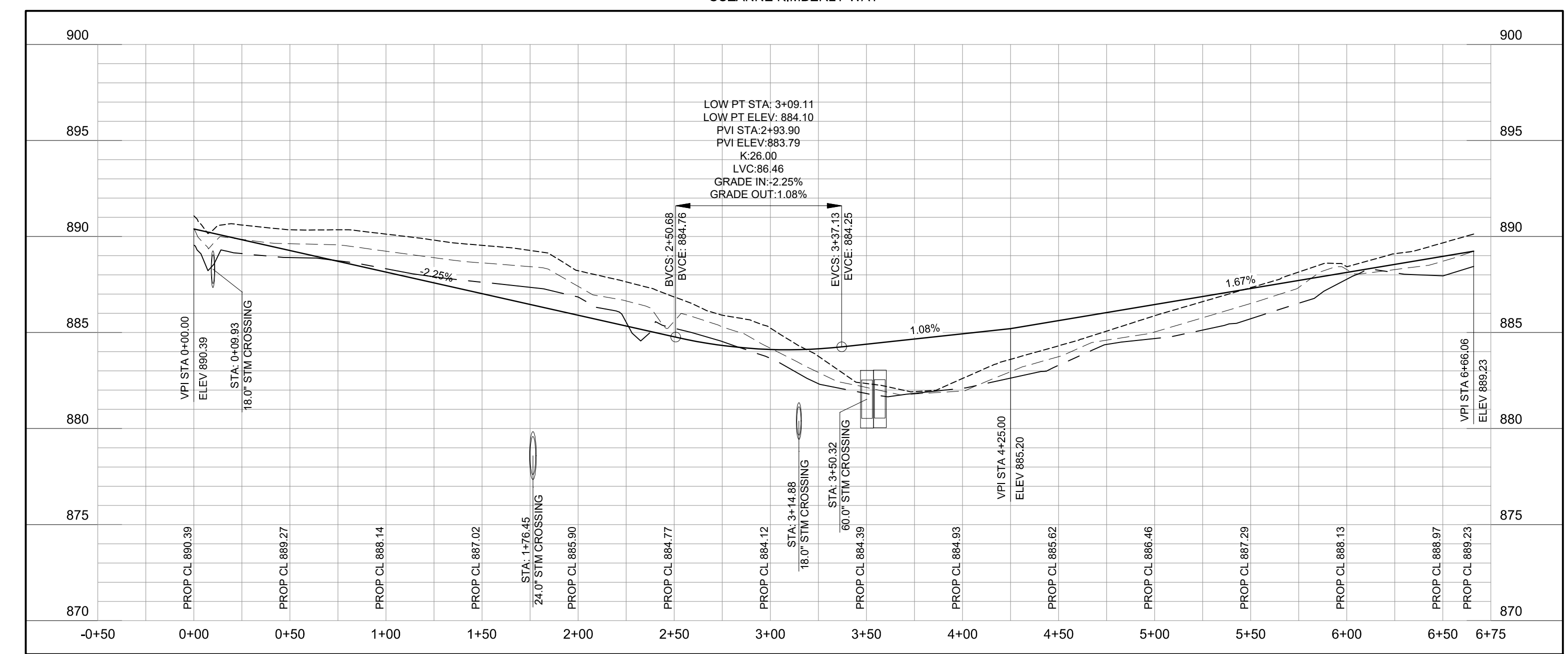
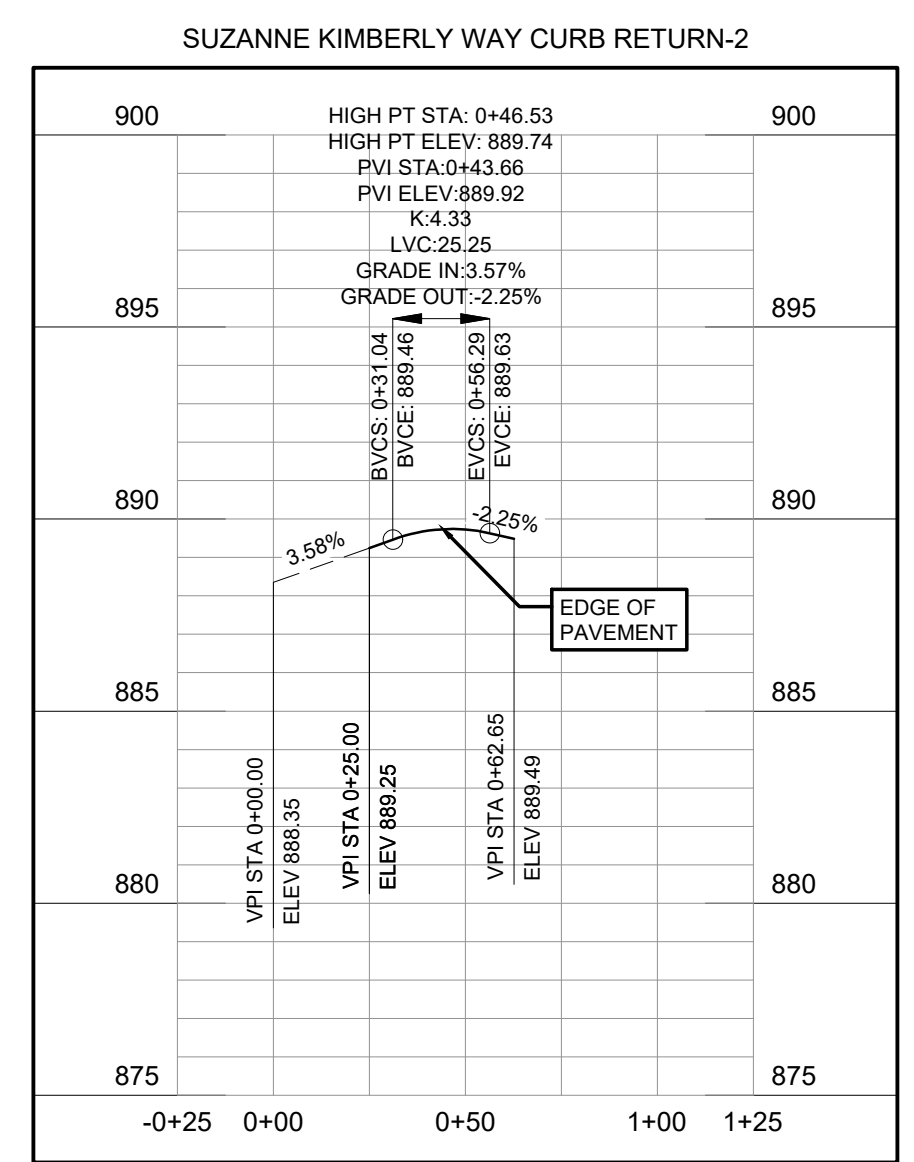
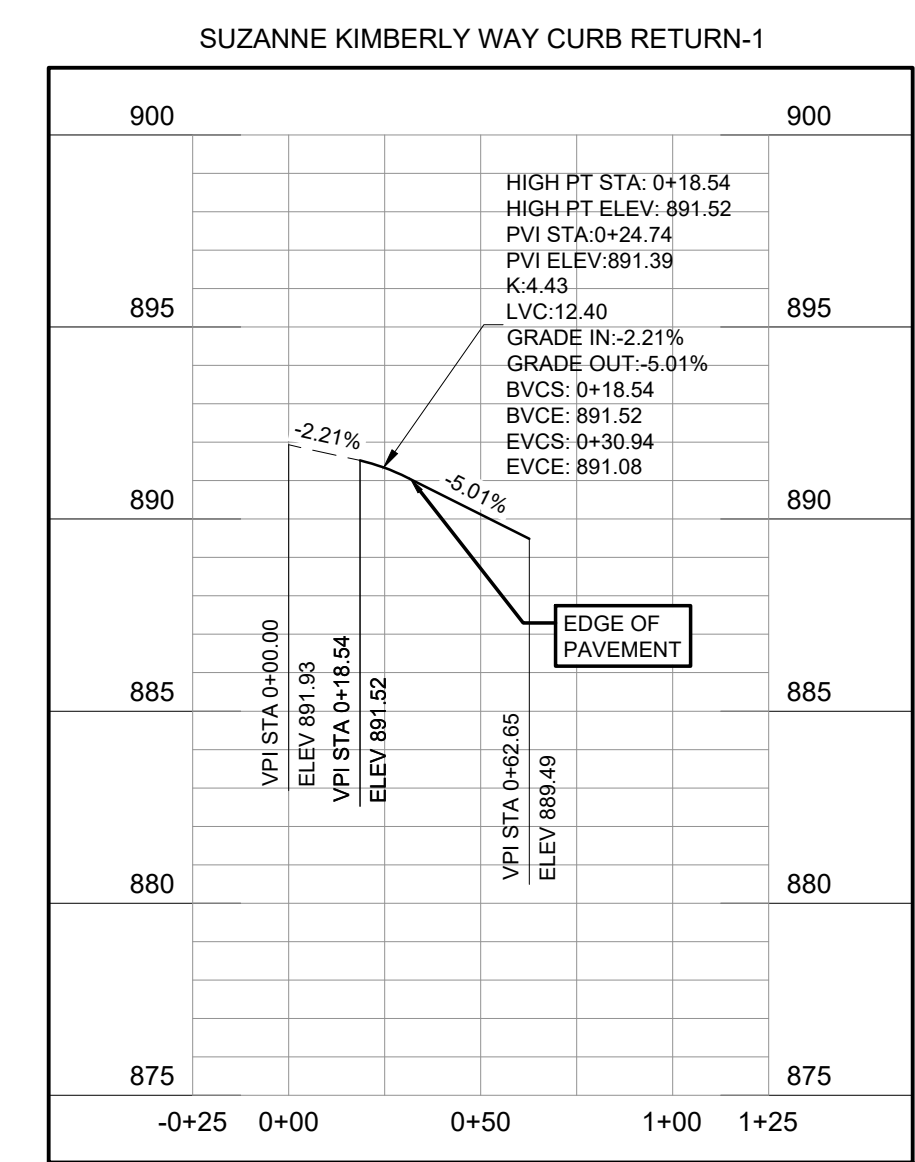
PROFILE LEGEND

- PROPOSED CENTERLINE
- - - EXISTING CENTERLINE
- - - EXISTING GROUND LEFT
- - - EXISTING GROUND RIGHT

PLAN LEGEND

- ➔ PROPOSED DIRECTION OF FLOW
- ➔ EXISTING DIRECTION OF FLOW

NOTES:
1. RESIDENTIAL LOCAL STREET SECTION PER CITY STANDARD DETAIL 204-3. REFER TO SHEET 46.

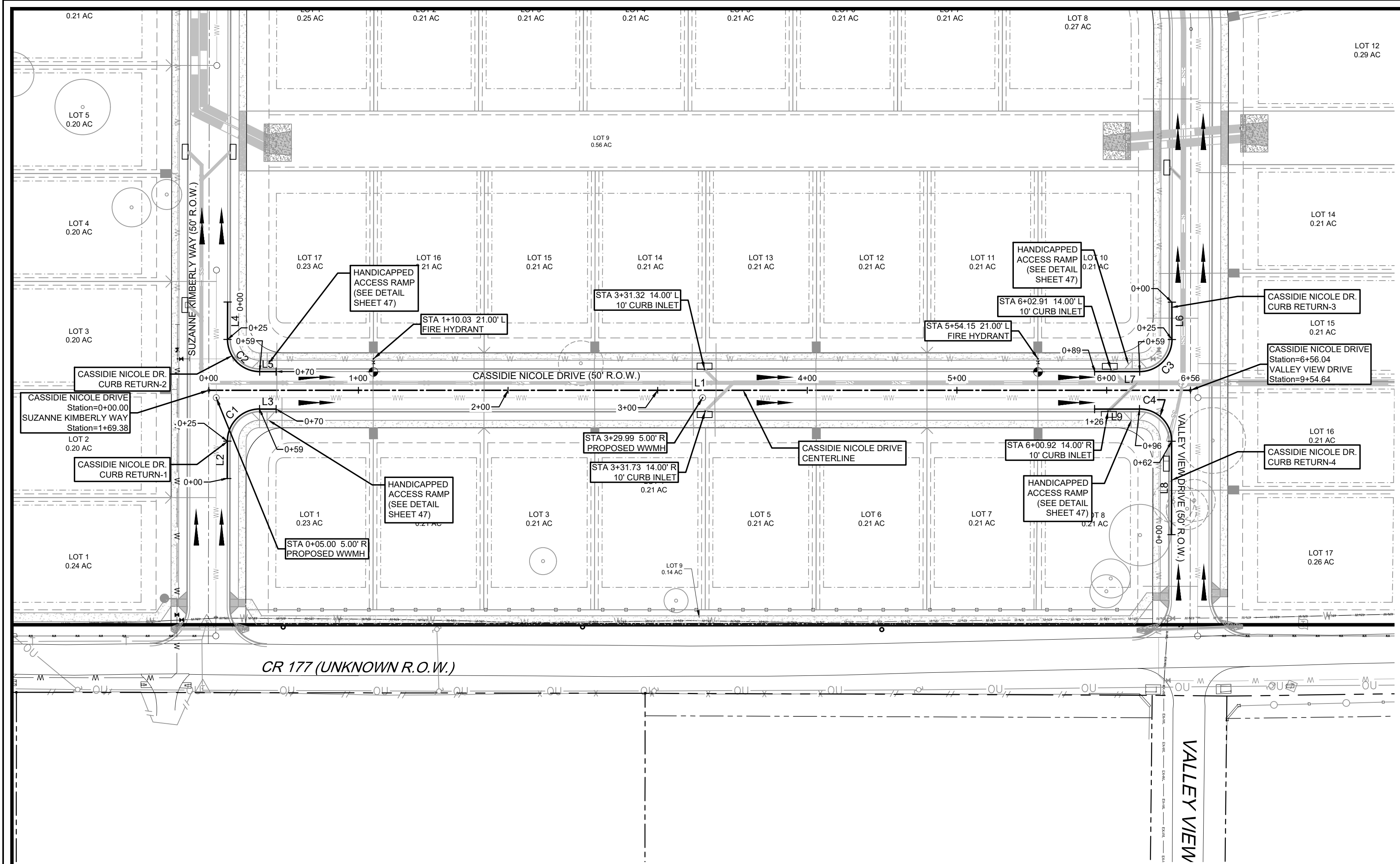


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512-819-0819 (F) 512-532-0560

LEANDER, TEXAS 78641 (CITY LIMITS)
LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
SUZANNE KIMBERLY WAY - STA 0+00 TO END

DRAWING SCALE:	HORIZ =	VERT =
SURVEYED:	RR	
FILE NAME:		
DATE:		
DRAWN:	JTC	
DESIGNED:	EEL	

C:\Users\jones\Documents\jones\lone star landing\lone star landing.suzanne.kimberly.prd.dwg, Jan 05, 24, 11:08 am



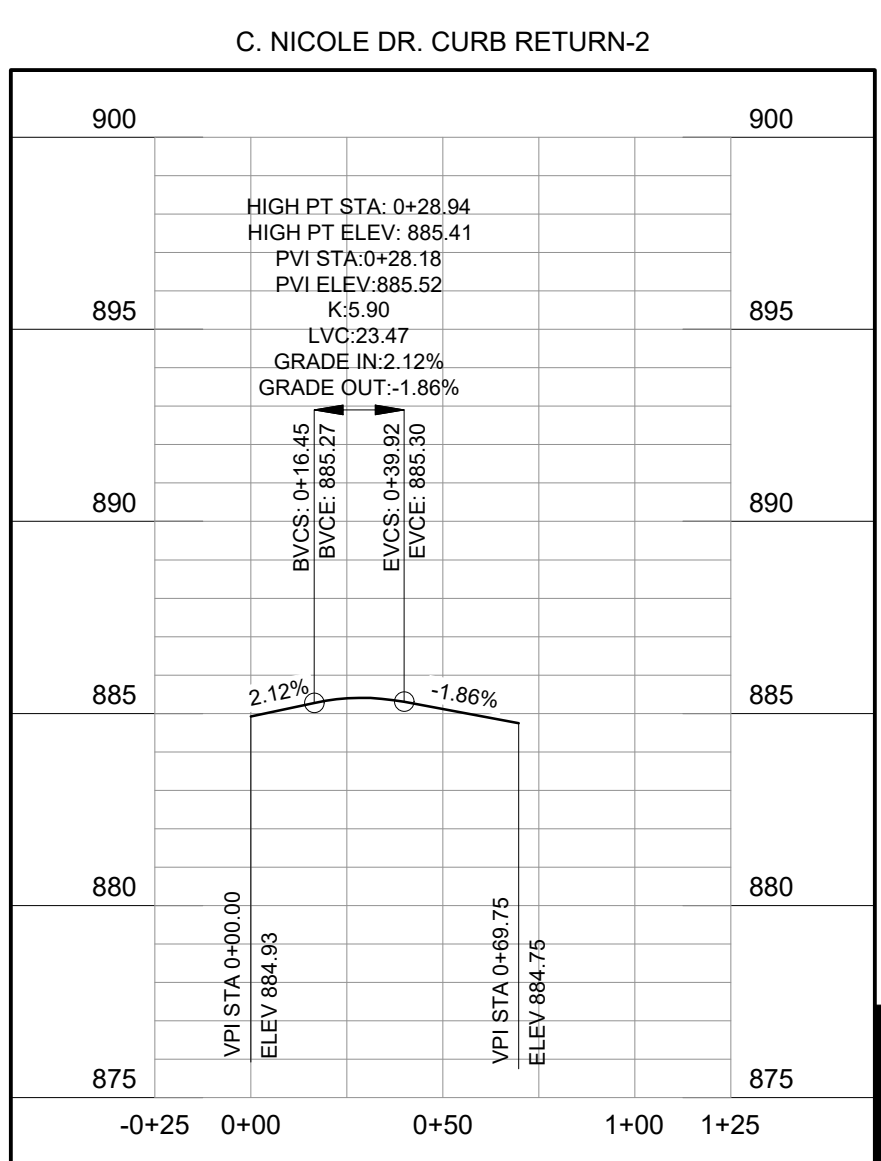
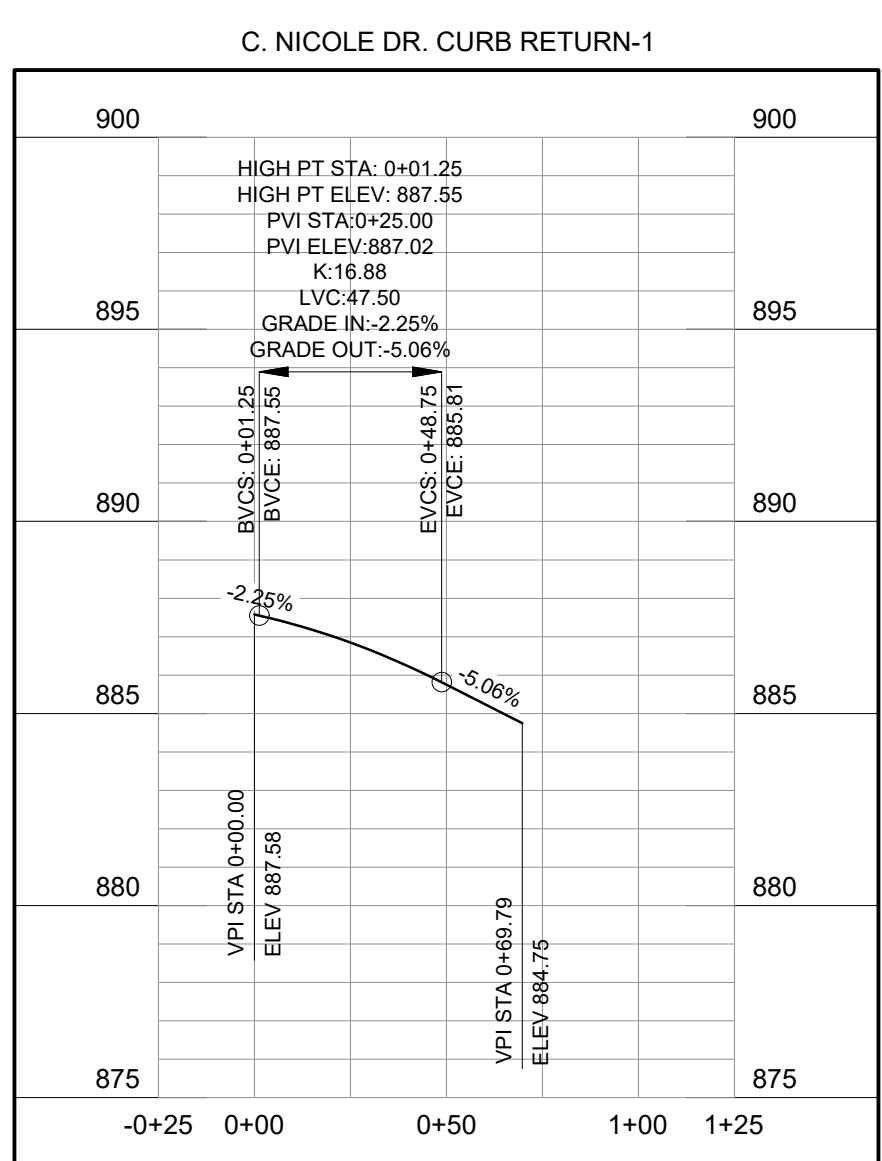
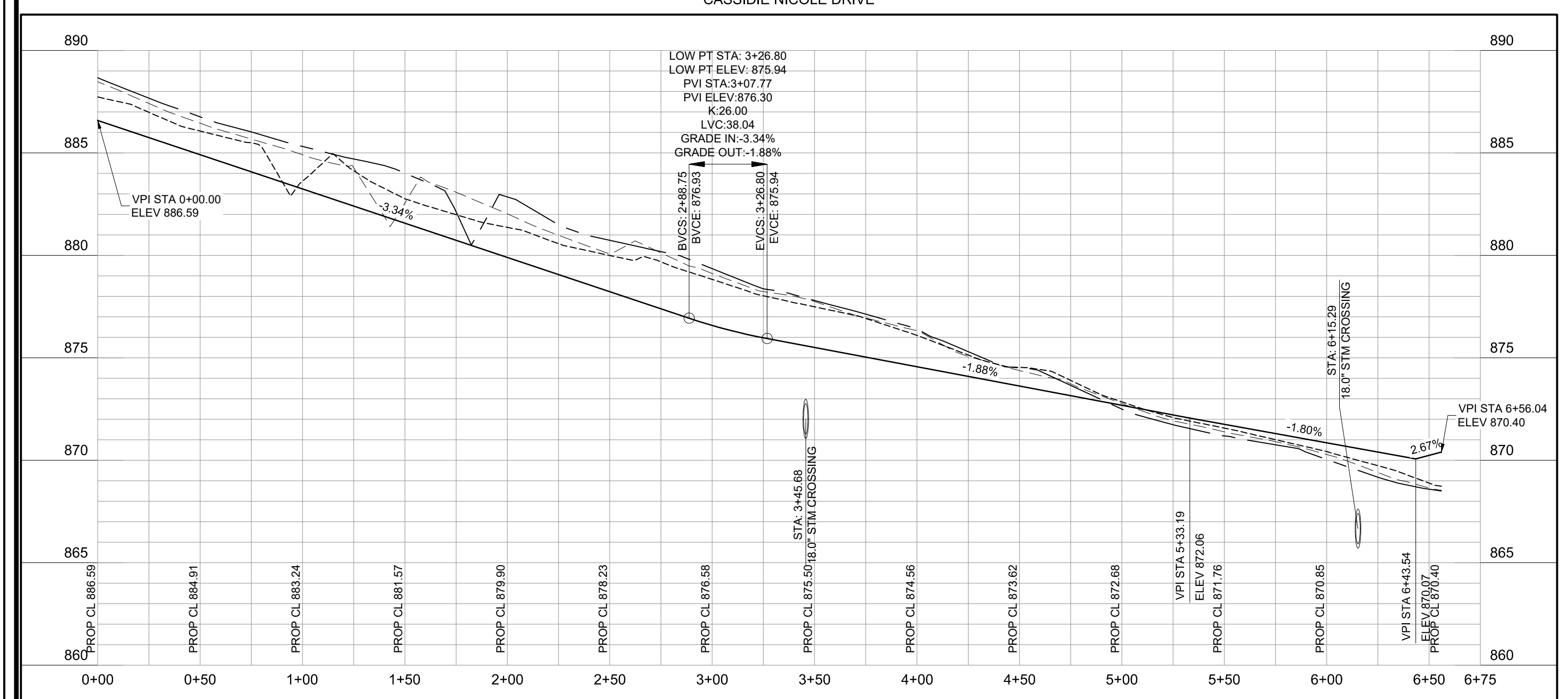
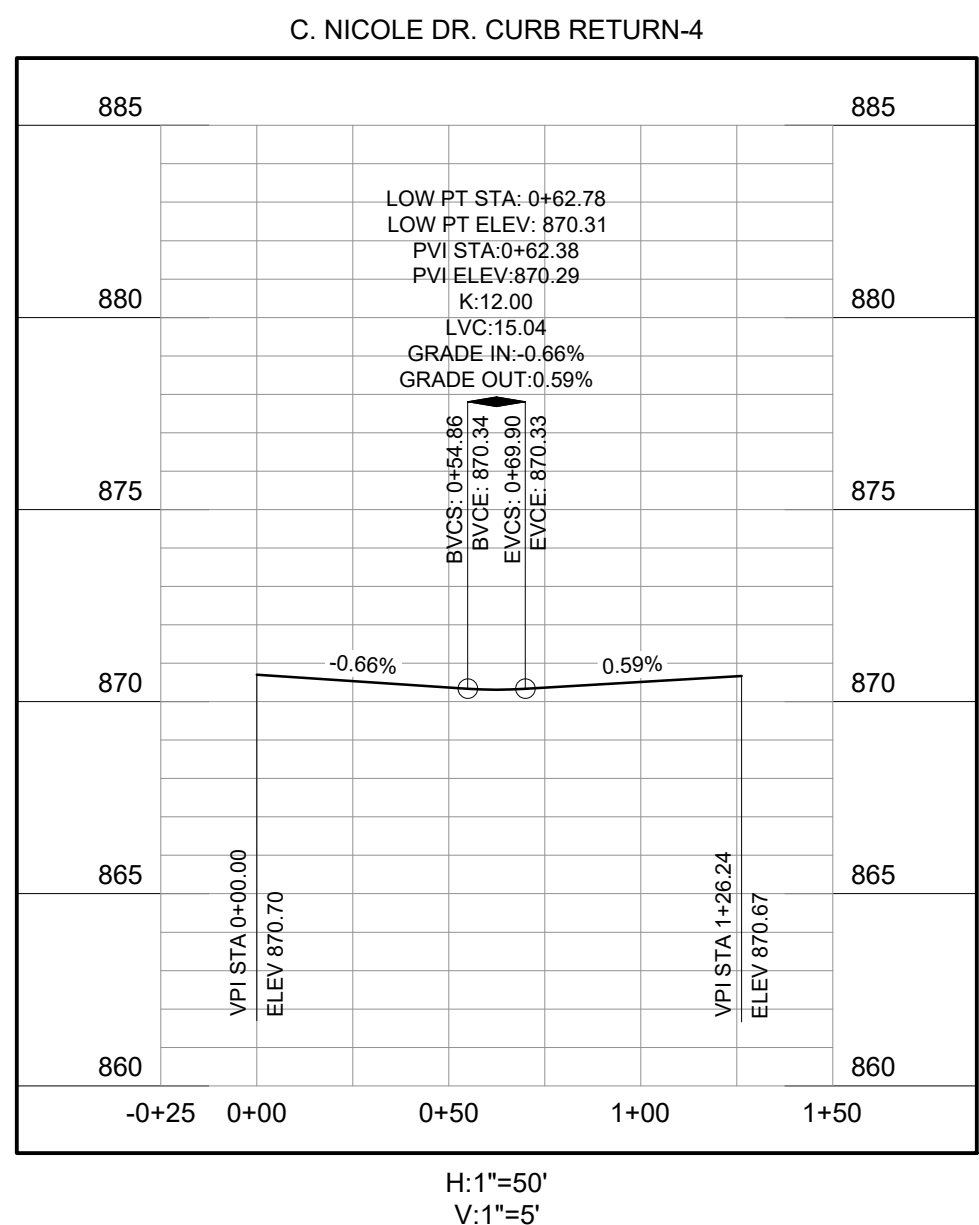
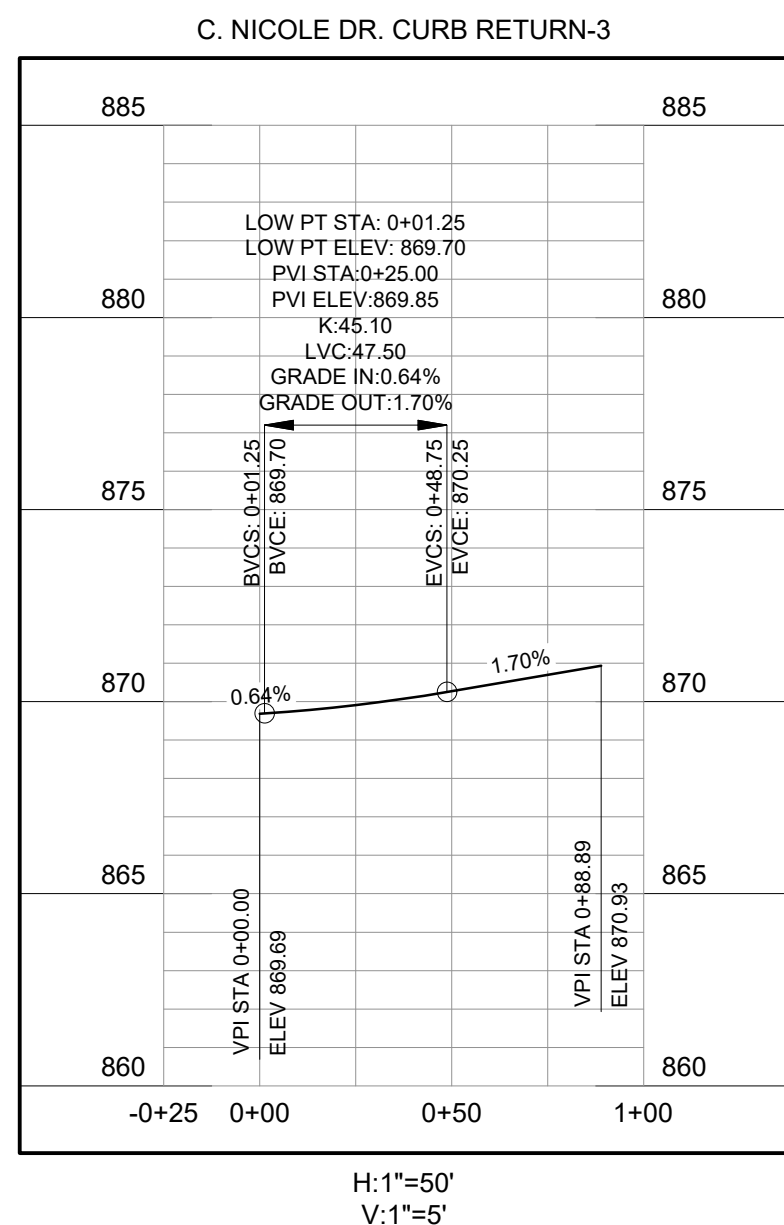
CASSIDIE NICOLE DRIVE				
Number	Radius	Length	Line/Chord Direction	A Value
L1		656.04	N68° 27' 18.73"E	

C. NICOLE DR. CURB RETURN-1				
Number	Radius	Length	Line/Chord Direction	A Value
L2		25.00	N21° 27' 23.41"W	
C1	21.50	33.74	N23° 29' 57.66"E	
L3		11.05	N68° 27' 18.73"E	

C. NICOLE DR. CURB RETURN-4				
Number	Radius	Length	Line/Chord Direction	A Value
L8		62.38	N21° 27' 23.41"W	
C4	21.50	33.81	N66° 30' 02.34"W	
L9		30.05	S68° 27' 18.73"W	

C. NICOLE DR. CURB RETURN-2				
Number	Radius	Length	Line/Chord Direction	A Value
L4		25.00	S21° 27' 23.41"E	
C2	21.50	33.81	S66° 30' 02.34"E	
L5		10.95	N68° 27' 18.73"E	

C. NICOLE DR. CURB RETURN-3				
Number	Radius	Length	Line/Chord Direction	A Value
L6		25.00	S21° 27' 23.41"E	
C3	21.50	33.74	S23° 29' 57.66"W	
L7		30.15	S68° 27' 18.73"W	



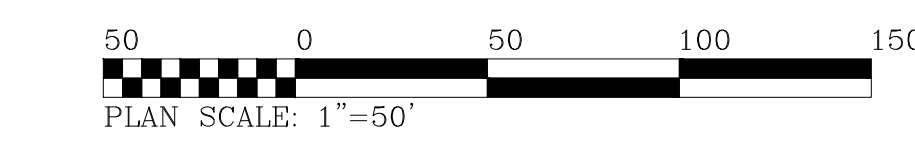
PROFILE LEGEND

- PROPOSED CENTERLINE
- - - EXISTING CENTERLINE
- - - EXISTING GROUND LEFT
- - - EXISTING GROUND RIGHT

PLAN LEGEND

- PROPOSED DIRECTION OF FLOW
- EXISTING DIRECTION OF FLOW
- ▬ SIDEWALK CONSTRUCTED WITH THIS CONTRACT

NOTES:
1. RESIDENTIAL LOCAL STREET SECTION PER CITY STANDARD DETAIL 204-3. REFER TO SHEET 46.



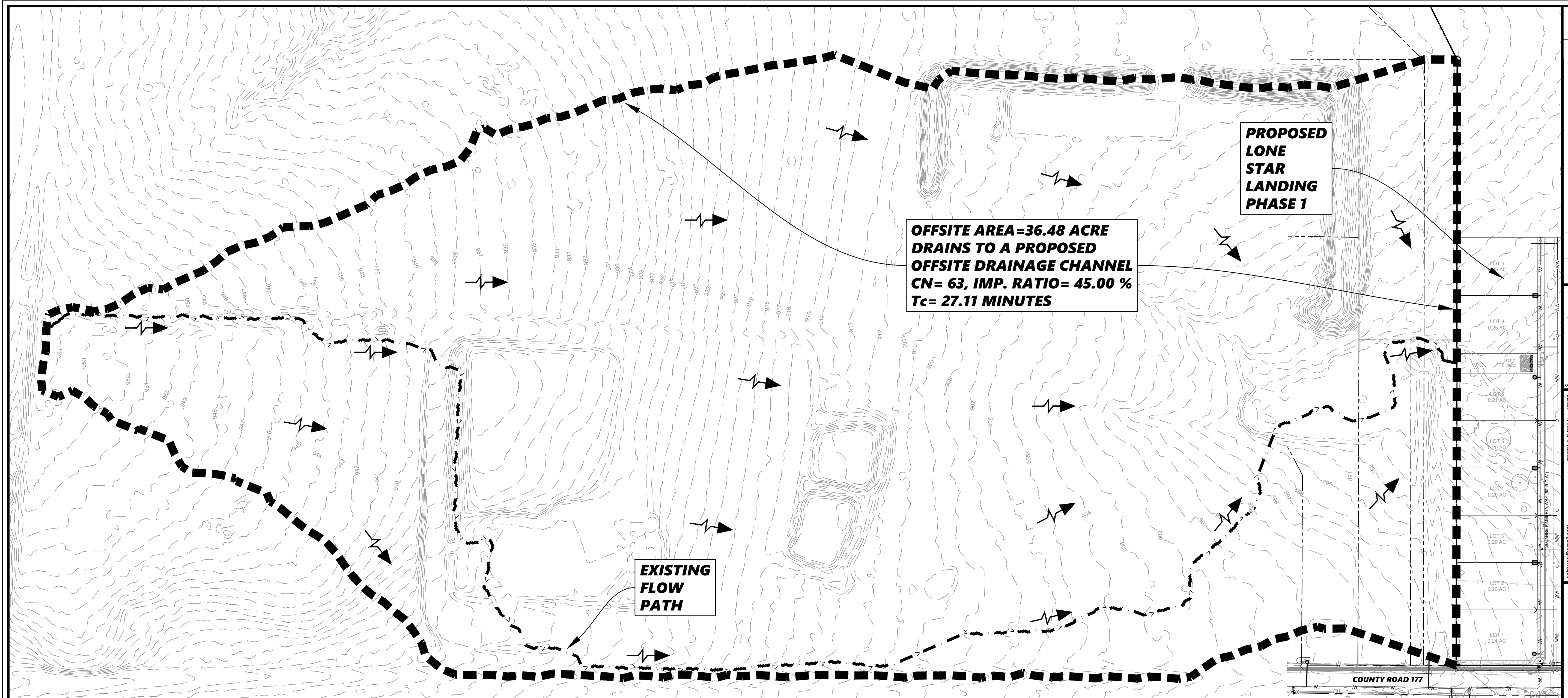
Jan 09, 2024
 TPBELS FIRM No. 17877
ELI ENGINEERING
 ELI ENGINEERING, PLLC.
 700 THERESA COVE, CEDAR PARK, TX 78613
 512-918-0818 (F) 512-532-0560

LEANDER, TEXAS 78641 (CITY LIMITS)
LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
 CASSIDIE NICOLE DRIVE - STA 0+00 TO END

DRAWING SCALE:	HORIZ =	VERT =
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	

SHEET
12
 OF
52

C:\Users\jones\Documents\offsite\lone_star_landing\offsite\drainage\plan_and_calcs.dwg Jan 09, 04:1:20 pm



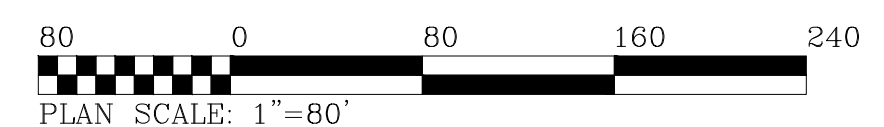
Drainage Area	EXISTING		IMPERVIOUS			GRASS		
	Total Area (Ac)	Total Area (sf)	Area Impervious (sf)	Area Impervious (Ac)	Area Impervious (%)	Area Grass (sf)	Area Grass (Ac)	Area Grass (%)
OFFSITE	36.48	1,589,069	0	0.00	0.0%	1,589,069	36.48	100.0%

Time of Concentration Calculations		Sheet Flow					Shallow Conc. Flow					Total
Existing Flows		Area	Area	L	n	S	T _t	L	Surface Type	S	T _t	T _c
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(min)
OFFSITE	EXS. OFFSITE RUNOFF TO BYPASS CHANNEL	36.48	1,589,080	100	0.150	0.020	8.85	3,100	Unpaved	0.0250	20.25	27.11

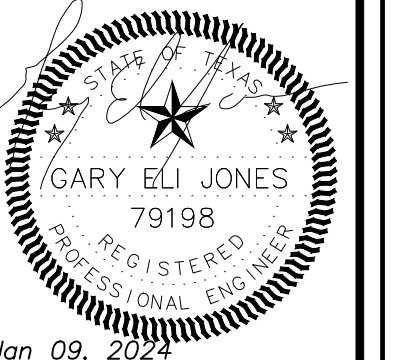
Existing Conditions				
	2yr	10yr	25yr	100yr
OFFSITE	64.28	116.83	155.92	225.89

LEGEND

- EXISTING FLOW PATH
- EXISTING DRAINAGE AREA BOUNDARY
- EXISTING FLOW DIRECTION



NO.	DATE	REVISION	BY



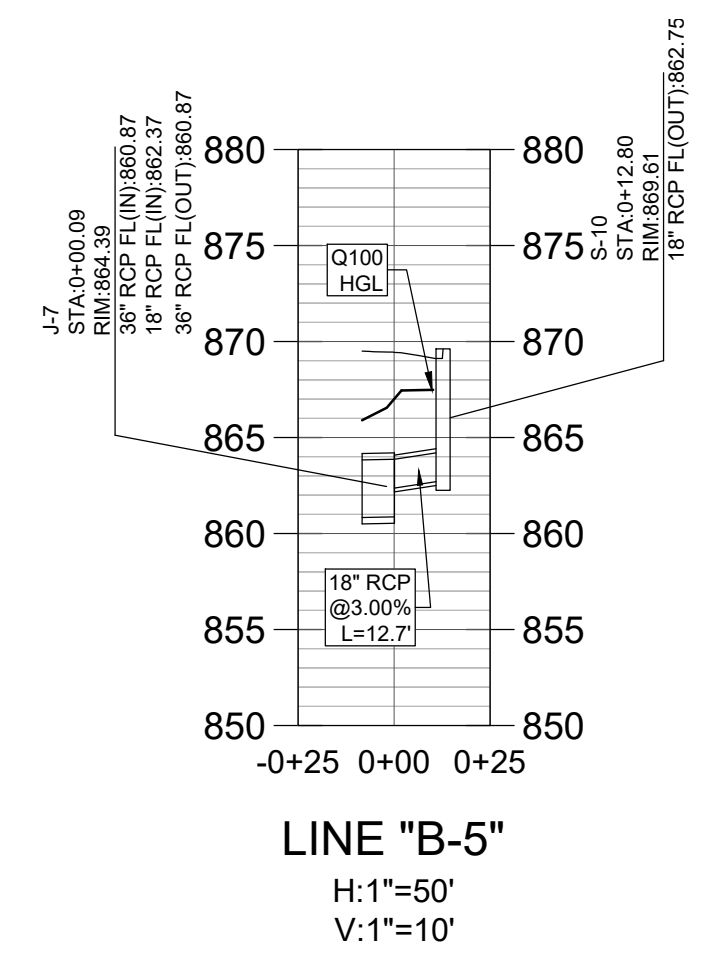
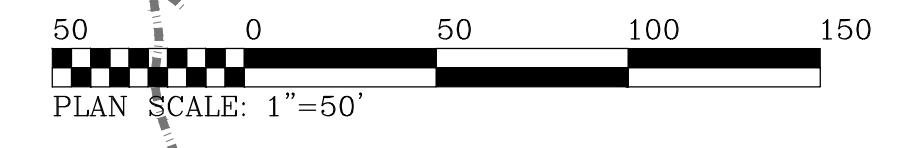
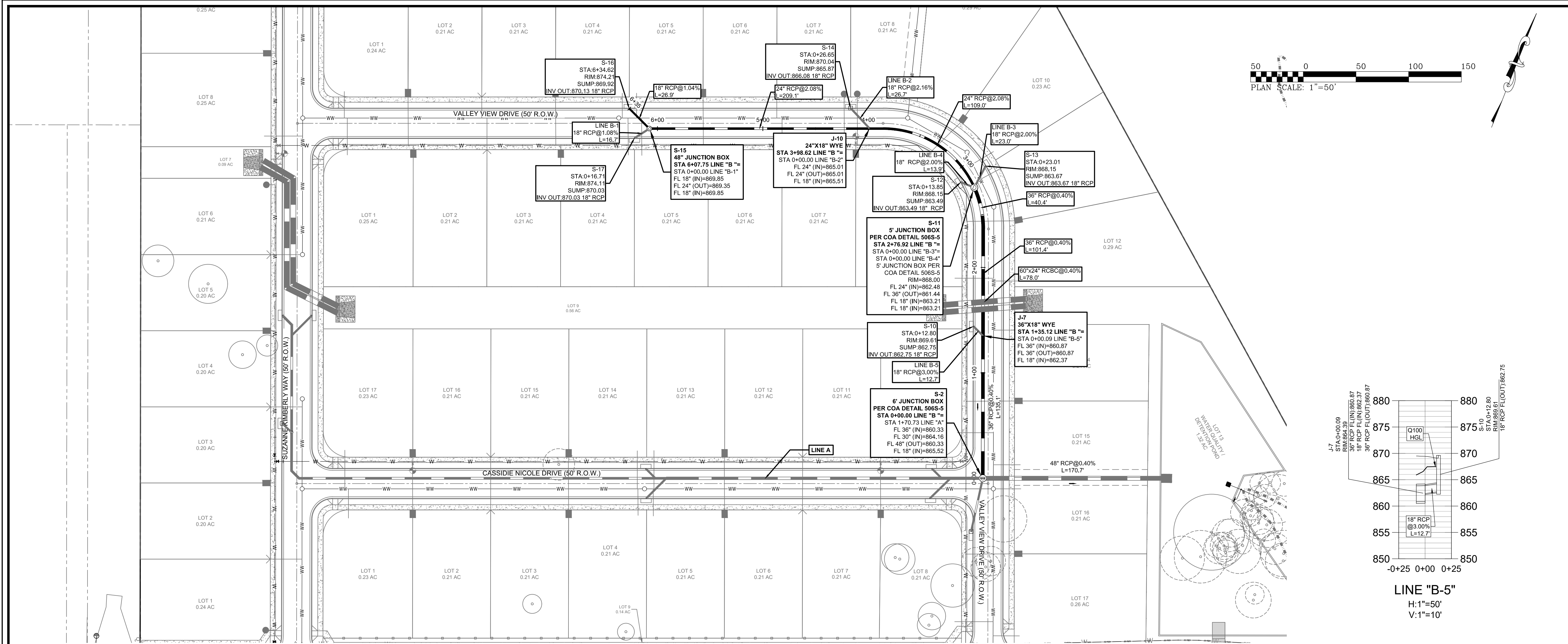
TPPELS FIRM No. 17877
ELI ENGINEERING
 ELI ENGINEERING, PLLC.
 700 THERESA COVE, CEDAR PARK, TX 78613
 512-918-0818 (F) 512-552-0560
 gajones@gmail.com

LEANDER, TEXAS 78641 (CITY LIMITS)
LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
 OFFSITE DRAINAGE PLAN AND CALCULATIONS

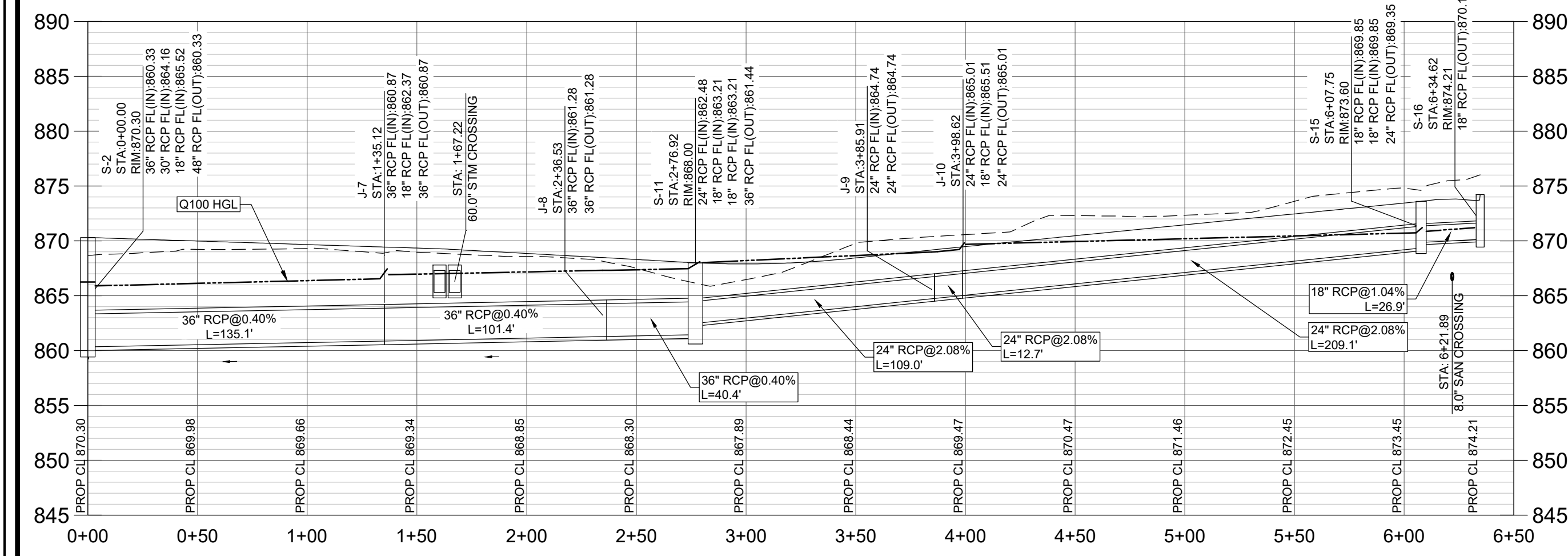
DRAWING SCALE:	HORIZ. =	VERT. =
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	

SHEET
13
 OF
52

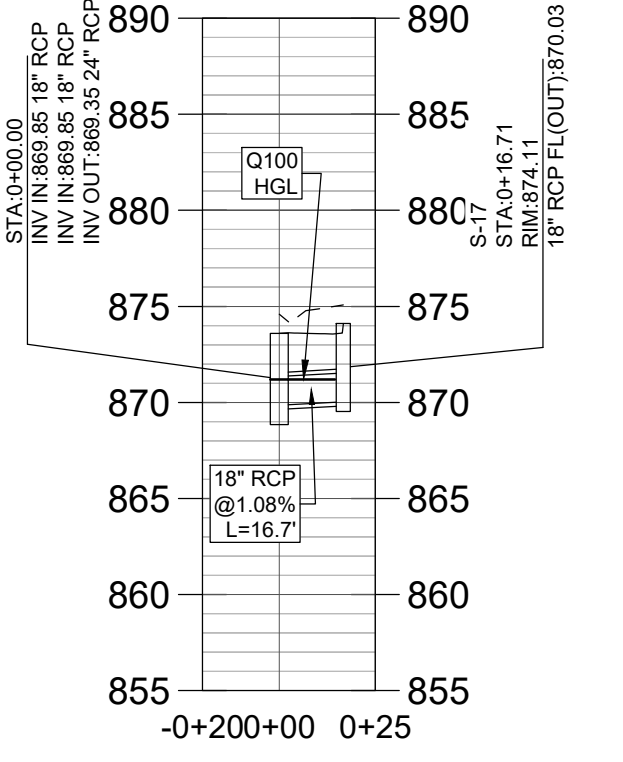
C:\Users\Hanna\Dropbox\eli_backup\elibered\dl\folder_for_hsan\001-001-cad\004-sheets\ELI_LONE_STAR_LANDING_STORM_LINE_B.dwg, Jan 09, 24 1:29 pm



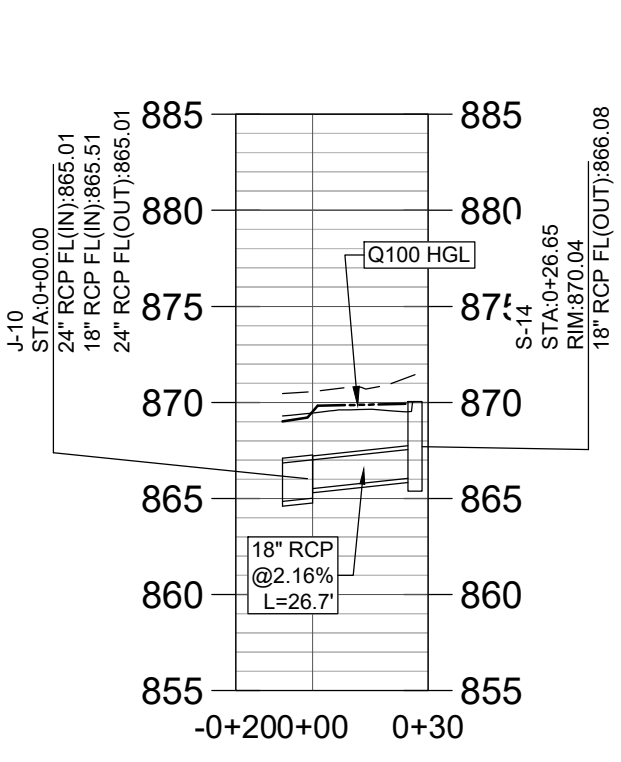
LINE "B-5"
H:1"=50'
V:1"=10'



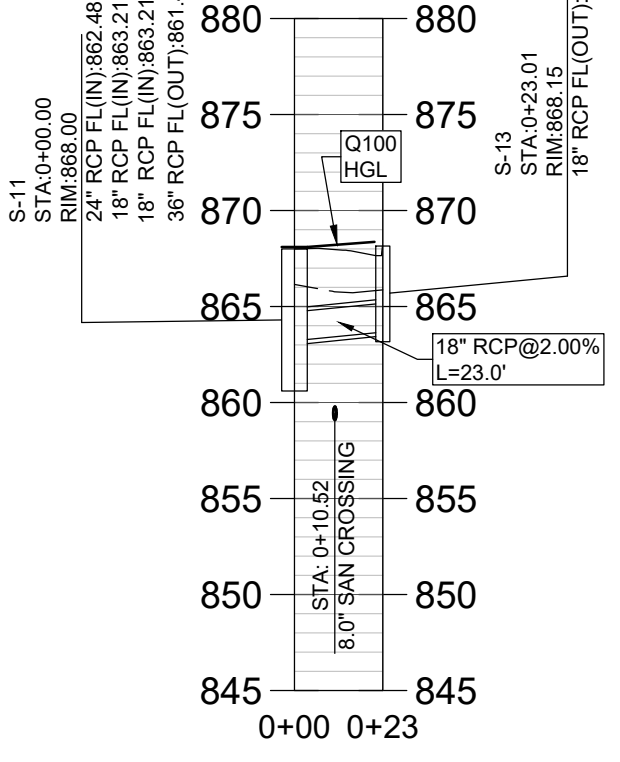
LINE "B"
H:1"=50'
V:1"=10'



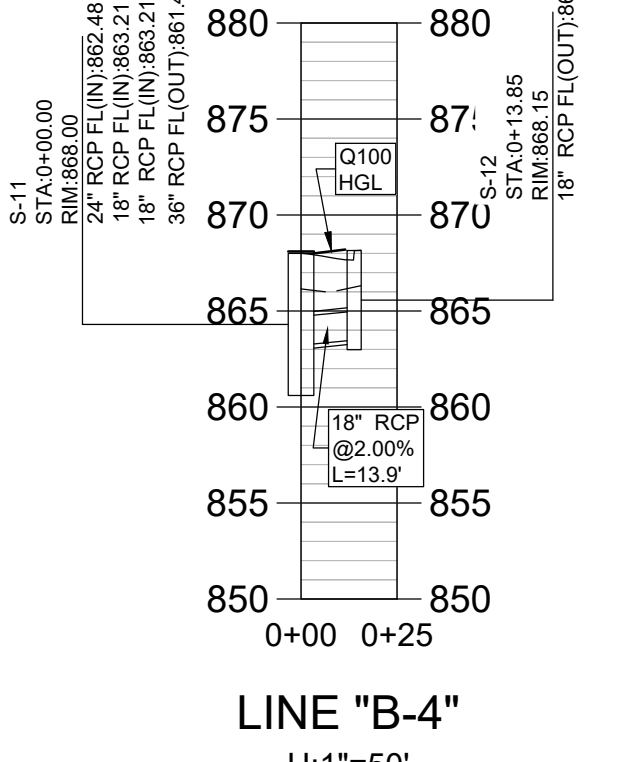
LINE "B-1"
H:1"=50'
V:1"=10'



LINE "B-2"
H:1"=50'
V:1"=10'



LINE "B-3"
H:1"=50'
V:1"=10'

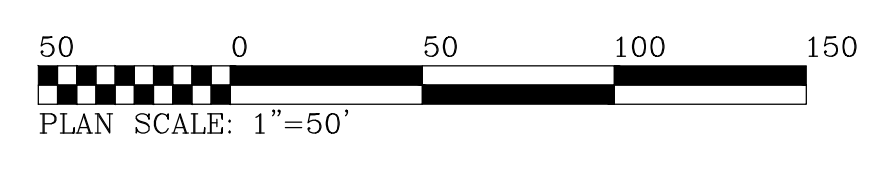
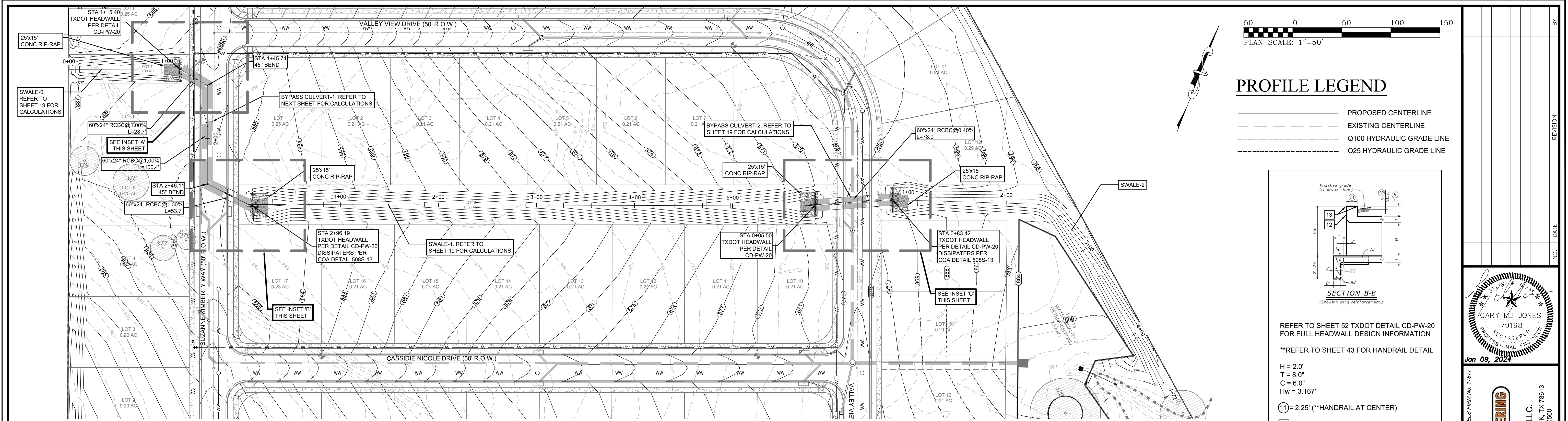


LINE "B-4"
H:1"=50'
V:1"=10'

PROFILE LEGEND

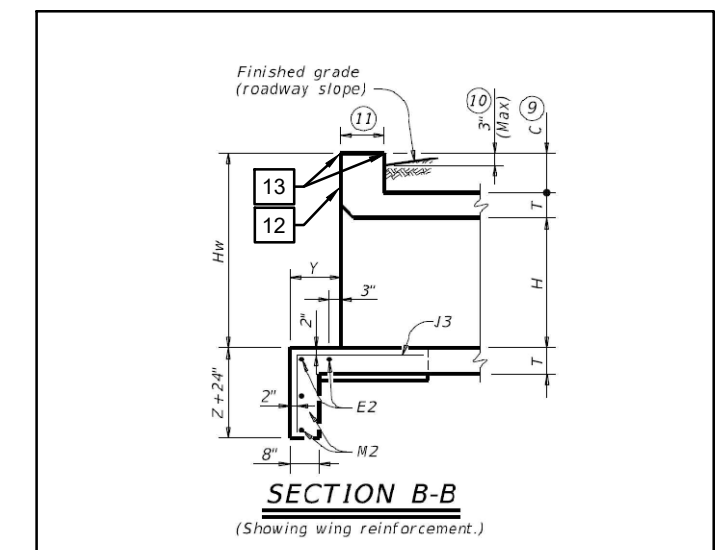
- PROPOSED CENTERLINE
- - - EXISTING CENTERLINE
- Q100 HYDRAULIC GRADE LINE

<p style="text-align: center;">LEANDER, TEXAS 78641 (CITY LIMITS)</p> <p style="text-align: center;">LONE STAR LANDING PHASE ONE</p> <p style="text-align: center;">SUBDIVISION IMPROVEMENTS</p> <p style="text-align: center;">STORM SEWER LINE B- STA 0+00 TO END</p>	<p style="text-align: center;"> ELI ENGINEERING PLLC 700 THERESA COVE, CEDAR PARK, TX 78613 512-818-0818 (F) 512-552-0560 </p> <p style="text-align: center;"> G.ELI@ELIENGINEERING.COM TPELS FIRM No. 17877 Jan 09, 2024 </p>				
<p>DRAWING SCALE: HORIZ. = VERT. =</p> <p>SURVEYED: FILE NAME: RR</p> <p>DATE: DRAWN: JTC</p> <p>DESIGNED: EEI</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">NO.</td> <td style="width: 50%;">REVISION</td> </tr> <tr> <td style="width: 50%;">DATE</td> <td style="width: 50%;">BY</td> </tr> </table>	NO.	REVISION	DATE	BY
NO.	REVISION				
DATE	BY				
<p>SHEET</p> <p style="font-size: 2em;">17</p> <p>OF</p> <p style="font-size: 2em;">52</p>					



PROFILE LEGEND

- PROPOSED CENTERLINE
- EXISTING CENTERLINE
- Q100 HYDRAULIC GRADE LINE
- Q25 HYDRAULIC GRADE LINE

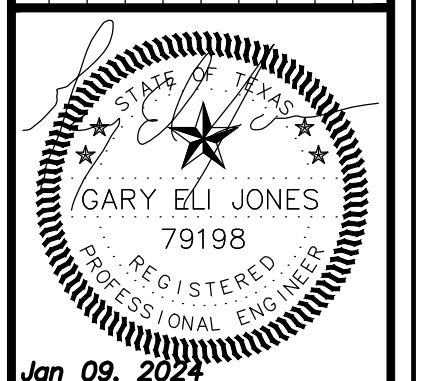


REFER TO SHEET 52 TXDOT DETAIL CD-PW-20 FOR FULL HEADWALL DESIGN INFORMATION

**REFER TO SHEET 43 FOR HANDRAIL DETAIL

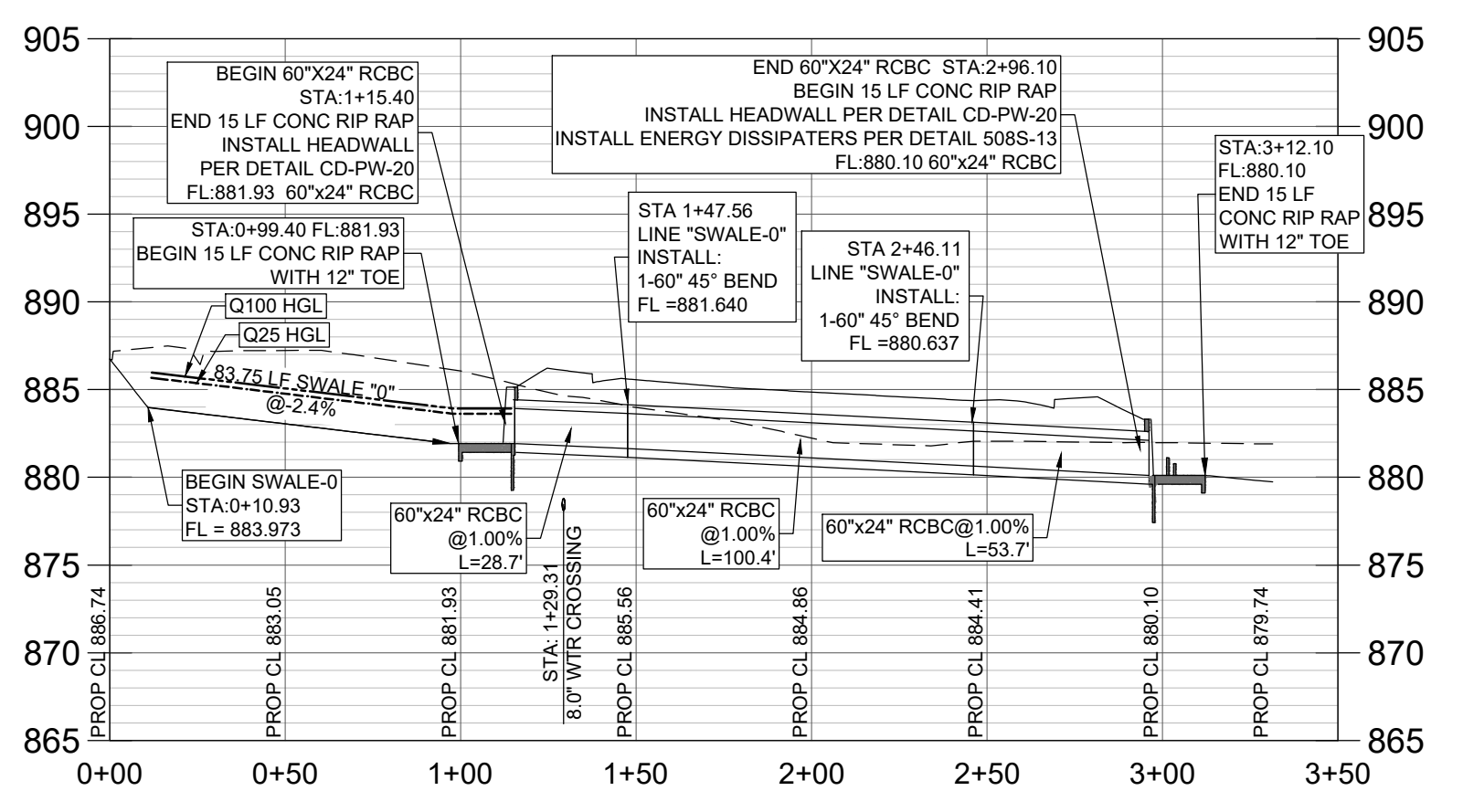
- H = 2.0'
- T = 8.0'
- C = 6.0'
- Hw = 3.167'

- ① = 2.25' (**HANDRAIL AT CENTER)
- ⑫ MID-POINT OF HEADWALL FACE
- ⑬ TOP CORNER OF HEADWALL CURB

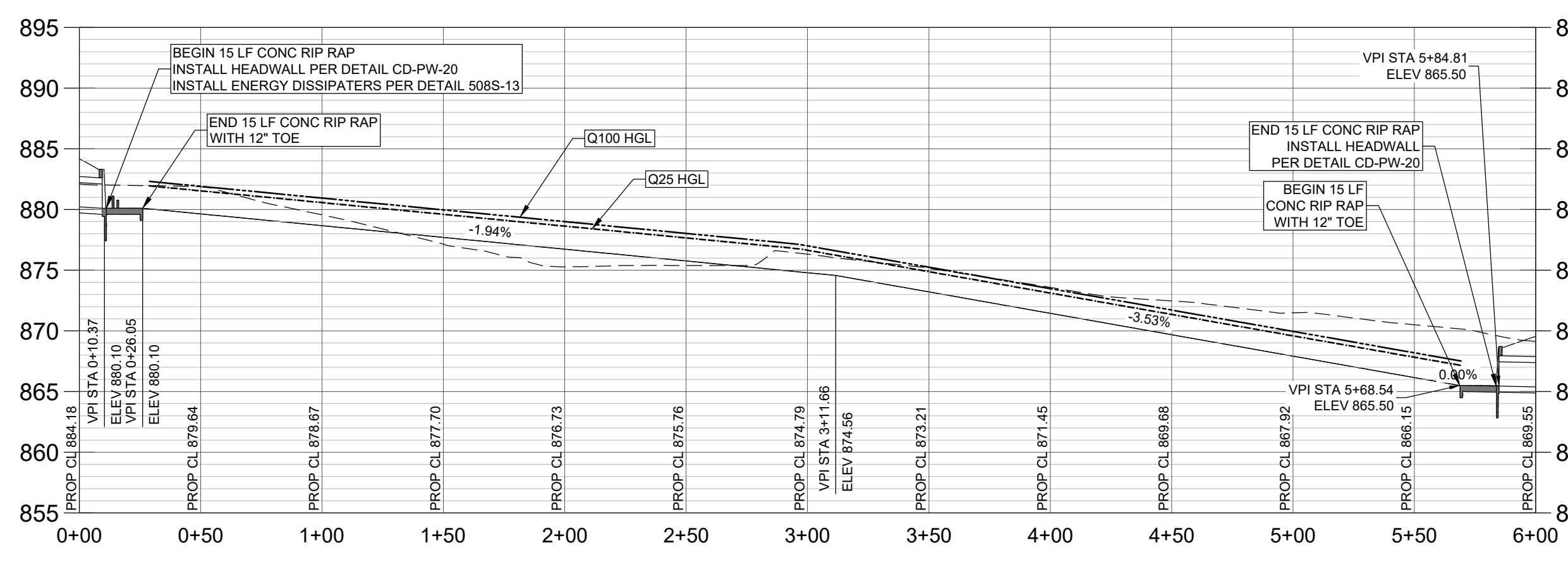


Jan 09, 2024

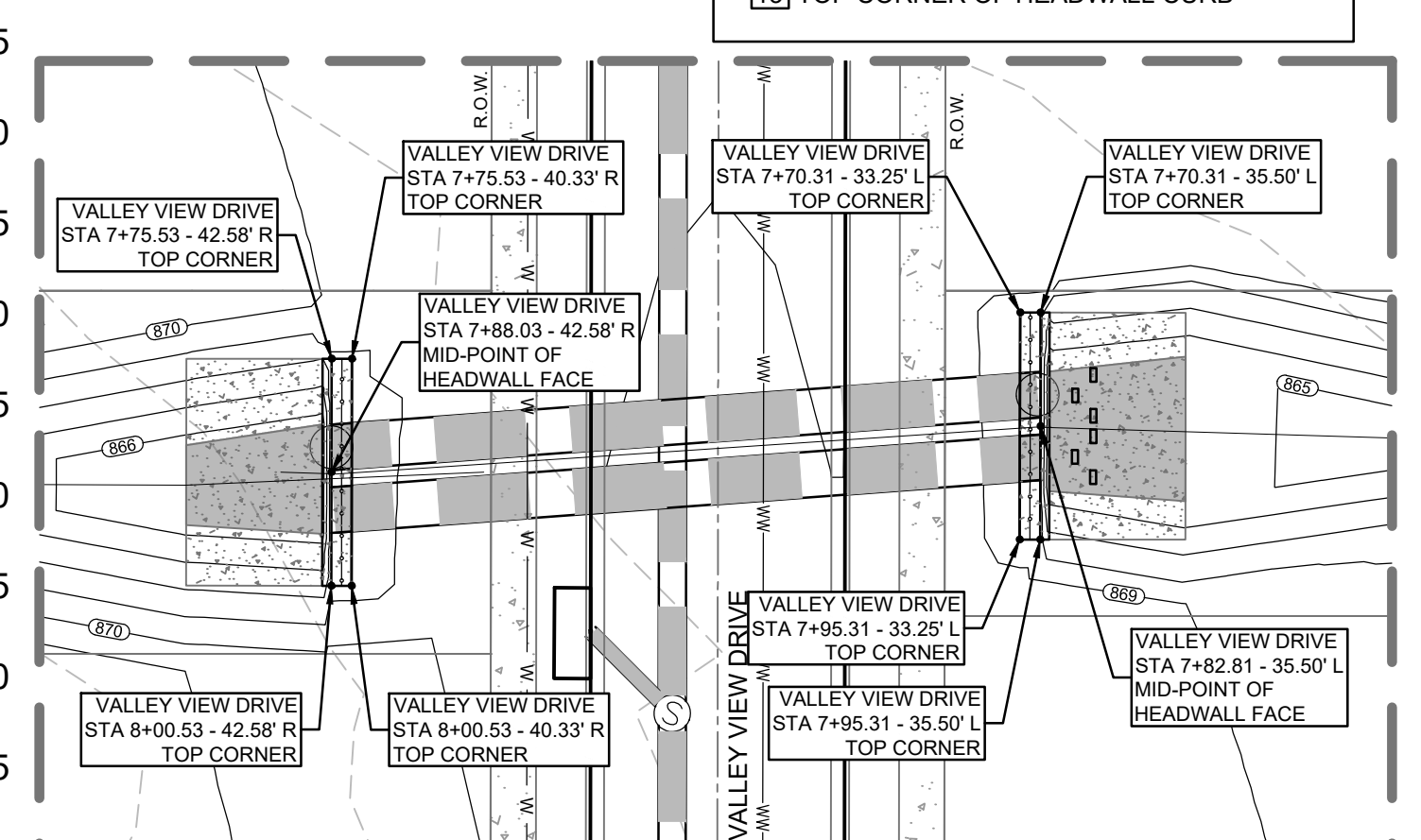
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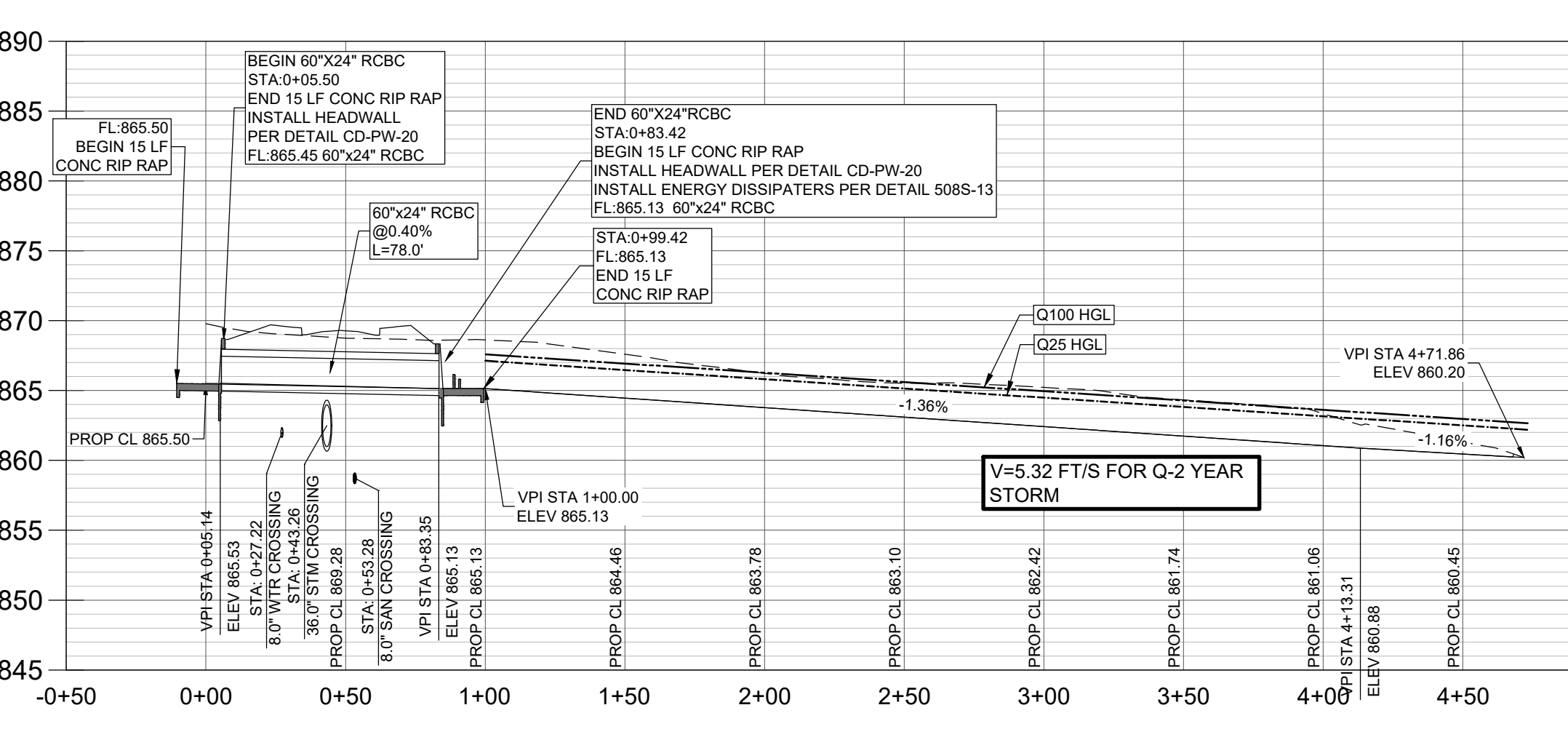
LINE "SWALE-0"
 H: 1"=50'
 V: 1"=10'



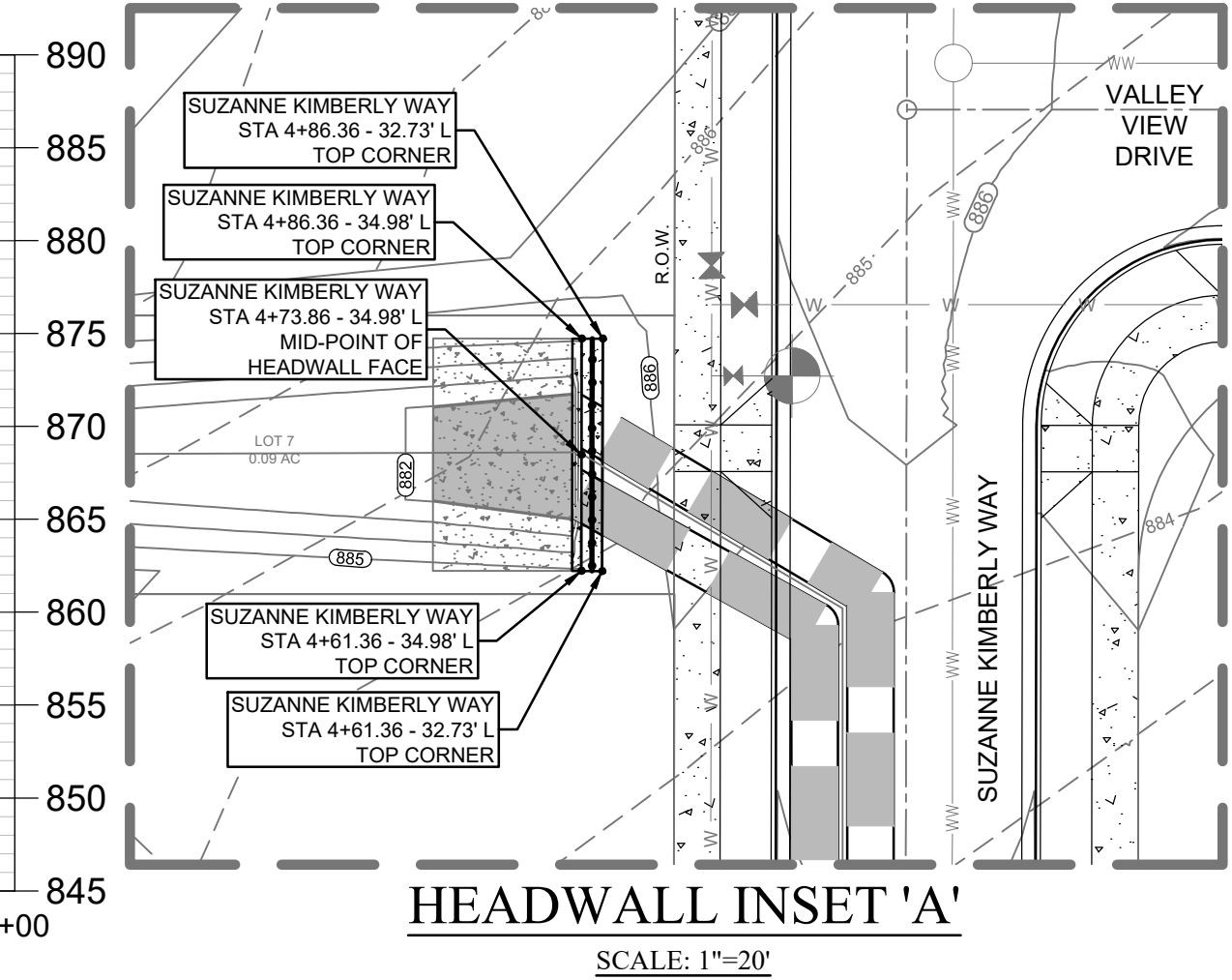
LINE "SWALE-1"
 H: 1"=50'
 V: 1"=10'



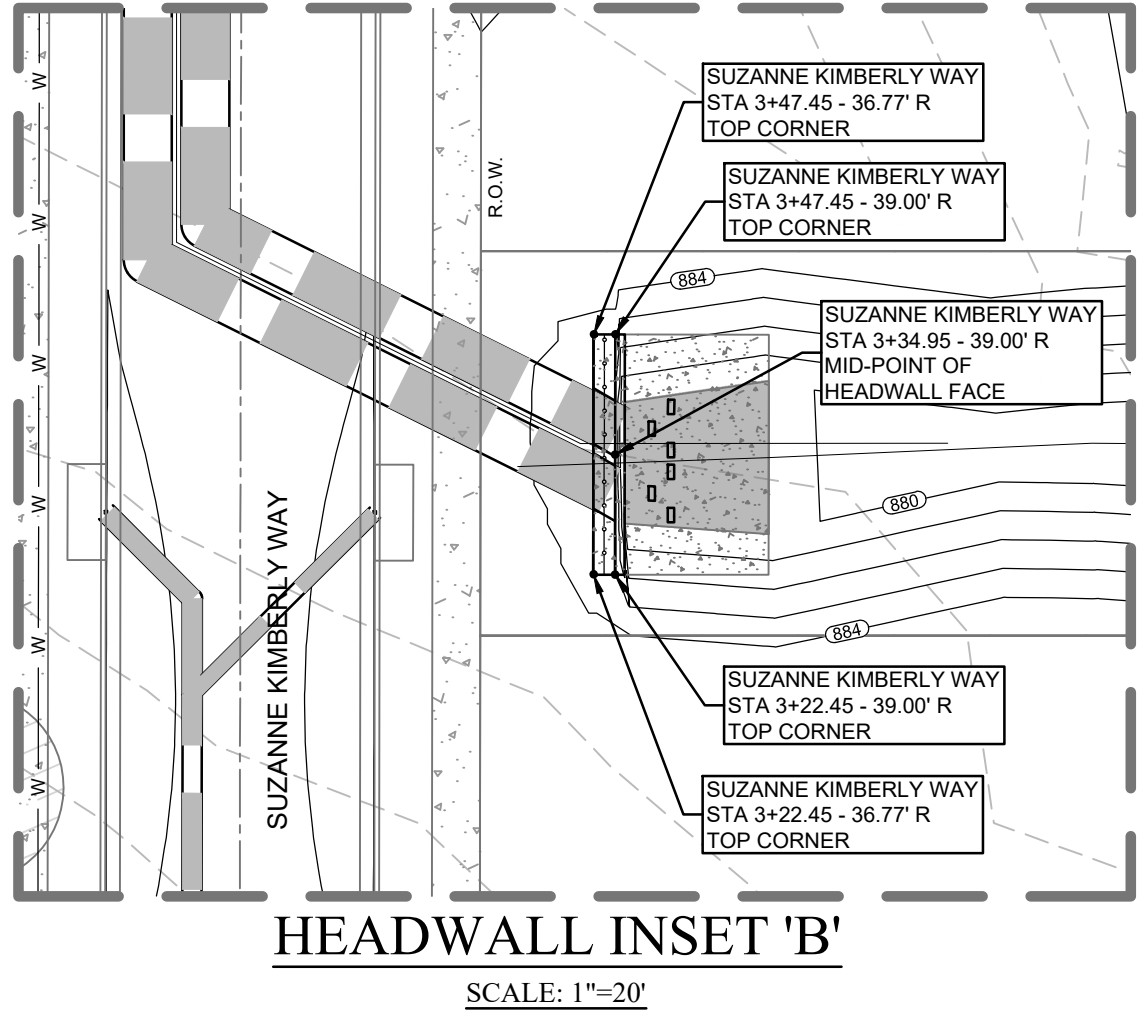
HEADWALL INSET 'C'
 SCALE: 1"=20'



LINE "SWALE-2"
 H: 1"=50'
 V: 1"=10'



HEADWALL INSET 'A'
 SCALE: 1"=20'

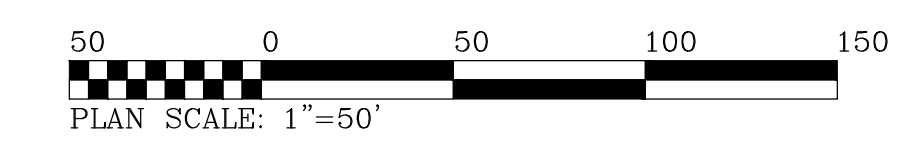
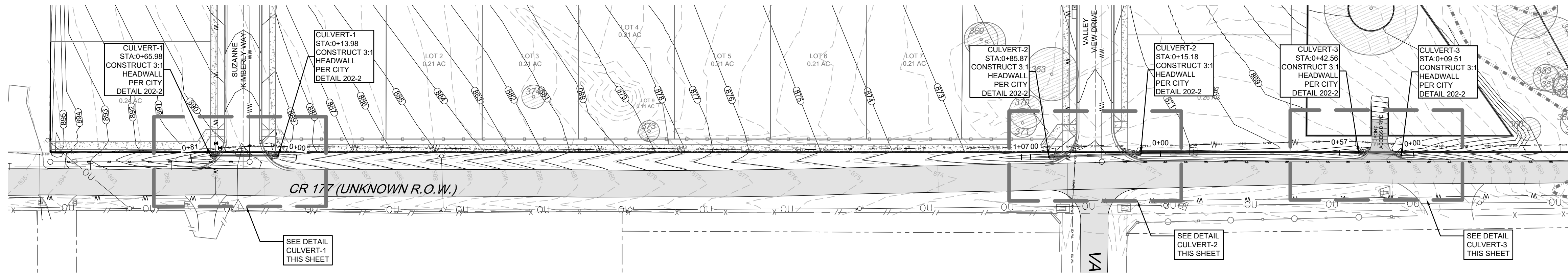


HEADWALL INSET 'B'
 SCALE: 1"=20'

LEANDER, TEXAS 78641 (CITY LIMITS)

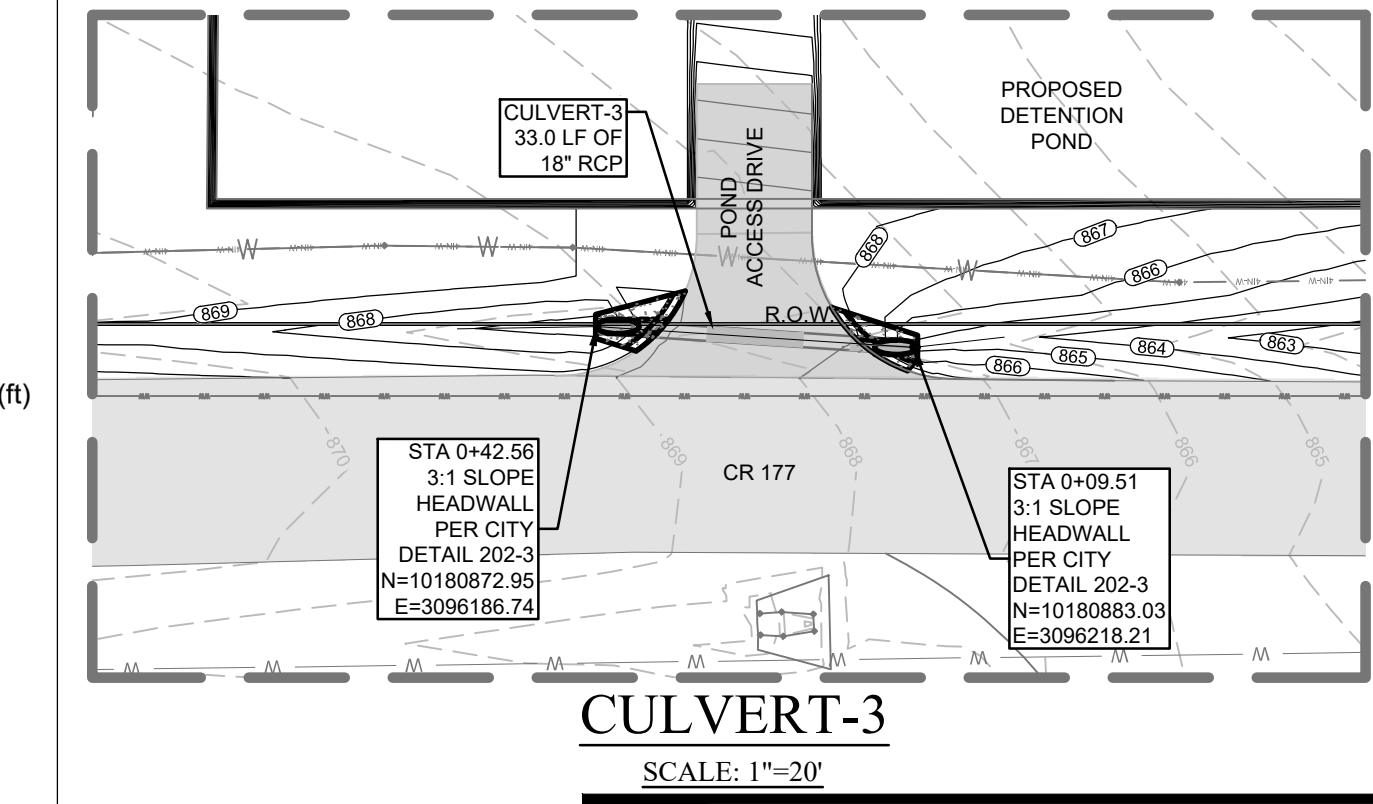
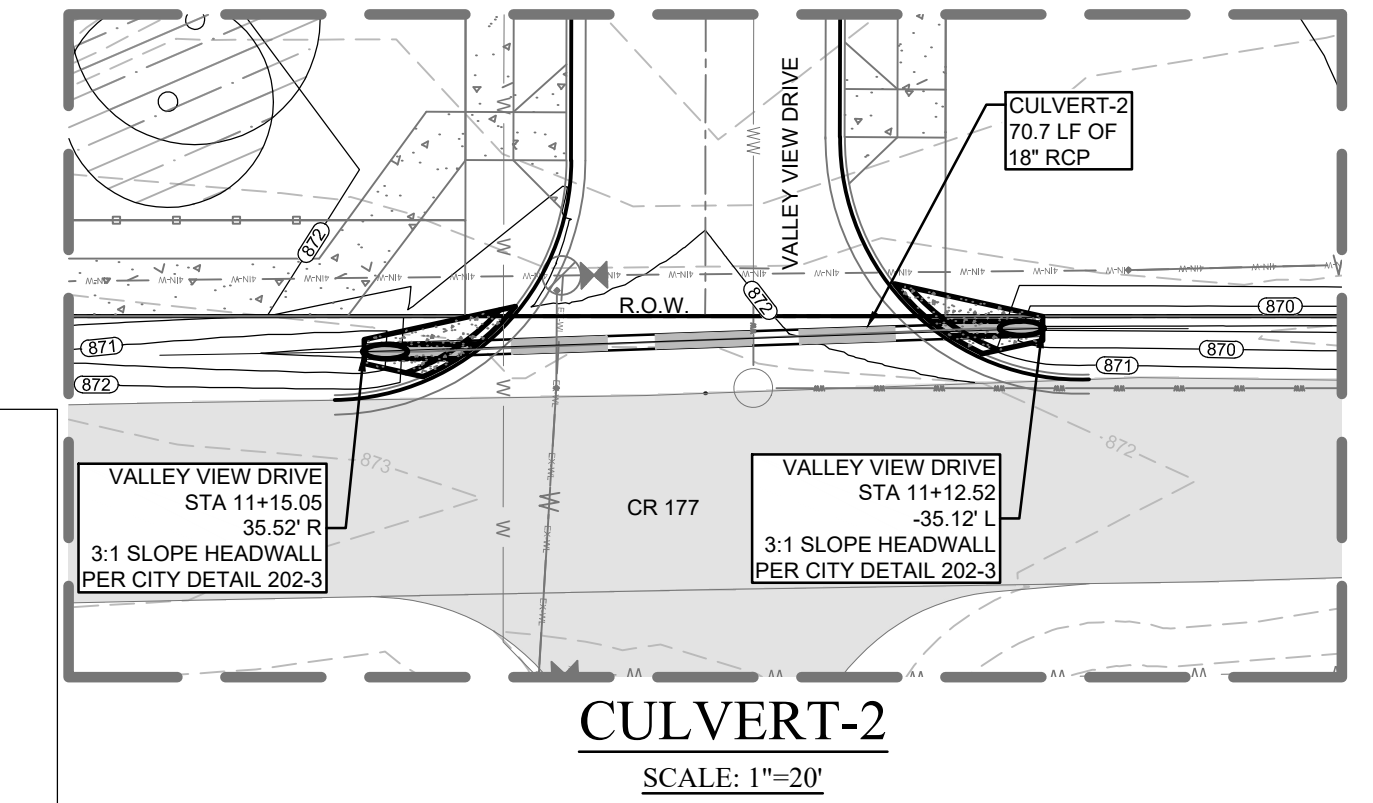
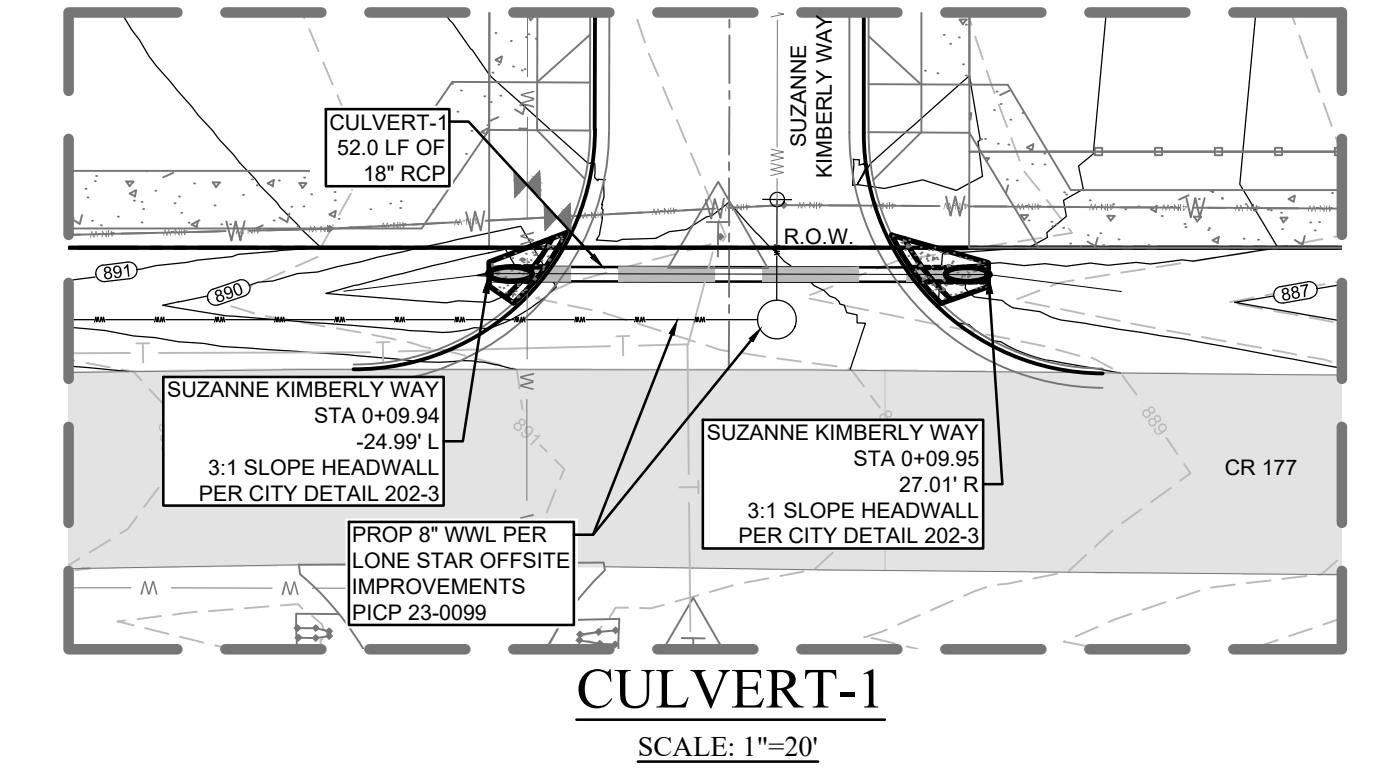
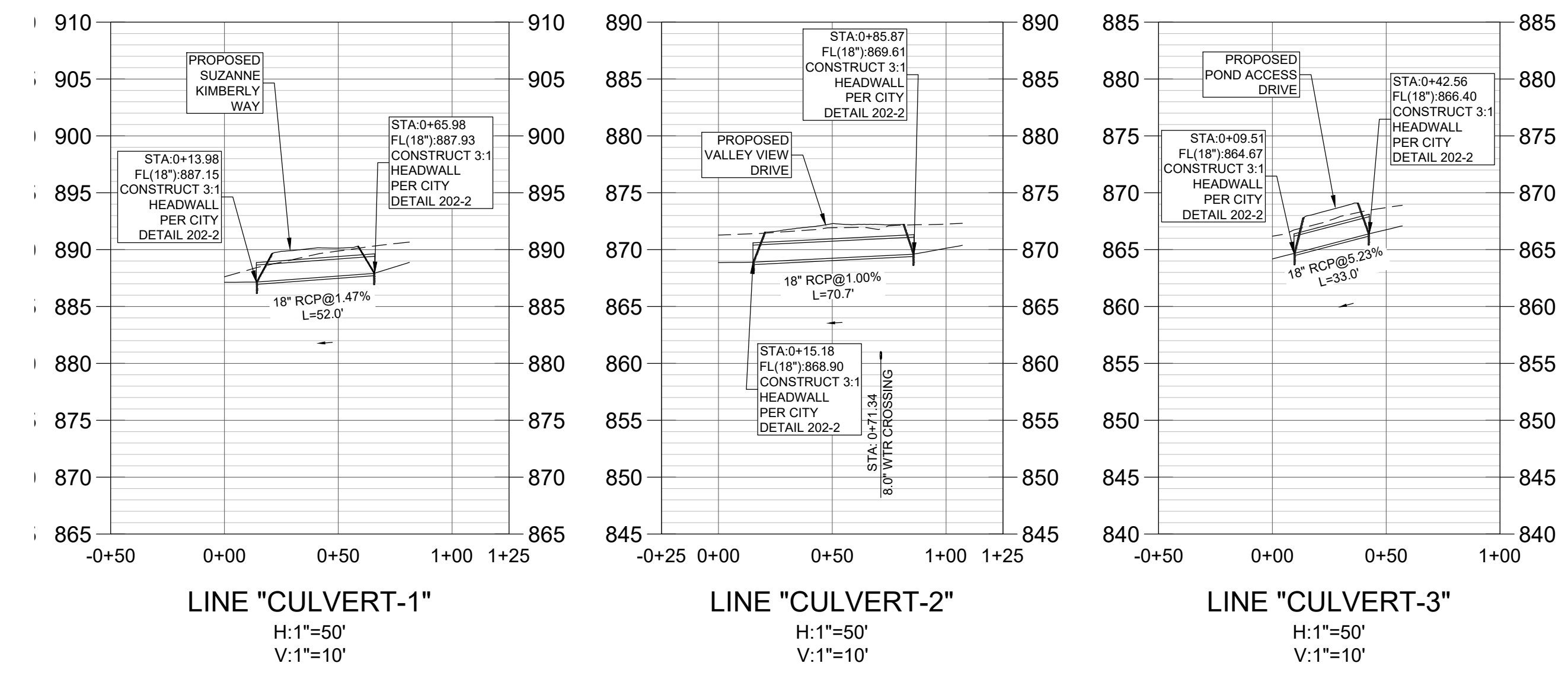
LONE STAR LANDING PHASE ONE
 SUBDIVISION IMPROVEMENTS
 CULVERT & SWALE PLAN AND PROFILE (1 OF 3)

DRAWING SCALE:	HORIZ. =	VERT. =
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	



PROFILE LEGEND

- PROPOSED CENTERLINE
- - - EXISTING CENTERLINE
- - - Q100 HYDRAULIC GRADE LINE
- - - Q25 HYDRAULIC GRADE LINE

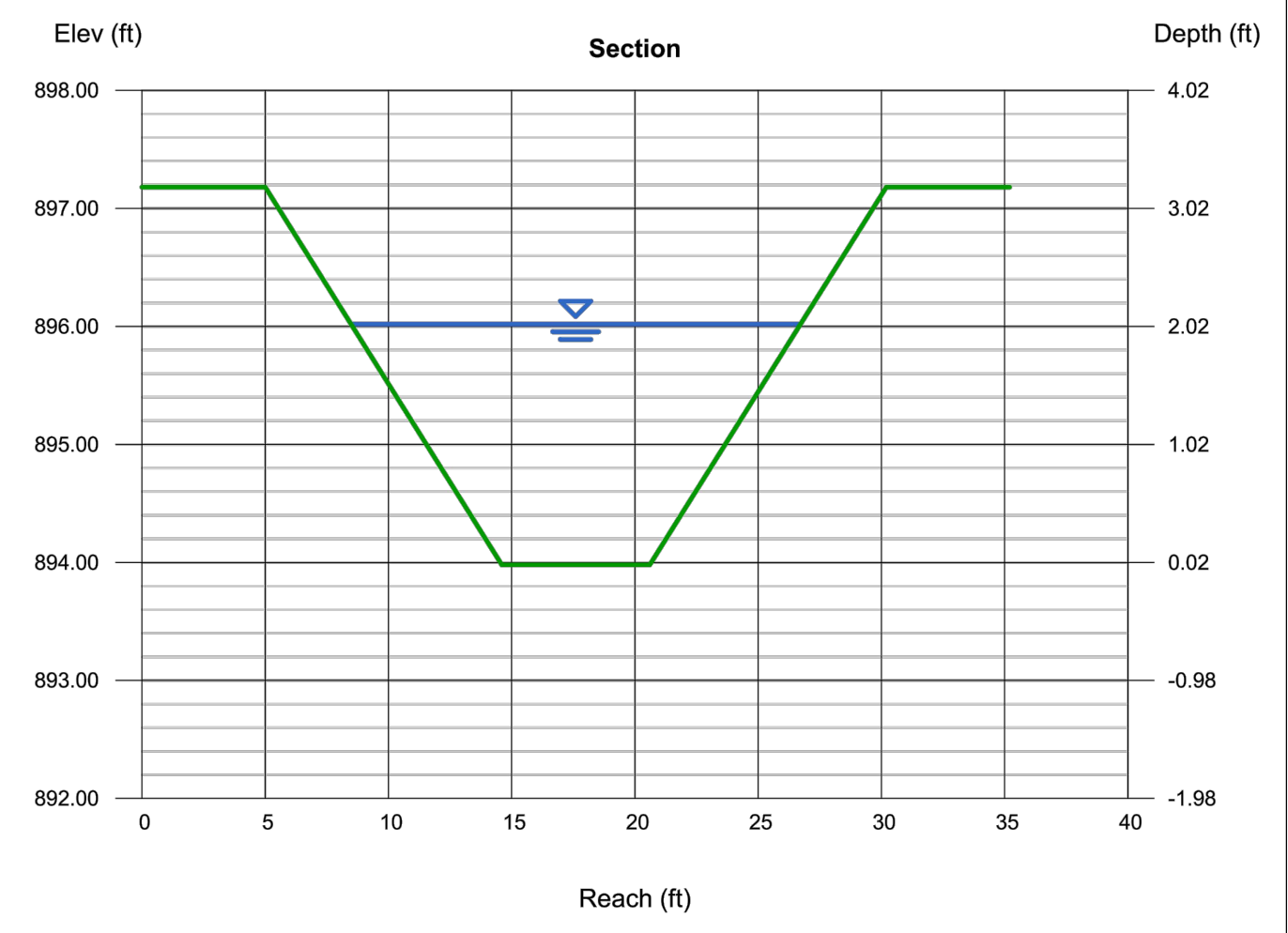


Channel Report

Hydraulix Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Jan 5 2024

SWALE-0 Q100 CALCULATIONS

Trapezoidal		Highlighted	
Bottom Width (ft)	= 6.00	Depth (ft)	= 2.04
Side Slopes (z:1)	= 3.00, 3.00	Q (cfs)	= 226.00
Total Depth (ft)	= 3.20	Area (sqft)	= 24.72
Invert Elev (ft)	= 893.98	Velocity (ft/s)	= 9.14
Slope (%)	= 2.40	Wetted Perim (ft)	= 18.90
N-Value	= 0.030	Crit Depth, Yc (ft)	= 2.42
		Top Width (ft)	= 18.24
		EGL (ft)	= 3.34
Calculations			
Compute by:	Known Q		
Known Q (cfs)	= 226.00		

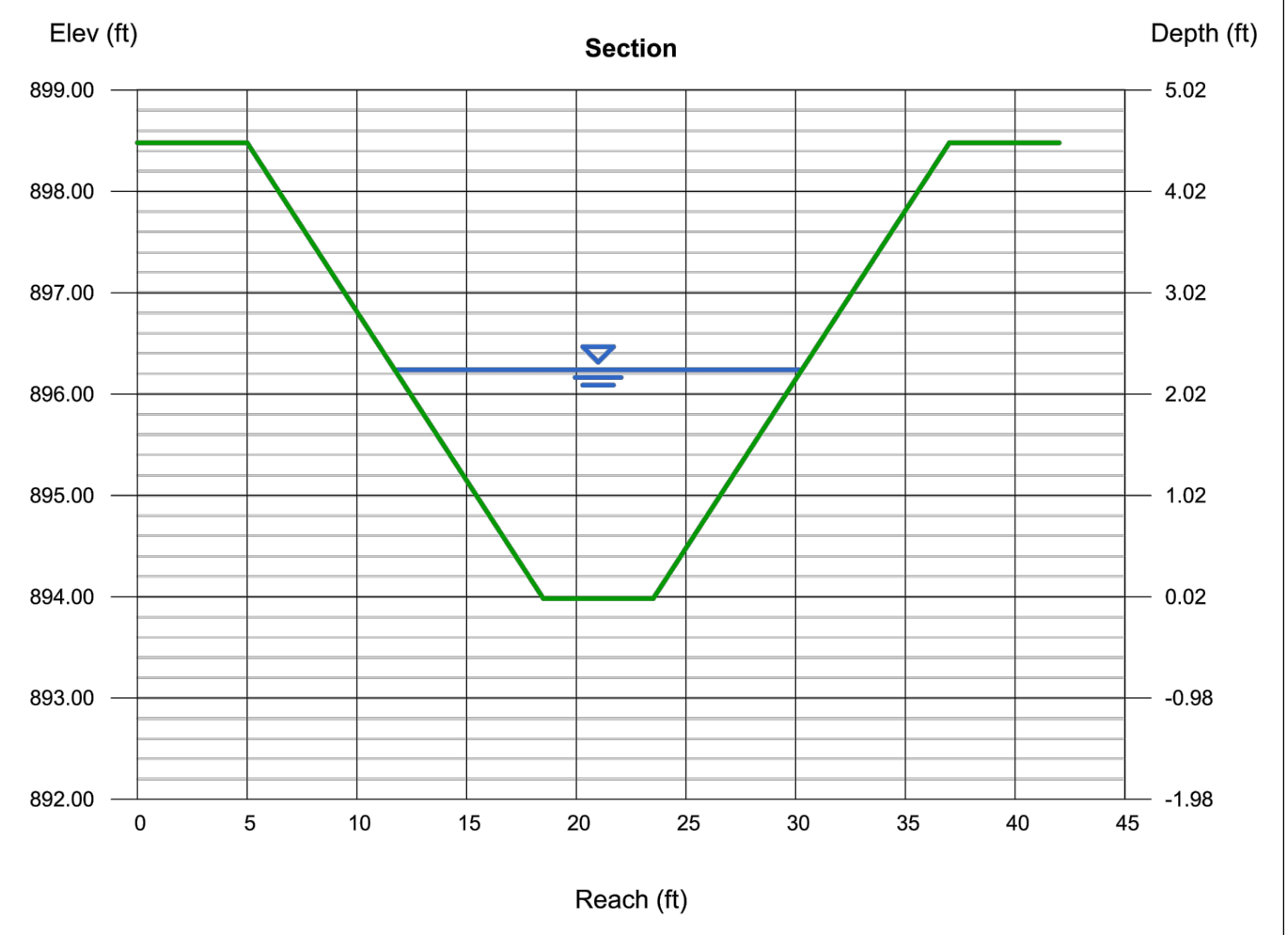


Channel Report

Hydraulix Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Thursday, Dec 14 2023

SWALE-1 Q100 CALCULATIONS

Trapezoidal		Highlighted	
Bottom Width (ft)	= 5.00	Depth (ft)	= 2.26
Side Slopes (z:1)	= 3.00, 3.00	Q (cfs)	= 226.00
Total Depth (ft)	= 4.50	Area (sqft)	= 26.62
Invert Elev (ft)	= 893.98	Velocity (ft/s)	= 8.49
Slope (%)	= 1.94	Wetted Perim (ft)	= 19.29
N-Value	= 0.030	Crit Depth, Yc (ft)	= 2.53
		Top Width (ft)	= 18.56
		EGL (ft)	= 3.38
Calculations			
Compute by:	Known Q		
Known Q (cfs)	= 226.00		

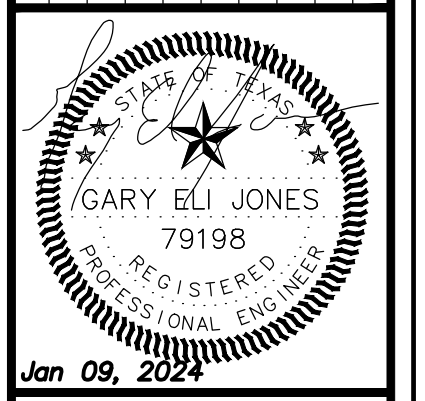
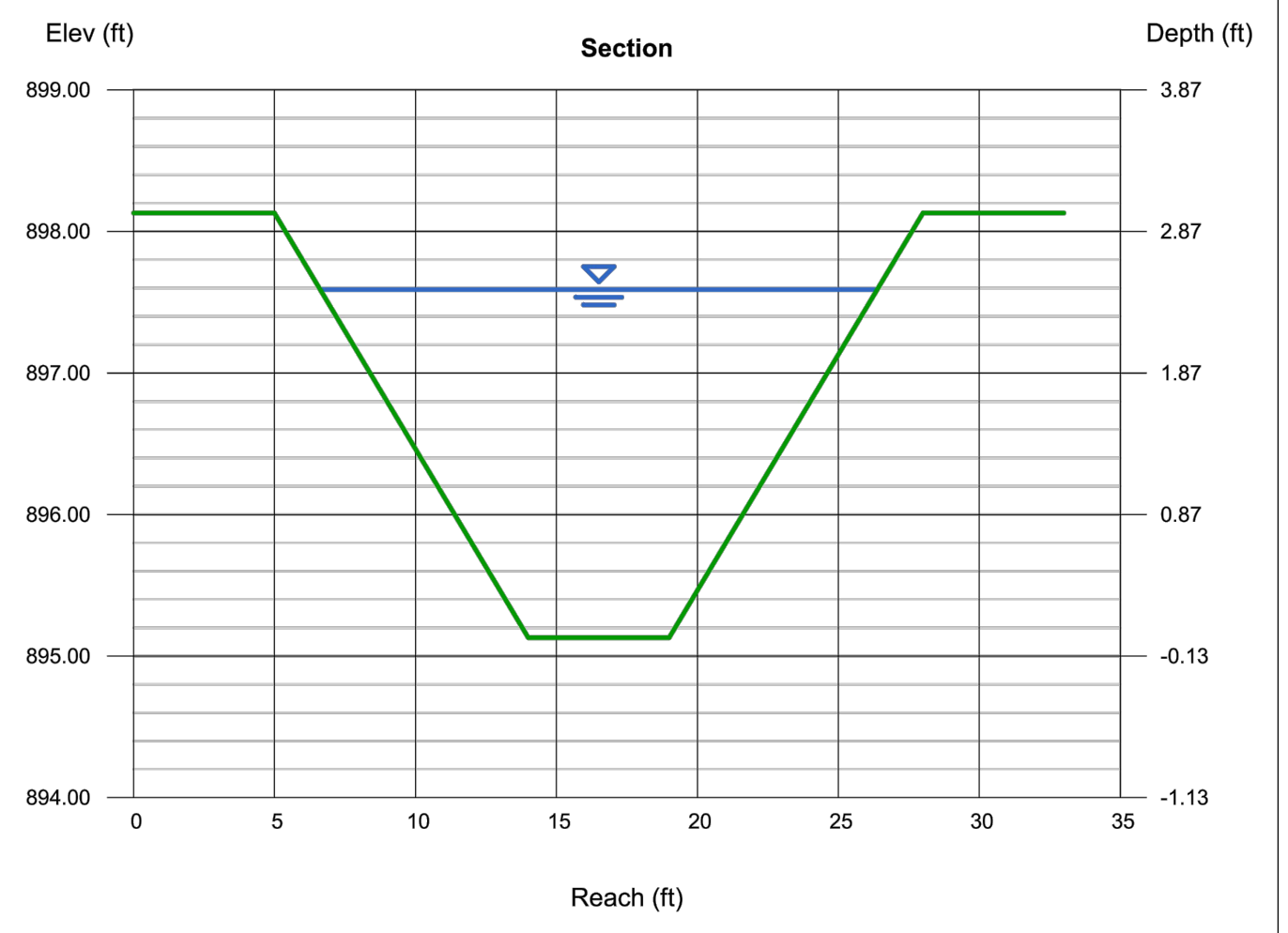


Channel Report

Hydraulix Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Thursday, Jan 4 2024

SWALE-2 Q100 CALCULATIONS

Trapezoidal		Highlighted	
Bottom Width (ft)	= 5.00	Depth (ft)	= 2.46
Side Slopes (z:1)	= 3.00, 3.00	Q (cfs)	= 226.00
Total Depth (ft)	= 3.00	Area (sqft)	= 30.45
Invert Elev (ft)	= 895.13	Velocity (ft/s)	= 7.42
Slope (%)	= 1.34	Wetted Perim (ft)	= 20.56
N-Value	= 0.030	Crit Depth, Yc (ft)	= 2.53
		Top Width (ft)	= 19.76
		EGL (ft)	= 3.32
Calculations			
Compute by:	Known Q		
Known Q (cfs)	= 226.00		



ELI ENGINEERING
700 THERESA COVE, CEDAR PARK, TX 78613
512-818-0818 (F) 512-532-0560

LONE STAR LANDING PHASE ONE SUBDIVISION IMPROVEMENTS CULVERT & SWALE PLAN AND PROFILE (2 OF 3)

DRAWING SCALE:	HORIZ. =	VERT. =
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	

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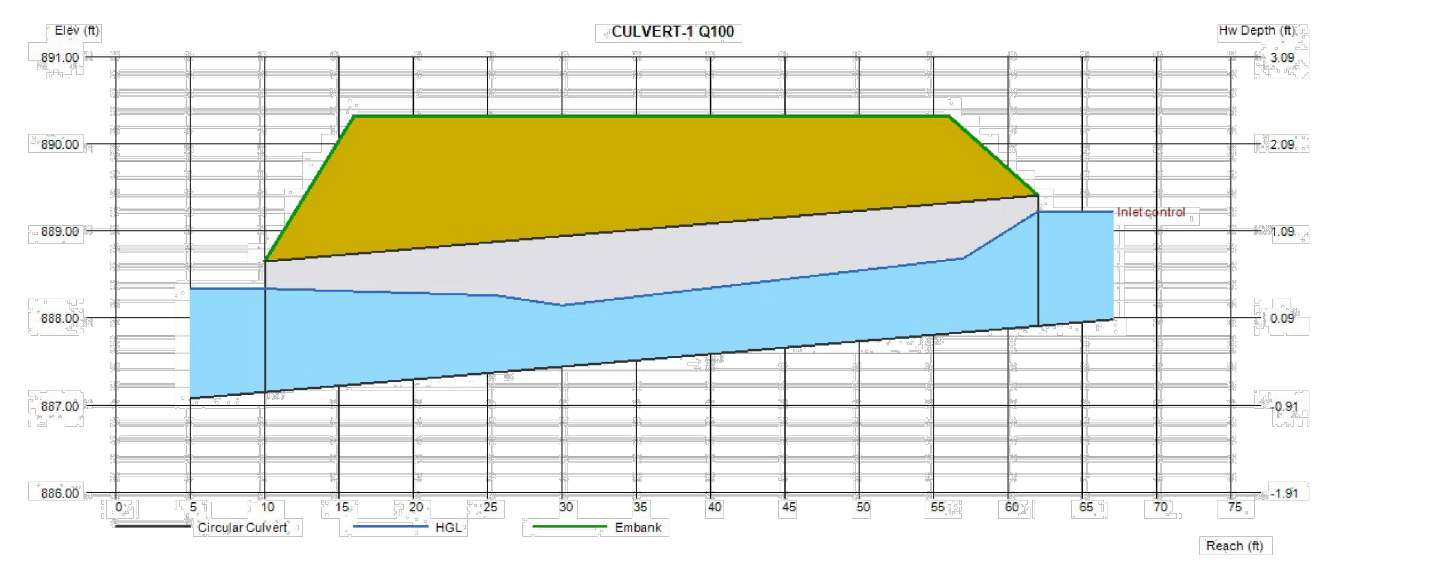
Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Jan 5 2024

CULVERT-1 Q100

Invert Elev Dn (ft)	= 887.15	Calculations	
Pipe Length (ft)	= 52.00	Qmin (cfs)	= 5.20
Slope (%)	= 1.46	Qmax (cfs)	= 5.20
Invert Elev Up (ft)	= 887.91	Tailwater Elev (ft)	= (dc+D)/2
Rise (in)	= 18.0		
Shape	= Circular	Highlighted	
Span (in)	= 18.0	Qtot (cfs)	= 5.20
No. Barrels	= 1	Qpipe (cfs)	= 5.20
n-Value	= 0.012	Qovertop (cfs)	= 0.00
Culvert Type	= Circular Concrete	Veloc Dn (ft/s)	= 3.46
Culvert Entrance	= Square edge w/headwall (C)	Veloc Up (ft/s)	= 4.84
Coeff. K,M,c,Y,k	= 0.0098, 2, 0.0398, 0.67, 0.5	HGL Dn (ft)	= 888.34
		HGL Up (ft)	= 888.79
		Hw Elev (ft)	= 889.23
		Hw/D (ft)	= 0.88
		Flow Regime	= Inlet Control

Embankment	
Top Elevation (ft)	= 890.32
Top Width (ft)	= 40.00
Crest Width (ft)	= 40.00



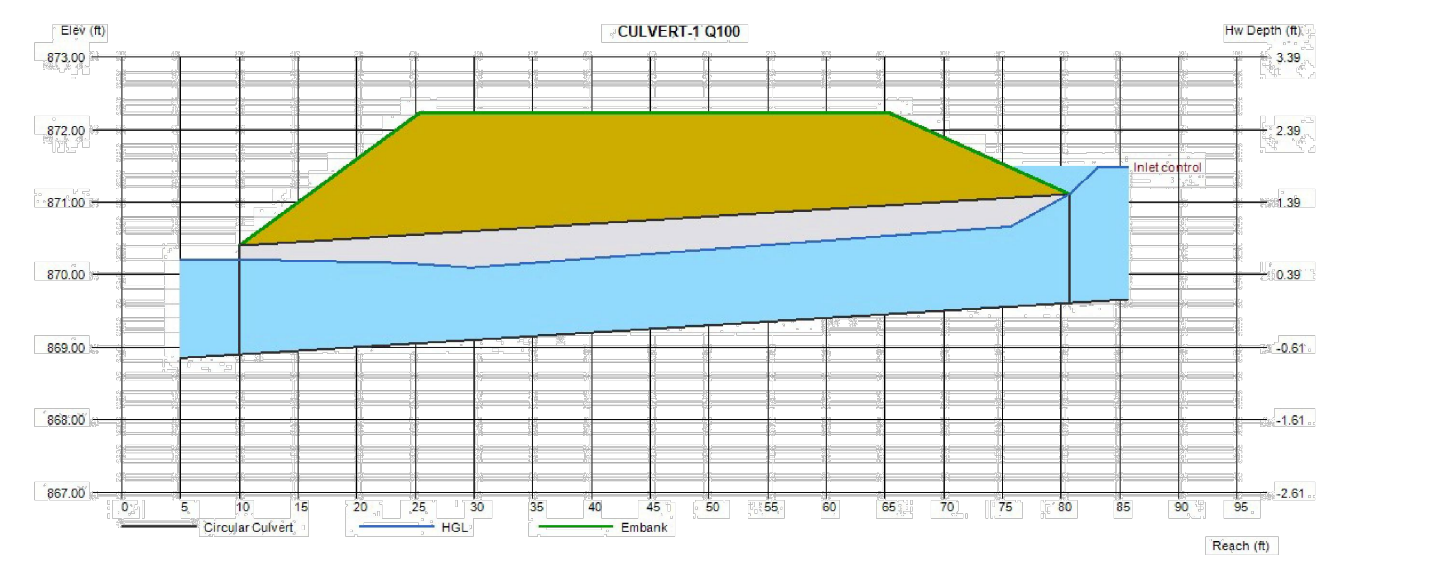
Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Jan 5 2024

CULVERT-2 Q100

Invert Elev Dn (ft)	= 868.90	Calculations	
Pipe Length (ft)	= 70.70	Qmin (cfs)	= 8.30
Slope (%)	= 1.00	Qmax (cfs)	= 8.30
Invert Elev Up (ft)	= 869.61	Tailwater Elev (ft)	= (dc+D)/2
Rise (in)	= 18.0		
Shape	= Circular	Highlighted	
Span (in)	= 18.0	Qtot (cfs)	= 8.30
No. Barrels	= 1	Qpipe (cfs)	= 8.30
n-Value	= 0.012	Qovertop (cfs)	= 0.00
Culvert Type	= Circular Concrete	Veloc Dn (ft/s)	= 5.08
Culvert Entrance	= Square edge w/headwall (C)	Veloc Up (ft/s)	= 5.89
Coeff. K,M,c,Y,k	= 0.0098, 2, 0.0398, 0.67, 0.5	HGL Dn (ft)	= 870.21
		HGL Up (ft)	= 870.72
		Hw Elev (ft)	= 871.49
		Hw/D (ft)	= 1.25
		Flow Regime	= Inlet Control

Embankment	
Top Elevation (ft)	= 872.23
Top Width (ft)	= 40.00
Crest Width (ft)	= 40.00



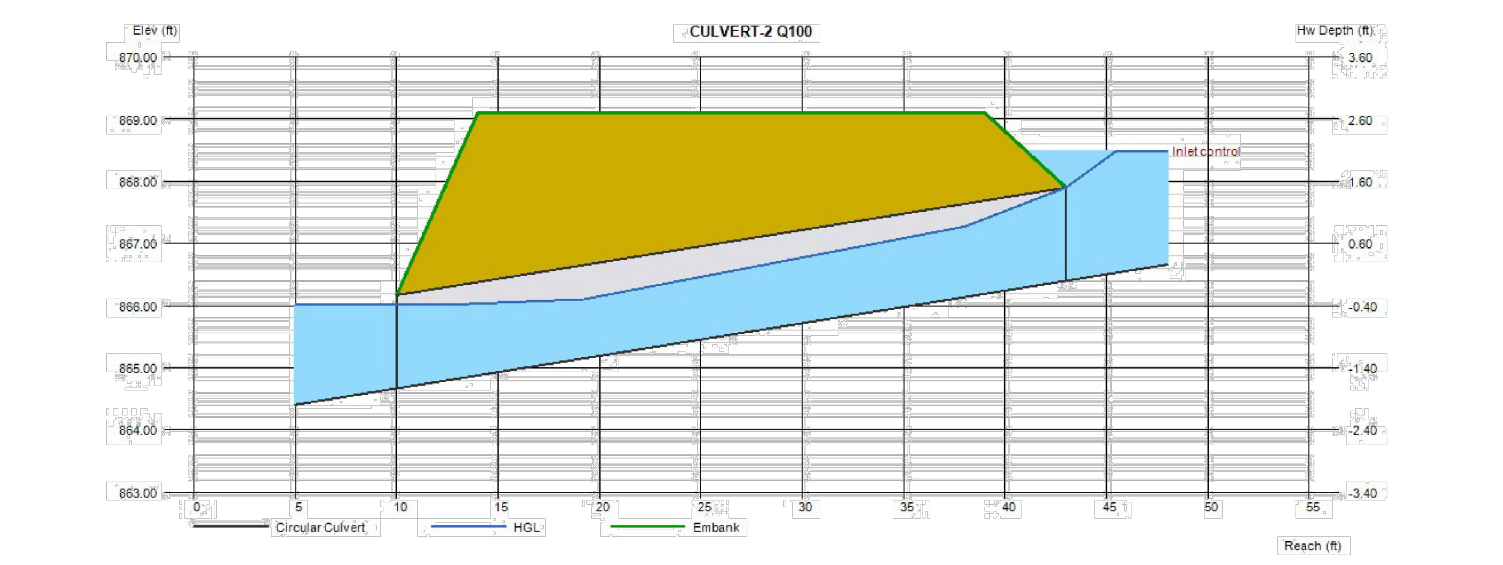
Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Jan 5 2024

CULVERT-3 Q100

Invert Elev Dn (ft)	= 864.67	Calculations	
Pipe Length (ft)	= 33.00	Qmin (cfs)	= 9.40
Slope (%)	= 5.24	Qmax (cfs)	= 9.40
Invert Elev Up (ft)	= 866.40	Tailwater Elev (ft)	= (dc+D)/2
Rise (in)	= 18.0		
Shape	= Circular	Highlighted	
Span (in)	= 18.0	Qtot (cfs)	= 9.40
No. Barrels	= 1	Qpipe (cfs)	= 9.40
n-Value	= 0.012	Qovertop (cfs)	= 0.00
Culvert Type	= Circular Concrete	Veloc Dn (ft/s)	= 5.64
Culvert Entrance	= Square edge w/headwall (C)	Veloc Up (ft/s)	= 6.28
Coeff. K,M,c,Y,k	= 0.0098, 2, 0.0398, 0.67, 0.5	HGL Dn (ft)	= 866.01
		HGL Up (ft)	= 867.58
		Hw Elev (ft)	= 868.49
		Hw/D (ft)	= 1.39
		Flow Regime	= Inlet Control

Embankment	
Top Elevation (ft)	= 869.10
Top Width (ft)	= 25.00
Crest Width (ft)	= 25.00



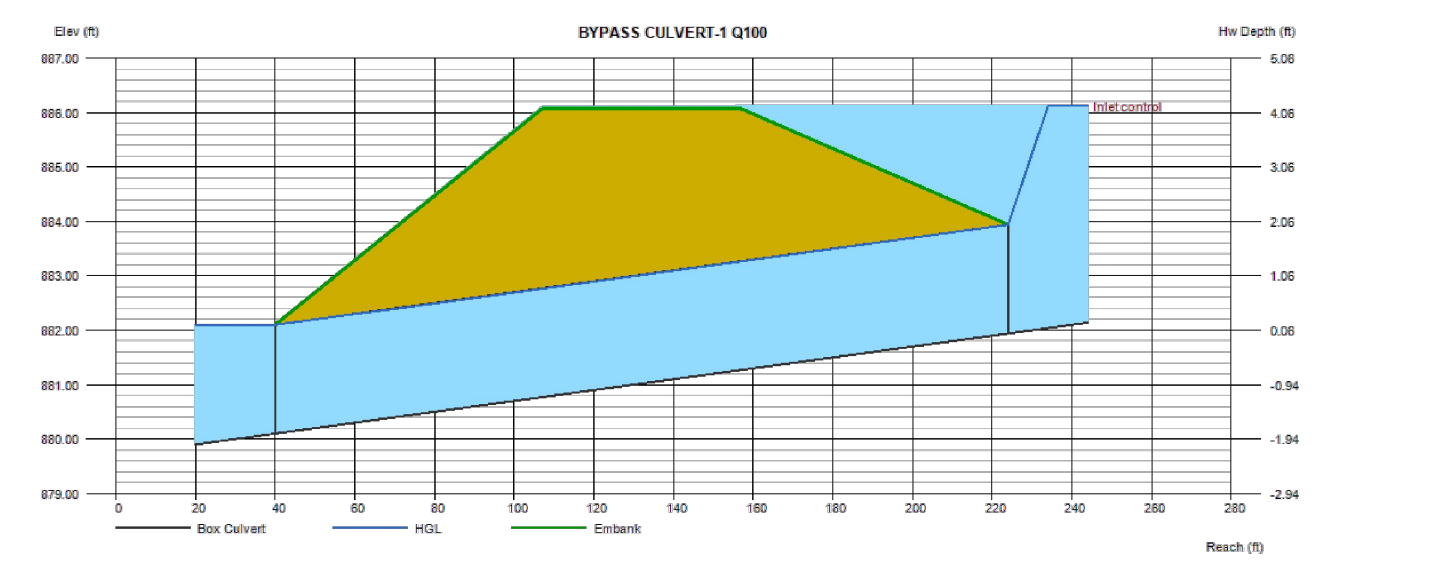
Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Monday, Nov 6 2023

BYPASS CULVERT-1 Q100

Invert Elev Dn (ft)	= 880.10	Calculations	
Pipe Length (ft)	= 184.00	Qmin (cfs)	= 156.00
Slope (%)	= 1.00	Qmax (cfs)	= 226.00
Invert Elev Up (ft)	= 881.94	Tailwater Elev (ft)	= (dc+D)/2
Rise (in)	= 24.0		
Shape	= Box	Highlighted	
Span (in)	= 60.0	Qtot (cfs)	= 226.00
No. Barrels	= 2	Qpipe (cfs)	= 224.27
n-Value	= 0.012	Qovertop (cfs)	= 1.73
Culvert Type	= Rectangular Concrete	Veloc Dn (ft/s)	= 11.21
Culvert Entrance	= Tapered inlet throat	Veloc Up (ft/s)	= 11.21
Coeff. K,M,c,Y,k	= 0.475, 0.667, 0.0179, 0.97, 0.2	HGL Dn (ft)	= 882.10
		HGL Up (ft)	= 883.94
		Hw Elev (ft)	= 886.12
		Hw/D (ft)	= 2.09
		Flow Regime	= Inlet Control

Embankment	
Top Elevation (ft)	= 886.07
Top Width (ft)	= 50.00
Crest Width (ft)	= 50.00



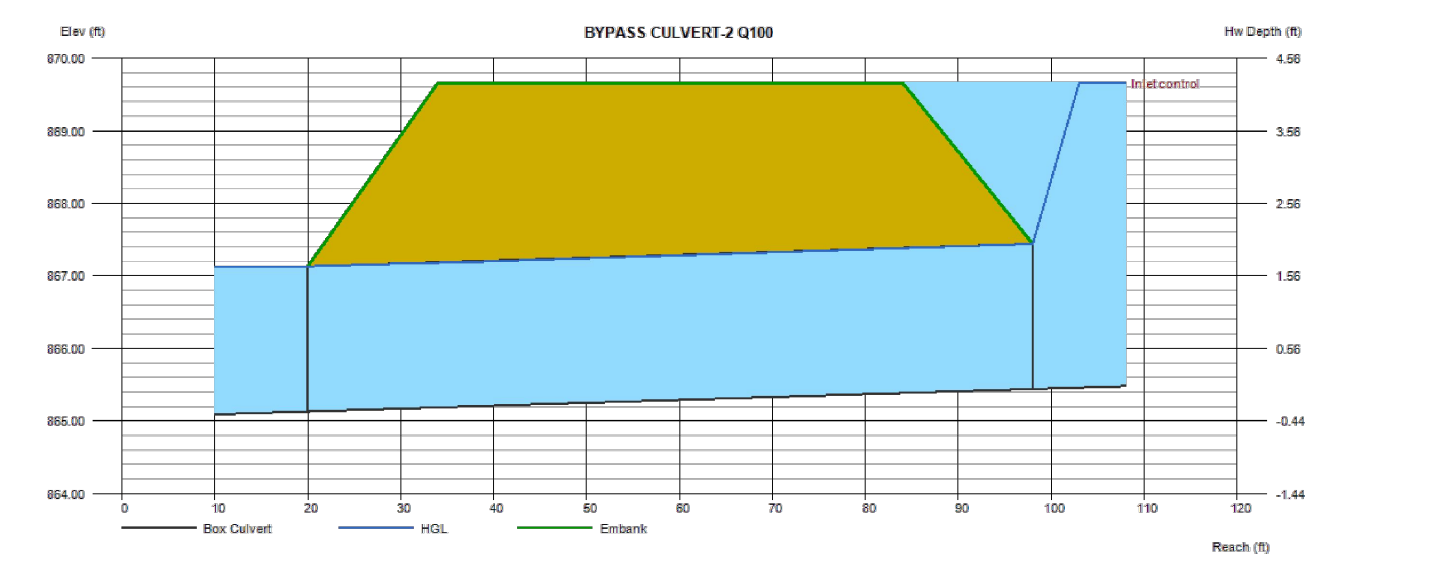
Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Monday, Nov 6 2023

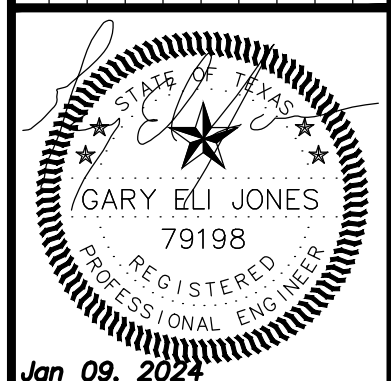
BYPASS CULVERT-2 Q100

Invert Elev Dn (ft)	= 865.13	Calculations	
Pipe Length (ft)	= 78.00	Qmin (cfs)	= 156.00
Slope (%)	= 0.40	Qmax (cfs)	= 226.00
Invert Elev Up (ft)	= 865.44	Tailwater Elev (ft)	= (dc+D)/2
Rise (in)	= 24.0		
Shape	= Box	Highlighted	
Span (in)	= 60.0	Qtot (cfs)	= 226.00
No. Barrels	= 2	Qpipe (cfs)	= 226.00
n-Value	= 0.012	Qovertop (cfs)	= 0.00
Culvert Type	= Rectangular Concrete	Veloc Dn (ft/s)	= 11.30
Culvert Entrance	= Tapered inlet throat	Veloc Up (ft/s)	= 11.30
Coeff. K,M,c,Y,k	= 0.475, 0.667, 0.0179, 0.97, 0.2	HGL Dn (ft)	= 867.13
		HGL Up (ft)	= 867.44
		Hw Elev (ft)	= 869.66
		Hw/D (ft)	= 2.11
		Flow Regime	= Inlet Control

Embankment	
Top Elevation (ft)	= 869.66
Top Width (ft)	= 50.00
Crest Width (ft)	= 50.00



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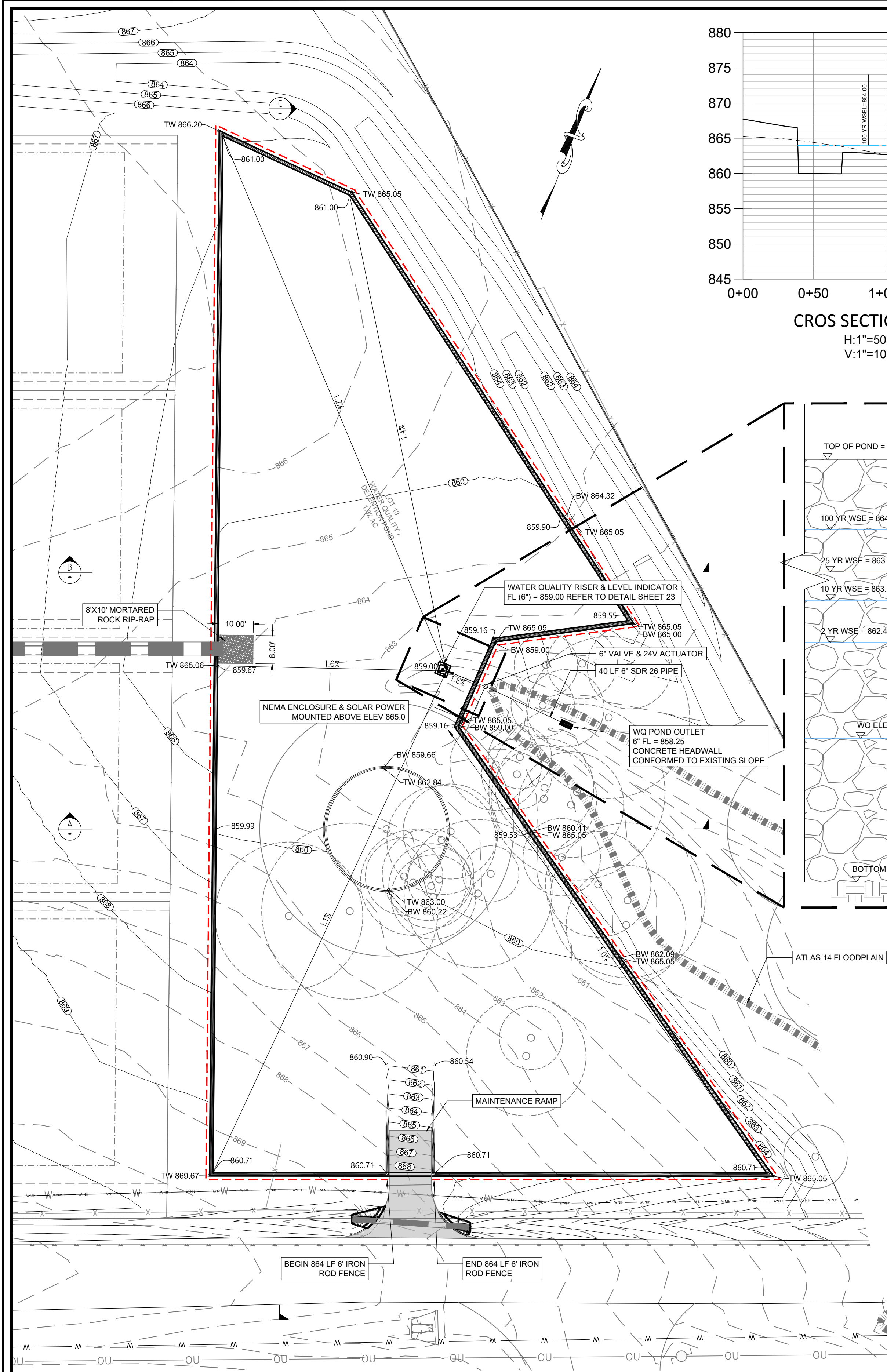
TPBELS FIRM No. 17877
ELI ENGINEERING
 ELI ENGINEERING, PLLC.
 700 THERESA COVE, CEDAR PARK, TX 78613
 512-919-0819 (F) 512-532-0560
 elijones@gmail.com

LEANDER, TEXAS 78641 (CITY LIMITS)
LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
 CULVERT & SWALE PLAN AND PROFILE (3 OF 3)

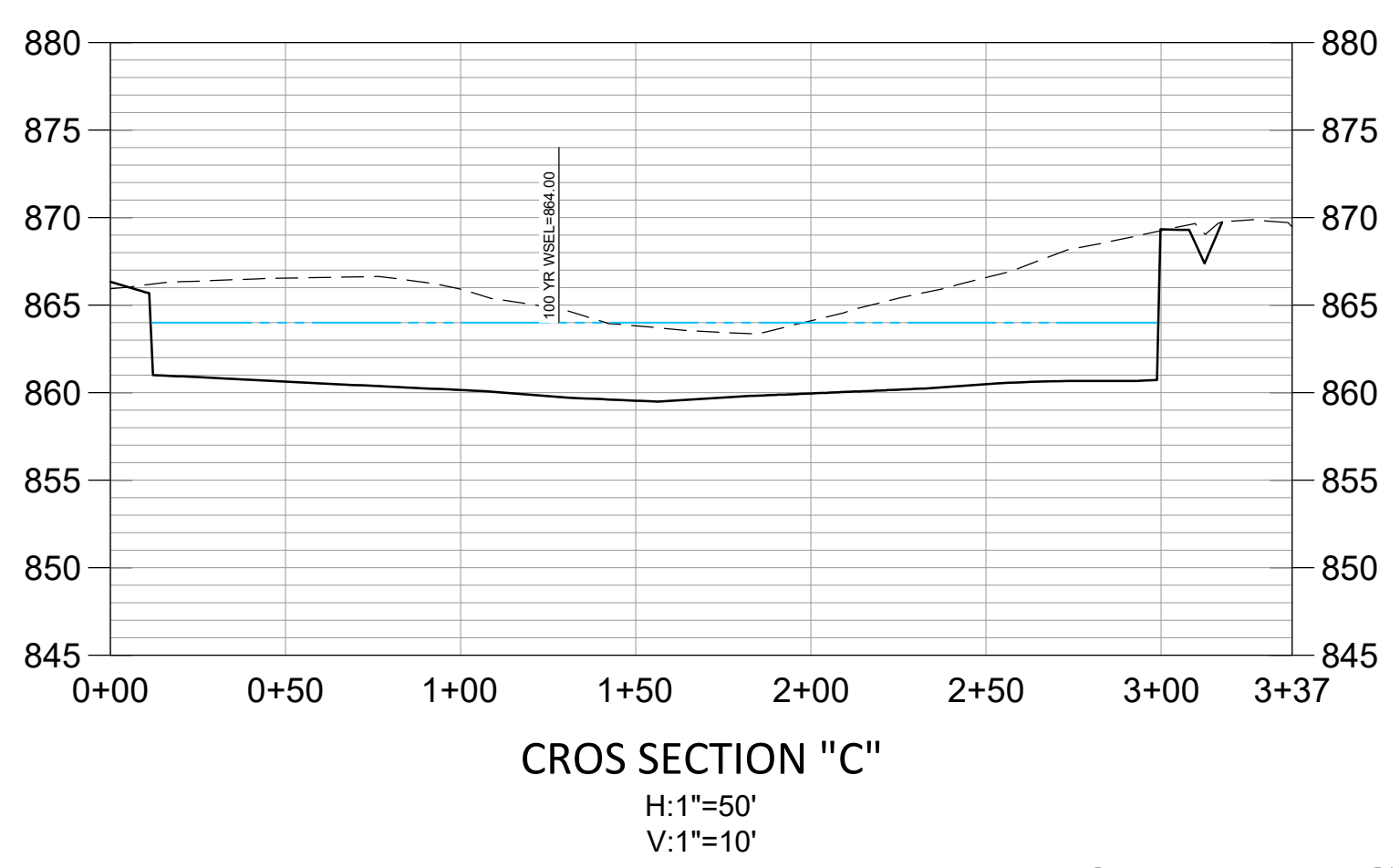
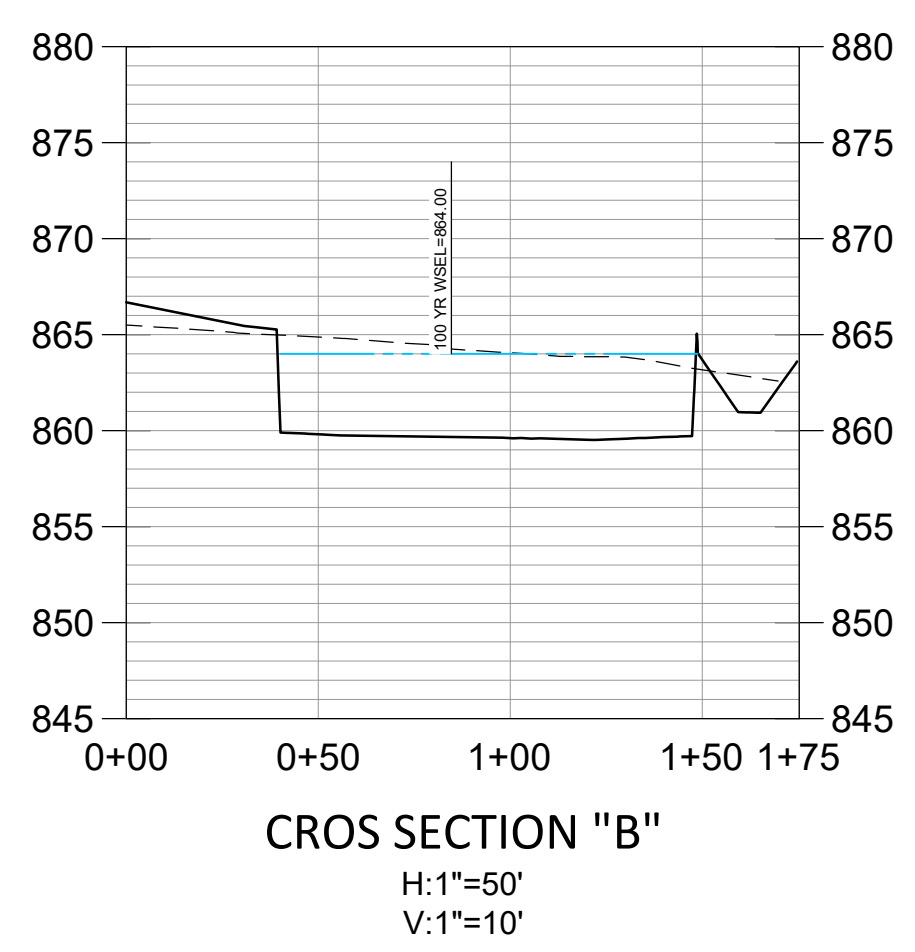
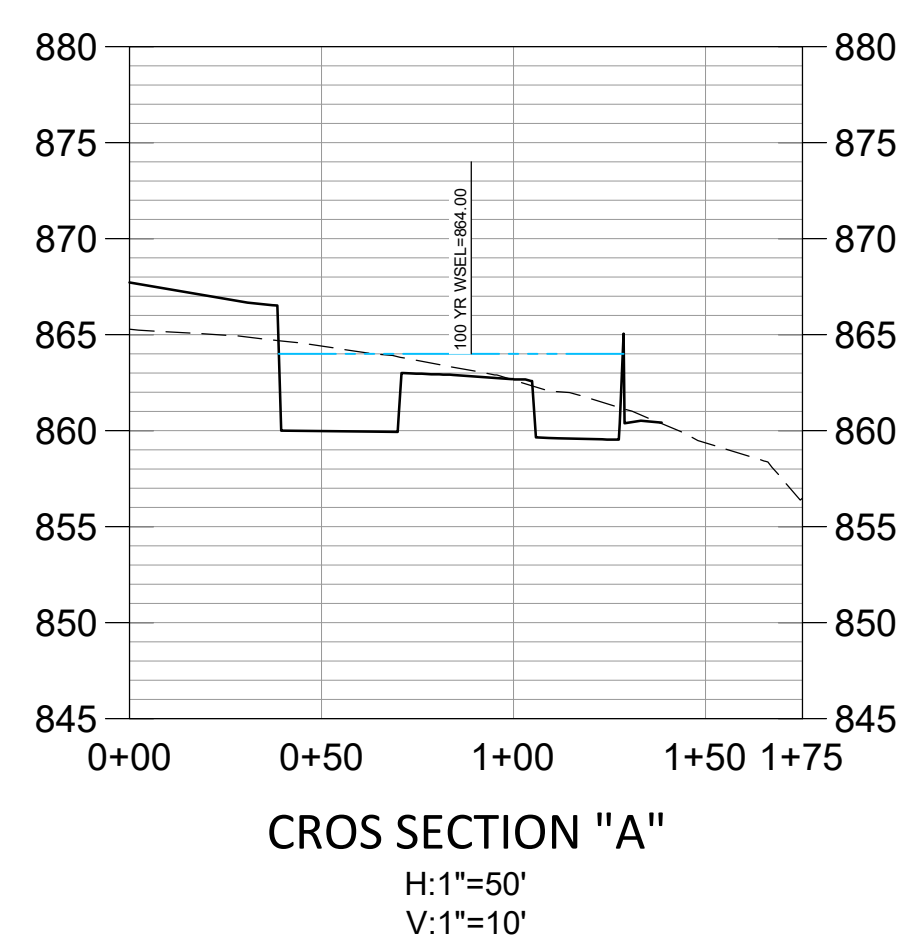
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SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:		EEL

SHEET
20
 OF
52

NO.	DATE	REVISION



(A) DETENTION POND PLAN VIEW
1"=20'



PROFILE LEGEND

- PROPOSED CENTERLINE
- - - EXISTING CENTERLINE
- - - 6" IRON ROD FENCE

NOTES:

REFER TO LONE STAR LANDING DRAINAGE REPORT FOR FULL DETAILS ON THE HMS ANALYSIS FOR THIS PROJECT. THE INFORMATION BELOW HAS BEEN GENERATED FROM THE RESULTS OF THE HMS MODEL.

Pond Report

Hydraulflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024
Monday, 01 / 8 / 2024

Pond No. 1 - <New Pond>

Pond Data

Contours - User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 859.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	859.00	00	0	0
1.00	860.00	11,760	5,880	5,880
2.00	861.00	25,630	18,695	24,575
3.00	862.00	25,857	25,744	50,319
4.00	863.00	26,100	25,979	76,297
5.00	864.00	26,300	26,200	102,497
6.05	865.05	26,520	27,730	130,227

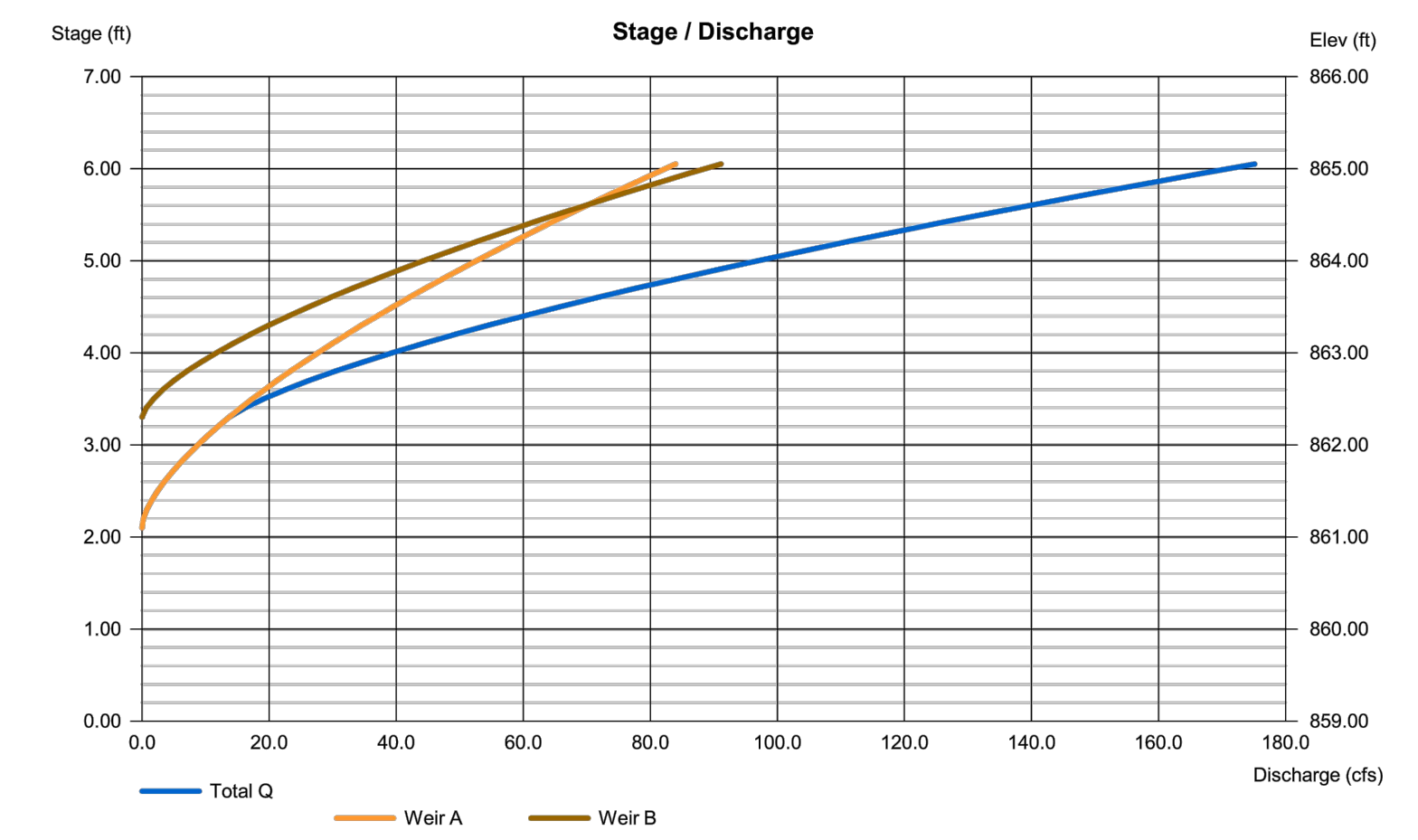
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 3.25	6.00	Inactive	0.00
Crest El. (ft)	= 861.13	862.30	864.15	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Broad	Broad	Broad	---
Multi-Stage	= No	No	No	No
Exfil. (in/hr)	= 0.000 (by Contour)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

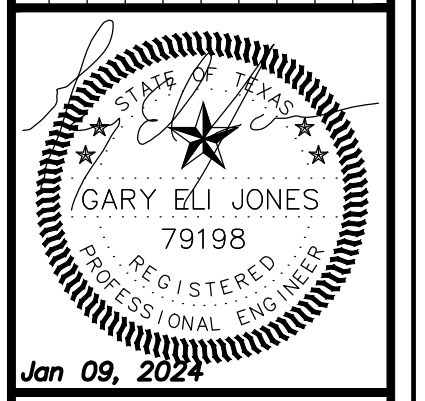


OUTLET STRUCTURE DETAIL

NTS

NOTE:
THE DESIGN PROVIDED IS A STACKED DETENTION / WATER QUALITY POND. DETENTION ELEVATION IS AT A POOL LEVEL OF 861.04. THE VOLUME OF THE POND BELOW THAT ELEVATION IS FOR TCEQ WATER QUALITY PER RG-348 TECHNICAL SPECIFICATIONS. RG-348 ADDENDUM SHEET 3.4.18 SPECIFIES THE BASIN CONFIGURATION TO HAVE A LATERAL AND LONGITUDINAL SLOPE OF 1-5%.

NO.	DATE	REVISION	BY



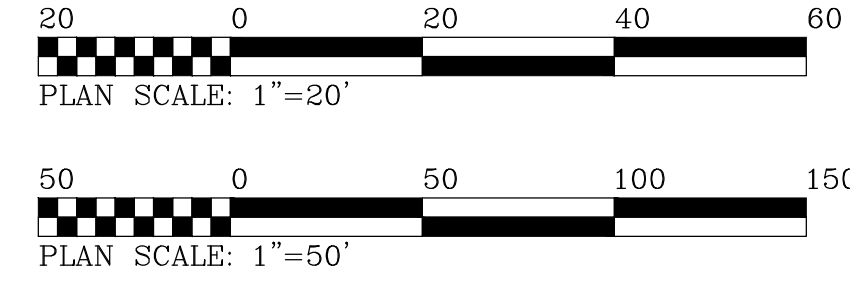
Jan 09, 2024

ELI ENGINEERING
700 THERESA COVE, CEDAR PARK, TX 78613
512-918-0818 (F) 512-532-0560

LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
WASTEWATER LINE 2, 3 & 4 - STA 0+00 TO END

DRAWING SCALE:	HORIZ. =	VERT. =
SURVEYED:	RR	
FILE NAME:	JTC	
DATE:	EEL	
DRAWN:		
DESIGNED:		

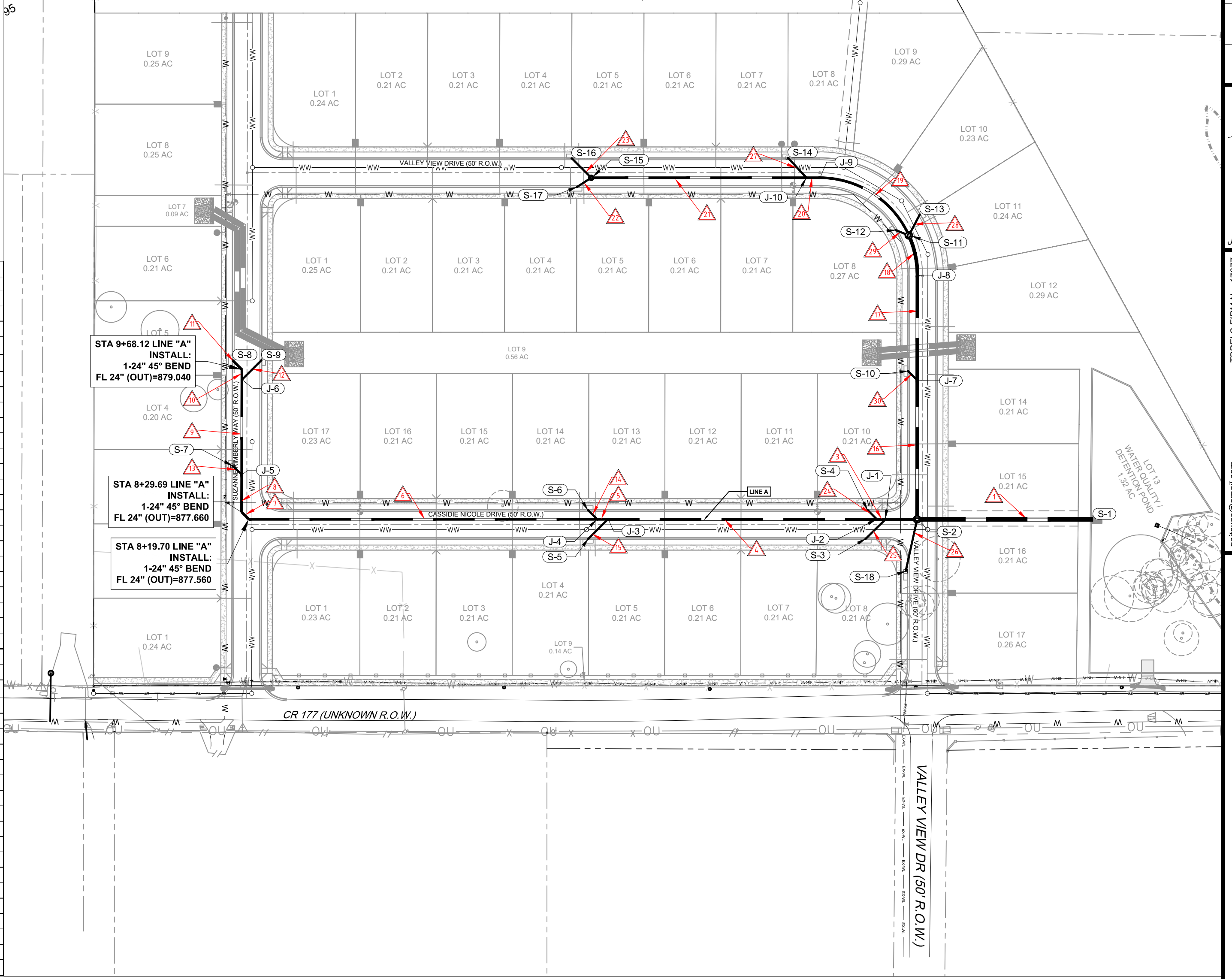
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Q100 PIPE FLOW CALCULATION TABLE																				
Line ID	Line Size (in)	Line Q (cfs)	Line Full Cap. (cfs)	Downstream							Upstream							Pipe		
				Invert Elev (ft)	Depth (ft)	Area (sqft)	HGLElev (ft)	Vel (ft/s)	VelHead (ft)	EGLElev (ft)	Length (ft)	Invert Elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	VelHead (ft)	EGLElev (ft)	nValue	EnergyLoss (ft)	
1	48	103.1	98.42	859.65	4	12.56	864	8.21	1.05	865.05	170.73	860.33	4	12.57	864.75	8.2	1.05	865.8	0.012	0.75
2	30	48.6	57.86	864.16	2.05	4.31	866.21	11.28	1.98	868.19	30.62	864.77	2.28	4.7	867.05	10.33	1.66	868.71	0.013	0.609
3	30	42	57.83	864.77	2.5	4.91	867.47	8.56	1.14	868.61	8.51	864.94	2.5	4.91	867.56	8.56	1.14	868.7	0.013	0.089
4	30	34.8	57.82	864.94	2.5	4.91	867.92	7.09	0.78	868.7	261.23	870.13	1.97	4.15	872.1	8.38	1.09	873.19	0.013	4.492
5	24	26.5	31.89	870.63	1.68	2.82	872.32	9.38	1.37	873.68	10.36	870.84	1.8	2.98	872.64	8.89	1.23	873.87	0.013	0.206
6	24	19.6	31.89	870.84	2	3.14	873.2	6.24	0.61	873.8	338.24	877.56	1.57	2.64	879.13	7.42	0.86	879.98	0.013	6.183
7	24	19.6	22.61	877.56	1.56	2.63	879.12	7.46	0.86	879.98	10	877.66	1.57	2.65	879.23	7.4	0.85	880.08	0.013	0.1
8	24	19.6	22.62	877.66	1.93	3.1	879.58	6.31	0.62	880.2	36.57	878.02	1.68	2.82	879.7	6.95	0.75	880.46	0.013	0.252
9	24	13.4	22.62	878.02	2	3.14	880.25	4.27	0.28	880.53	91.86	878.94	1.52	2.55	880.46	5.25	0.43	880.88	0.013	0.351
10	24	11.1	22.62	878.94	1.71	2.85	880.65	3.89	0.24	880.88	10	879.04	1.6	2.7	880.64	4.11	0.26	880.91	0.013	0.024
11	24	11.1	22.86	879.04	1.59	2.69	880.63	4.13	0.27	880.9	12.73	879.17	1.44	2.42	880.61	4.58	0.33	880.94	0.013	0.036
12	18	2.3	17.76	879.44	0.43	0.41	879.87	5.56	0.48	880.35	26.87	880.21	0.58	0.63	880.79	3.63	0.2	881	0.013	0.113
13	18	6.2	10.51	878.52	1.5	1.77	880.34	3.51	0.19	880.53	12.29	878.65	1.5	1.77	880.38	3.51	0.19	880.57	0.013	0.043
14	18	6.9	14.81	871.34	1.5	1.77	873.59	3.91	0.24	873.83	12.73	871.59	1.5	1.77	873.64	3.9	0.24	873.88	0.013	0.055
15	18	8.3	14.81	871.13	0.92	1.14	872.06	7.27	0.82	872.88	26.8	871.66	1.1	1.39	872.76	5.98	0.56	873.32	0.013	0.467
16	36	50.1	45.7	860.33	3	7.07	865.89	7.09	0.78	866.67	135.12	860.87	3	7.07	866.54	7.09	0.78	867.32	0.012	0.65
17	36	45.5	45.69	860.87	3	7.07	866.91	6.44	0.64	867.55	101.42	861.28	3	7.07	867.31	6.44	0.64	867.95	0.012	0.402
18	36	45.5	45.88	861.28	3	7.07	867.31	6.44	0.64	867.95	40.08	861.44	3	7.07	867.47	6.44	0.64	868.11	0.012	0.159
19	24	21.8	33.79	862.44	2	3.14	868.02	6.94	0.75	868.77	103.11	864.74	2	3.14	868.98	6.94	0.75	869.73	0.013	0.958
20	24	21.8	32.6	864.74	2	3.14	869.09	6.94	0.75	869.84	12.72	865.01	2	3.14	869.21	6.94	0.75	869.96	0.013	0.118
21	24	15.1	32.6	865.01	2	3.14	869.68	4.81	0.36	870.04	209.13	869.35	1.38	2.31	870.73	6.55	0.67	871.39	0.013	1.352
22	18	7.3	10.9	869.85	1.35	1.67	871.2	4.36	0.3	871.49	16.71	870.03	1.16	1.46	871.19	4.99	0.39	871.57	0.013	0.081
23	18	7.8	10.73	869.85	1.02	1.28	870.87	6.11	0.58	871.45	26.87	870.13	1.07	1.35	871.2	5.79	0.52	871.72	0.013	0.216
24	18	7.2	14.81	865.94	1.5	1.77	868.44	4.08	0.26	868.7	12.73	866.19	1.5	1.77	868.5	4.07	0.26	868.76	0.013	0.06
25	18	6.6	14.81	865.77	1.5	1.77	868.45	3.74	0.22	868.67	27.23	866.31	1.5	1.77	868.56	3.73	0.22	868.78	0.013	0.108
26	18	4.4	10.53	865.52	0.72	0.83	866.24	5.29	0.43	866.67	51.68	866.04	0.8	0.96	866.84	4.59	0.33	867.17	0.013	0.52
27	18	6.7	15.43	865.51	1.5	1.77	869.82	3.79	0.22	870.04	26.65	866.09	1.5	1.77	869.93	3.79	0.22	870.15	0.013	0.109
28	18	11.1	14.85	863.21	1.5	1.77	868.11	6.28	0.61	868.72	23.01	863.67	1.5	1.77	868.36	6.28	0.61	868.97	0.013	0.257
29	18	12.6	14.85	863.21	1.5	1.77	868	7.13	0.79	868.79	13.85	863.49	1.5	1.77	868.2	7.13	0.79	868.99	0.013	0.199
30	18	4.6	18.19	862.37	1.5	1.77	867.45	2.6	0.11	867.55	12.71	862.75	1.5	1.77	867.47	2.6	0.11	867.58	0.013	0.024

REFER TO PLAN TO IDENTIFY EACH LINE BY THEIR RESPECTIVE ID #



ON-SITE DRAINAGE CALCULATIONS Lonestar Landing									
INLET	AREA ac.	TC min.	C25	C100	I25 in./hr.	H00 in./hr.	Q25 cfs	Q100 cfs	Inlet Type
3	0.84	10	0.58	0.65	9.1	12.0	4.4	6.6	
4	0.74	5	0.58	0.65	11.3	15.0	4.8	7.2	
5	1.07	10	0.58	0.65	9.1	12.0	5.6	8.3	
6	0.89	10	0.58	0.65	9.1	12.0	4.7	6.9	
7	0.64	5	0.58	0.65	11.3	15.0	4.2	6.2	
8.1	0.86	10	0.58	0.65	9.1	12.0	4.5	6.7	sump
8.2	0.45	5	0.58	0.65	11.3	15.0	2.9	4.4	sump
9	0.24	5	0.58	0.65	11.3	15.0	1.6	2.3	sump
10	0.47	5	0.58	0.65	11.3	15.0	3.1	4.6	
12.1	0.81	5	0.58	0.65	11.3	15.0	5.3	7.9	sump
12.2	0.48	5	0.58	0.65	11.3	15.0	3.1	4.7	sump
13.1	0.39	5	0.58	0.65	11.3	15.0	2.6	3.8	sump
13-2	0.65	5	0.67	0.75	11.3	15.0	4.9	7.3	sump
14	0.69	5	0.58	0.65	11.3	15.0	4.5	6.7	
16	1.00	10	0.58	0.65	9.1	12.0	5.2	7.8	
17	0.93	10	0.58	0.65	9.1	12.0	4.9	7.3	
18	0.45	5	0.58	0.65	11.3	15.0	2.9	4.4	
Off-site Pond	2.15	5	0.50	0.62	11.3	15.0	12.1	20.0	off-site
Culvert-1	1.62	5	0.40	0.47	11.3	15.0	7.3	11.4	direct to pond
Culvert-2	0.53	5	0.58	0.65	11.3	15.0	3.5	5.2	18" Culvert
Culvert-3	0.85	5	0.58	0.65	11.3	15.0	5.6	8.3	18" Culvert
Culvert-4	0.96	5	0.58	0.65	11.3	15.0	6.3	9.4	18" Culvert

REFER TO SHEET 14 FOR THE BASIN AREA ILLUSTRATIONS

Parabolic Crown Streets Without Curb Split Source: City of Austin Drainage Criteria Manual Section 3.3.3, p.3-6										
25 Yr. Calculations Section I										
Sub-Area	Q (cfs)	Width (ft)	Slope (%)	Depth at Gutter (ft)	Spread of Water (ft)	Q (cfs)	Width (ft)	Slope (%)	Depth at Gutter (ft)	Spread of Water (ft)
3	4.4	30	1.35	0.38	4.6	7.67				
4	4.8	30	1.01	0.41	4.9	8.71				
5	5.6	30	2.07	0.38	4.6	7.78				
6	4.7	30	2.07	0.36	4.3	7.11				
7	4.2	30	2.25	0.34	4.1	6.63				
8.1	4.5	30	1.08	0.40	4.8	8.23				SUMP
8.2	2.9	30	1.08	0.35	4.2	6.67				SUMP
9	1.6	30	1.08	0.28	3.4	5.07				SUMP
10	3.1	30	0.64	0.38	4.6	7.73				
12.1	5.3	30	1.99	0.38	4.6	7.64				SUMP
12.2	3.1	30	1.08	0.35	4.2	6.88				SUMP
13.1	2.6	30	1.99	0.30	3.6	5.47				SUMP
13-2	4.9	30	1.08	0.41	4.9	8.62				SUMP
14	4.5	30	1.99	0.36	4.3	7.07				
16	5.2	30	1.99	0.38	4.5	7.60				
17	4.9	30	1.99	0.37	4.4	7.33				
18	2.9	30	0.64	0.38	4.5	7.56				

100 Yr. Calculations Section 1										
Sub-Area	Q (cfs)	Width (ft)	Slope (%)	Depth at Gutter (ft)	Spread of Water (ft)	Q (cfs)	Width (ft)	Slope (%)	Depth at Gutter (ft)	Spread of Water (ft)
3	6.6	30	1.35	0.43	5.2	9.54				
4	7.2	30	1.01	0.47	5.6	11.32				
5	8.3	30	2.07	0.44	5.3	9.72				
6	6.9	30	2.07	0.41	4.9	8.71				
7	6.2	30	2.25	0.39	4.7	8.04				
8.1	6.7	30	1.08	0.45	5.4	10.43				SUMP
8.2	4.4	30	1.08	0.39	4.7	8.10				SUMP
9	2.3	30	1.08	0.32	3.8	6.01				SUMP
10	4.6	30	0.64	0.44	5.2	9.64				
12.1	7.9	30	1.99	0.43	5.2	9.50				SUMP
12.2	4.7	30	1.08	0.40	4.8	8.39				SUMP
13.1	3.8	30	1.99	0.34	4.1	6.52				SUMP
13-2	7.3	30	1.08	0.47	5.6	11.13				SUMP
14	6.7	30	1.99	0.41	4.9	8.65				
16	7.8	30	1.99	0.43	5.2	9.43				
17	7.3	30	1.08	0.47	5.6	11.06				
18	4.4	30	0.64	0.43	5.2	9.38				

100 Yr. Inlet Calculations Section II														
Inlet #	Drainage Sub-Area	Q (cfs)	Q pass (cfs)	Q total (cfs)	Slope (%)	Ponded			Reduction Factor (%)	La (ft)	Length of Inlet (ft)	L/La	a/yo	Remarks
						a (in)	yo (ft)	yo (ft)						
3	6.6	1.35	5	0.43	9.5	0	0.94	7.3	10	1.37	0.96	1	6.6	
4	7.2	1.01	5	0.47	11.3	0	0.94	7.7	10	1.30	0.89	1	7.2	
5	8.3	2.07	5	0.44	9.7	0	0.90	9.						

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.

Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.

Characters shown in red are data entry fields.

Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_{NI} \times P)$

where: L_M TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load
 A_{NI} = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County = Williamson	
Total project area included in plan = 15.37	acres
Predevelopment impervious area within the limits of the plan = 0.00	acres
Total post-development impervious area within the limits of the plan = 5.97	acres
Total post-development impervious cover fraction = 0.39	
P = 32	inches
L_M TOTAL PROJECT = 5196	lbs.

IC CALCULATIONS FYI

	3500	168000	TOTAL IC
48 SF Lots < 10,000 SF	3500	168000	
Streets	2420	72600	
Sidewalks	2420	19360	
		259960	5.97

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = **1**

BYPASS IC CALCS

	50%	3500	1750	TOTAL
Lot 8, Blk A	50%	3500	1750	
Lot 8, Blk D	25%	3500	875	
Lot 9, Blk D	50%	3500	1750	
Lot 10, Blk D	50%	3500	1750	
Lot 11, Blk D	50%	3500	1750	
Lot 12, Blk D	75%	3500	2625	
Total IC Bypass:		10500	0.24	
Total Area Bypass			2.15	

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = **1** "PR DA-1"

Total drainage basin/outfall area = 13.22	acres
Predevelopment impervious area within drainage basin/outfall area = 0.00	acres
Post-development impervious area within drainage basin/outfall area = 5.73	acres
Post-development impervious fraction within drainage basin/outfall area = 0.43	
L_M THIS BASIN = 4987	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**
Removal efficiency = **91** percent

- Aqualogic Cartridge Filter
- Bioretention
- Contech Storm Filter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (BMP \text{ efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = 13.22	acres
A_i = 5.73	acres
A_p = 7.49	acres
L_R = 5891	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired L_M THIS BASIN = **5196** lbs.
 F = **0.88**

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

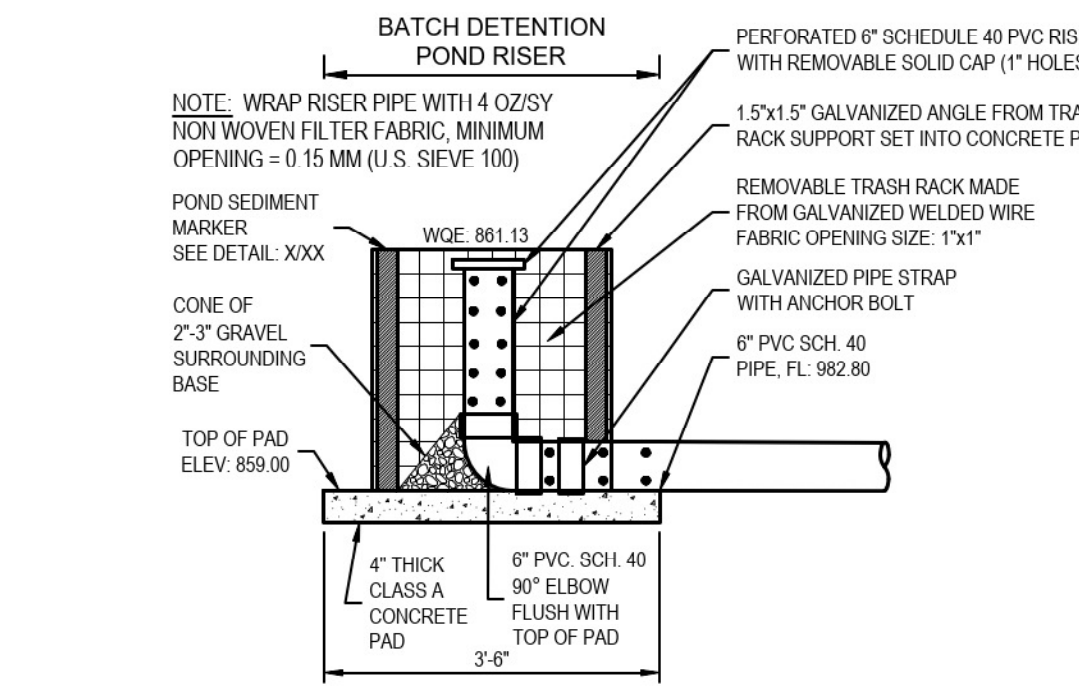
Rainfall Depth = **1.50** inches
Post Development Runoff Coefficient = **0.32**
On-site Water Quality Volume = **23257** cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = **0.00** acres
Off-site Impervious cover draining to BMP = **0.00** acres
Impervious fraction of off-site area = **0**
Off-site Runoff Coefficient = **0.00**
Off-site Water Quality Volume = **0** cubic feet

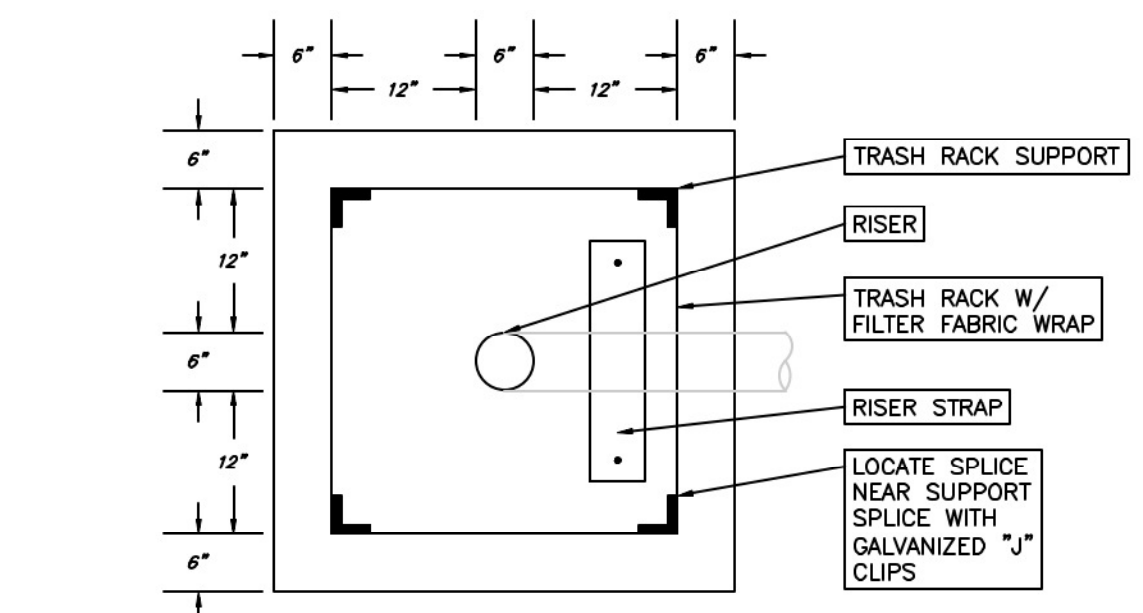
Storage for Sediment = **4651** cubic ft
Total Capture Volume (required water quality volume(s) x 1.20) = **27908** cubic feet

BATCH DETENTION POND	
Contributing Drainage Area =	"PR DA-1"
Total Drainage Area =	15.37 acre
Pre-Development I.C. =	- acre
Post-Development I.C. =	6 acre
Post-Development I.C. Fraction =	0
LM TOTAL PROJECT =	5,196 lbs
AC =	13.22 acre
AI =	5.73 acre
AP =	7.49 acre
LR =	5,891 lbs
Desired LM this basin =	5,196 lbs
Fraction of Annual Runoff (F) =	1
Rainfall Depth =	2 inch
Post Development Runoff Coefficient =	0
On-site Water Quality Volume =	23,257 cubic ft
Off-site area draining to BMP =	BYPASS acre
Off-site Impervious cover draining to BMP =	- acre
Impervious fraction of off-site area =	-
Off-site Runoff Coefficient =	-
Off-site Water Quality Volume =	- cubic ft
Storage for Sediment =	4,651 cubic ft
Total Capture Volume Required =	27,908 cubic ft
Total Capture Volume Provided =	28,000 cubic ft



WATER QUALITY RISER PIPE SECTION

A NTS



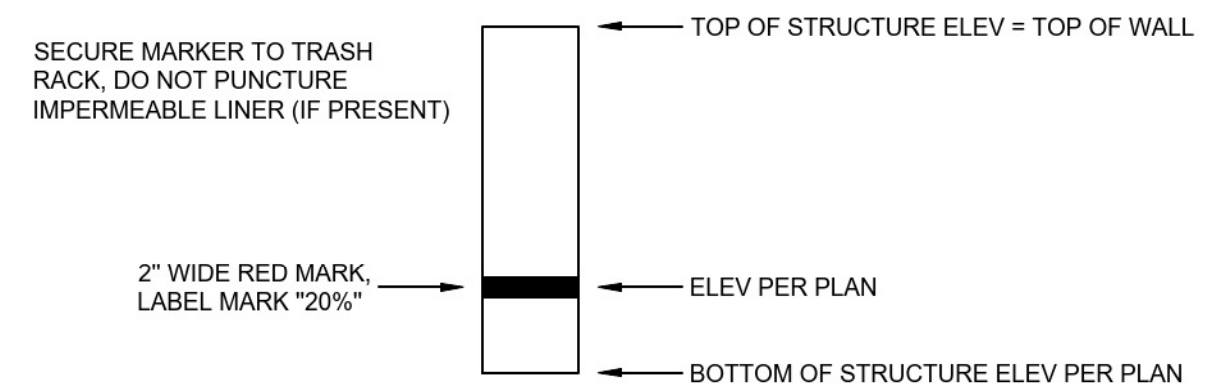
BATCH DETENTION POND RISER PIPE

B NTS

- NOTES:
- POST THE FOLLOWING SIGN UNDER THE VISIBLE ALARM FOR EMERGENCY CONTACT:

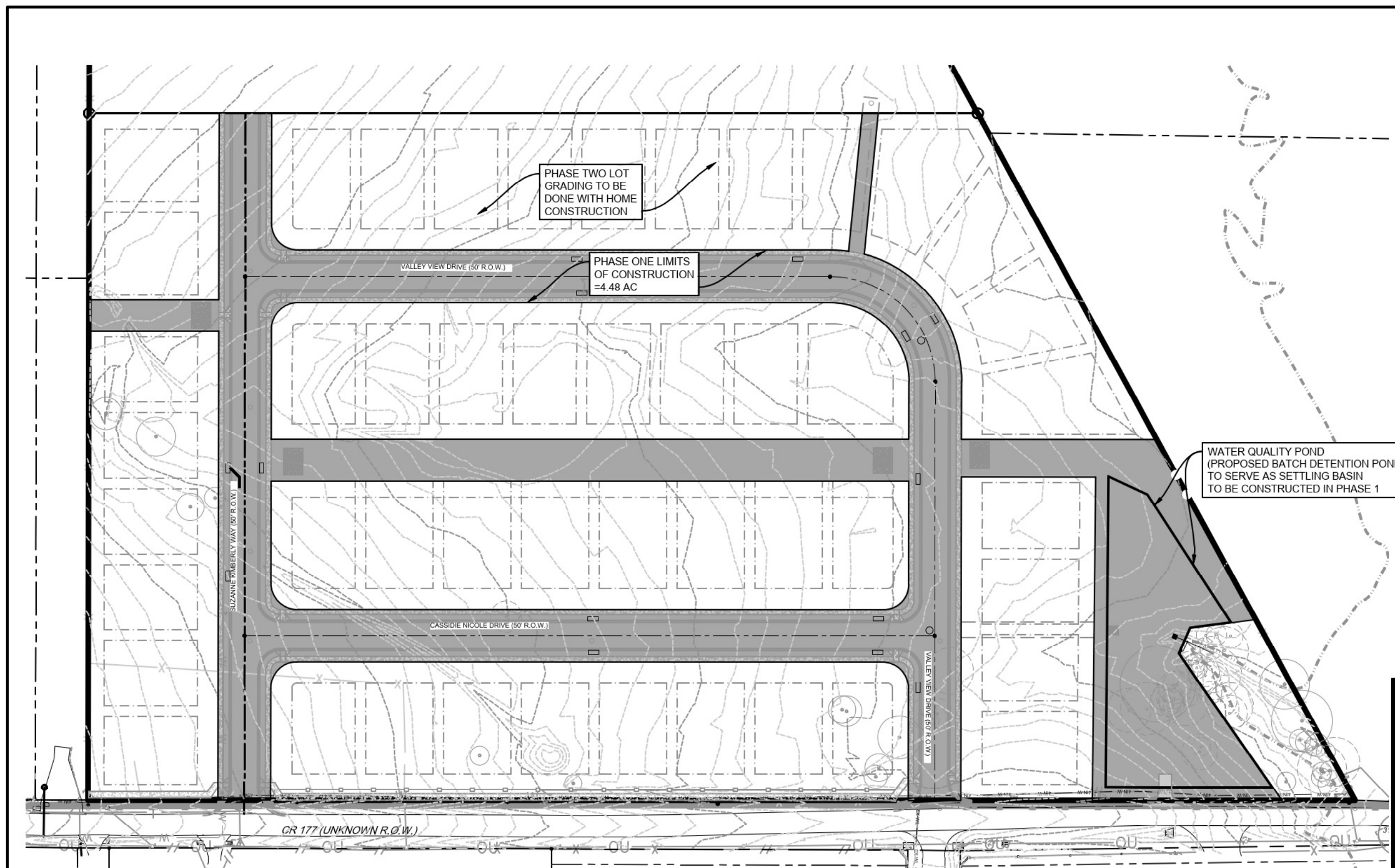
EMERGENCY CONTACT:
OWNER: XXX-XXX-XXXX
TCEQ: 512-339-2929

- POND BOTTOM SHALL BE VEGETATED PER THE SEEDING SPECIFICATION ON THE EROSION CONTROL PLAN SHEET.

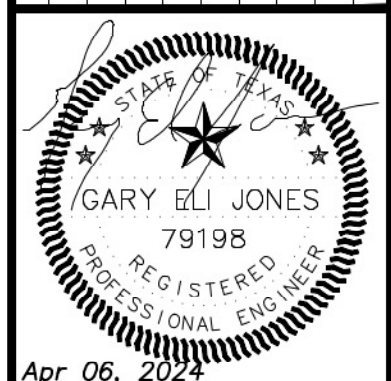


WATER QUALITY POND SEDIMENT MARKER

C NTS



TCEQ LIMITS OF CONSTRUCTION EXHIBIT

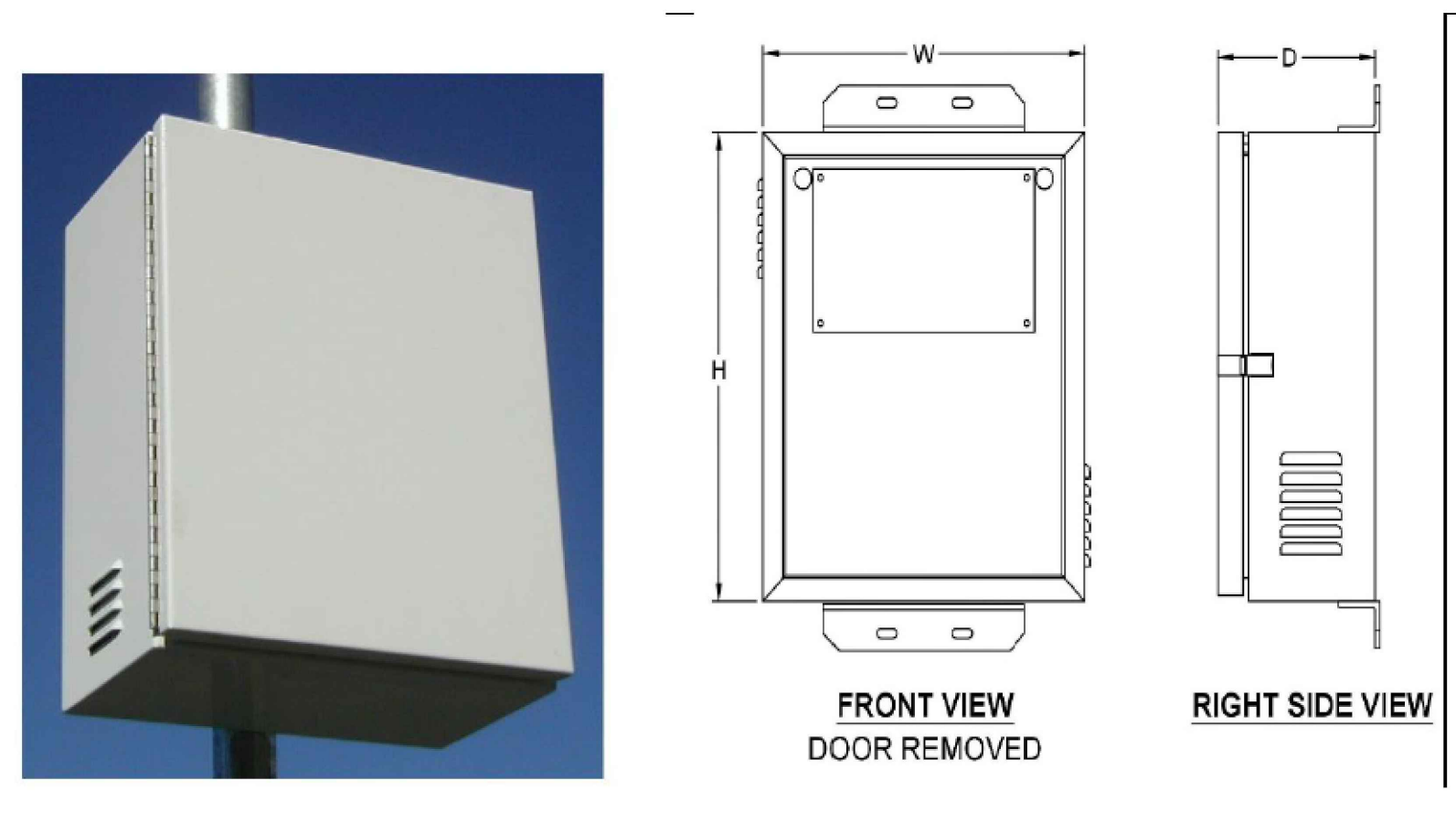


APR 06, 2024
TPELS FIRM No. 17817
ELI ENGINEERING, PLLC.
700 THERESA COVE, CEDAR PARK, TX 78613
512-919-8491 (F) 512-552-0560

LEANDER, TEXAS 78641 (CITY LIMITS)
LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
PROPOSED DRAINAGE AREA MAP

DRAWING SCALE:	HORIZ. =	VERT. =
SURVEYED:	RR	
FILE NAME:		
DATE:	JTC	
DRAWN:	EEL	
DESIGNED:		

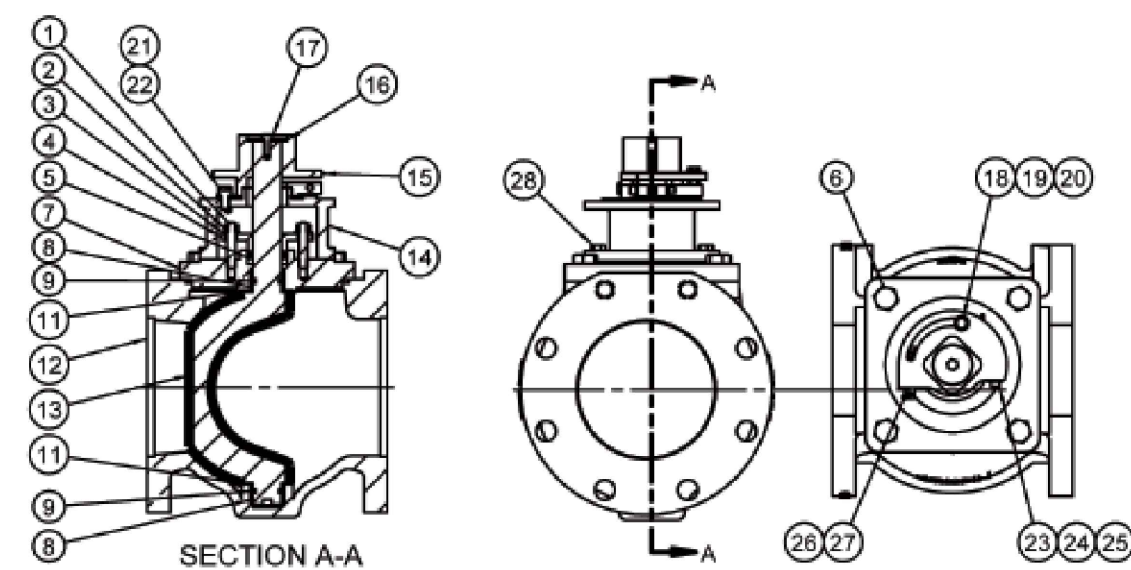
Ground Mount Controller and Battery Enclosure



- Standard boxes are fabricated from .125" thick 5052--H32 aluminum
- Heavy--duty stainless steel continuous
- Heavy--duty stainless steel continuous hinge
- Seams are continuously welded and then sanded smooth
- Adjustable tension stainless steel padlock hasp
- Removable component mounting plate
- Standard finish is a bright white polyester powder--coat inside and out
- Two 7/8" diameter wire holes
- Built to NEMA 3R specifications
- Filtered or screened ventilation louvers
- Hinged front door with PORON door gasket
- Supplied with u--bolts (when pole specified)

800 SERIES MATERIAL LIST

2.5" to 12", 212F Max Temp., 175 psi Max Press, Bi-Directional



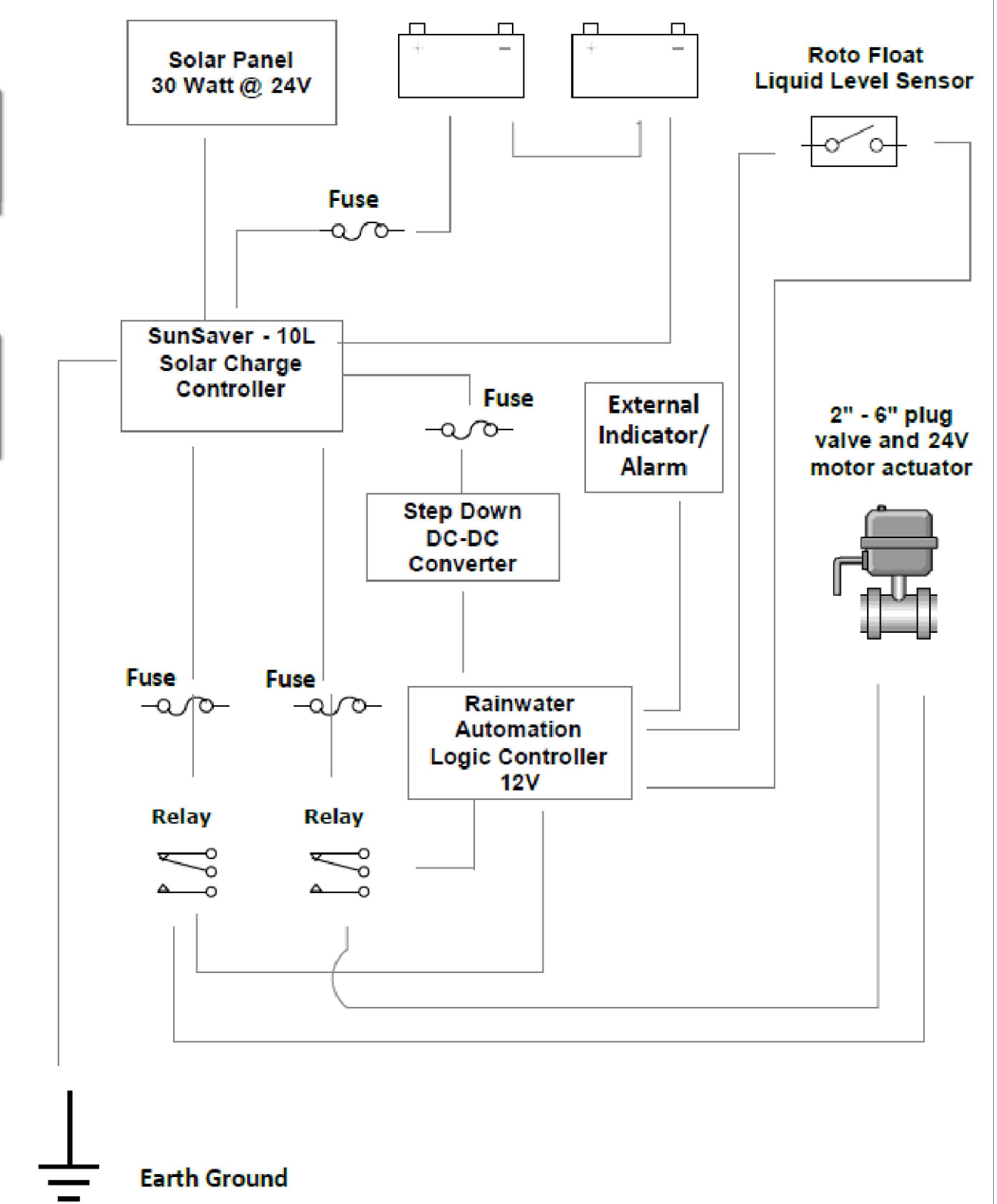
Item	Description	Material	Item	Description	Material
1	Gland Stud	Stainless Steel	15	Torque Collar	A536 GR 65-45-12
2	Hex Nut	Stainless Steel	16	Flat Washer	Q235-A Zinc Plated
3	Flat Washer	Stainless Steel	17	Socket Head Capscrew	Stainless Steel
4	Gland	ASTM A126 CL B	18	Hex Head Capscrew	Stainless Steel
5	V-Ring Set	NBR	19	Hex Nut	Stainless Steel
6	Hex Head Capscrew	Stainless Steel	20	Flat Washer	Stainless Steel
7	Cover	ASTM A126 CL B	21	Socket Head Capscrew	Stainless Steel
8	Bearing	SST, Sintered	22	Lock Washer	Stainless Steel
9	O-Ring	NBR	23	Socket Head Capscrew	Stainless Steel
10	O-Ring	NBR	24	Hex Nut	Stainless Steel
11	Thrust Washer	PTFE	25	Flat Washer	Stainless Steel
12	Body	ASTM A126 CL B	26	Hex Head Capscrew	Stainless Steel
13	Plug Molded	A536 GR 65-45-12 +NBR	27	Hex Nut	Stainless Steel
14	Torque Collar Adapter (Buried)	ASTM A126 CL B	28	Hex Head Capscrew	Stainless Steel

800 SERIES Cv Data (GPM@1PSI)

Size	2.5	3	4	5	6	8	10	12
Cv	425	680	1190	2000	2400	4600	5800	9100

Crispin/K-Flo Valves, 600 Fowler Ave., Berwick PA 18603 T: 800-247-VALV W: www.kflovalves.com

Circuit Block Diagram

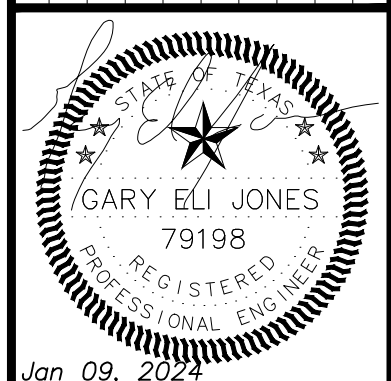
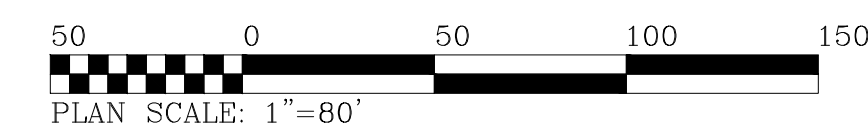
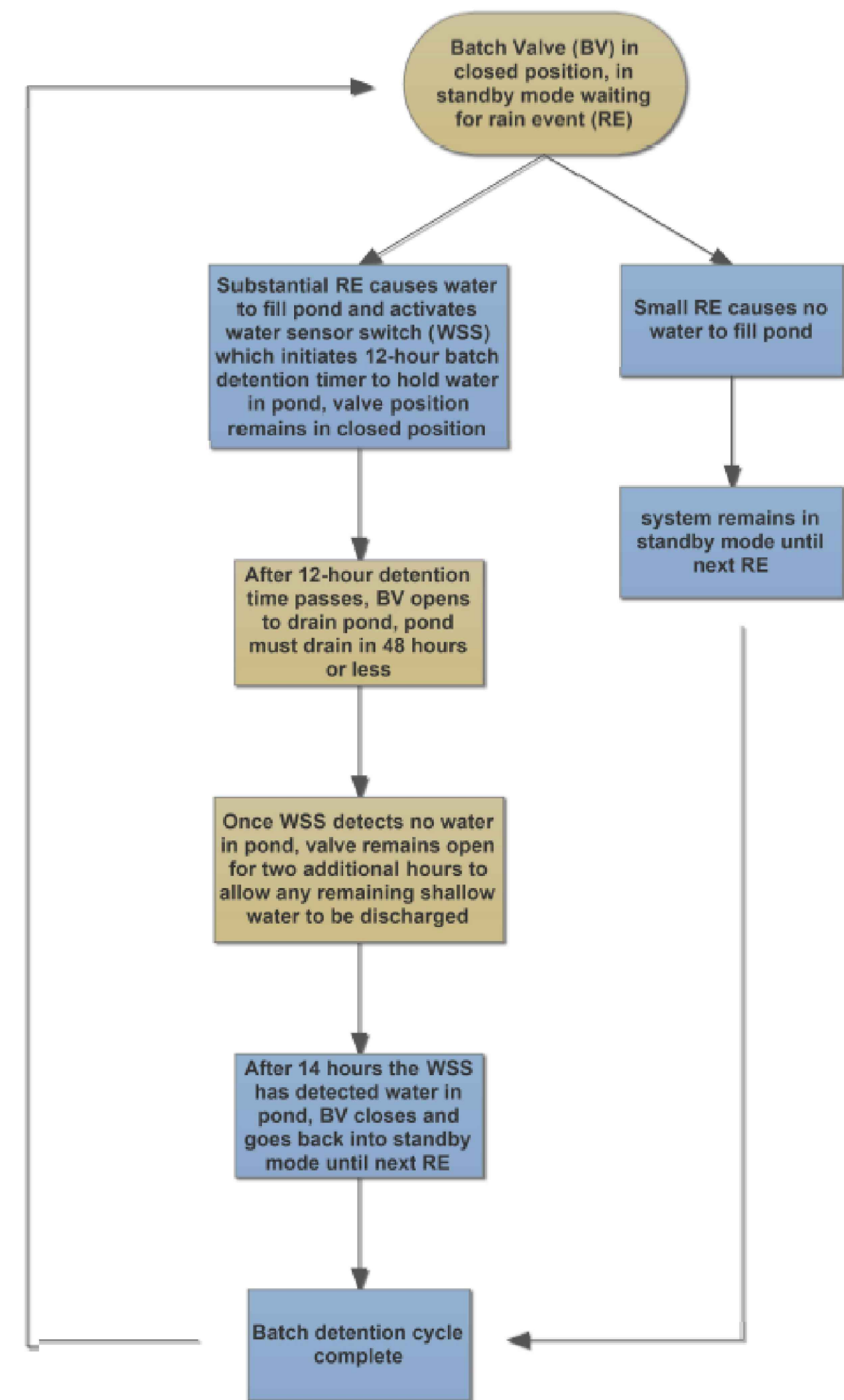


Actuator Specifications	P4	P5	P6
Torque *lb/Nm	3500"lbs/400Nm	4400"lbs/500Nm	5750"lbs/650Nm
Supply Voltage	12vac/vdc 24vac/vdc	12vac/vdc 24vac/vdc	12vac/vdc 24vac/vdc
Max Inrush Current	16.1A	9.2A	13.5A
Running Current	16.1A	8.5A	14.1A
Motor	DC Brush Type		
Runtime (90°@60Hz/vdc)	16 sec	22 sec	28 sec
Runtime (90°@50Hz)	16 sec	22 sec	28 sec
Duty Cycle	75%		
Motor Starts	1200 per hour		
Weight	47lbs/22kg		
Mechanical Connections	ISO5211 F10 8pt 35mm		
Electrical Entry	(2) 3/4" NPT		
Electrical Terminations	12-16ga		
Environmental Rating	NEMA 4/4X		
Manual Override	7.6" Handwheel		
Control	On/Off-Jog, Proportional		
Actuator Case material	Aluminum Alloy, Powder coated		
Motor Protection	230°F/110°C Thermal F° Class *Totally Enclosed Non-Ventilated Motors		
Ambient Temperature Operating Range	-22°F to +125°F -30°C to +52°C		

TCEQ CONSTRUCTION NOTES:

- 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.
- 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.
- NO HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
- 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.
- 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.
- SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
- LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFF-SITE.
- ALL EXCAVATED MATERIAL THAT WILL BE STORED ON-SITE MUST HAVE PROPER E&S CONTROLS.
- 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.
- 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.
- 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.

Batch Valve Programmable Logic Flow Chart



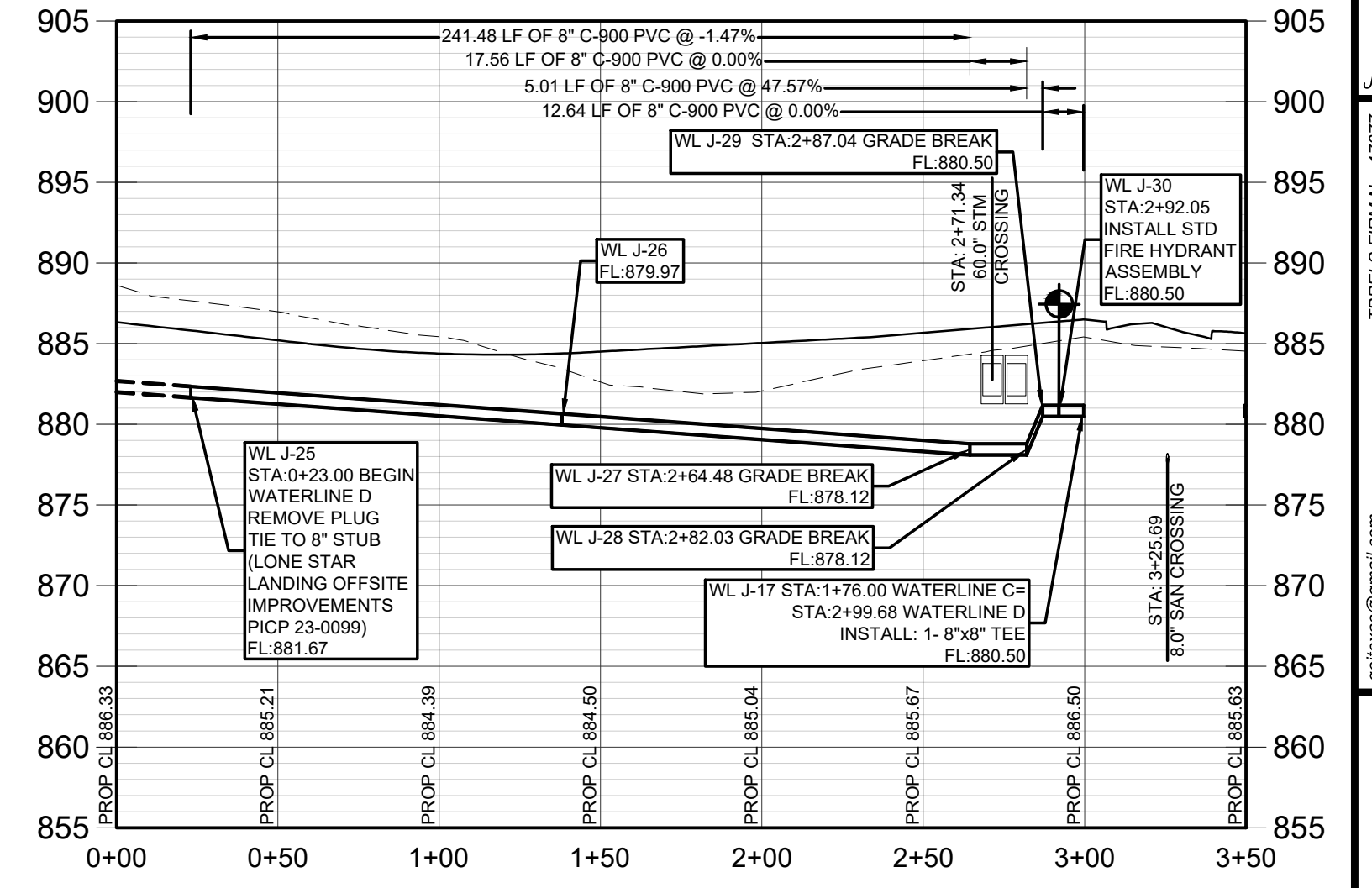
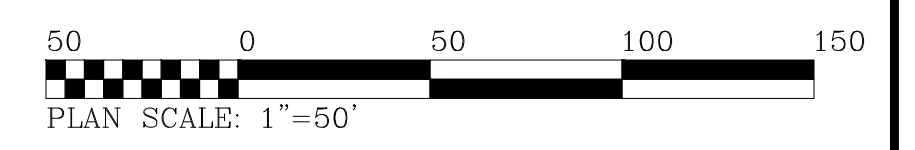
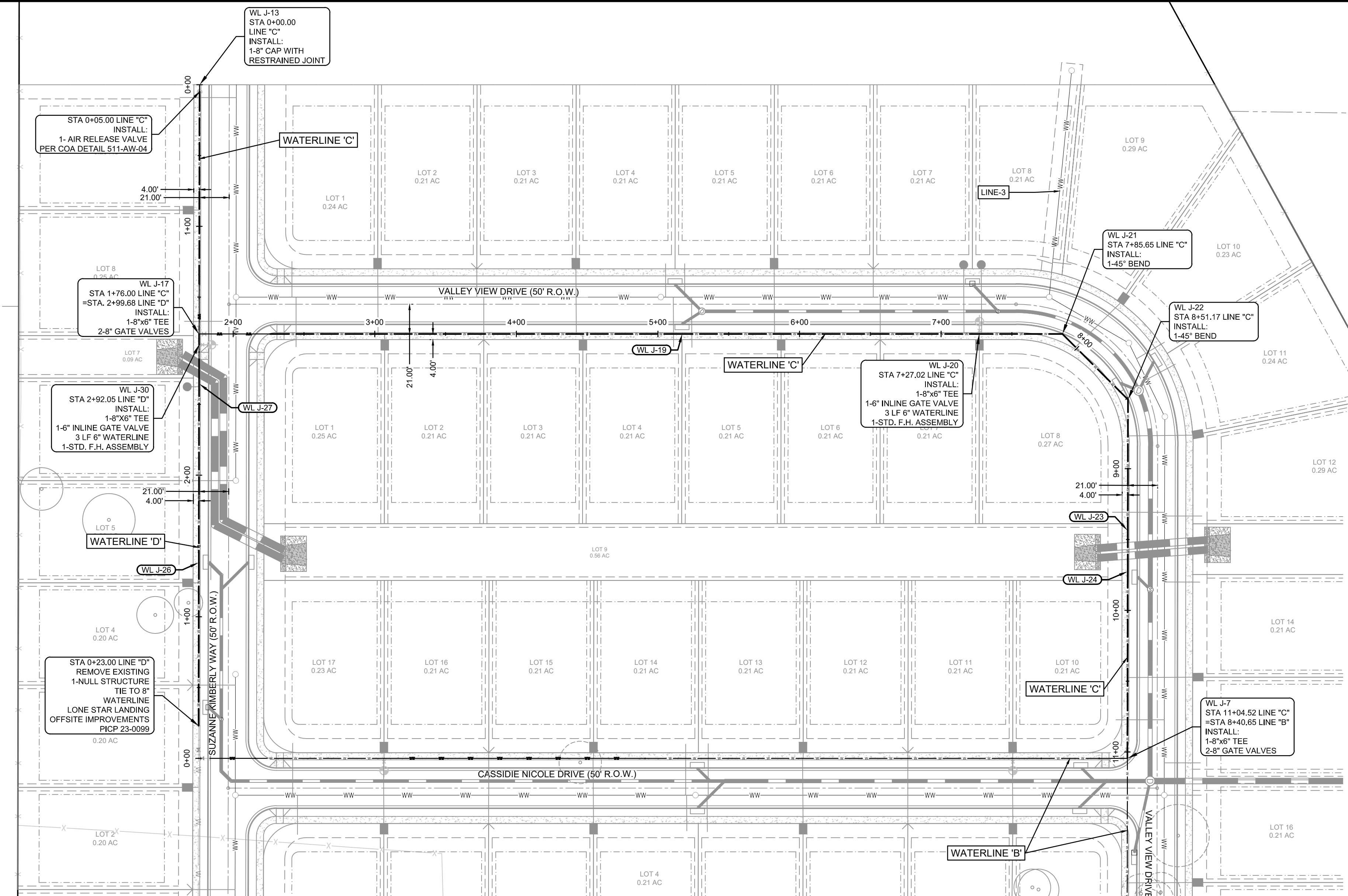
Jan 09, 2024
 TBPELS FIRM No. 17877
ELI ENGINEERING
 ELI ENGINEERING, PLLC.
 700 THERESA COVE, CEDAR PARK, TX 78613
 512-918-0819 (F) 512-532-0560
 gajones@gmail.com

LEANDER, TEXAS 78641 (CITY LIMITS)
LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
 PROPOSED POND PRE POST

DRAWING SCALE:	HORIZ. =	VERT. =
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	

SHEET
25
 OF
52

C:\Users\jwanda\Documents\lone star landing\lone star landing\lone star landing\water\water sheet-2.dwg, Jan 08, 24 3:35 pm



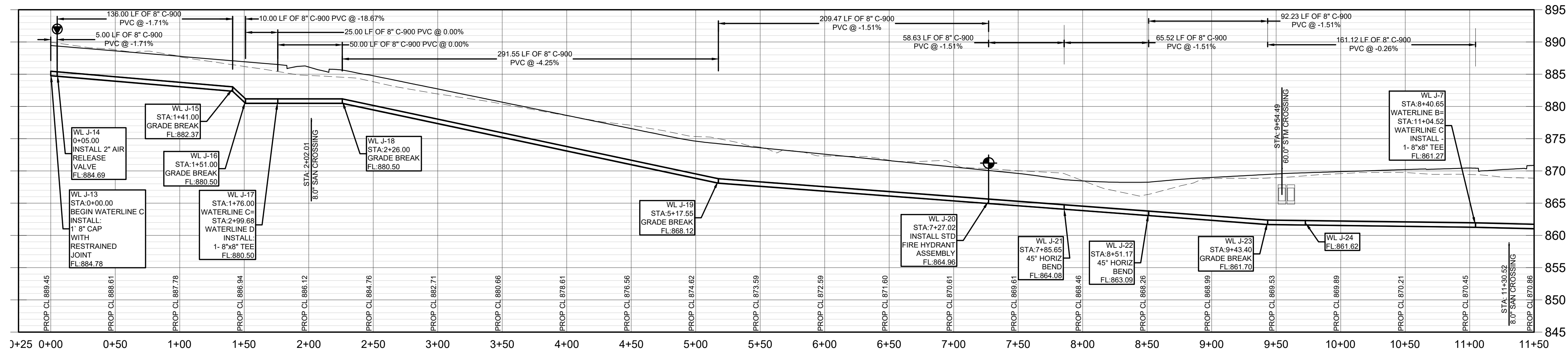
WATERLINE D
H:1"=50'
V:1"=10'

PLAN LEGEND

- W — PROPOSED WATER LINE
- WW — PROPOSED SEWER LINE
- PROPOSED DOUBLE WATER SERVICE
- PROPOSED SINGLE WATER SERVICE
- PROPOSED SINGLE WASTEWATER SERVICE
- PROPOSED DOUBLE WASTEWATER SERVICE

PROFILE LEGEND

- PROPOSED CENTERLINE
- - - EXISTING CENTERLINE



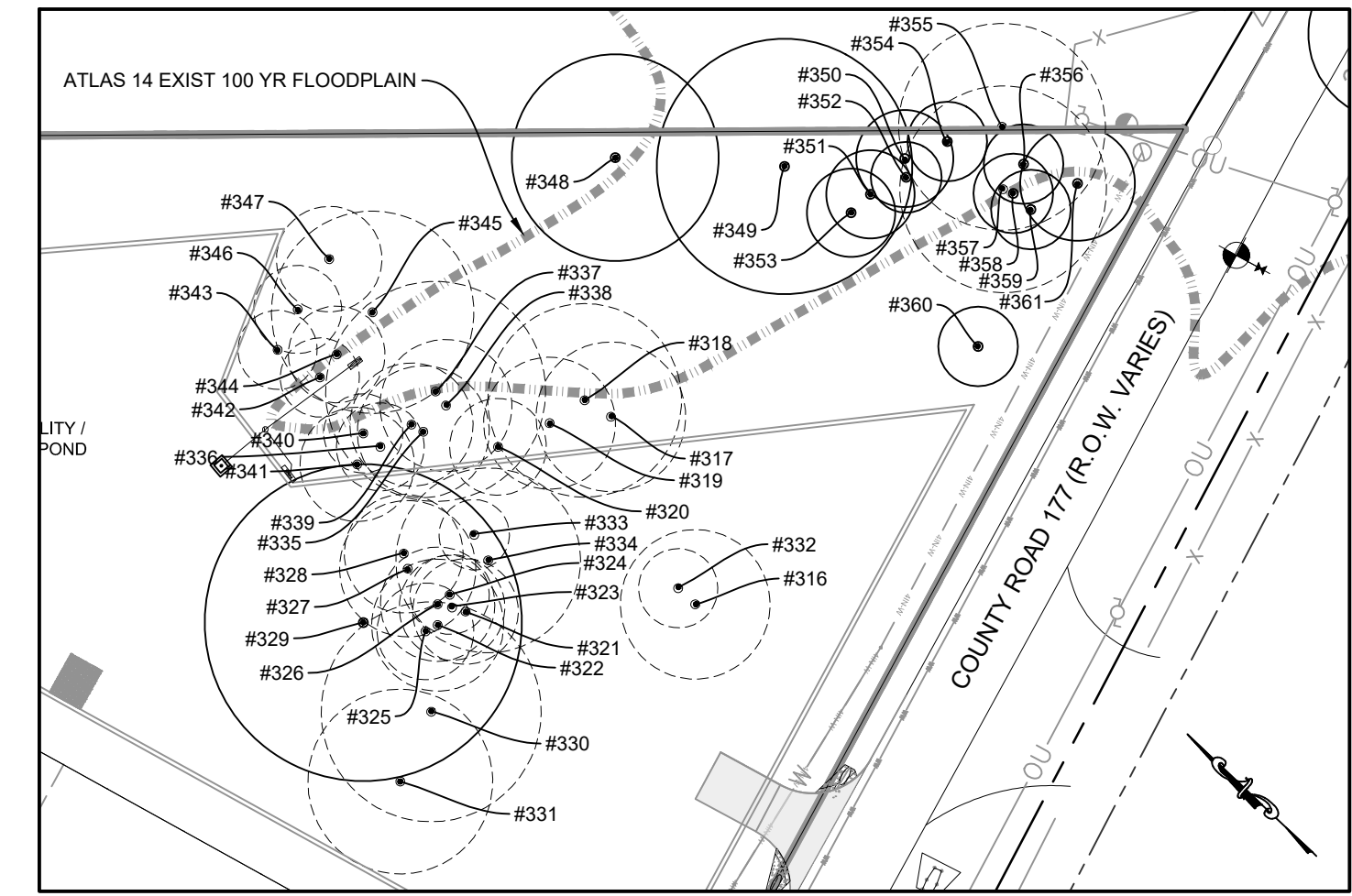
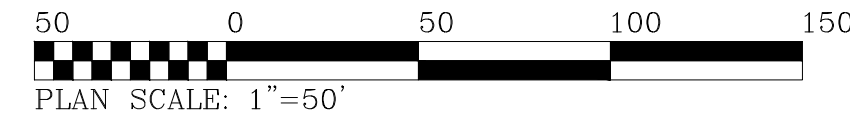
WATERLINE C
H:1"=50'
V:1"=10'



Jan 09, 2024
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 512-818-0818 (F) 512-532-0560
 gelijones@gmail.com

LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
 WATER LINE C- STA 0+00 TO END

DRAWING SCALE:	HORIZ. =	VERT. =
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	



TREE LABEL DETAIL
SCALE: 1"=40'

**CITY OF LEANDER LANDSCAPE REQUIREMENTS
LONE STAR LANDING (DETENTION POND SCREENING)**

250 LF x 10 LF = 2500 SF OF LANDSCAPED AREA REQUIRED
2500/600 = 4.2 UNITS
8 TREES
16 SHRUBS

PLANT LIST

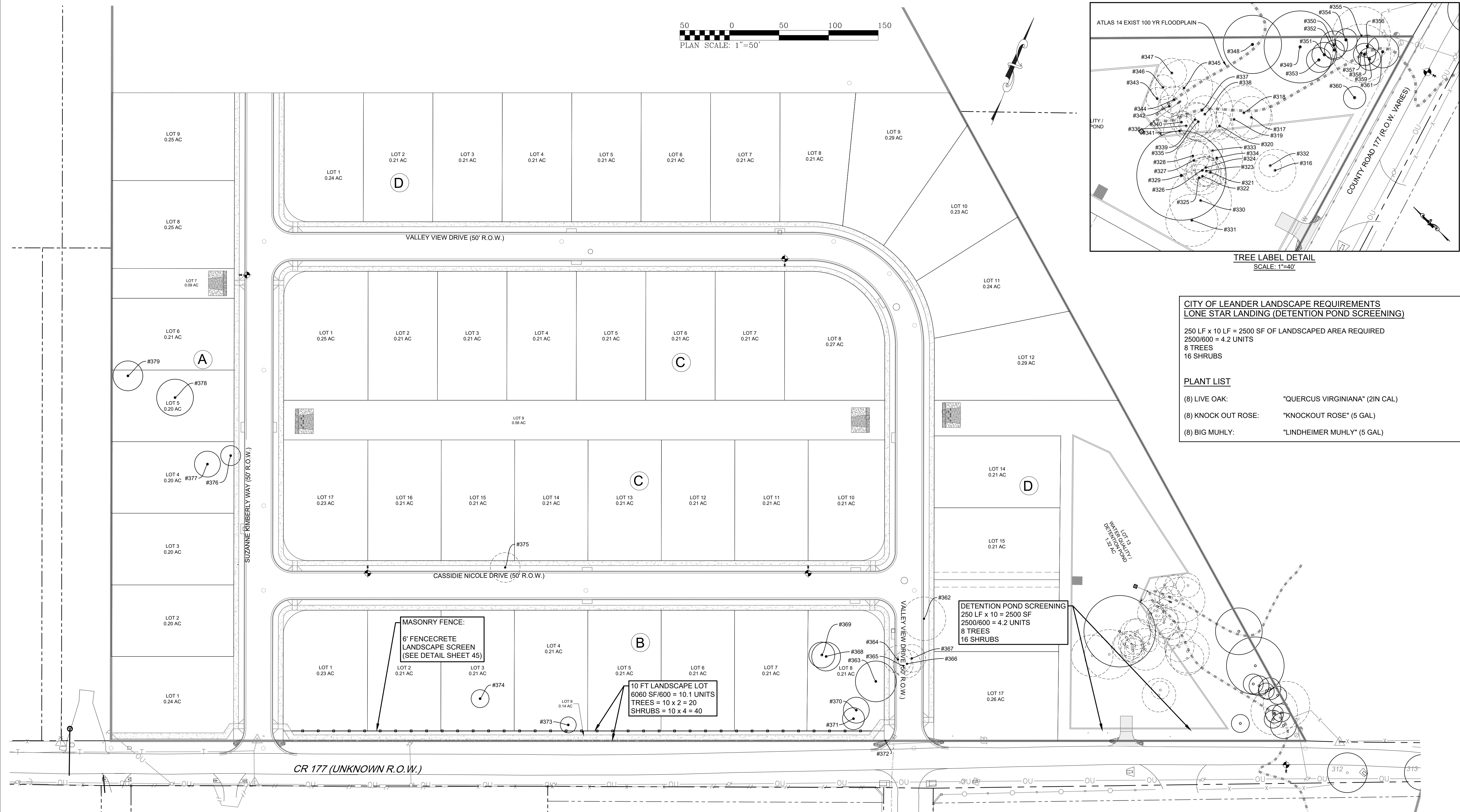
- (8) LIVE OAK: "QUERCUS VIRGINIANA" (2IN CAL)
- (8) KNOCK OUT ROSE: "KNOCKOUT ROSE" (5 GAL)
- (8) BIG MUHLY: "LINDHEIMER MUHLY" (5 GAL)



Jan 09, 2024

ELI ENGINEERING
ELI ENGINEERING, PLLC.
700 THERESA COVE, CEDAR PARK, TX 78613
512-918-0818 (F) 512-532-0560

**LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
LANDSCAPE PLAN**



**CITY OF LEANDER LANDSCAPE REQUIREMENTS
LONE STAR LANDING (LOTS 1-8, BLOCK B)**

606 LF x 10 LF = 6060 SF OF LANDSCAPED AREA REQUIRED
6060/600 = 10 UNITS
10 x 2 = 20 TREES
10 x 4 = 40 SHRUBS

PLANT LIST

- (20) TREES: RETAINED EXISTING TREES WILL BE CREDITED FOR REQUIRED STREET TREES (605 INCHES)
- (20) KNOCK OUT ROSE: "KNOCKOUT ROSE" (5 GAL)
- (20) BIG MUHLY: "LINDHEIMER MUHLY" (5 GAL)

MASONRY FENCE REQUIRED

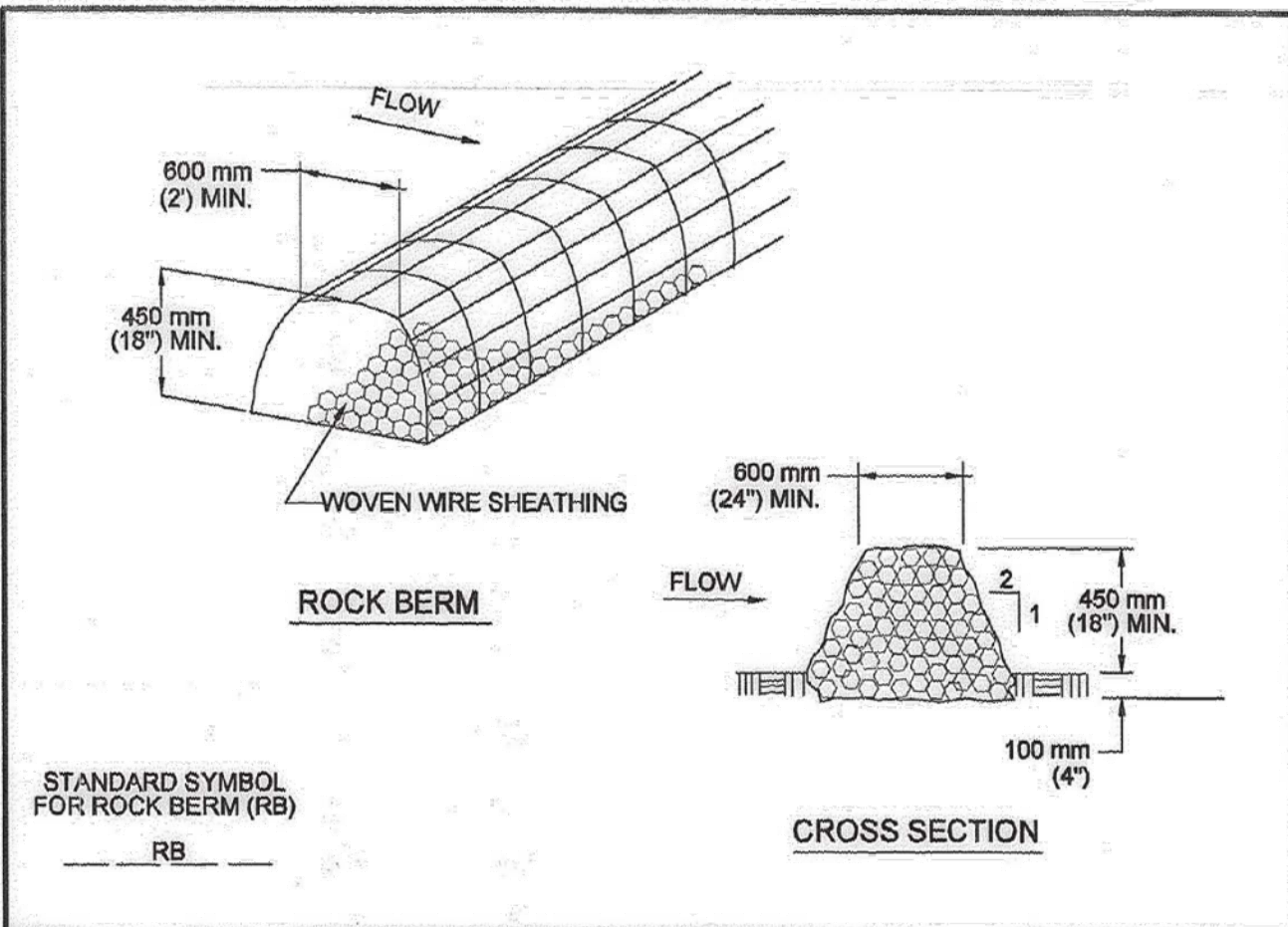
SINGLE WYTHE MASONRY FENCE 6FT HEIGHT x 606 LF

TREE LIST

(O) TREE LOCATED OFFSITE	(S) TREE TO REMAIN	(R) TREE TO BE REMOVED
300 (O) 9" LIVE OAK	327 (R) 12" LIVE OAK CLUSTER	354 (S) 9" PECAN
301 (O) 9" HACKBERRY	328 (R) 10" LIVE OAK CLUSTER	355 (R) MULTI-TRUNK PECAN (12", 10", 9", 4")
302 (O) MULTI-TRUNK PECAN (18", 13")	329 (S) MULTI-TRUNK LIVE OAK (26", 20")	356 (S) 9" PECAN
303 (O) 8" PECAN	330 (R) MULTI-TRUNK LIVE OAK (16", 9", 9")	357 (R) MULTI-TRUNK PECAN (12", 10", 9", 4")
304 (O) 13" PECAN	331 (R) MULTI-TRUNK LIVE OAK (16", 10")	358 (S) 9" LIVE OAK
305 (O) MULTI-TRUNK LIVE OAK (12", 11")	332 (R) 9" LIVE OAK	359 (S) 9" PECAN
306 (O) 13" PECAN	333 (R) 8" LIVE OAK	360 (S) 9" LIVE OAK
307 (O) 20" LIVE OAK	334 (R) MULTI-TRUNK LIVE OAK (16", 10")	361 (S) 13" PECAN
308 (O) 14" CEDAR ELM	335 (R) 15" LIVE OAK	362 (R) 22" PECAN
309 (O) 18" LIVE OAK	336 (R) 14" LIVE OAK	363 (S) 17" CEDAR ELM CLUSTER
310 (O) 14" LIVE OAK	337 (R) MULTI-TRUNK LIVE OAK (16", 9", 9")	364 (R) 14" CEDAR ELM
311 (O) 19" LIVE OAK	338 (R) 15" LIVE OAK	365 (R) 10" CEDAR
312 (O) 20" CEDAR ELM	339 (R) 10" LIVE OAK	366 (R) 14" CEDAR ELM
313 (O) 18" CEDAR ELM	340 (R) 9" LIVE OAK	367 (R) 14" CEDAR ELM
314 (O) 19" CEDAR ELM	341 (R) 13" LIVE OAK	368 (R) 10", 5", 4" CEDAR ELM CLUSTER
315 (O) 11" HACKBERRY	342 (R) 9" LIVE OAK	369 (S) 13" CEDAR ELM
316 (R) 17" RED OAK	343 (R) 9" LIVE OAK	370 (S) 13" CEDAR ELM
317 (R) 17" LIVE OAK	344 (R) 11" PECAN	371 (S) 11" CEDAR ELM
318 (R) 22" LIVE OAK	345 (R) 23" LIVE OAK	372 (R) MULTI-TRUNK CEDAR ELM (16", 12")
319 (R) 15" LIVE OAK	346 (R) 10" LIVE OAK	373 (S) 8" CEDAR ELM
320 (R) 11" LIVE OAK	347 (R) 12" LIVE OAK	374 (S) 9" LIVE OAK
321 (R) 12" LIVE OAK	348 (S) MULTI-TRUNK PECAN (12", 10", 9", 4")	375 (R) 9", 5", 4", 3" CEDAR ELM CLUSTER
322 (R) 12" LIVE OAK	349 (S) 23" LIVE OAK	376 (S) 10" LIVE OAK
323 (R) 9" LIVE OAK	350 (S) 11" PECAN	377 (S) 9", 9" LIVE OAK CLUSTER
324 (R) 9", 8" LIVE OAK CLUSTER	351 (S) 10" PECAN	378 (S) 9", 7", 7", 5" CEDAR ELM CLUSTER
325 (R) 15" LIVE OAK	352 (S) 8" PECAN	379 (S) MULTI-TRUNK CEDAR ELM (11", 8")
326 (R) 11" LIVE OAK	353 (S) 10" PECAN	

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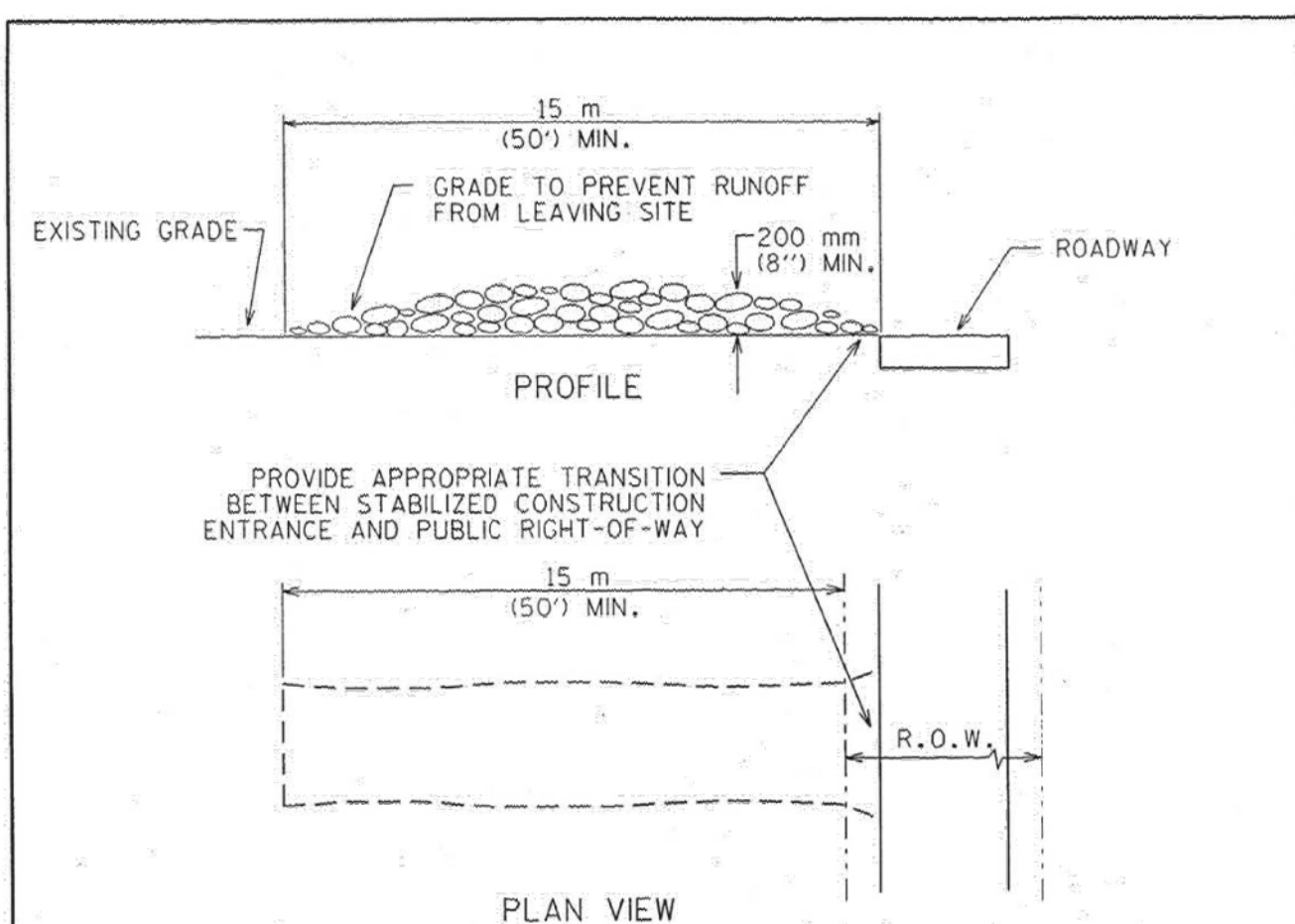
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NOTES:

- USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
- 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).
- THE ROCK BERM SHALL BE INSPECTED DAILY 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 SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
- IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
- WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

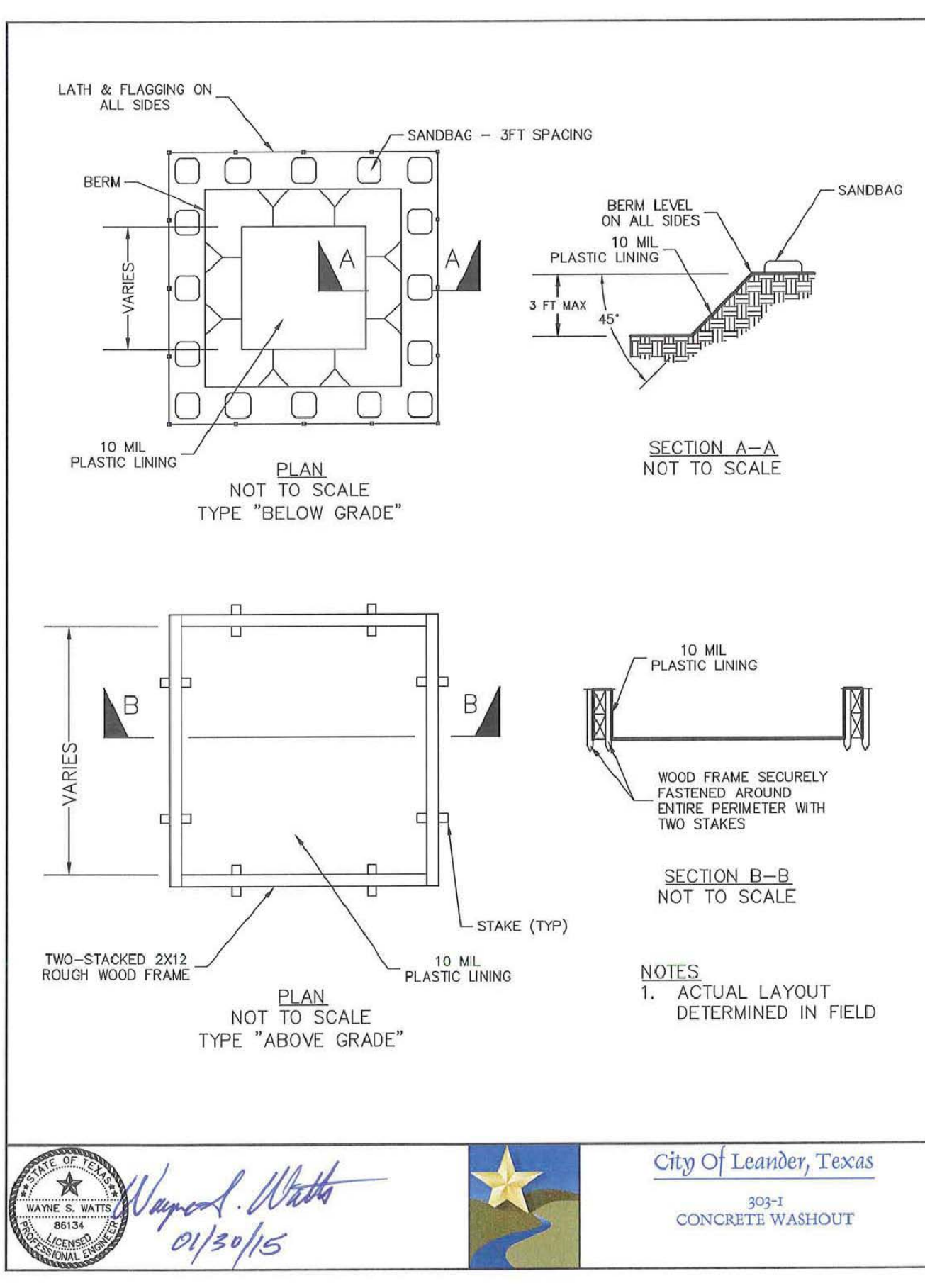
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	ROCK BERM	STANDARD NO. 639S-1
<i>Mary B. Hagg</i> 8/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



NOTES:

- STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
- LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
- THICKNESS: NOT LESS THAN 200 mm (8").
- WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
- 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.
- 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.
- DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

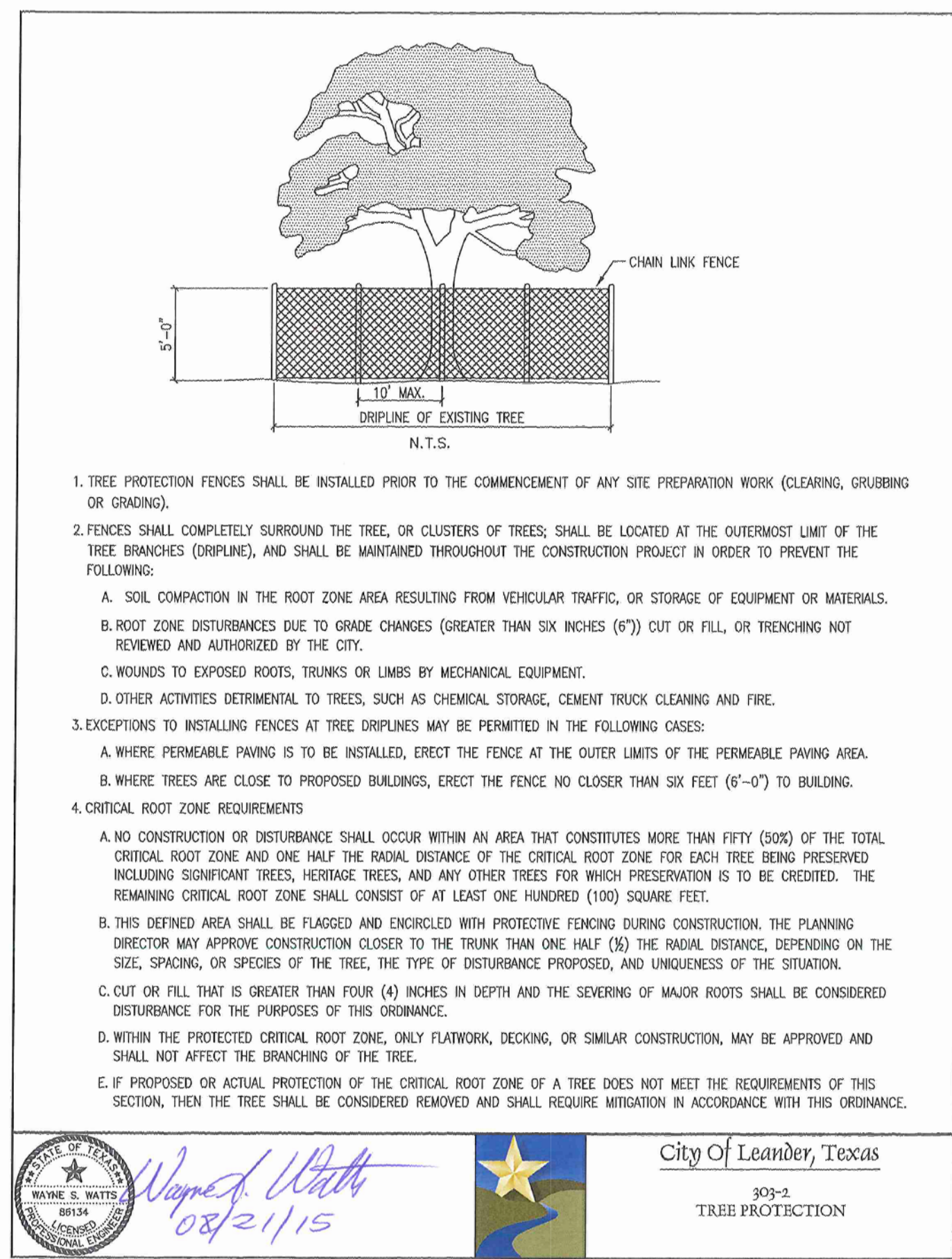
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE	STANDARD NO. 641S-1
<i>Don Sula</i> 5/23/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



NOTES:

- ACTUAL LAYOUT DETERMINED IN FIELD.

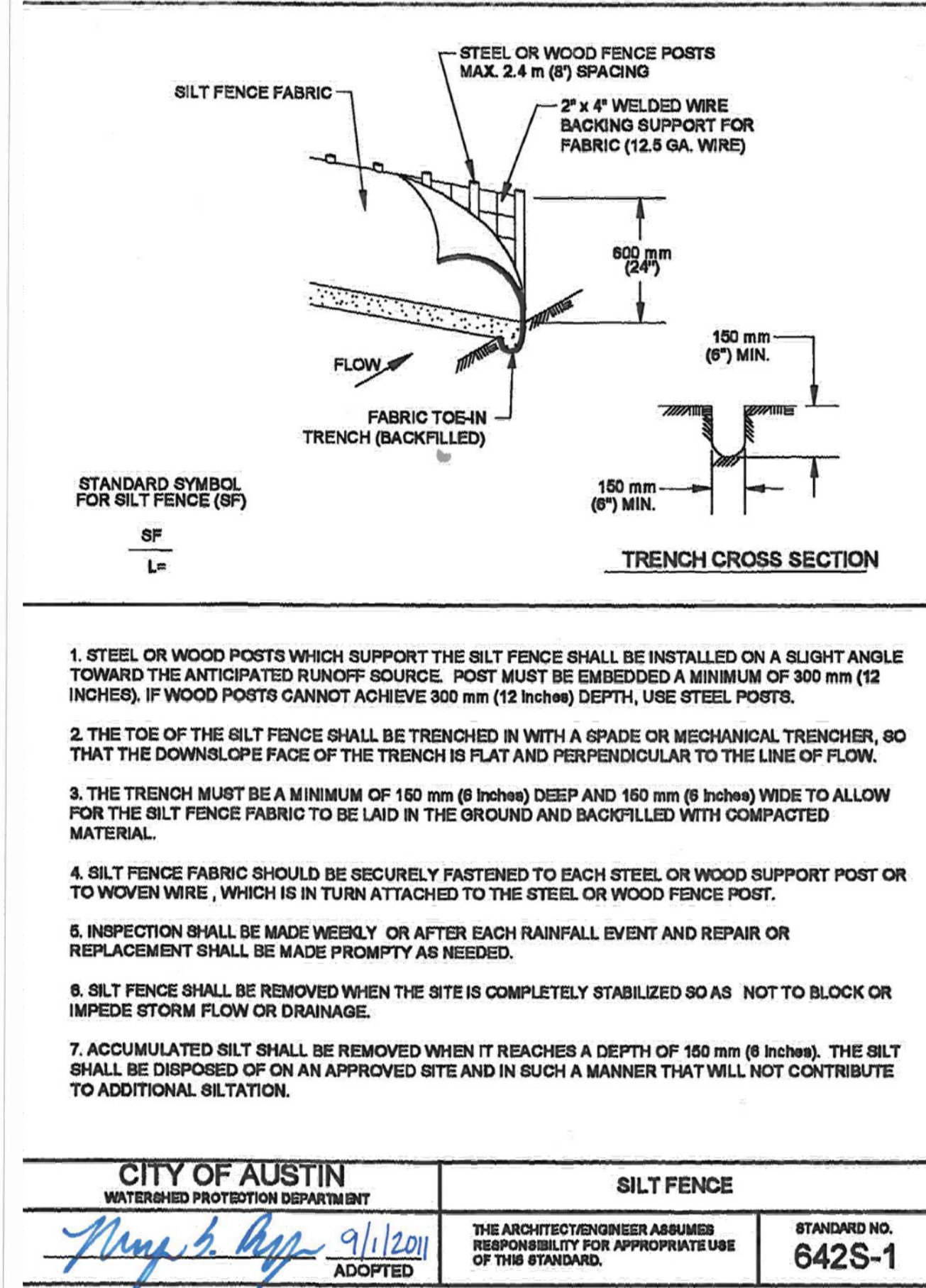
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	CONCRETE WASHOUT	STANDARD NO. 303-1
<i>Wayne S. Watts</i> 01/30/15 ADOPTED		



NOTES:

- TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
- FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES, SHALL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
 - SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
 - ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY.
 - WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
 - OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
- EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
 - WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
 - WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN SIX FEET (6'-0") TO BUILDING.
- CRITICAL ROOT ZONE REQUIREMENTS
 - NO CONSTRUCTION OR DISTURBANCE SHALL OCCUR WITHIN AN AREA THAT CONSTITUTES MORE THAN FIFTY (50%) OF THE TOTAL CRITICAL ROOT ZONE AND ONE HALF THE RADIAL DISTANCE OF THE CRITICAL ROOT ZONE FOR EACH TREE BEING PRESERVED INCLUDING SIGNIFICANT TREES, HERITAGE TREES, AND ANY OTHER TREES FOR WHICH PRESERVATION IS TO BE CREDITED. THE REMAINING CRITICAL ROOT ZONE SHALL CONSIST OF AT LEAST ONE HUNDRED (100) SQUARE FEET.
 - THIS DEFINED AREA SHALL BE FLAGGED AND ENCLOSED WITH PROTECTIVE FENCING DURING CONSTRUCTION. THE PLANNING DIRECTOR MAY APPROVE CONSTRUCTION CLOSER TO THE TRUNK THAN ONE HALF (1/2) THE RADIAL DISTANCE, DEPENDING ON THE SIZE, SPACING, OR SPECIES OF THE TREE, THE TYPE OF DISTURBANCE PROPOSED, AND UNIQUENESS OF THE SITUATION.
 - CUT OR FILL THAT IS GREATER THAN FOUR (4) INCHES IN DEPTH AND THE SEVERING OF MAJOR ROOTS SHALL BE CONSIDERED DISTURBANCE FOR THE PURPOSES OF THIS ORDINANCE.
 - WITHIN THE PROTECTED CRITICAL ROOT ZONE, ONLY FLATWORK, DECKING, OR SIMILAR CONSTRUCTION, MAY BE APPROVED AND SHALL NOT AFFECT THE BRANCHING OF THE TREE.
 - IF PROPOSED OR ACTUAL PROTECTION OF THE CRITICAL ROOT ZONE OF A TREE DOES NOT MEET THE REQUIREMENTS OF THIS SECTION, THEN THE TREE SHALL BE CONSIDERED REMOVED AND SHALL REQUIRE MITIGATION IN ACCORDANCE WITH THIS ORDINANCE.

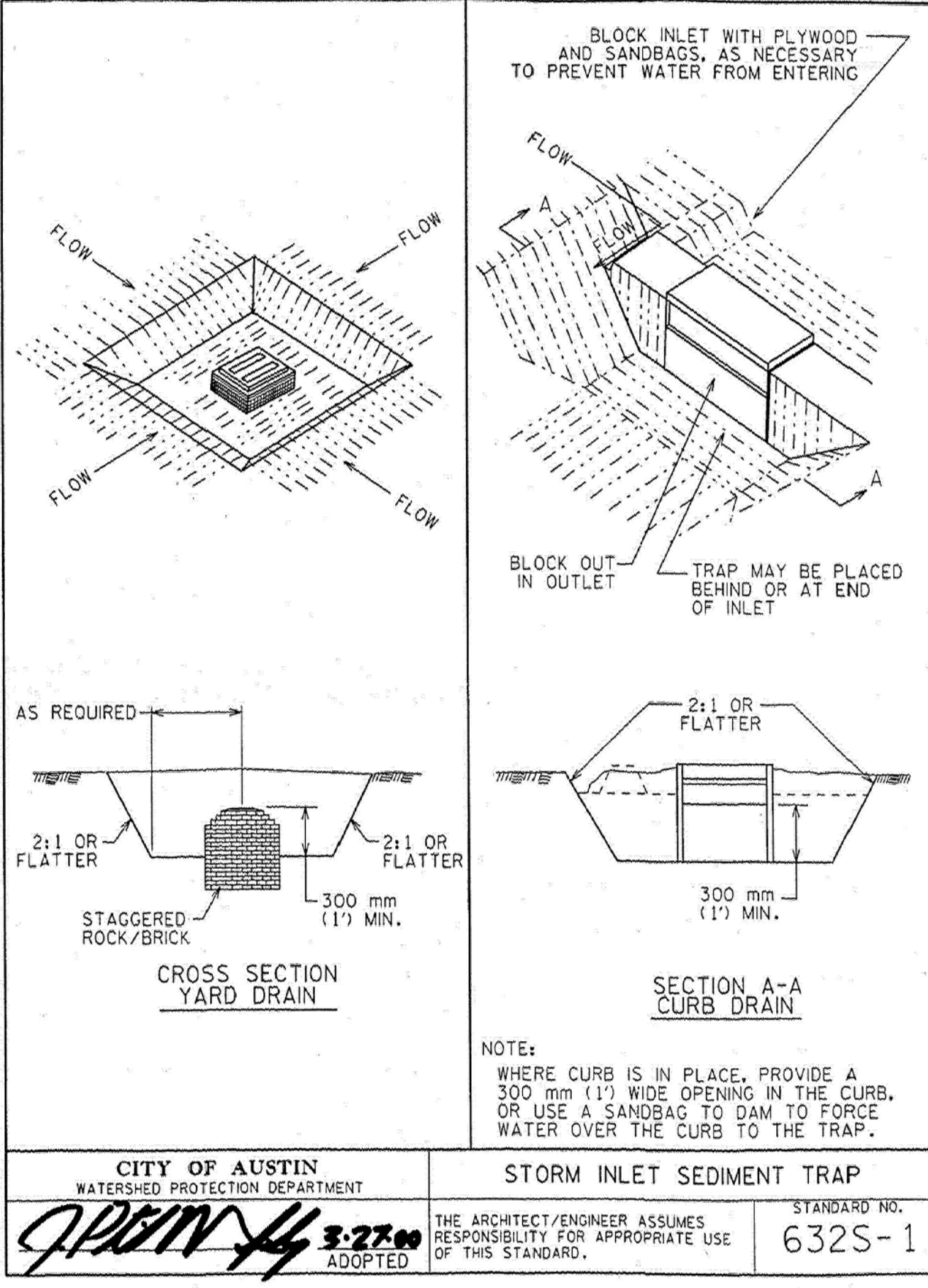
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROTECTION	STANDARD NO. 303-2
<i>Wayne S. Watts</i> 08/21/15 ADOPTED		



NOTES:

- STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 INCHES) DEPTH, USE STEEL POSTS.
- 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.
- THE TRENCH MUST BE A MINIMUM OF 150 mm (6 INCHES) DEEP AND 150 mm (6 INCHES) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
- SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.
- INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- 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 150 mm (6 INCHES). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

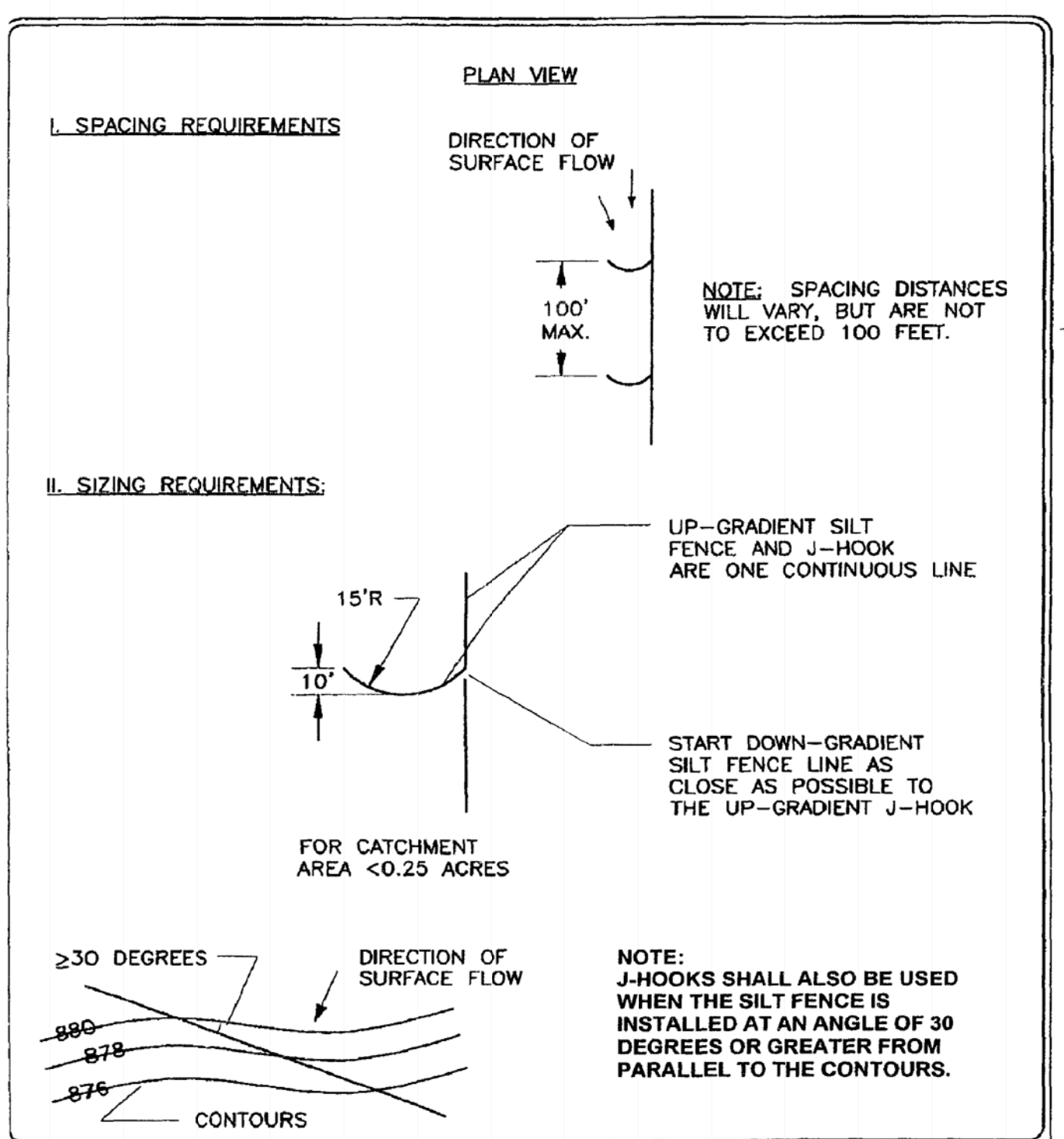
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SILT FENCE	STANDARD NO. 642S-1
<i>Mary B. Hagg</i> 9/1/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



NOTES:

- WHERE CURB IS IN PLACE, PROVIDE A 300 mm (12") WIDE OPENING IN THE CURB. OR USE A SANDBAG TO DAM TO FORCE WATER OVER THE CURB TO THE TRAP.

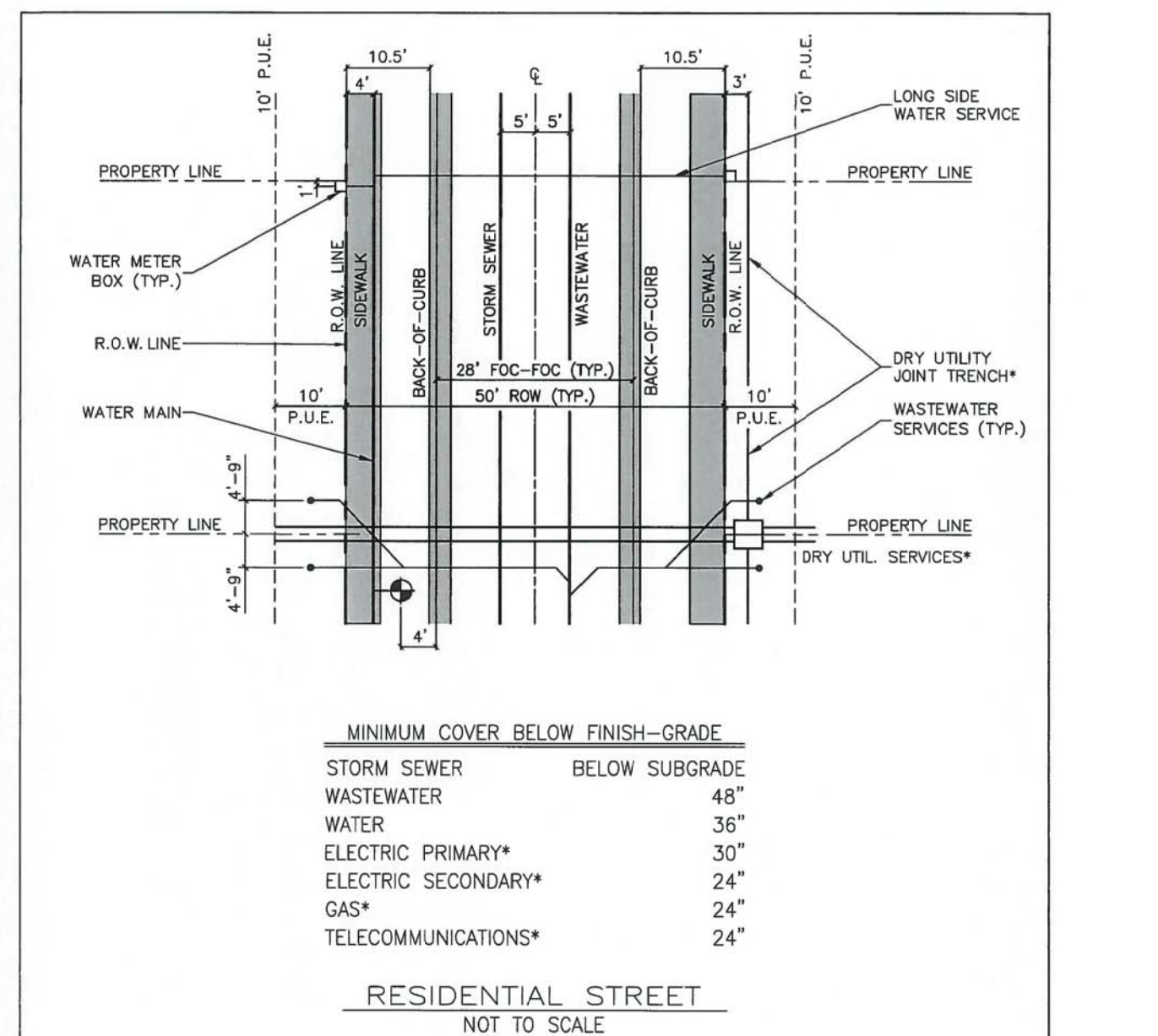
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STORM INLET SEDIMENT TRAP	STANDARD NO. 632S-1
<i>Wayne S. Watts</i> 3-27-00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



NOTES:

- J-HOOKS SHALL ALSO BE USED WHEN THE SILT FENCE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO THE CONTOURS.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SPACING REQUIREMENTS	STANDARD NO. 100'
<i>Wayne S. Watts</i> 01/09/18 ADOPTED		



MINIMUM COVER BELOW FINISH-GRADE

STORM SEWER	BELOW SUBGRADE
WASTEWATER	48"
WATER	36"
ELECTRIC PRIMARY*	30"
ELECTRIC SECONDARY*	24"
GAS*	24"
TELECOMMUNICATIONS*	24"

NOTE: ALL GAS, ELECTRIC, AND TELECOMMUNICATION LINES SHALL BE INSTALLED PER THE UTILITY PROVIDER'S STANDARDS AND SPECIFICATIONS.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	UTILITY ASSIGNMENTS	STANDARD NO. DETAIL #204-5
<i>Wayne S. Watts</i> 01/09/18 ADOPTED		

NO. _____ DATE _____ REVISION _____

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GARY ELI JONES
79198
REGISTERED ENGINEER
Jan 09, 2024

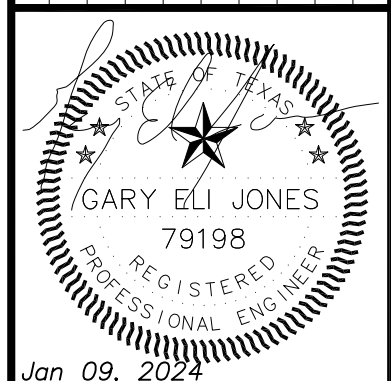
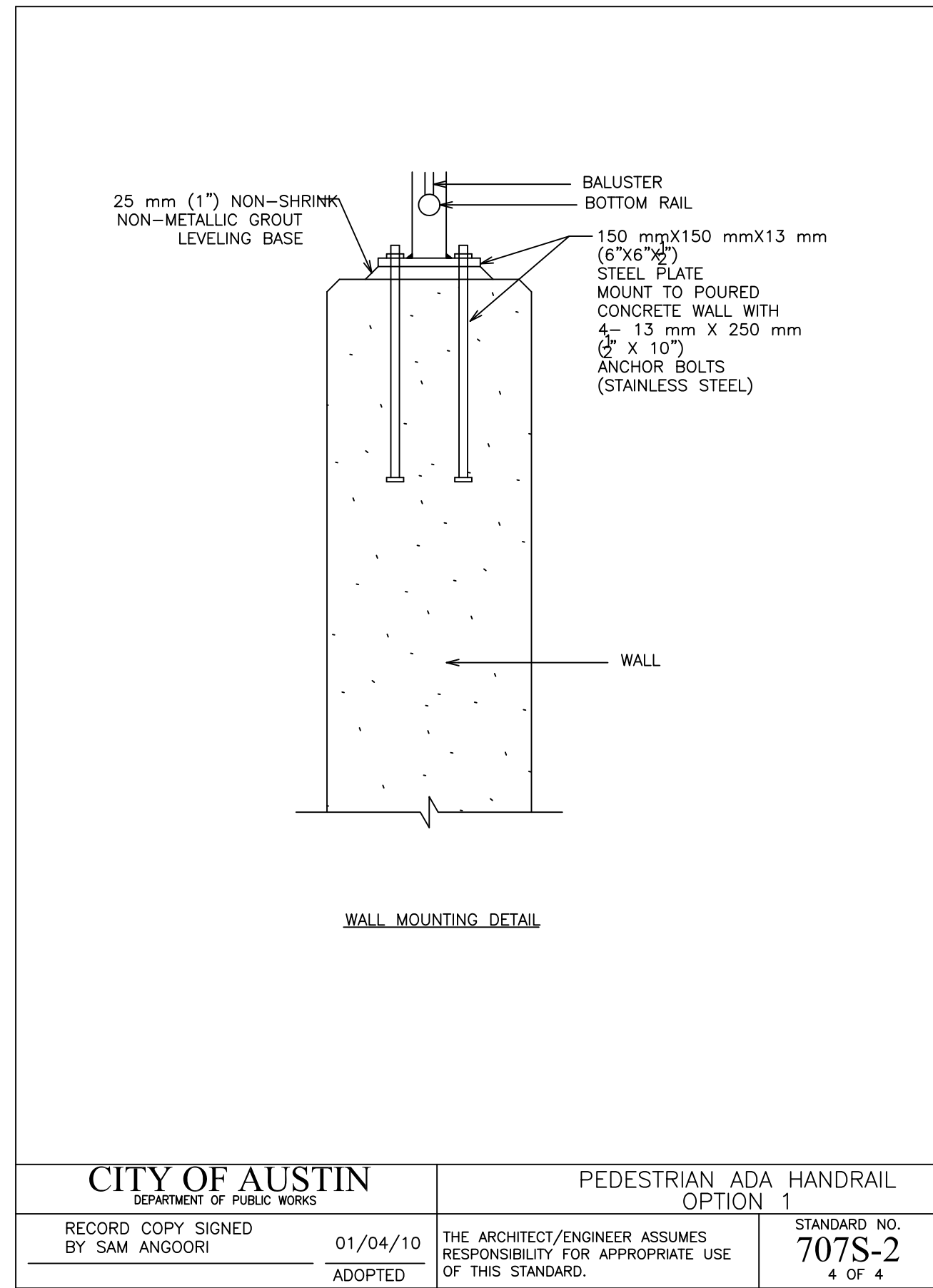
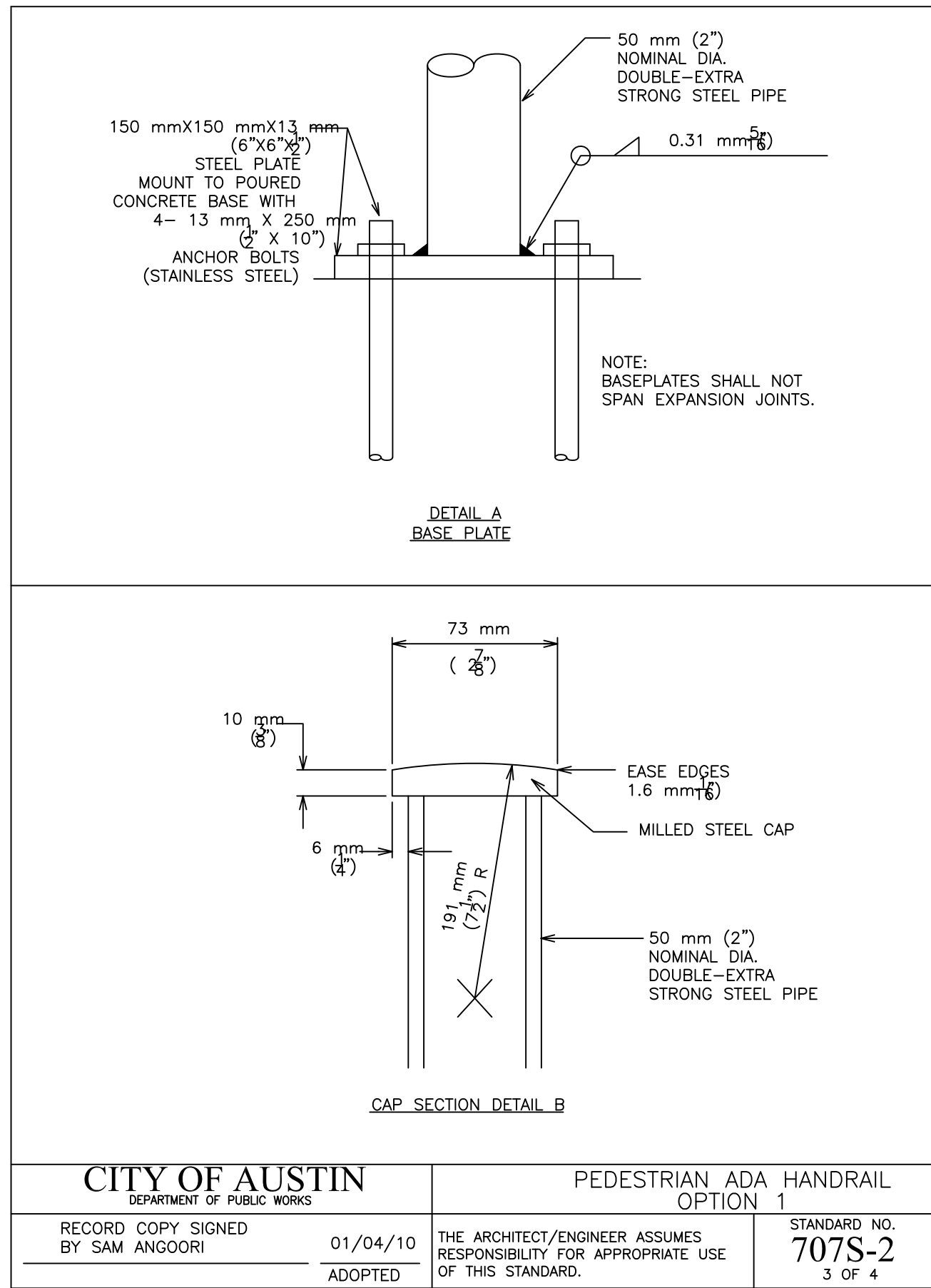
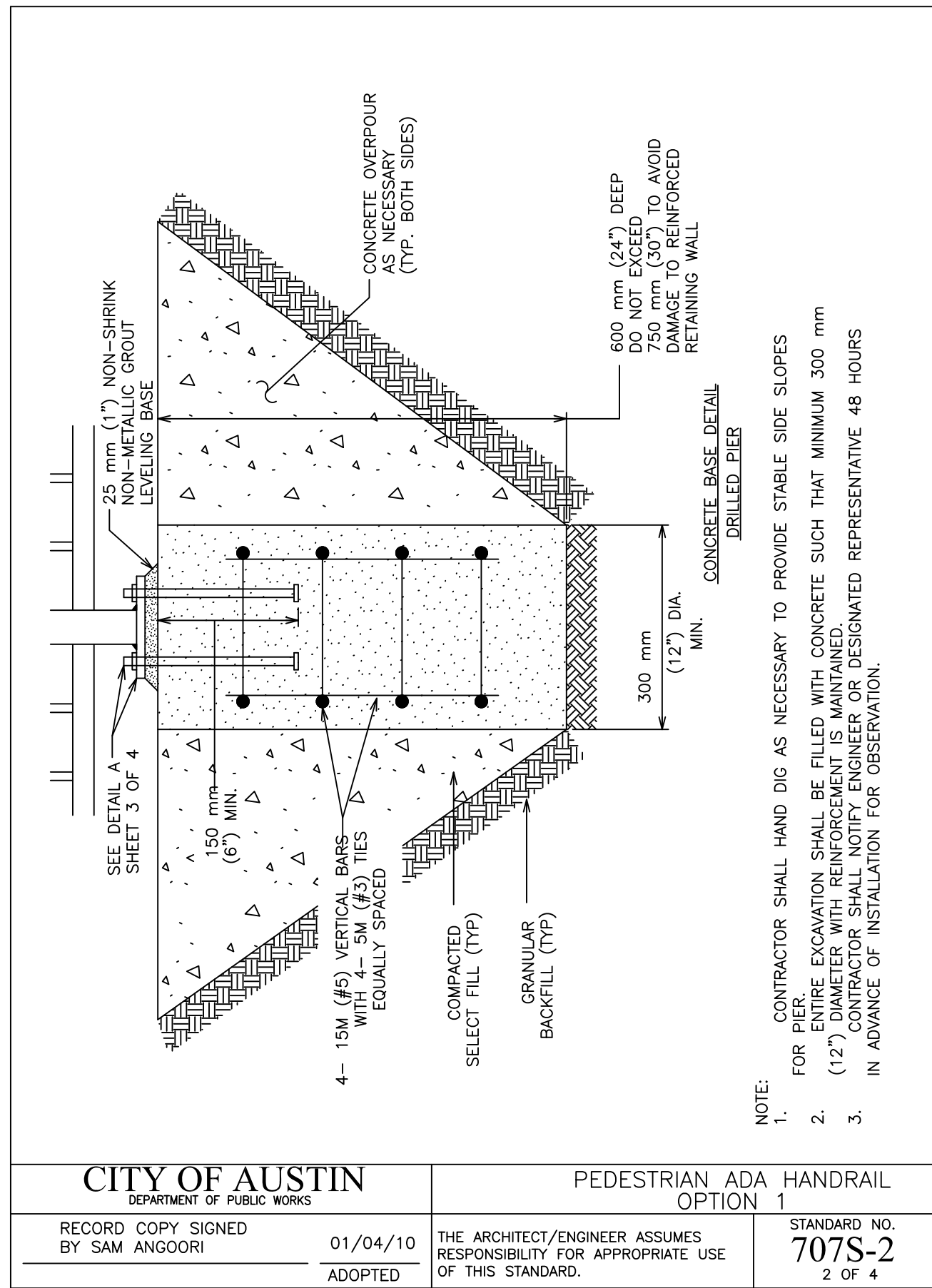
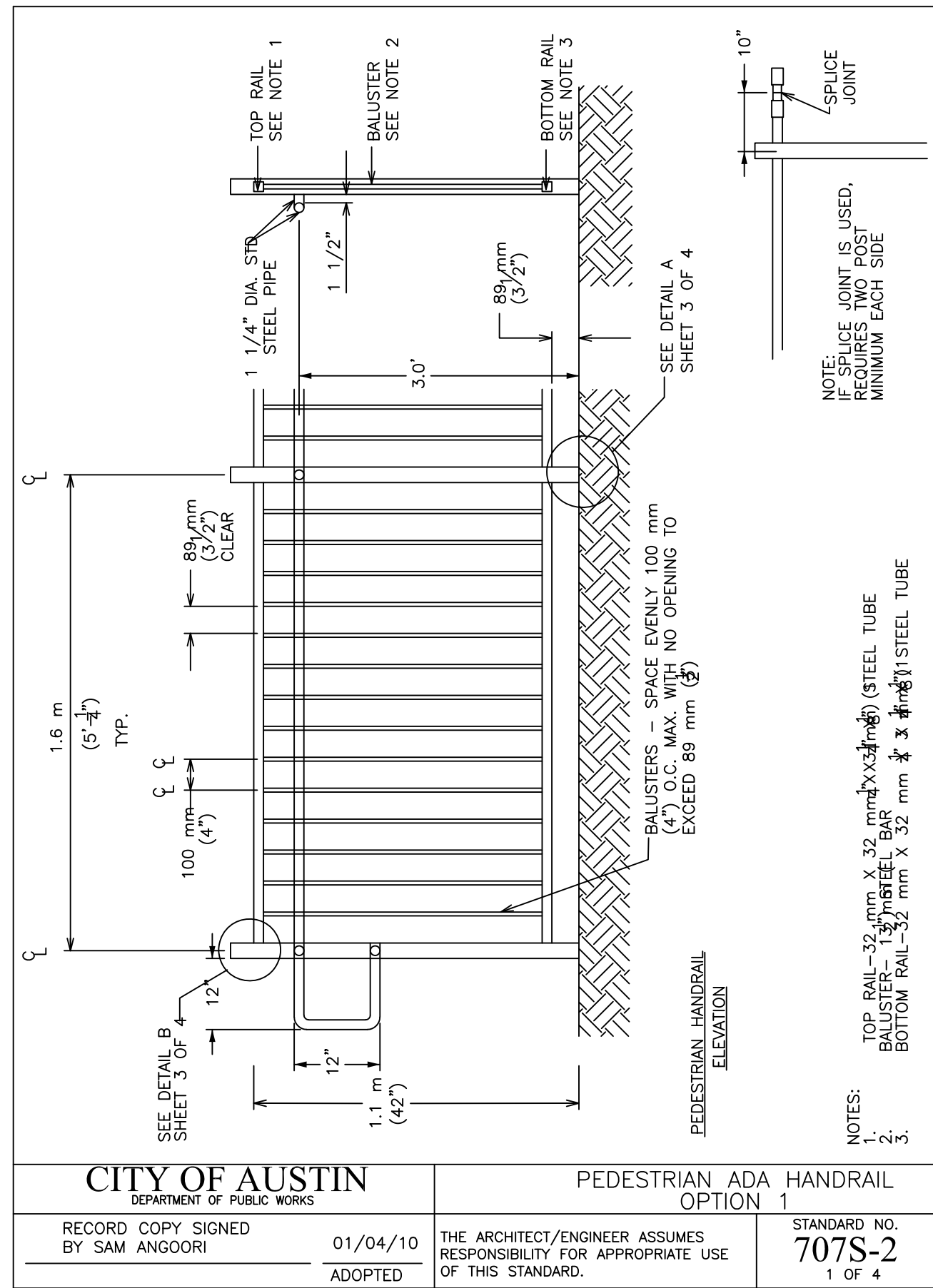
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700 THERESA COVE, CEDAR PARK, TX 78613
512-919-0819 (F) 512-532-0560

LONG STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
CONSTRUCTION DETAILS (1 OF 10)

HORIZ. SCALE: _____ VERT. SCALE: _____

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SHEET **43** OF **52**



Jan 09, 2024

TEPELS FIRM No. 17877

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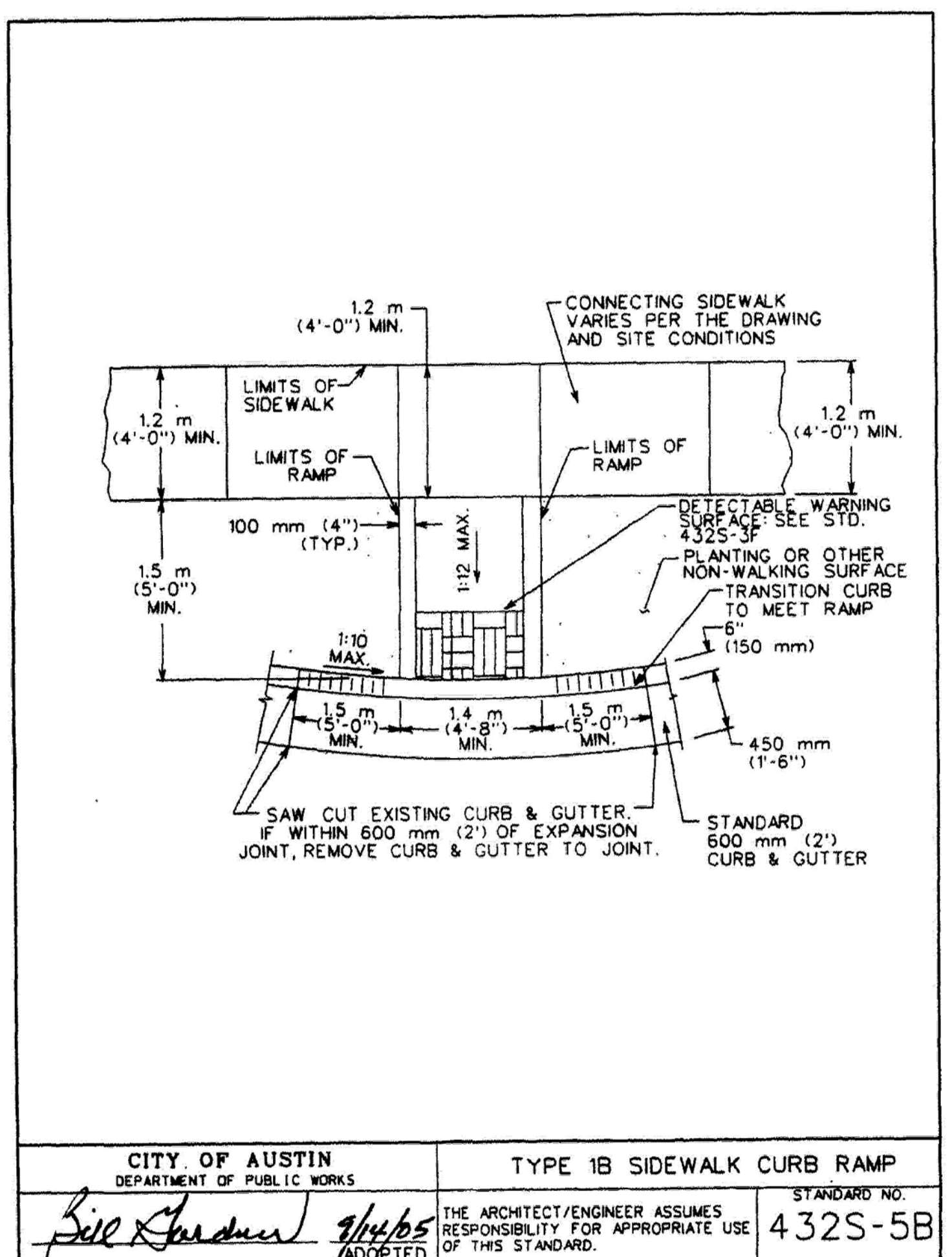
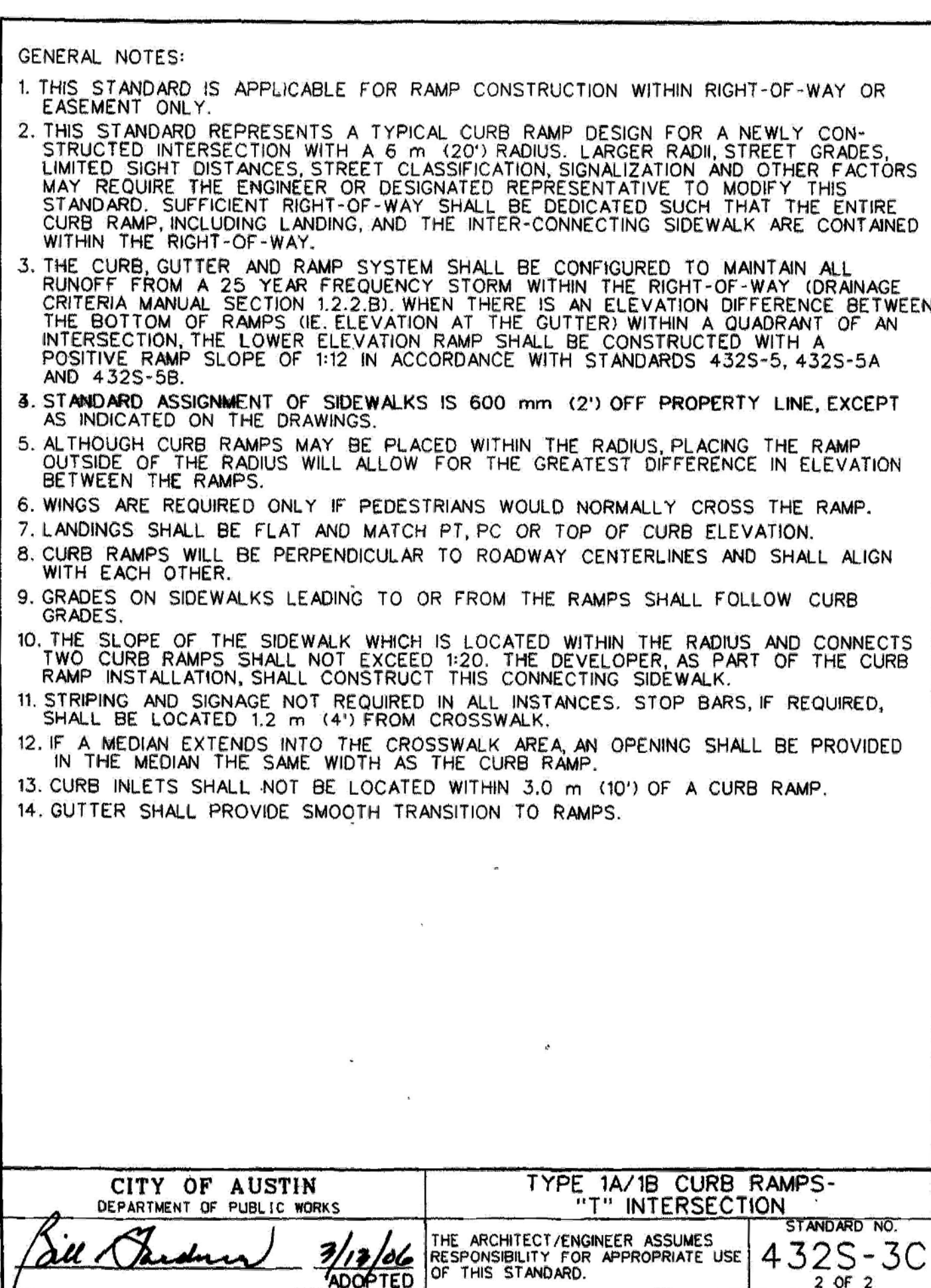
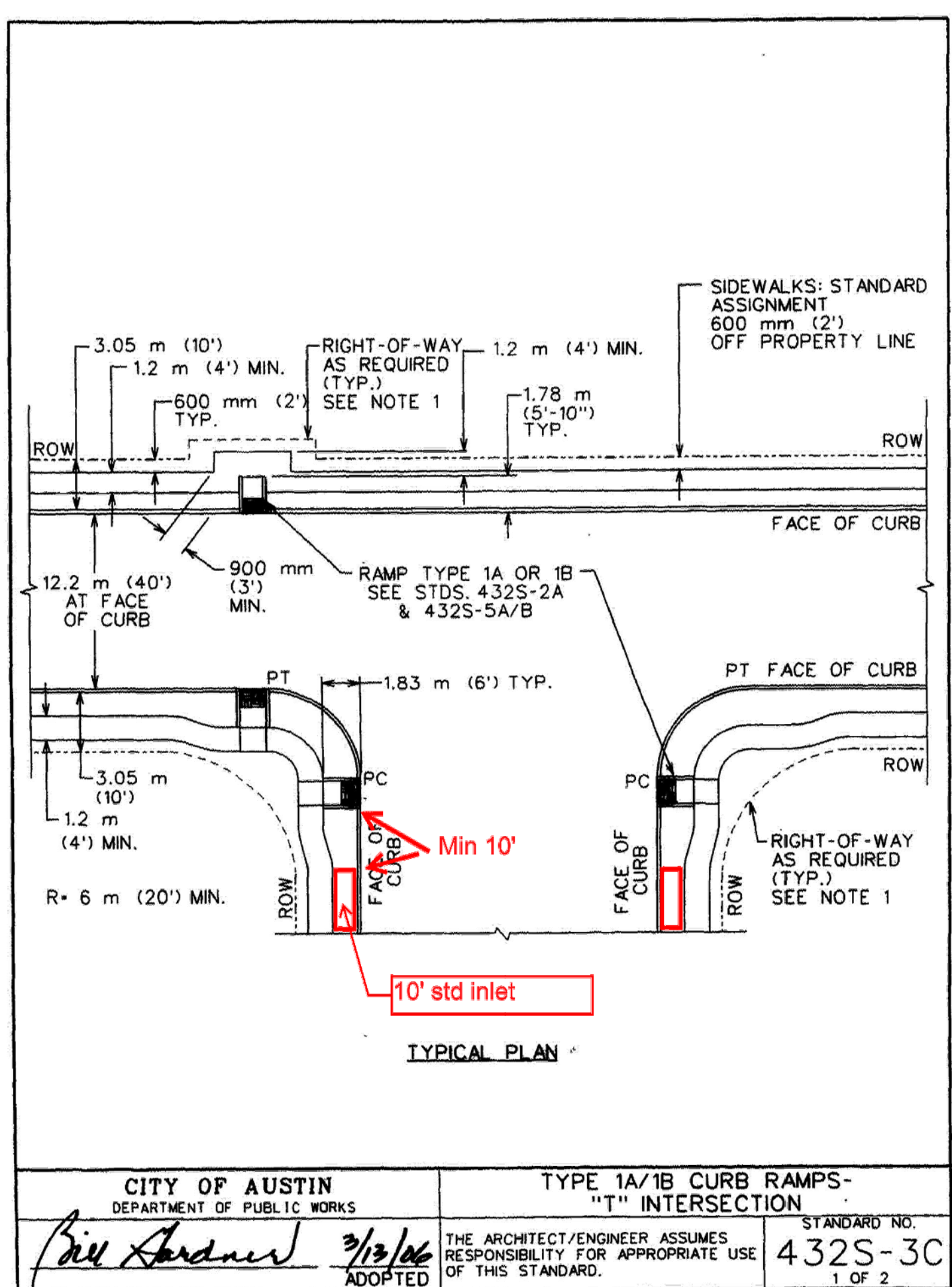
LEANDER, TEXAS 78641 (CITY LIMITS)

LONE STAR LANDING PHASE ONE

SUBDIVISION IMPROVEMENTS

CONSTRUCTION DETAILS (2 OF 10)

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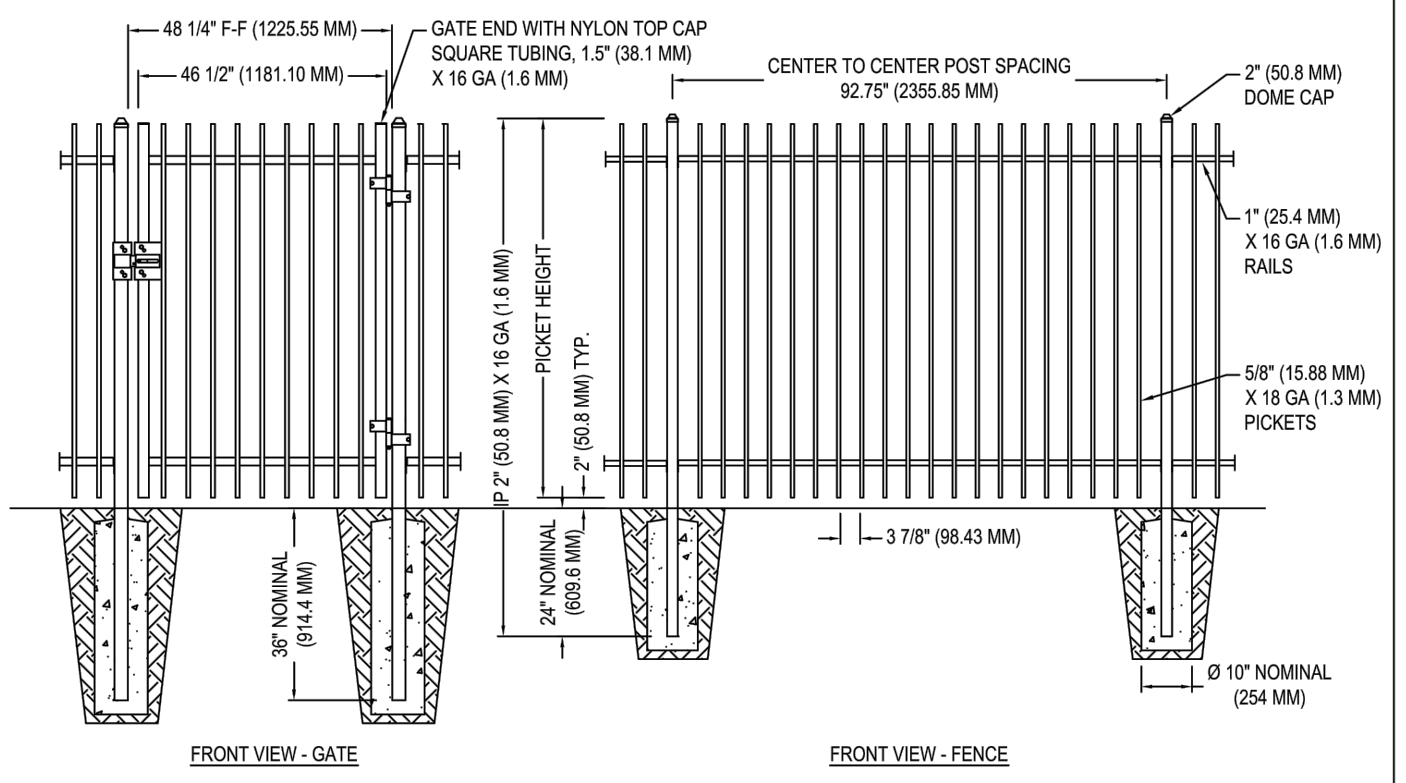
- GENERAL NOTES:
- THIS STANDARD IS APPLICABLE FOR RAMP CONSTRUCTION WITHIN RIGHT-OF-WAY OR EASEMENT ONLY.
 - THIS STANDARD REPRESENTS A TYPICAL CURB RAMP DESIGN FOR A NEWLY CONSTRUCTED INTERSECTION WITH A 6 m (20') RADIUS. LARGER RADIUS STREET GRADES, LIMITED SIGHT DISTANCES, STREET CLASSIFICATION, SIGNALIZATION AND OTHER FACTORS MAY REQUIRE THE ENGINEER OR DESIGNATED REPRESENTATIVE TO MODIFY THIS STANDARD. SUFFICIENT RIGHT-OF-WAY SHALL BE DEDICATED SUCH THAT THE ENTIRE CURB RAMP, INCLUDING LANDING, AND THE INTER-CONNECTING SIDEWALK ARE CONTAINED WITHIN THE RIGHT-OF-WAY.
 - THE CURB, GUTTER AND RAMP SYSTEM SHALL BE CONFIGURED TO MAINTAIN ALL RUNOFF FROM A 25 YEAR FREQUENCY STORM WITHIN THE RIGHT-OF-WAY (DRAINAGE CRITERIA MANUAL SECTION 1.2.2.B). WHEN THERE IS AN ELEVATION DIFFERENCE BETWEEN THE BOTTOM OF RAMPS (IE. ELEVATION AT THE GUTTER) WITHIN A QUADRANT OF AN INTERSECTION, THE LOWER ELEVATION RAMP SHALL BE CONSTRUCTED WITH A POSITIVE RAMP SLOPE OF 1:12 IN ACCORDANCE WITH STANDARDS 432S-5, 432S-5A AND 432S-5B.
 - STANDARD ASSIGNMENT OF SIDEWALKS IS 600 mm (2') OFF PROPERTY LINE, EXCEPT AS INDICATED ON THE DRAWINGS.
 - ALTHOUGH CURB RAMPS MAY BE PLACED WITHIN THE RADIUS, PLACING THE RAMP OUTSIDE OF THE RADIUS WILL ALLOW FOR THE GREATEST DIFFERENCE IN ELEVATION BETWEEN THE RAMPS.
 - WINGS ARE REQUIRED ONLY IF PEDESTRIANS WOULD NORMALLY CROSS THE RAMP.
 - LANDINGS SHALL BE FLAT AND MATCH PT, PC OR TOP OF CURB ELEVATION.
 - CURB RAMPS WILL BE PERPENDICULAR TO ROADWAY CENTERLINES AND SHALL ALIGN WITH EACH OTHER.
 - GRADES ON SIDEWALKS LEADING TO OR FROM THE RAMPS SHALL FOLLOW CURB GRADES.
 - THE SLOPE OF THE SIDEWALK WHICH IS LOCATED WITHIN THE RADIUS AND CONNECTS TWO CURB RAMPS SHALL NOT EXCEED 1:20. THE DEVELOPER, AS PART OF THE CURB RAMP INSTALLATION, SHALL CONSTRUCT THIS CONNECTING SIDEWALK.
 - STRIPING AND SIGNAGE NOT REQUIRED IN ALL INSTANCES. STOP BARS, IF REQUIRED, SHALL BE LOCATED 1.2 m (4') FROM CROSSWALK.
 - IF A MEDIAN EXTENDS INTO THE CROSSWALK AREA, AN OPENING SHALL BE PROVIDED IN THE MEDIAN THE SAME WIDTH AS THE CURB RAMP.
 - CURB INLETS SHALL NOT BE LOCATED WITHIN 3.0 m (10') OF A CURB RAMP.
 - GUTTER SHALL PROVIDE SMOOTH TRANSITION TO RAMPS.

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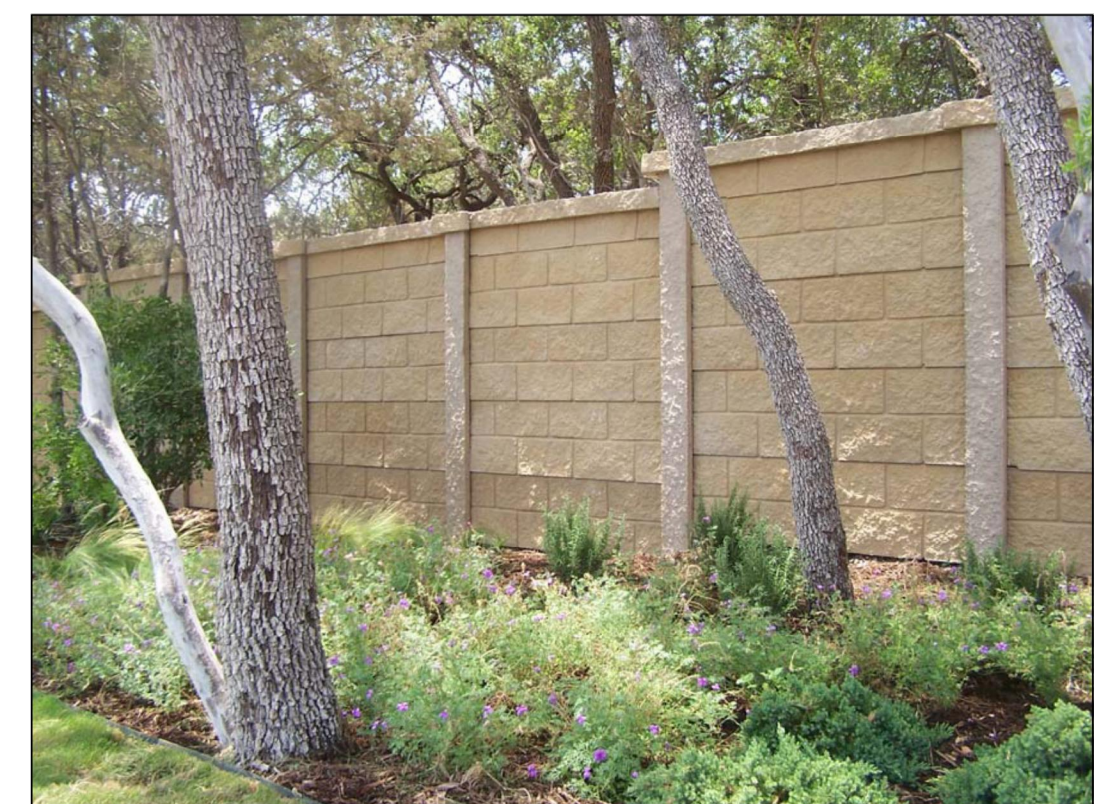
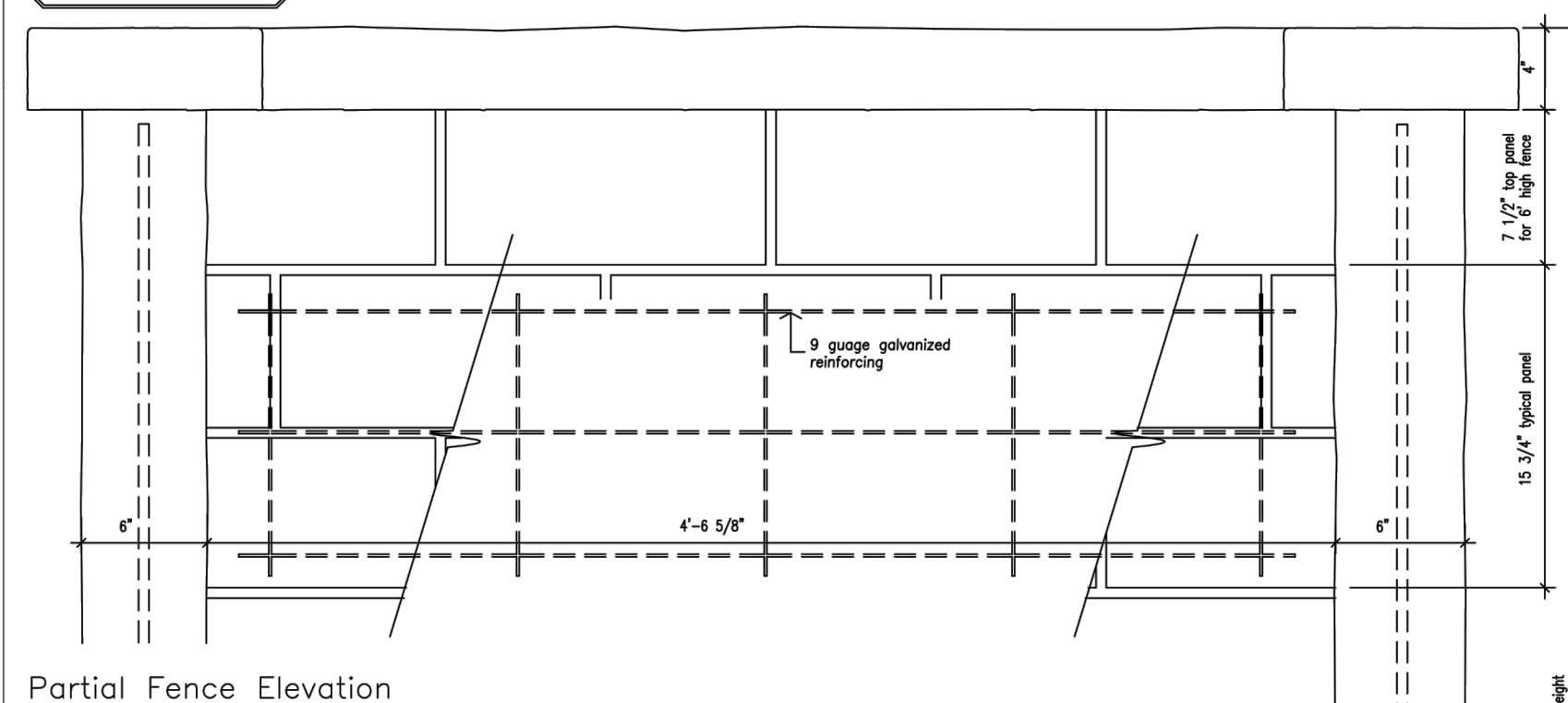
- MANUFACTURER NOTES:
- CUSTOM SIZES AVAILABLE UPON REQUEST. CONTACT FORTRESS FENCE PRODUCTS FOR INFORMATION.
 - INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 - NOTE TO ARCHITECT, SCALE DRAWING IN AUTOCAD MODEL SPACE.
 - THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
 - ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MAY BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
 - CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5170-029

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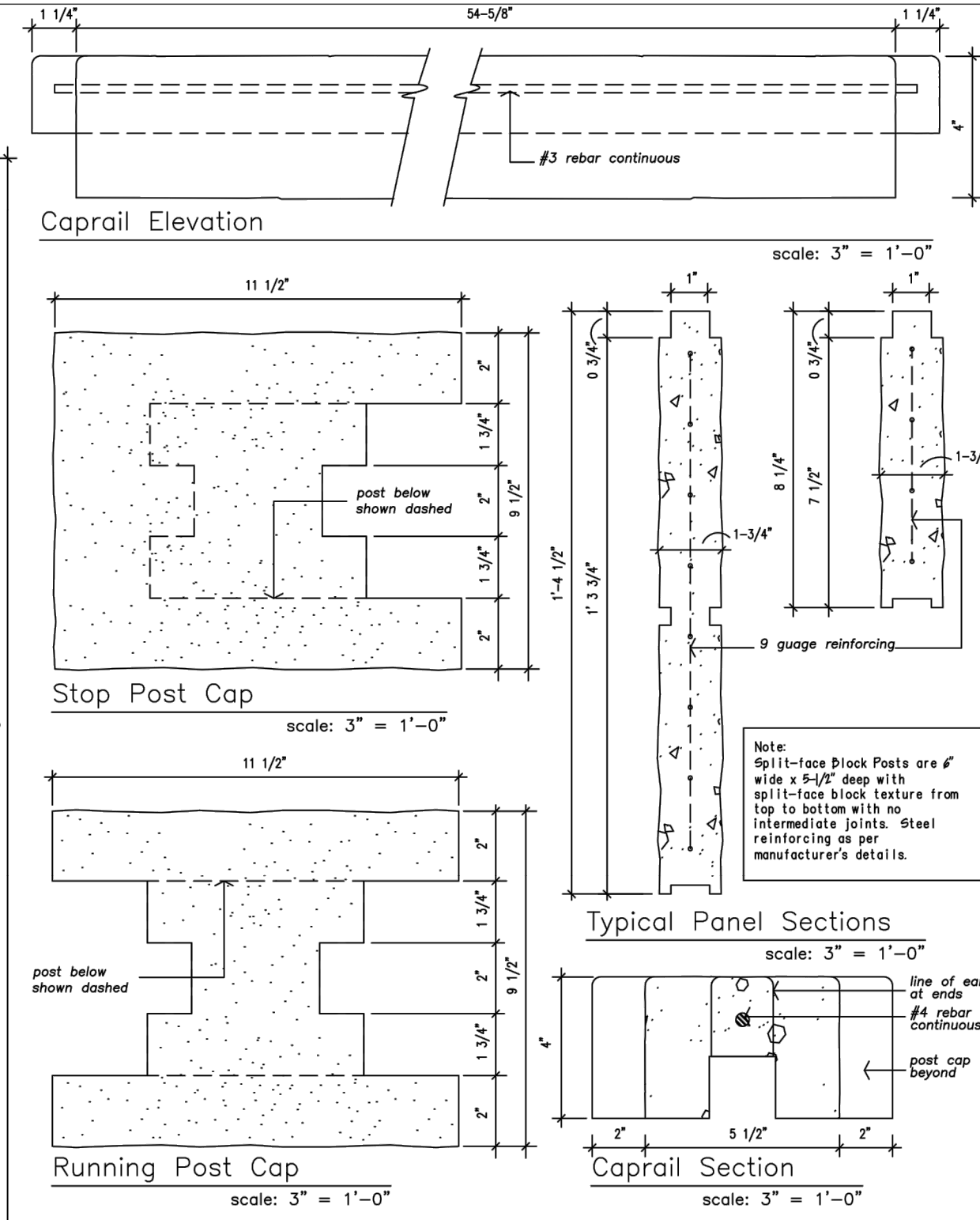


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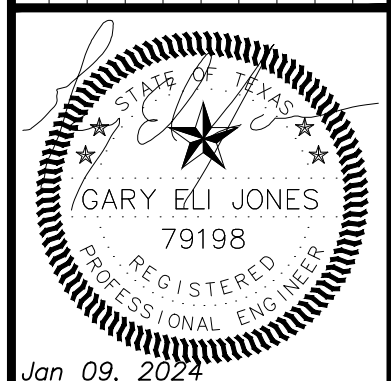


- Post Reinforcing:
- 6" high fence: 2 each #4 rebar
 - 8" high fence: 4 each #4 rebar

12" - 18" diameter footing 3000 p.s.i. concrete, depth varies according to local soil conditions

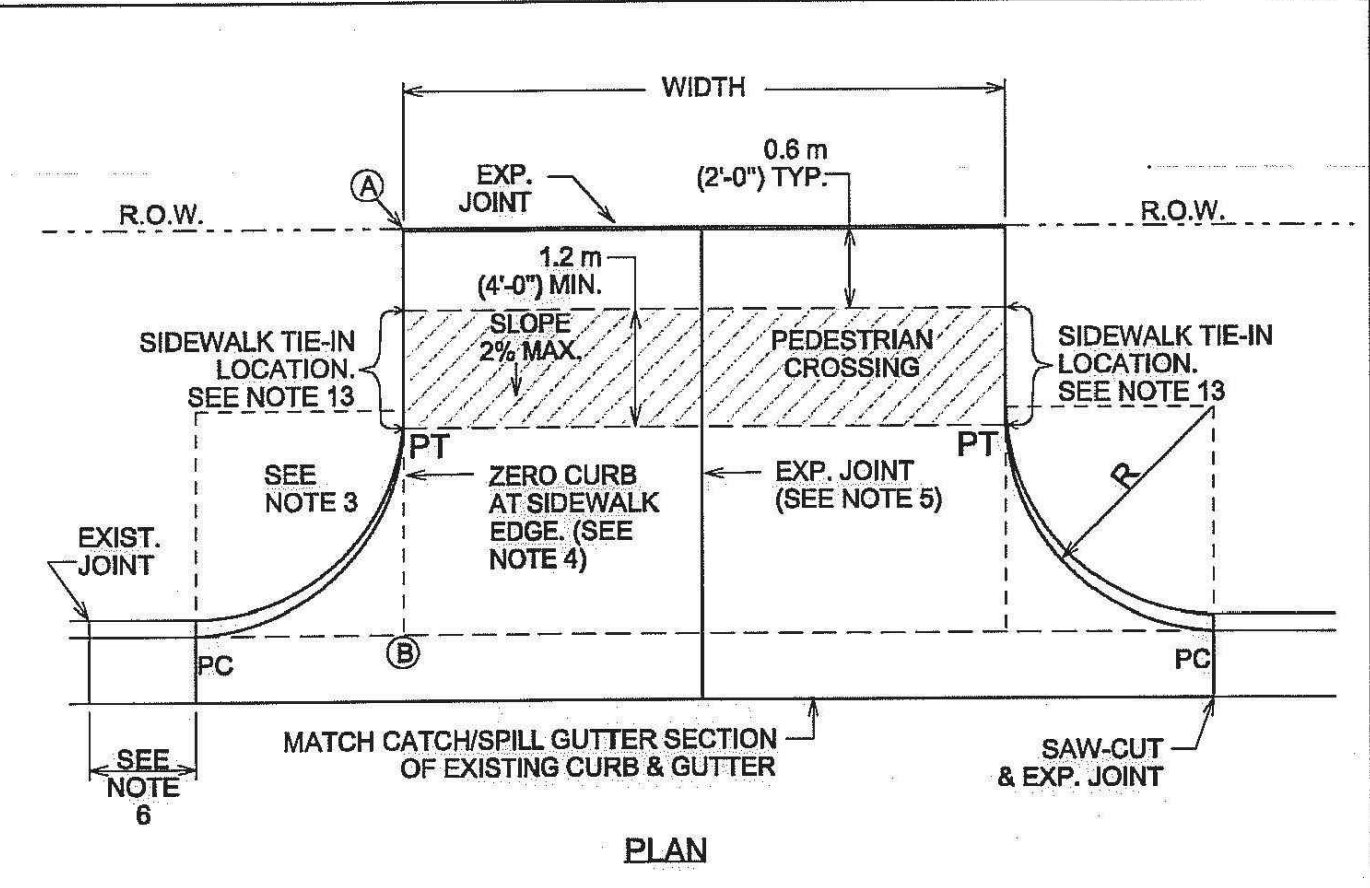


- notes:
- The column height can be from 0 to a maximum of 10'-0". Additional heights are available upon special order.
 - All fence concrete shall be 3000 p.s.i.
 - All reinforcement shall be A.S.T.M. 615 grade 60. Special reinforcement is available upon special order.
 - Concrete Footing: 12" - 18" diameter, 3000 p.s.i. concrete, depth varies according to local soil conditions.
 - Split-face block look panels are available in a variety of colors.
 - Texture: All exposed sides have split-face block-like texture.
 - Gates: Shall have additional steel supports adjacent to concrete columns.
 - All steel reinforcement is provided with steel spacers so as to allow for maximum concrete coverage.
 - 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, Limited

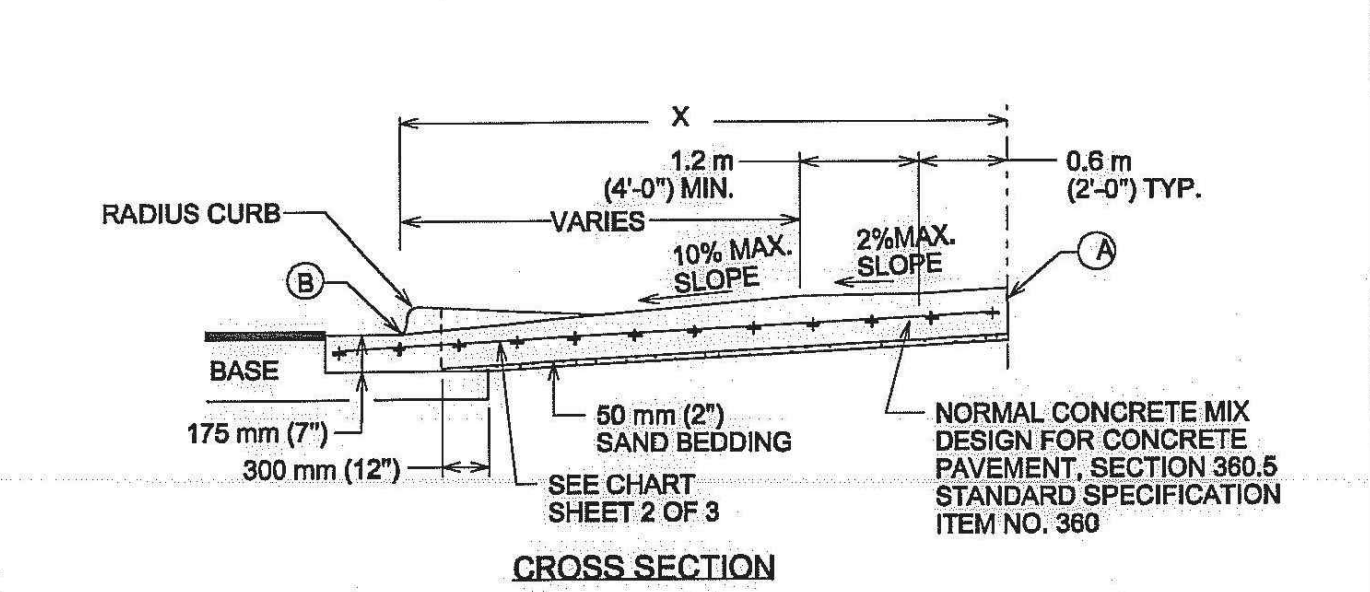


GARY ELI JONES
79198
REGISTERED PROFESSIONAL ENGINEER
Jan 09, 2024

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512-818-0819 (F) 512-532-0560



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 (2") RISE/FOOT OVER DISTANCE "X" IN METERS (FEET).

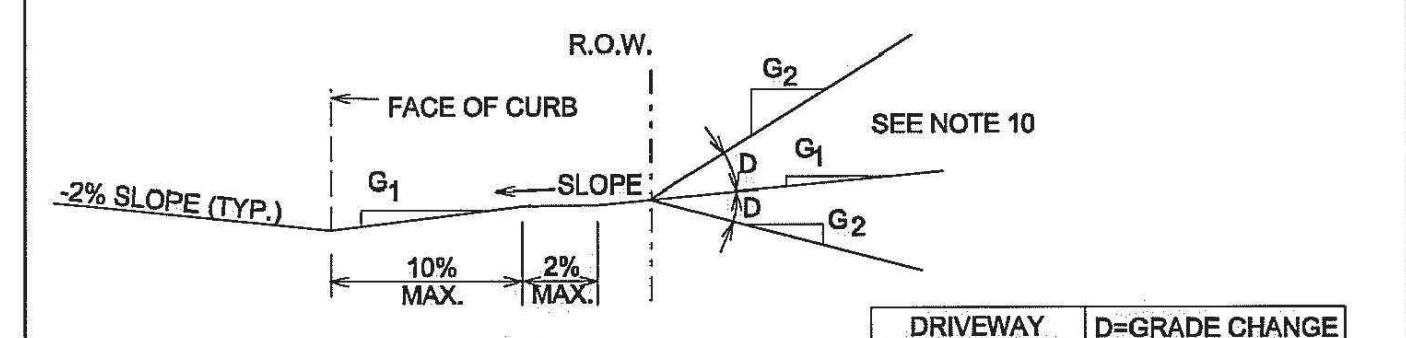


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS TYPE II DRIVEWAY STANDARD NO. 433S-2 1 OF 2

2/24/16 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

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

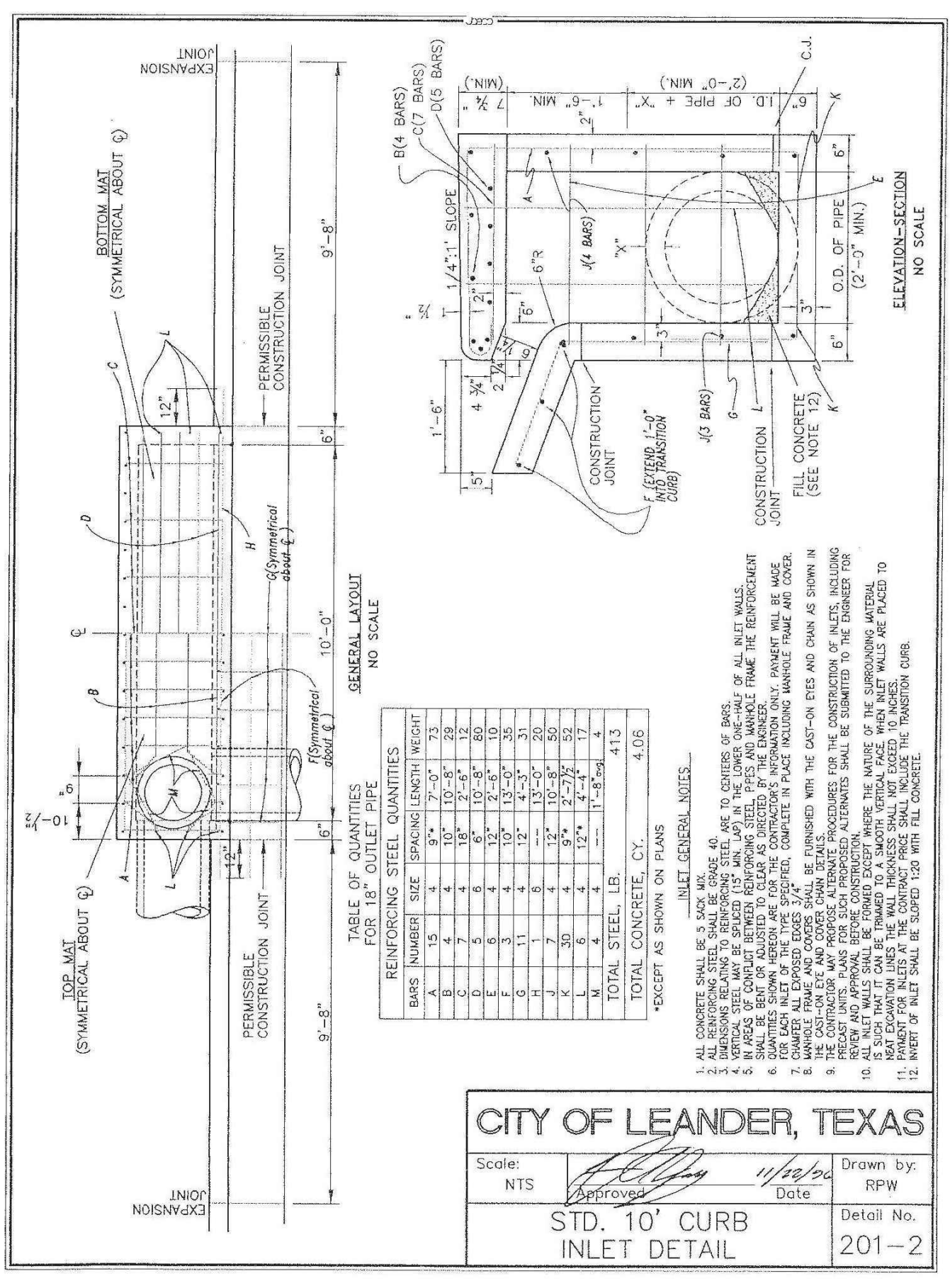


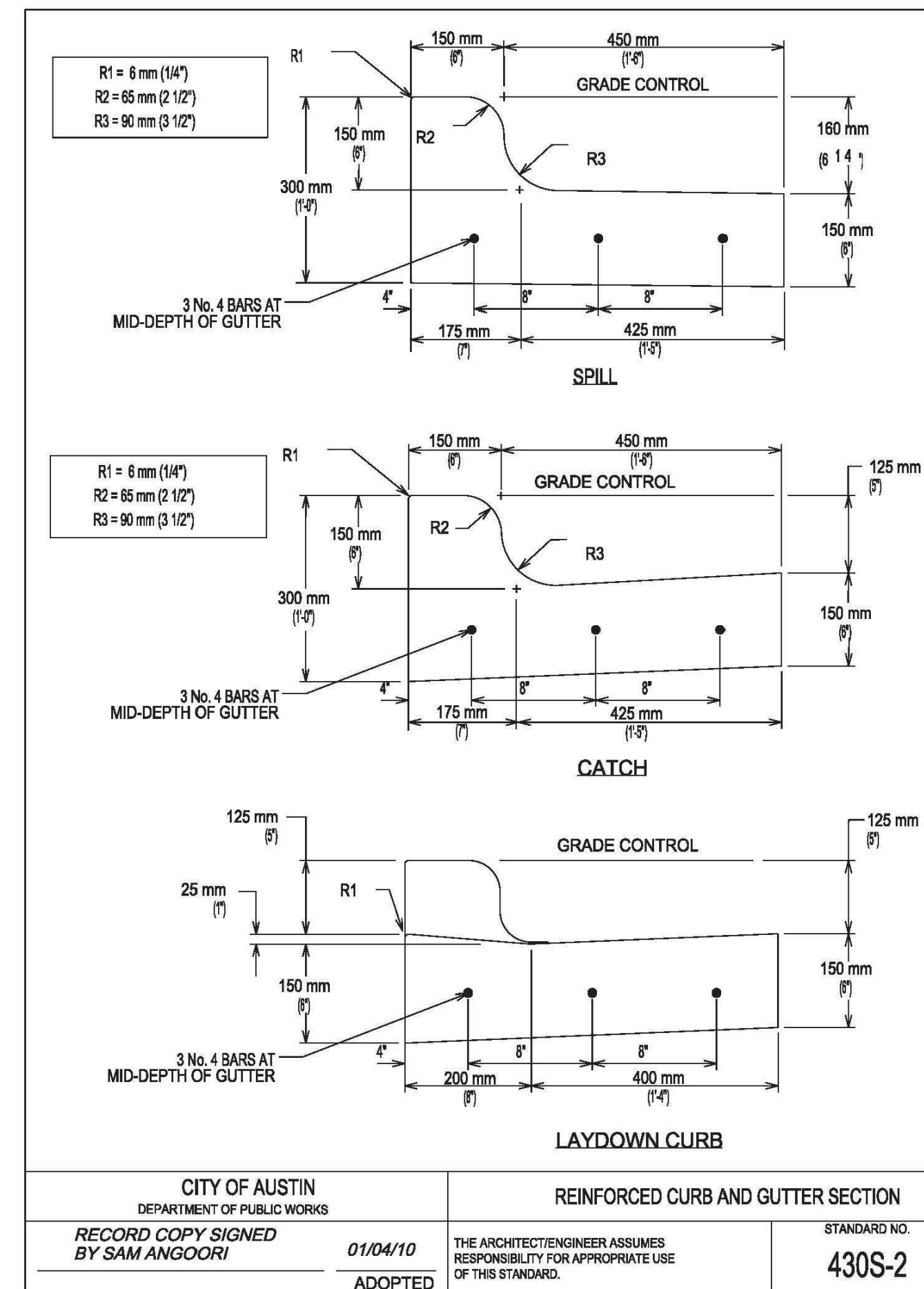
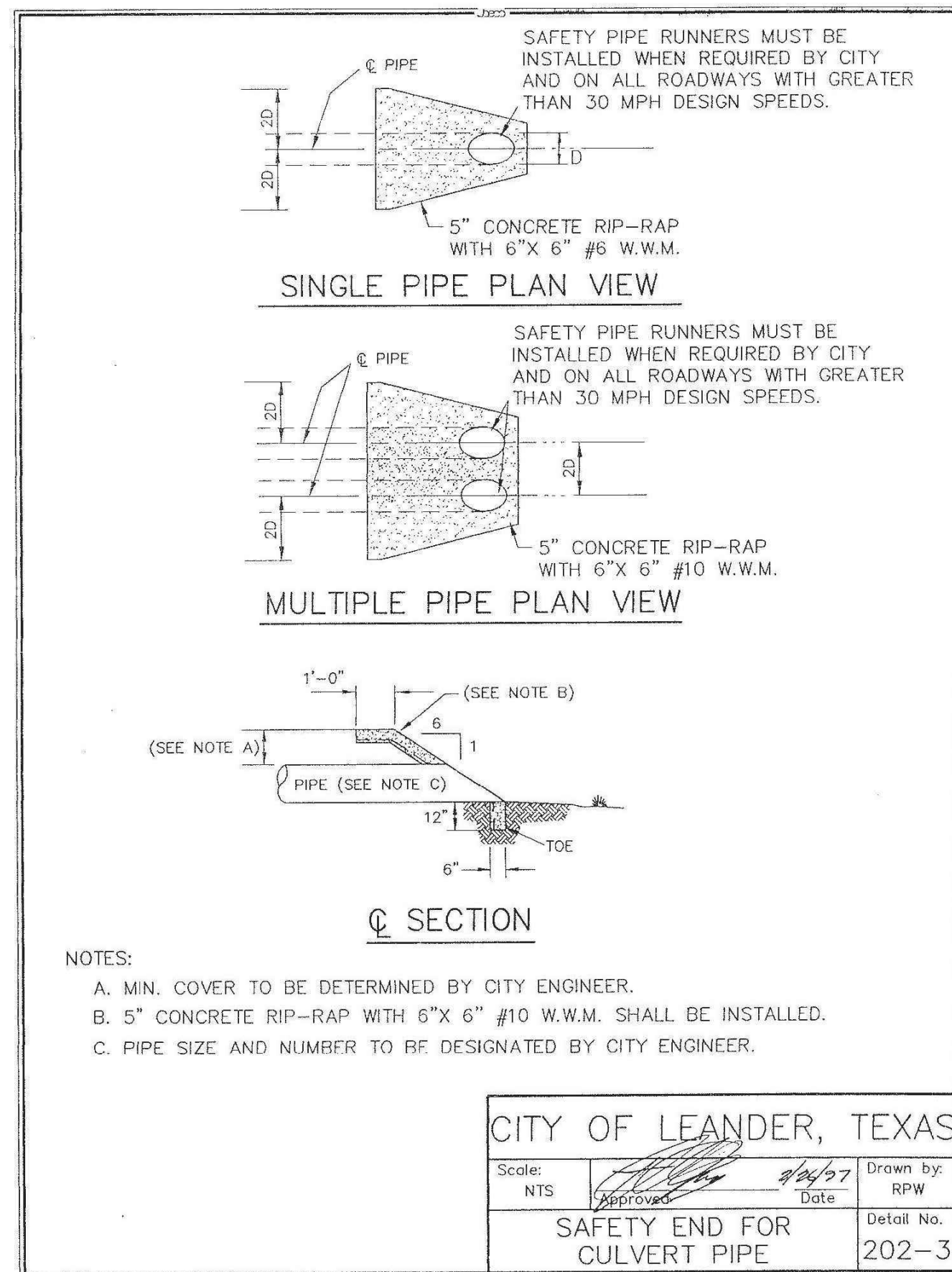
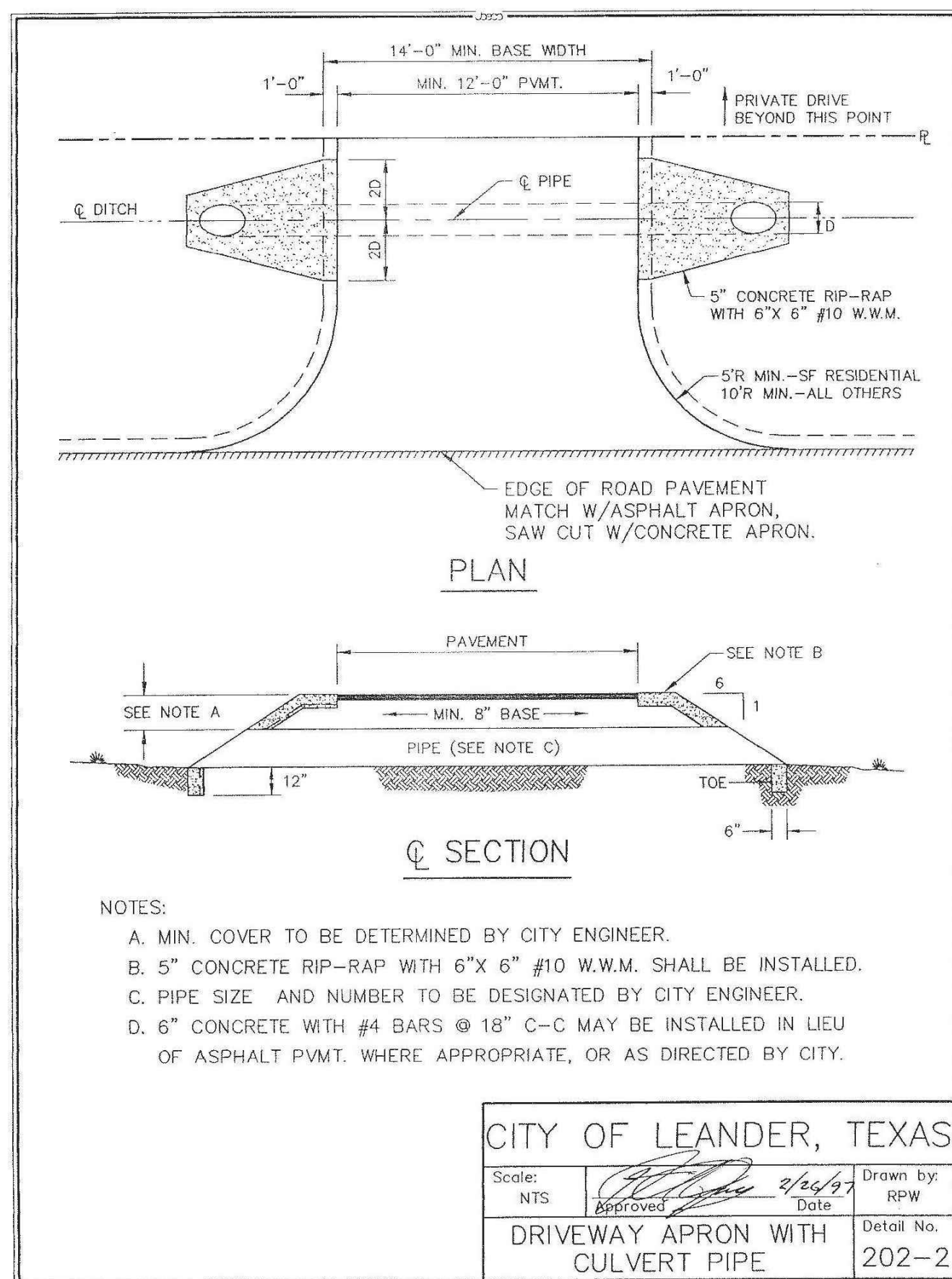
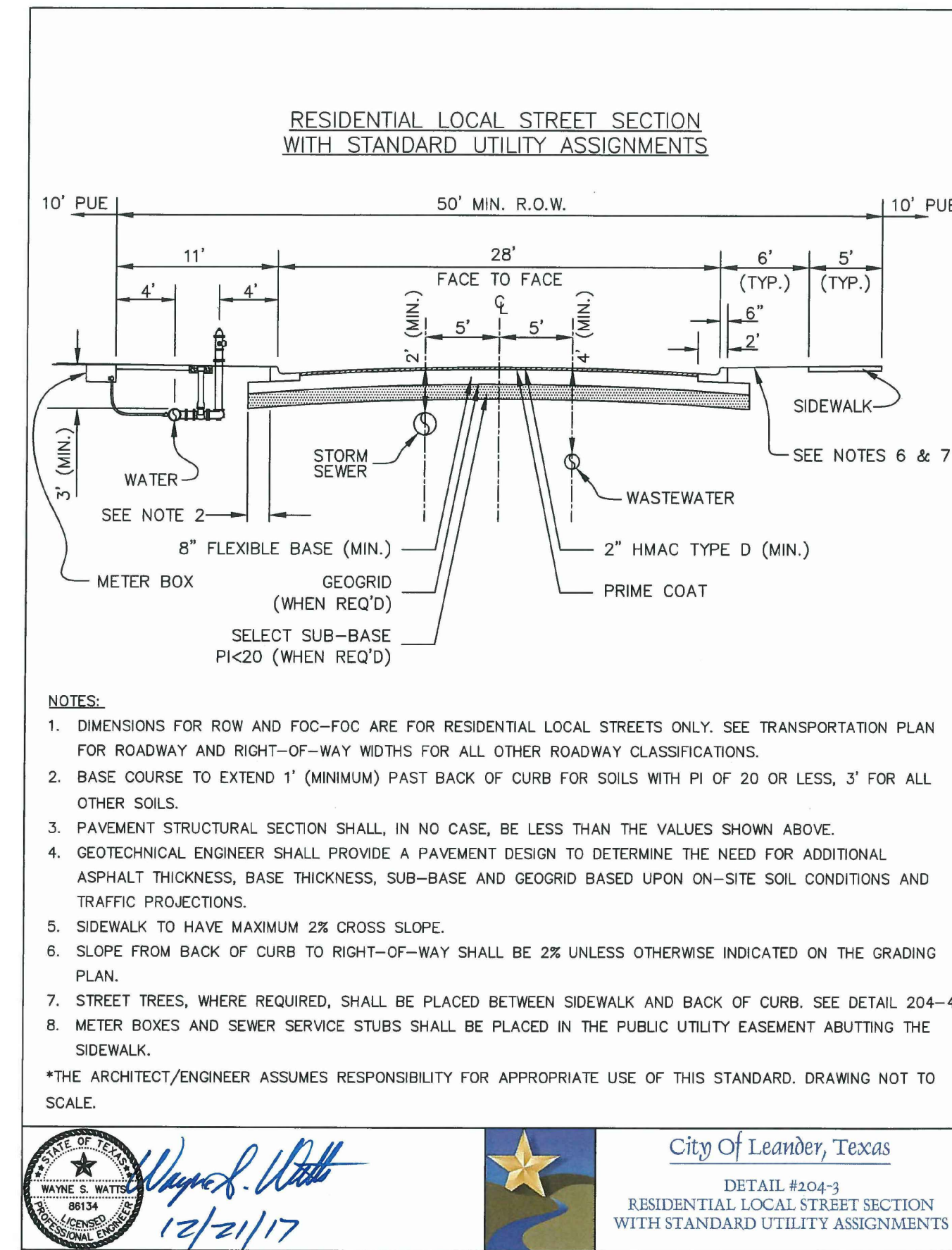
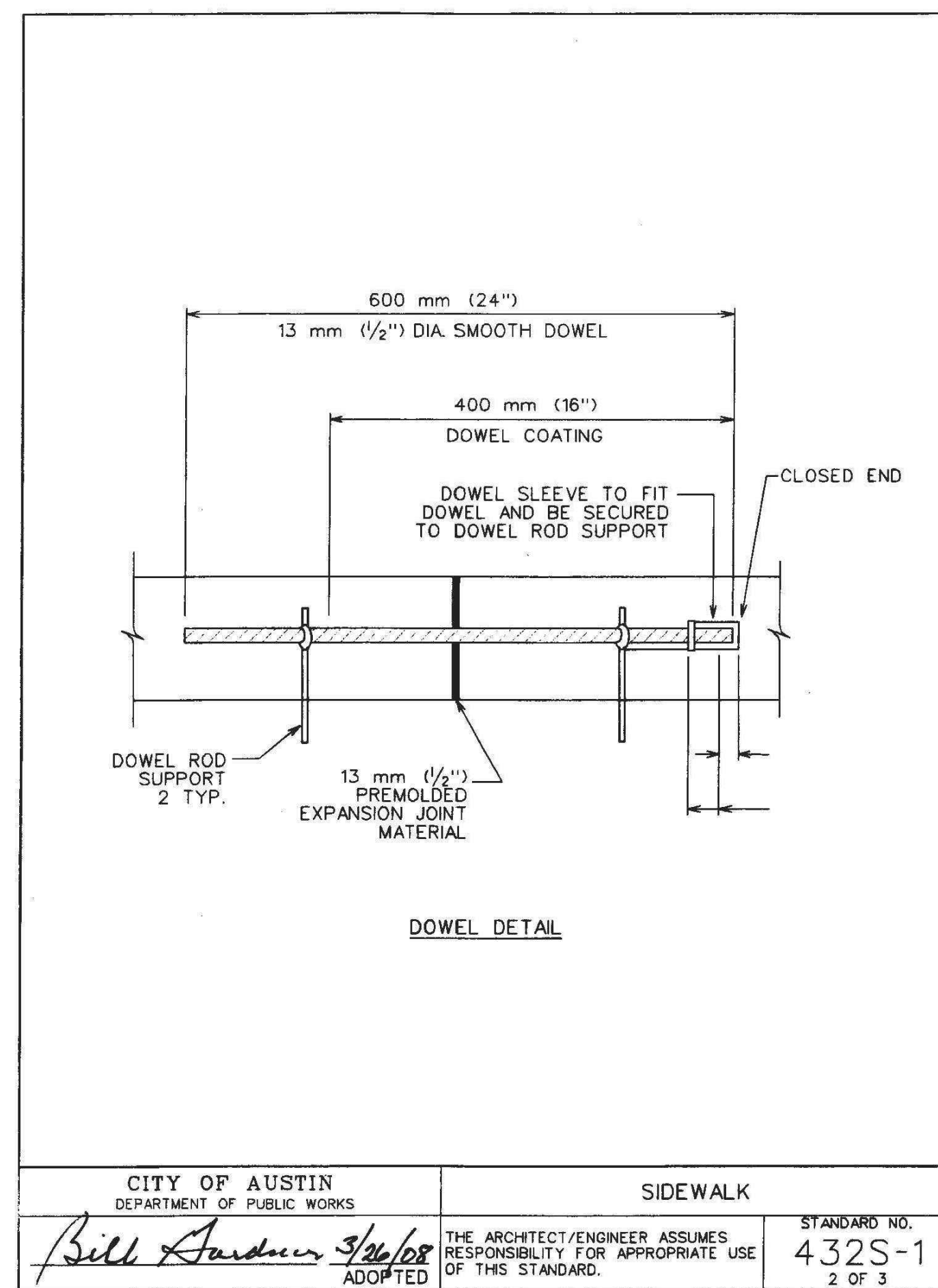
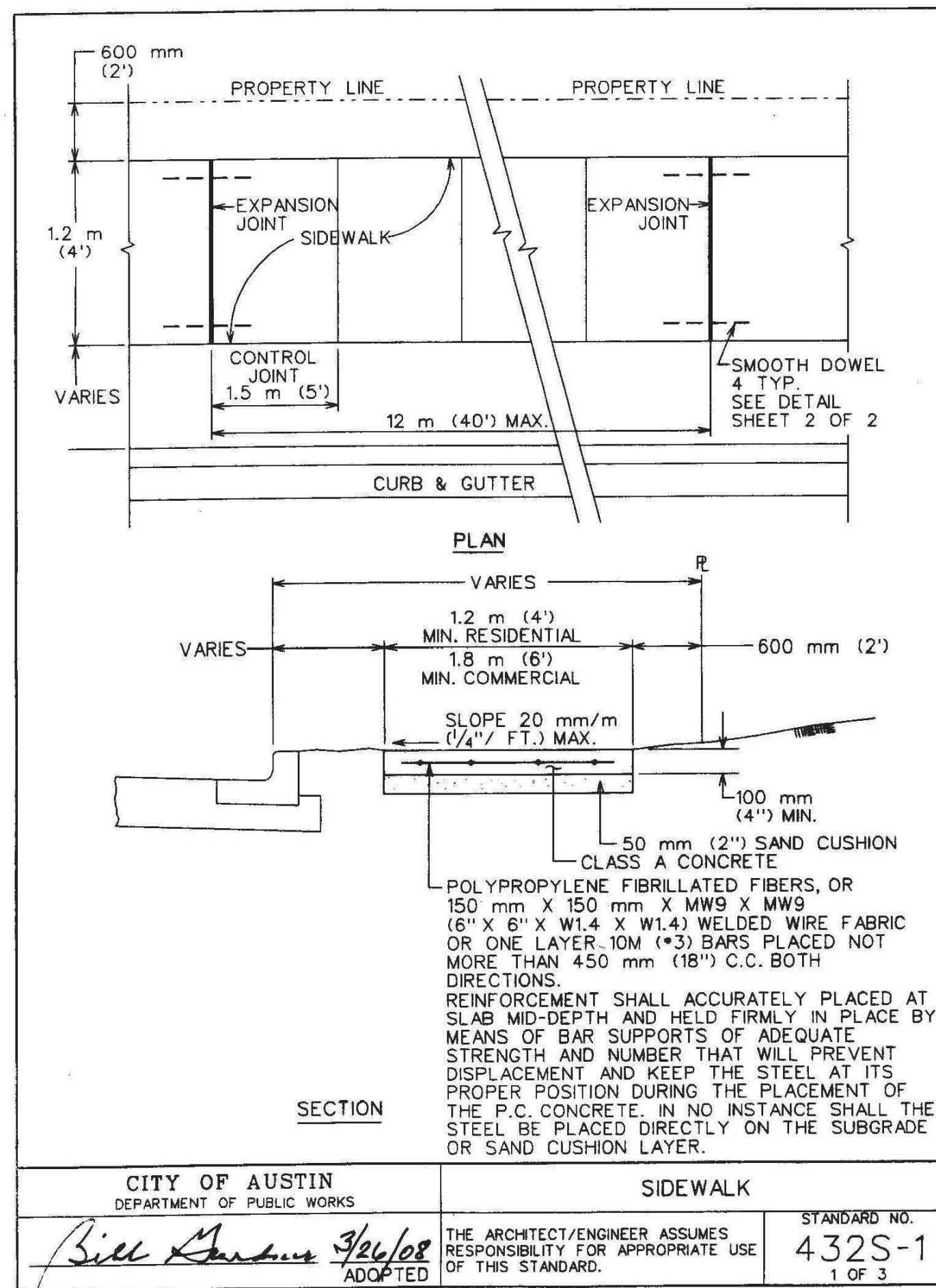
- NOTES:
- ALL TYPE II DRIVEWAYS SHALL HAVE RADIUS ENDS.
 - DRIVEWAY WIDTHS AND RADIUS DIMENSIONS, ONE-WAY TRAVEL REQUIREMENTS, AND GEOMETRIC LAYOUT ARE HIGHLY VARIABLE. SUBJECT TO SITE SPECIFIC CONDITIONS AND REQUIREMENTS. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 "DRIVEWAYS".
 - THE DRIVEWAY EDGE SHALL BE SMOOTHLY TRANSITIONED INTO THE SIDEWALK TIE-IN LOCATION BEGINNING AT THE RADIUS PC LINE.
 - "ZERO" CURB AT PT OR SIDEWALK EDGE, WHICHEVER IS ENCOUNTERED FIRST.
 - PLACE AN EXPANSION JOINT DOWN THE CENTER OF DRIVEWAY ALL DRIVEWAYS.
 - IF DIMENSION IS LESS THAN 1.5 METERS (5 FEET), REMOVE CURB AND GUTTER TO EXISTING JOINT AND FOUR MONOLITHICALLY WITH DRIVEWAY.
 - IF THE BASE IS OVER-EXCAVATED WHERE THE CURB AND GUTTER WERE REMOVED, BACKFILL WITH CONCRETE MONOLITHICALLY WITH THE DRIVEWAY.
 - TYPE II DRIVEWAYS ARE TO BE LOCATED NO CLOSER TO THE CORNER OF INTERSECTING RIGHT OF WAY THAN 80% OF PARCEL FRONTAGE AT 30 METERS (100 FEET), WHICHEVER IS LESS.
 - DRIVEWAY SHALL NOT BE CONSTRUCTED WITHIN THE CURB RETURN OF A STREET INTERSECTION.
 - 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 IS GREATER THAN 15%.
 - 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 6.
 - SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 FOR OTHER DRIVEWAY REQUIREMENTS.
 - THE SIDEWALK, REGARDLESS OF ITS LOCATION WITH RESPECT TO THE CURB OR PROPERTY LINE, SHALL BE CONNECTED TO THE DRIVEWAY AT THESE LOCATIONS.
 - 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 STANDARD NO. 433S-2 2 OF 2

2/24/16 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.





GARY ELI JONES
79198
REGISTERED PROFESSIONAL ENGINEER

Jan 09, 2024

ELI ENGINEERING, PLLC.
700 THERESA COVE, CEDAR PARK, TX 78613
512-818-0818 (F) 512-532-0560

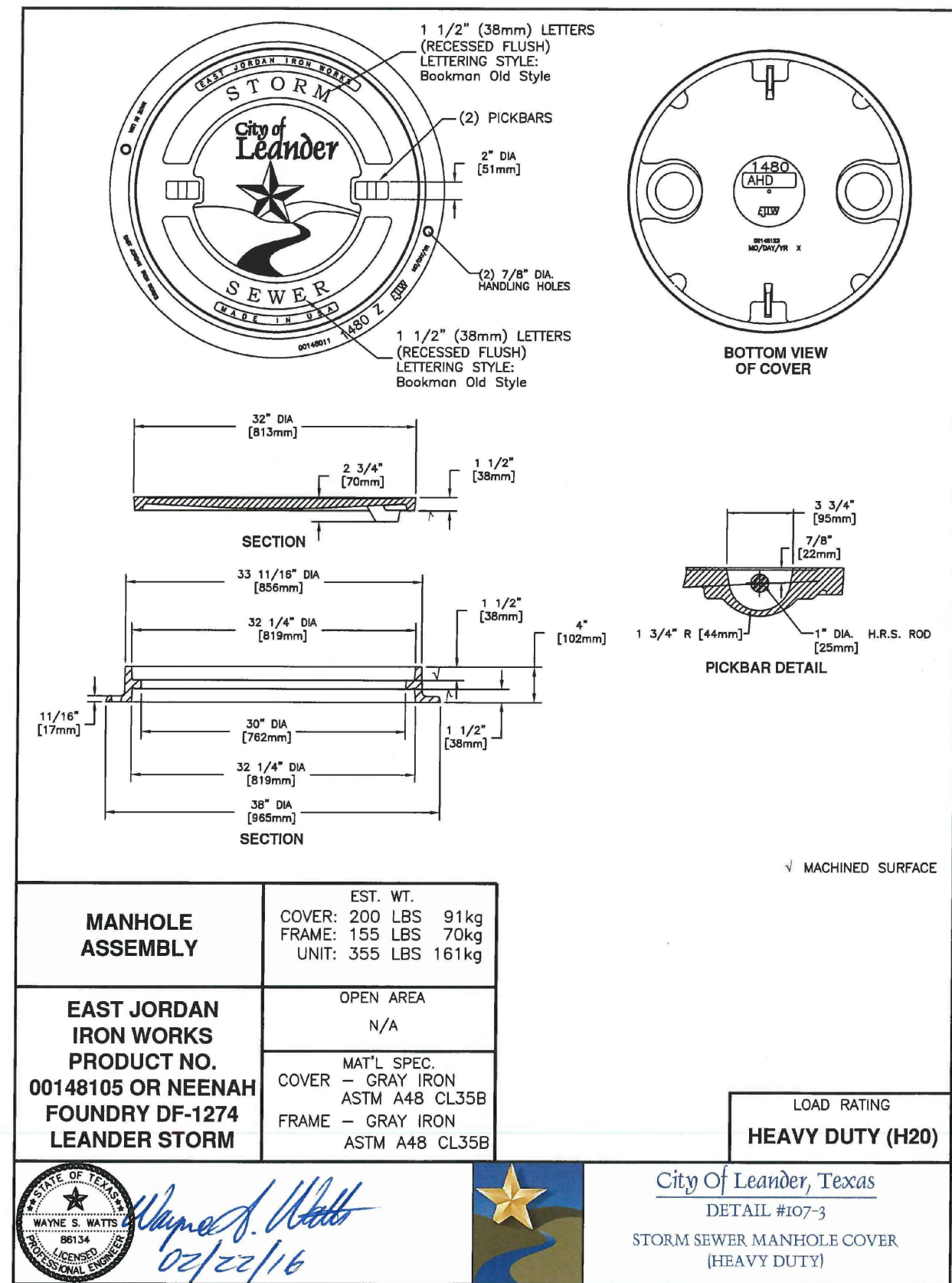
LEANDER, TEXAS 78641 (CITY LIMITS)

LONE STAR LANDING PHASE ONE

SUBDIVISION IMPROVEMENTS

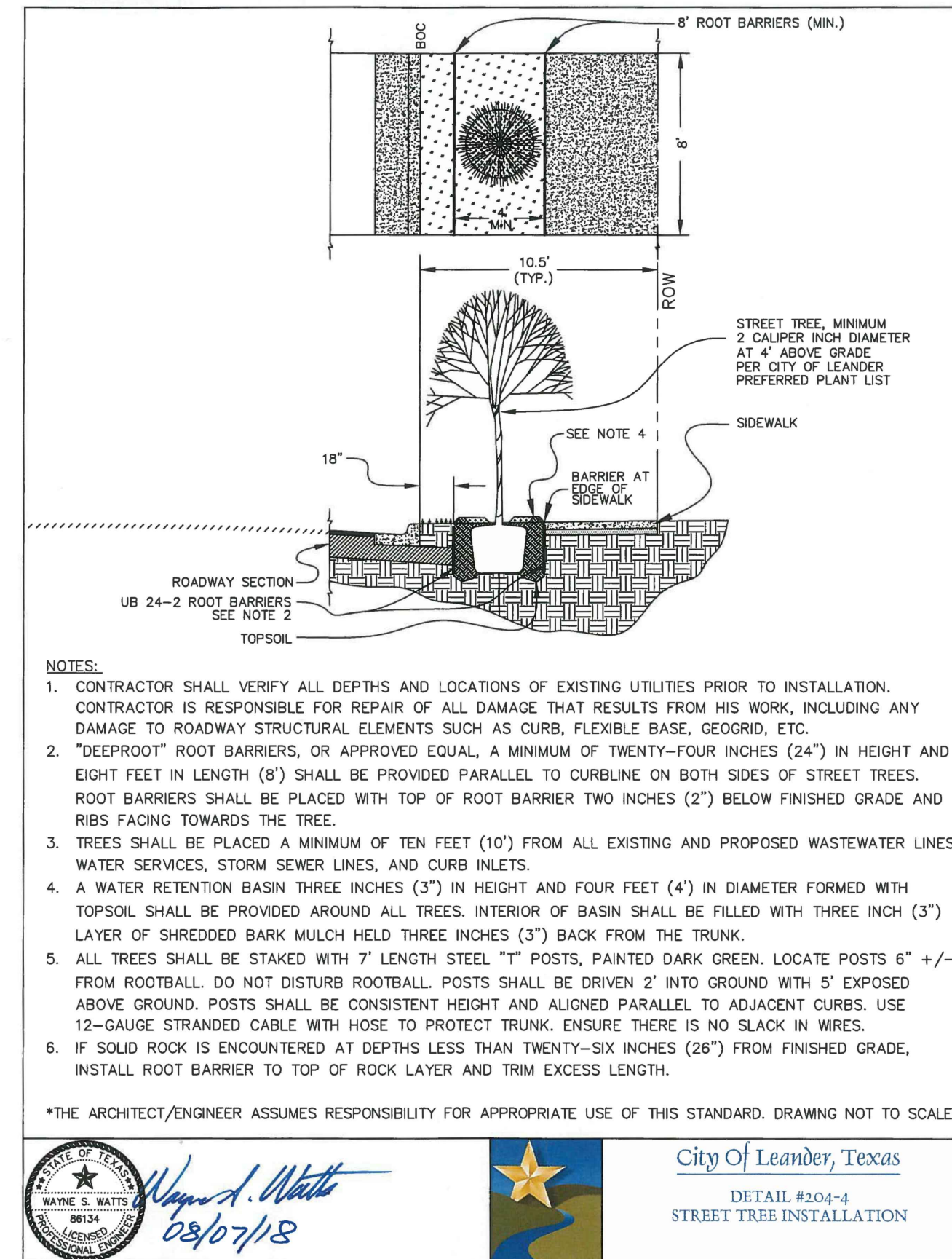
CONSTRUCTION DETAILS (4 OF 10)

DRAWING SCALE:	HORIZ. =	VERT. =
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	
SHEET		
46		
OF		
52		



MANHOLE ASSEMBLY	EST. WT. COVER: 200 LBS 91kg FRAME: 155 LBS 70kg UNIT: 355 LBS 161kg	LOAD RATING HEAVY DUTY (H20)
EAST JORDAN IRON WORKS PRODUCT NO. 00148105 OR NEENAH FOUNDRY DF-1274 LEANDER STORM	OPEN AREA N/A	
	MAT'L SPEC. COVER - GRAY IRON ASTM A48 CL35B FRAME - GRAY IRON ASTM A48 CL35B	

City Of Leander, Texas
DETAIL #107-3
STORM SEWER MANHOLE COVER (HEAVY DUTY)

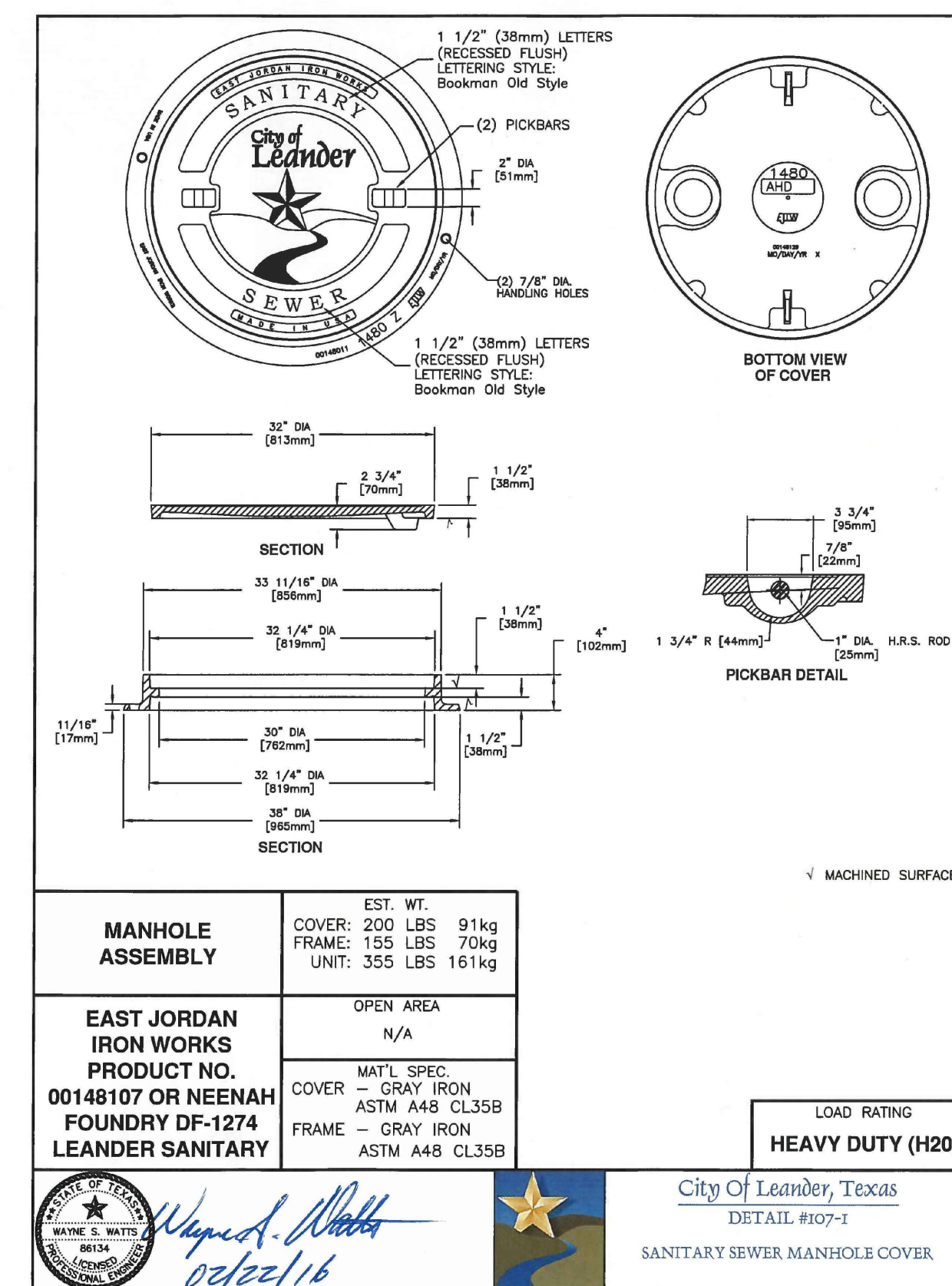


NOTES:

- CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR REPAIR OF ALL DAMAGE THAT RESULTS FROM HIS WORK, INCLUDING ANY DAMAGE TO ROADWAY STRUCTURAL ELEMENTS SUCH AS CURB, FLEXIBLE BASE, GEOGRID, ETC.
- "DEEPROOT" ROOT BARRIERS, OR APPROVED EQUAL, A MINIMUM OF TWENTY-FOUR INCHES (24") IN HEIGHT AND EIGHT FEET IN LENGTH (8') SHALL BE PROVIDED PARALLEL TO CURBLINE ON BOTH SIDES OF STREET TREES. ROOT BARRIERS SHALL BE PLACED WITH TOP OF ROOT BARRIER TWO INCHES (2") BELOW FINISHED GRADE AND RIBS FACING TOWARDS THE TREE.
- TREES SHALL BE PLACED A MINIMUM OF TEN FEET (10') FROM ALL EXISTING AND PROPOSED WASTEWATER LINES, WATER SERVICES, STORM SEWER LINES, AND CURB INLETS.
- A WATER RETENTION BASIN THREE INCHES (3") IN HEIGHT AND FOUR FEET (4') IN DIAMETER FORMED WITH TOPSOIL SHALL BE PROVIDED AROUND ALL TREES. INTERIOR OF BASIN SHALL BE FILLED WITH THREE INCH (3") LAYER OF SHREDDED BARK MULCH HELD THREE INCHES (3") BACK FROM THE TRUNK.
- ALL TREES SHALL BE STAKED WITH 7' LENGTH STEEL "T" POSTS, PAINTED DARK GREEN. LOCATE POSTS 6" +/- FROM ROOTBALL. DO NOT DISTURB ROOTBALL. POSTS SHALL BE DRIVEN 2' INTO GROUND WITH 5' EXPOSED ABOVE GROUND. POSTS SHALL BE CONSISTENT HEIGHT AND ALIGNED PARALLEL TO ADJACENT CURBS. USE 12-GAUGE STRANDED CABLE WITH HOSE TO PROTECT TRUNK. ENSURE THERE IS NO SLACK IN WIRES.
- IF SOILD ROCK IS ENCOUNTERED AT DEPTHS LESS THAN TWENTY-SIX INCHES (26") FROM FINISHED GRADE, INSTALL ROOT BARRIER TO TOP OF ROCK LAYER AND TRIM EXCESS LENGTH.

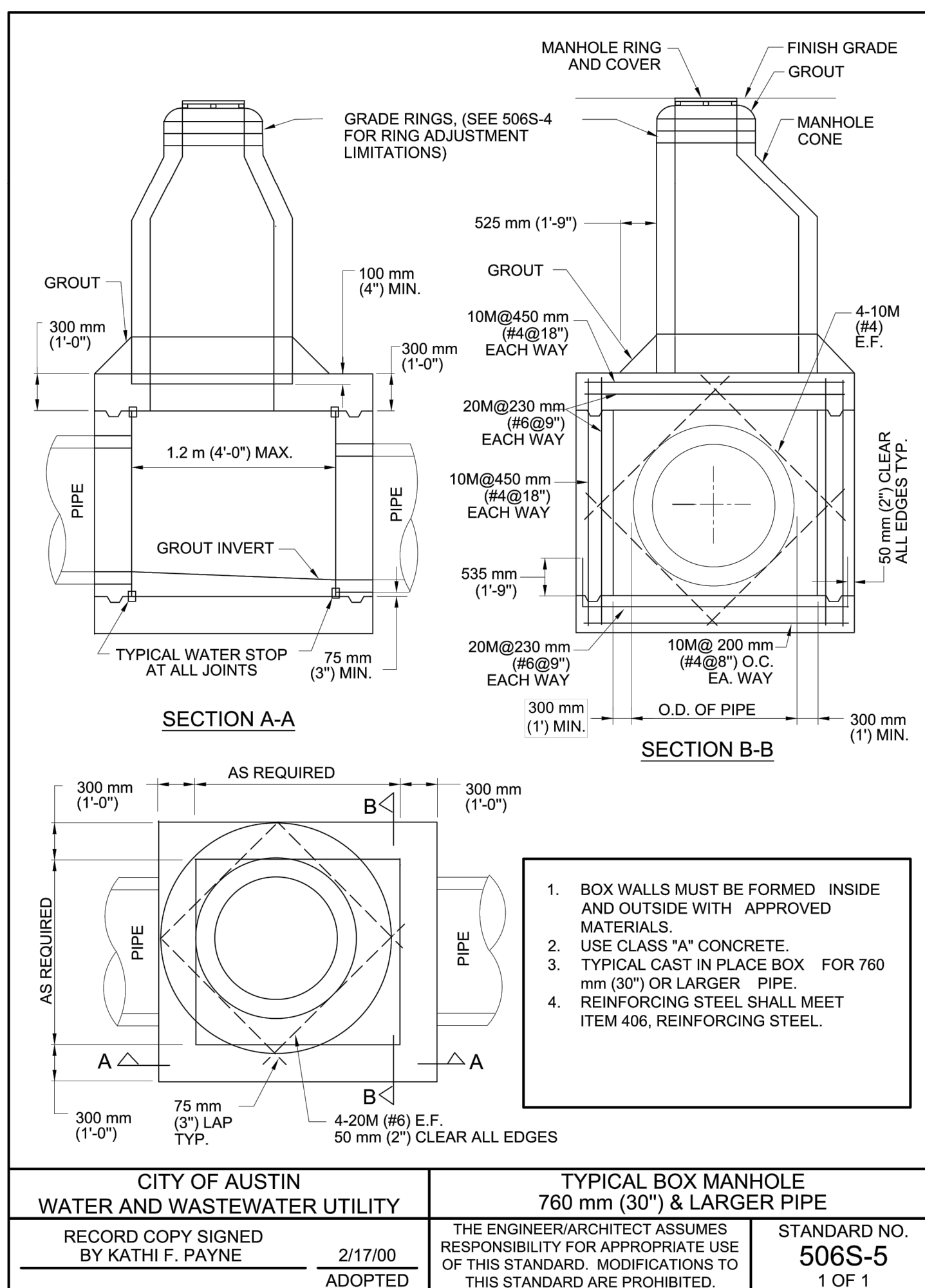
*THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. DRAWING NOT TO SCALE.

City Of Leander, Texas
DETAIL #204-4
STREET TREE INSTALLATION



MANHOLE ASSEMBLY	EST. WT. COVER: 200 LBS 91kg FRAME: 155 LBS 70kg UNIT: 355 LBS 161kg	LOAD RATING HEAVY DUTY (H20)
EAST JORDAN IRON WORKS PRODUCT NO. 00148107 OR NEENAH FOUNDRY DF-1274 LEANDER SANITARY	OPEN AREA N/A	
	MAT'L SPEC. COVER - GRAY IRON ASTM A48 CL35B FRAME - GRAY IRON ASTM A48 CL35B	

City Of Leander, Texas
DETAIL #107-1
SANITARY SEWER MANHOLE COVER

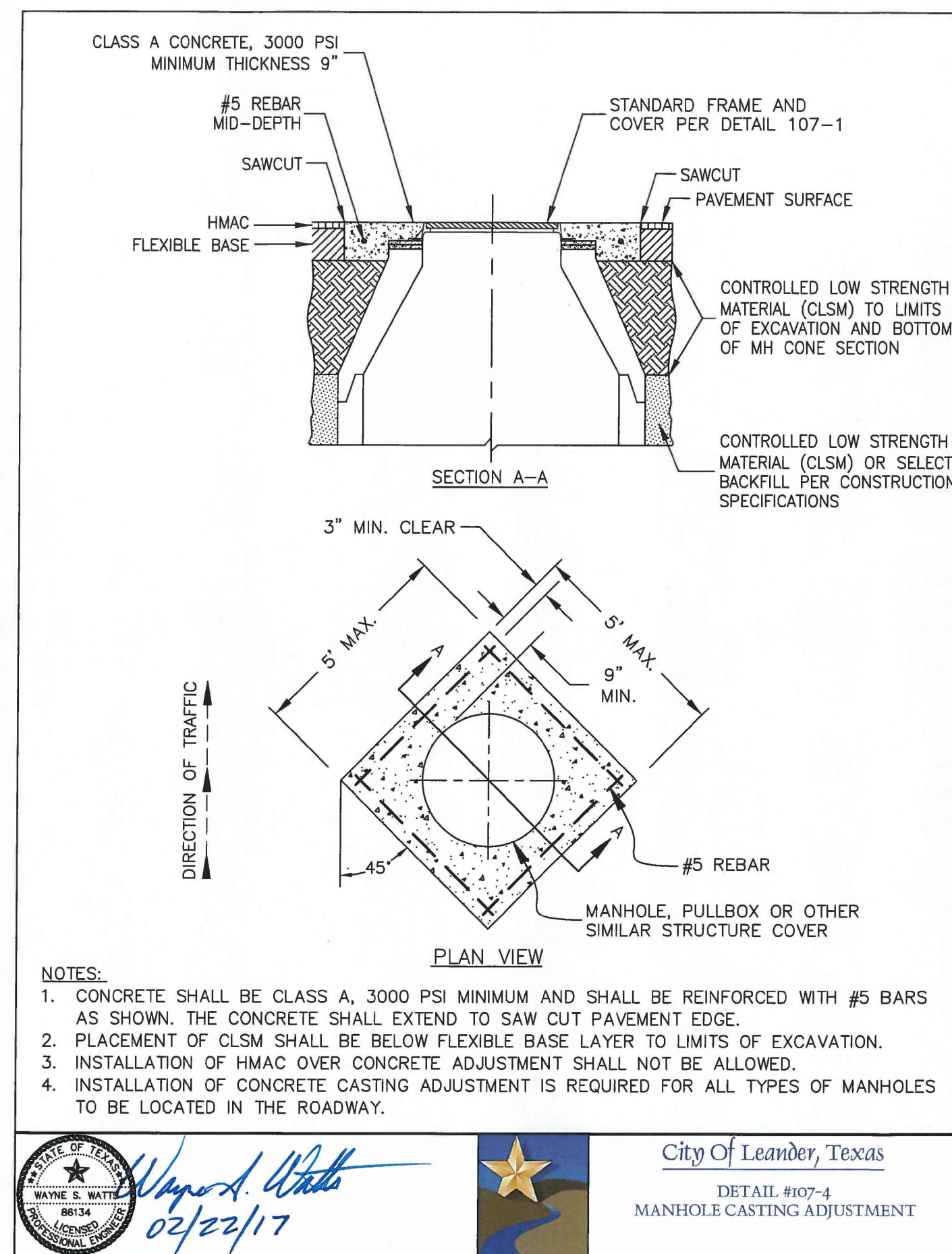


NOTES:

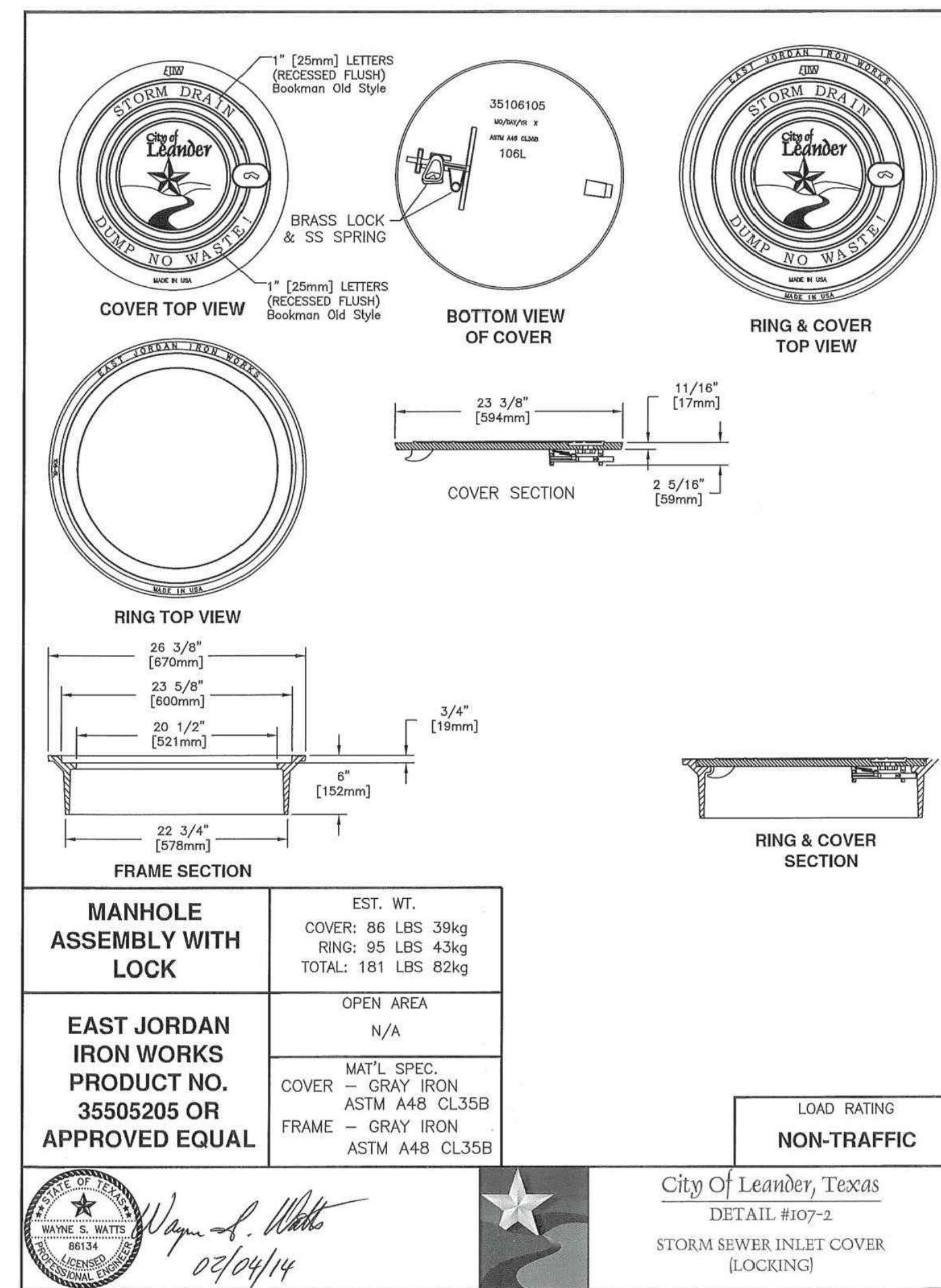
- BOX WALLS MUST BE FORMED INSIDE AND OUTSIDE WITH APPROVED MATERIALS.
- USE CLASS "A" CONCRETE.
- TYPICAL CAST IN PLACE BOX FOR 760 mm (30") OR LARGER PIPE.
- REINFORCING STEEL SHALL MEET ITEM 406, REINFORCING STEEL.

CITY OF AUSTIN WATER AND WASTEWATER UTILITY
RECORD COPY SIGNED BY KATHI F. PAYNE
2/17/00 ADOPTED

STANDARD NO. 506S-5
1 OF 1



City Of Leander, Texas
DETAIL #107-4
MANHOLE CASTING ADJUSTMENT



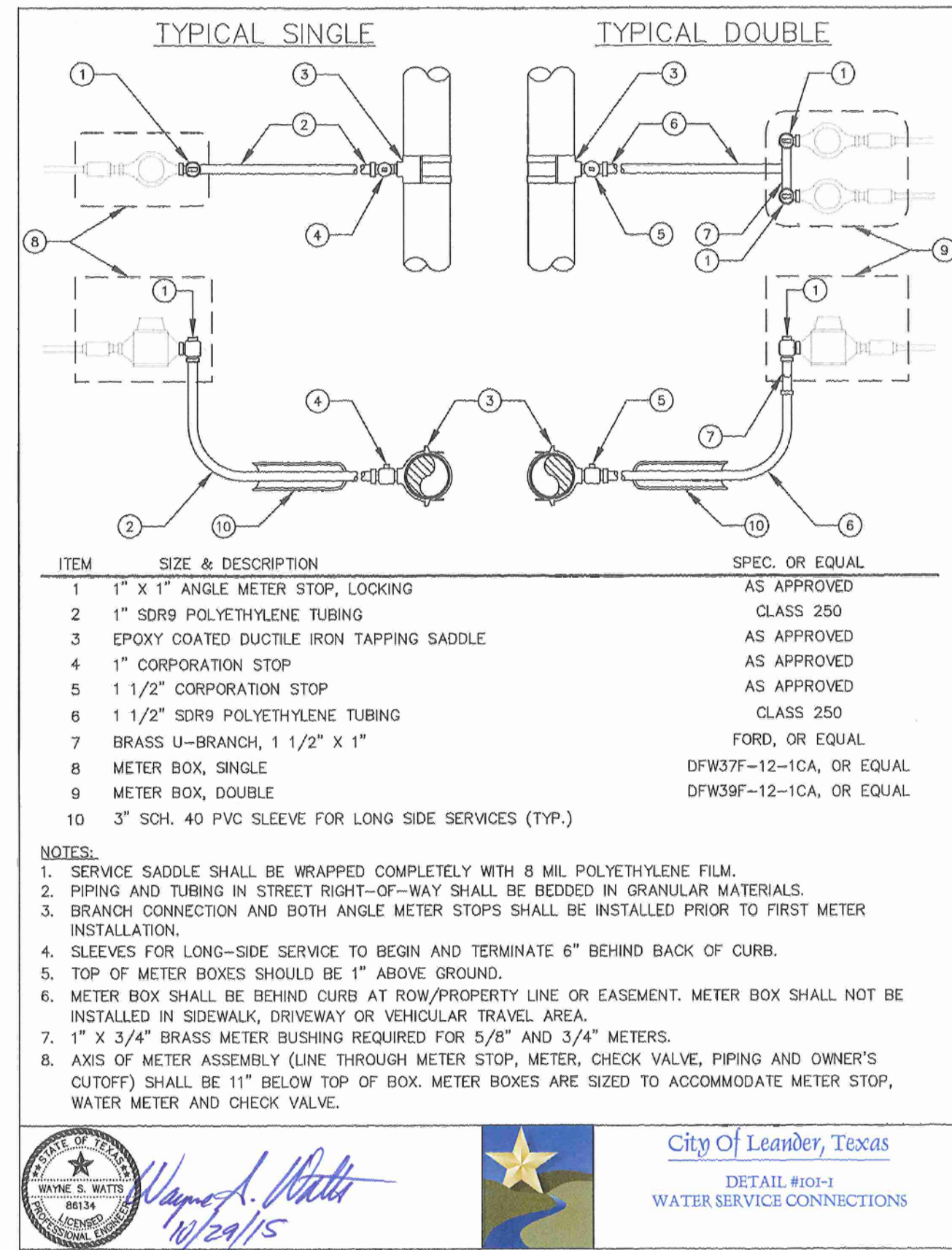
MANHOLE ASSEMBLY WITH LOCK	EST. WT. COVER: 86 LBS 39kg RING: 95 LBS 43kg TOTAL: 181 LBS 82kg	LOAD RATING NON-Traffic
EAST JORDAN IRON WORKS PRODUCT NO. 35505205 OR APPROVED EQUAL	OPEN AREA N/A	
	MAT'L SPEC. COVER - GRAY IRON ASTM A48 CL35B FRAME - GRAY IRON ASTM A48 CL35B	

City Of Leander, Texas
DETAIL #107-2
STORM SEWER INLET COVER (LOCKING)

Professional Engineer
GARY ELI JONES
79198
REGISTERED PROFESSIONAL ENGINEER
Jan 09, 2024
ELI ENGINEERING
ELI ENGINEERING, PLLC.
700 THERESA COVE, CEDAR PARK, TX 78613
512-918-0818 (F) 512-532-0560

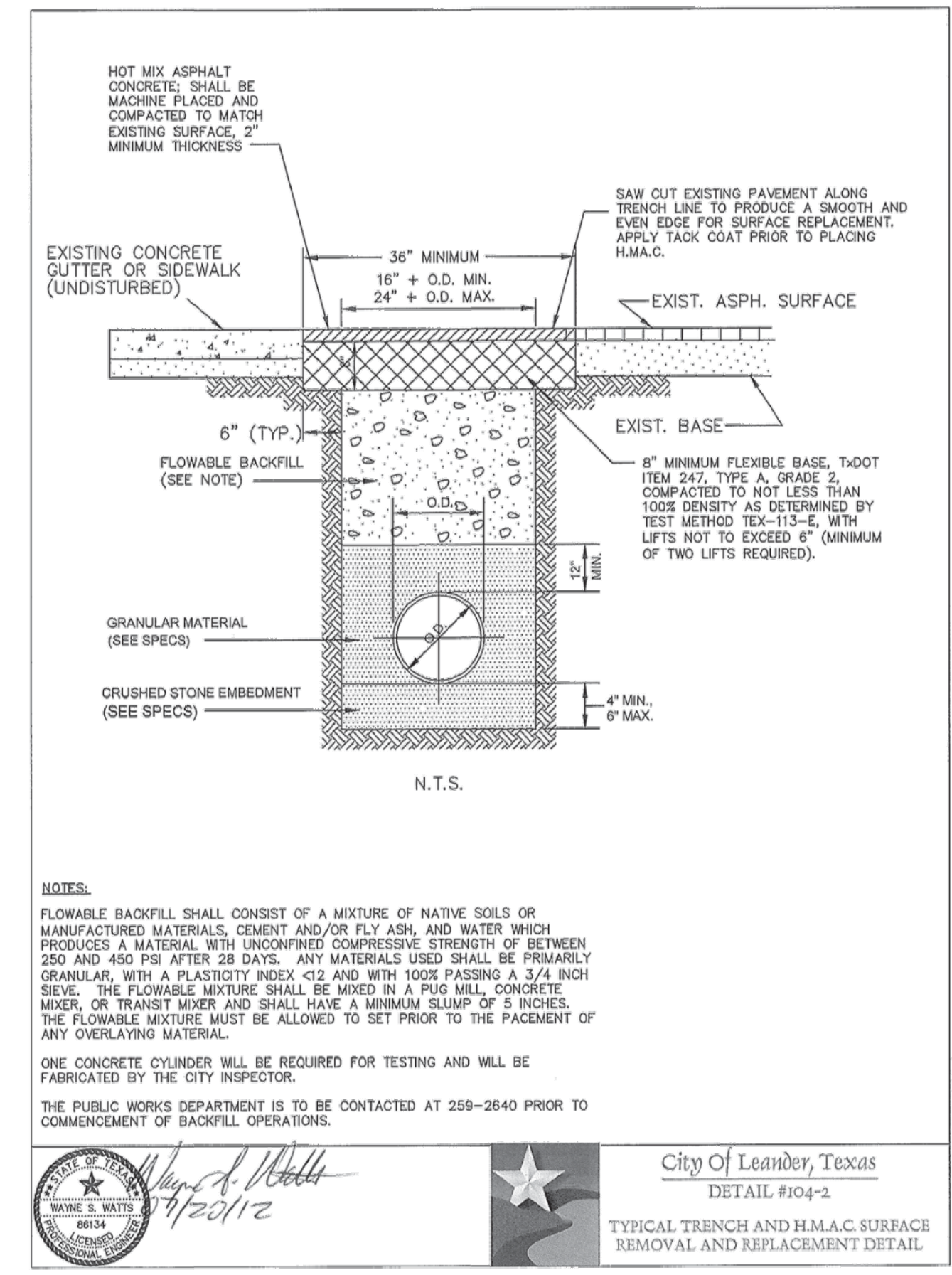
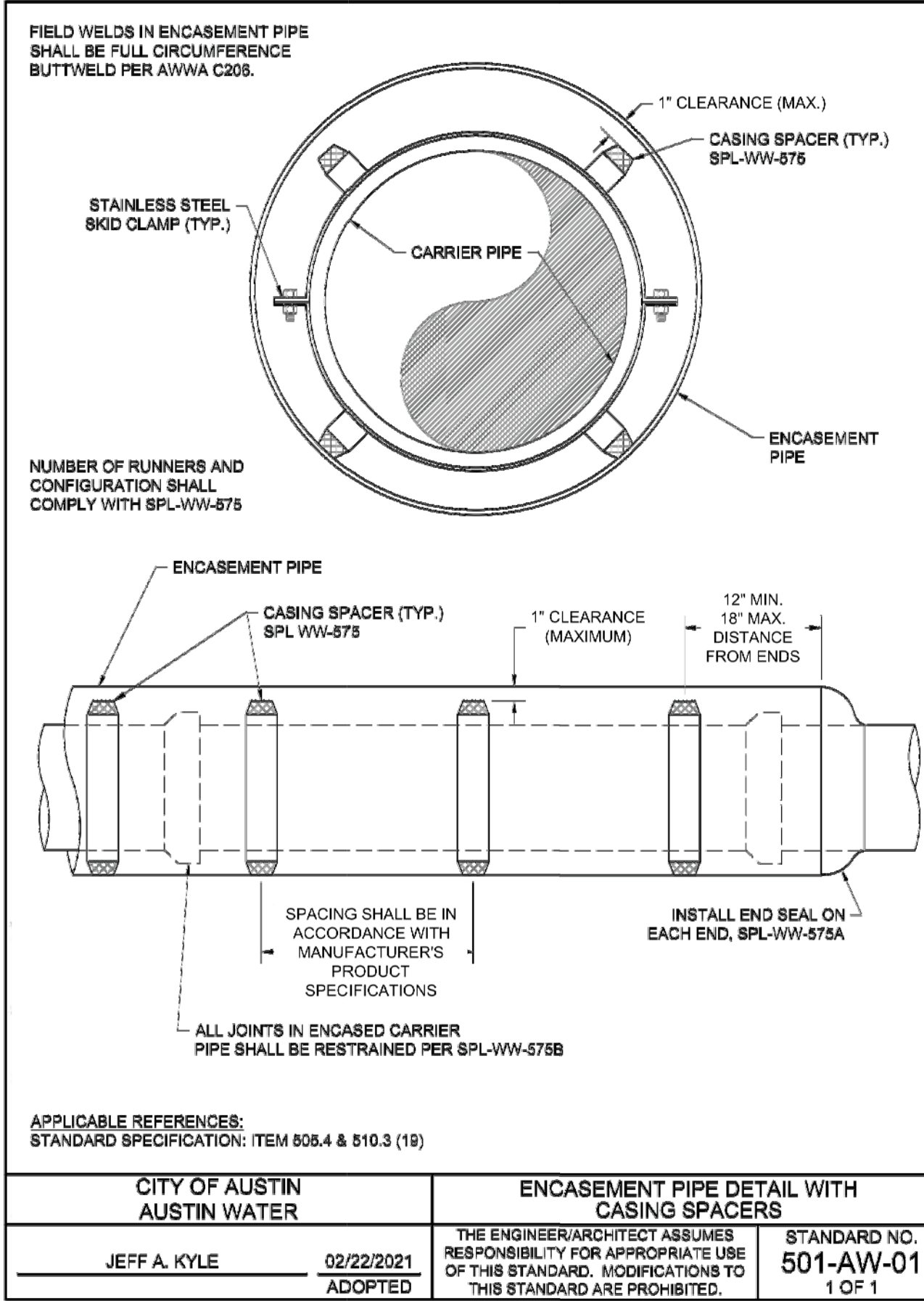
LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
CONSTRUCTION DETAILS (5 OF 10)

DRAWING SCALE:	HORIZ. =	VERT. =
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	
SHEET 47 OF 52		



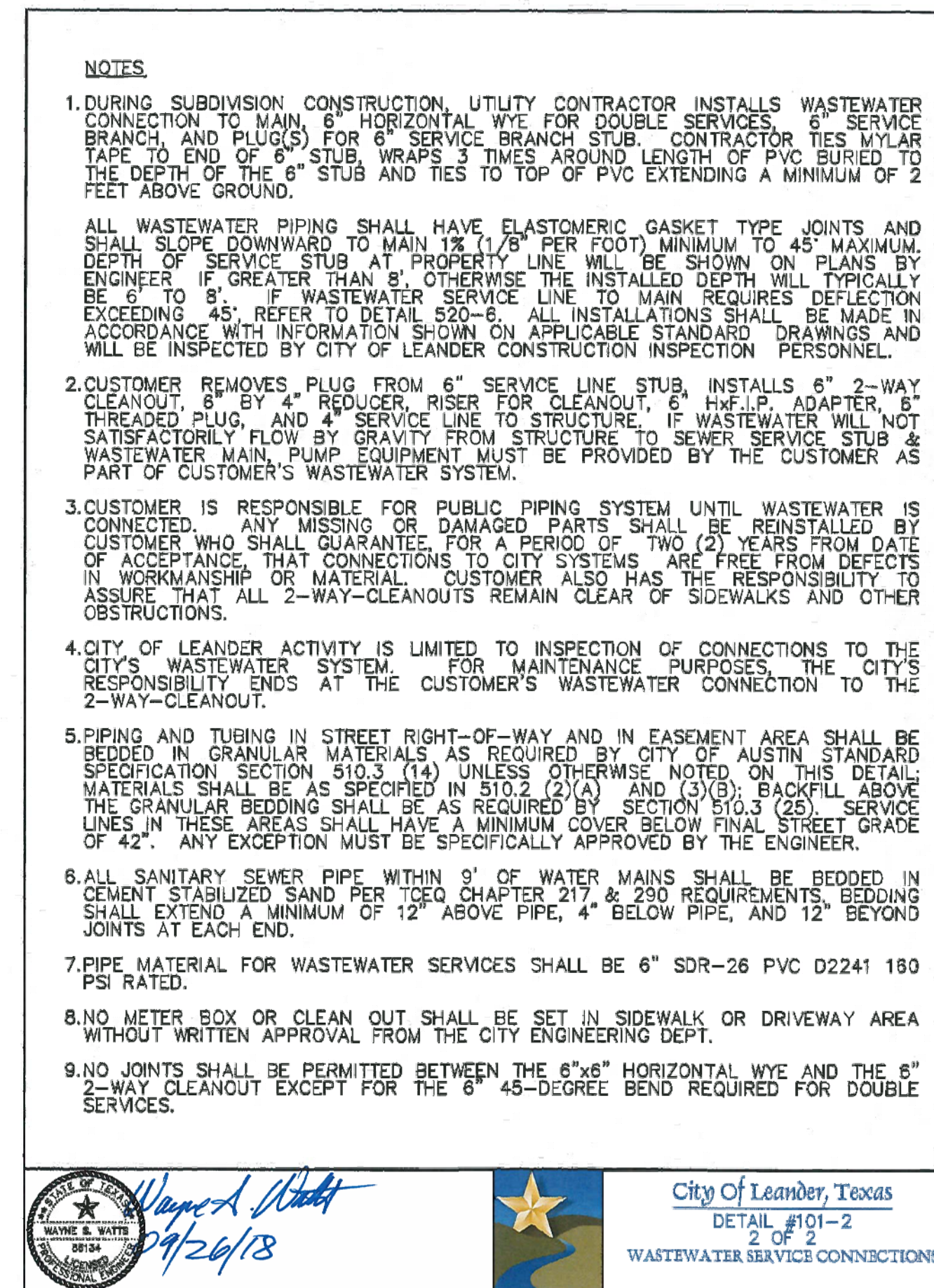
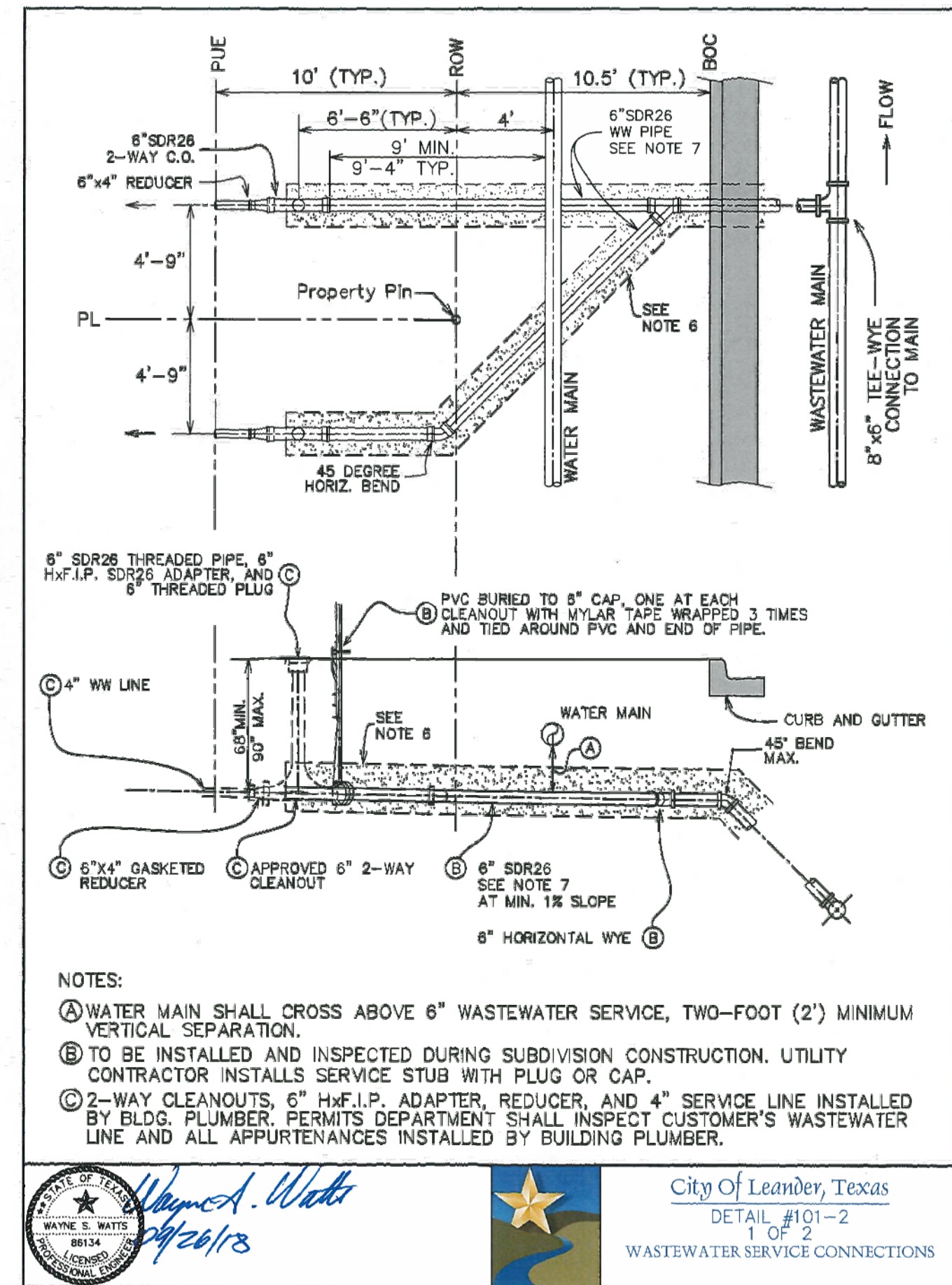
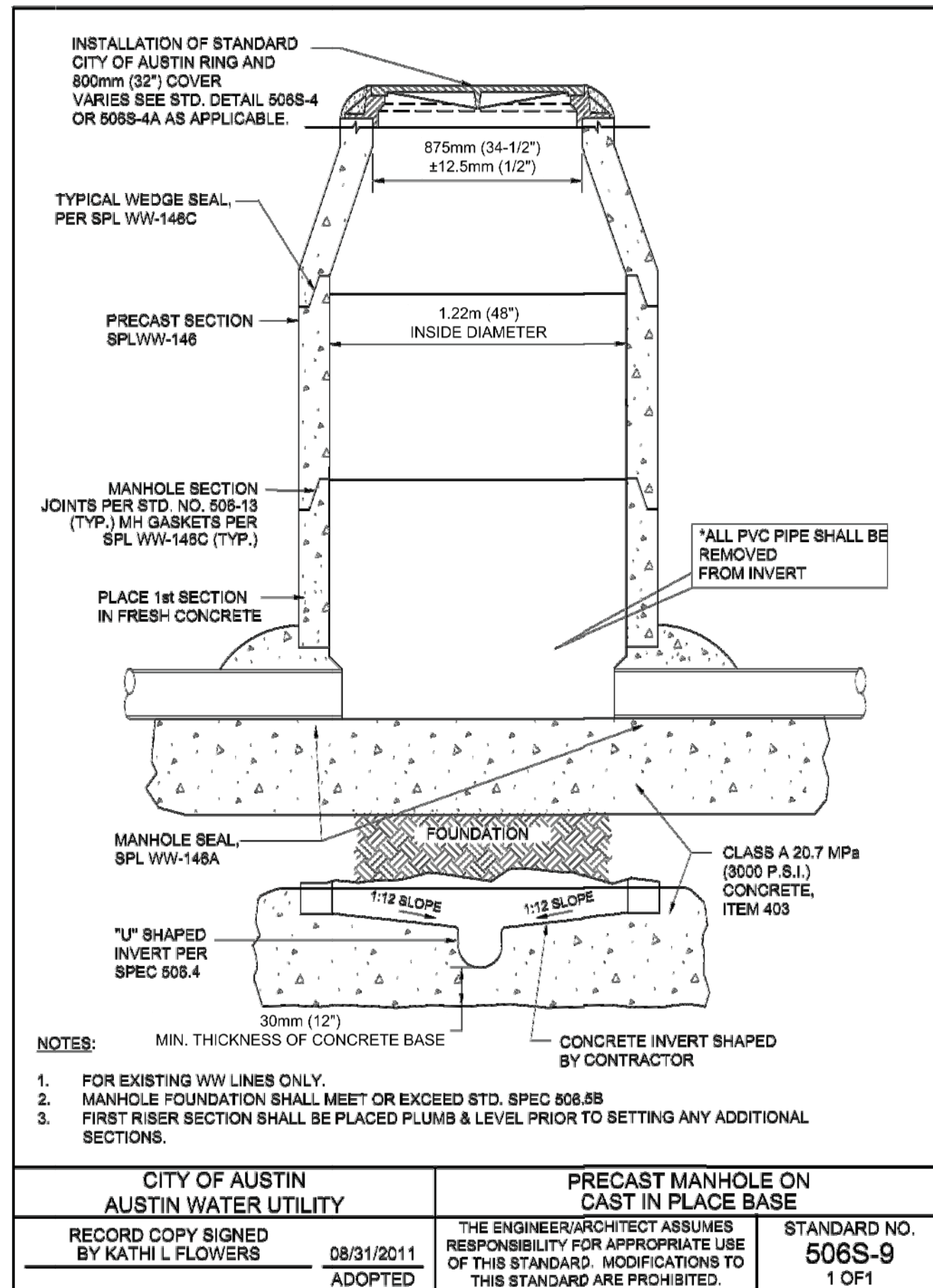
City of Leander, Texas
 DETAIL #101-1
 WATER SERVICE CONNECTIONS

Wayne S. Watters
 10/24/15



City of Leander, Texas
 DETAIL #104-2

Wayne S. Watters
 10/20/12



REVISION

NO.

DATE

Jan 09, 2024

GARY ELI JONES
 79198
 REGISTERED
 PROFESSIONAL ENGINEER

TPBELS FIRM No. 17877

ELI ENGINEERING
 ELI ENGINEERING, PLLC.
 700 THERESA COVE, CEDAR PARK, TX 78613
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LONG STAR LANDING PHASE ONE
 SUBDIVISION IMPROVEMENTS
 CONSTRUCTION DETAILS (7 OF 10)

DRAWING SCALE: HORIZ. # VERT. #

SURVEYED: RR

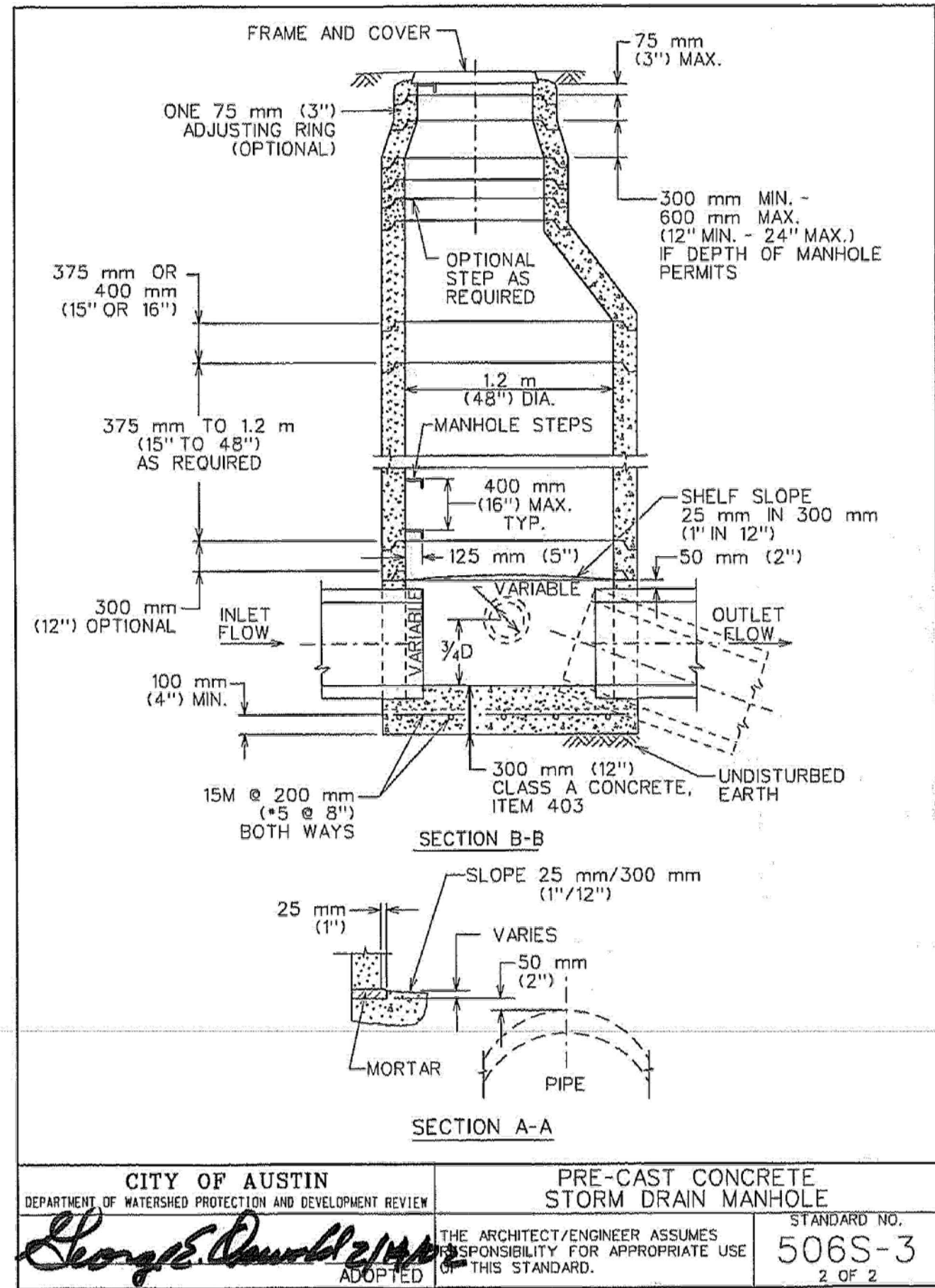
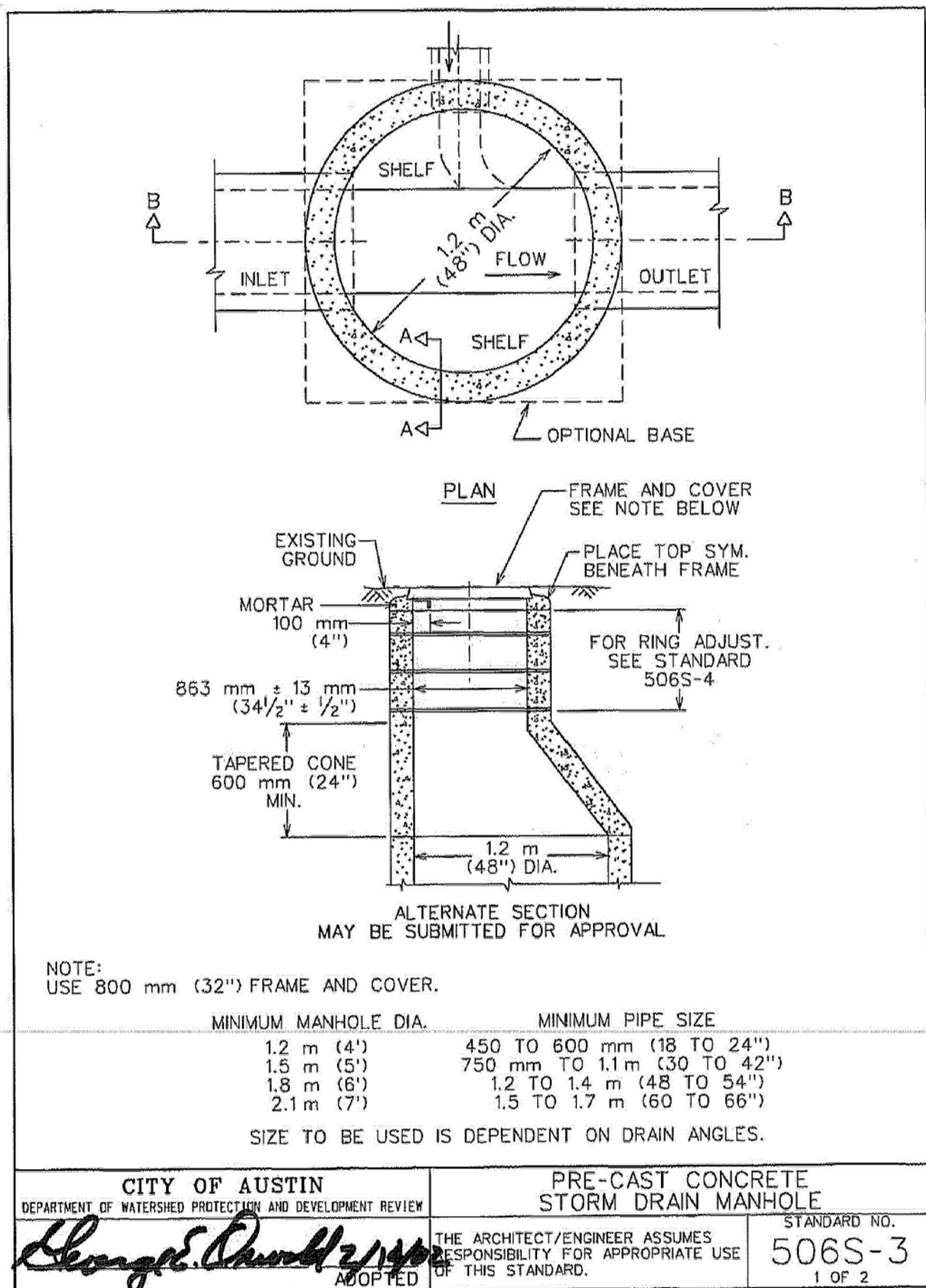
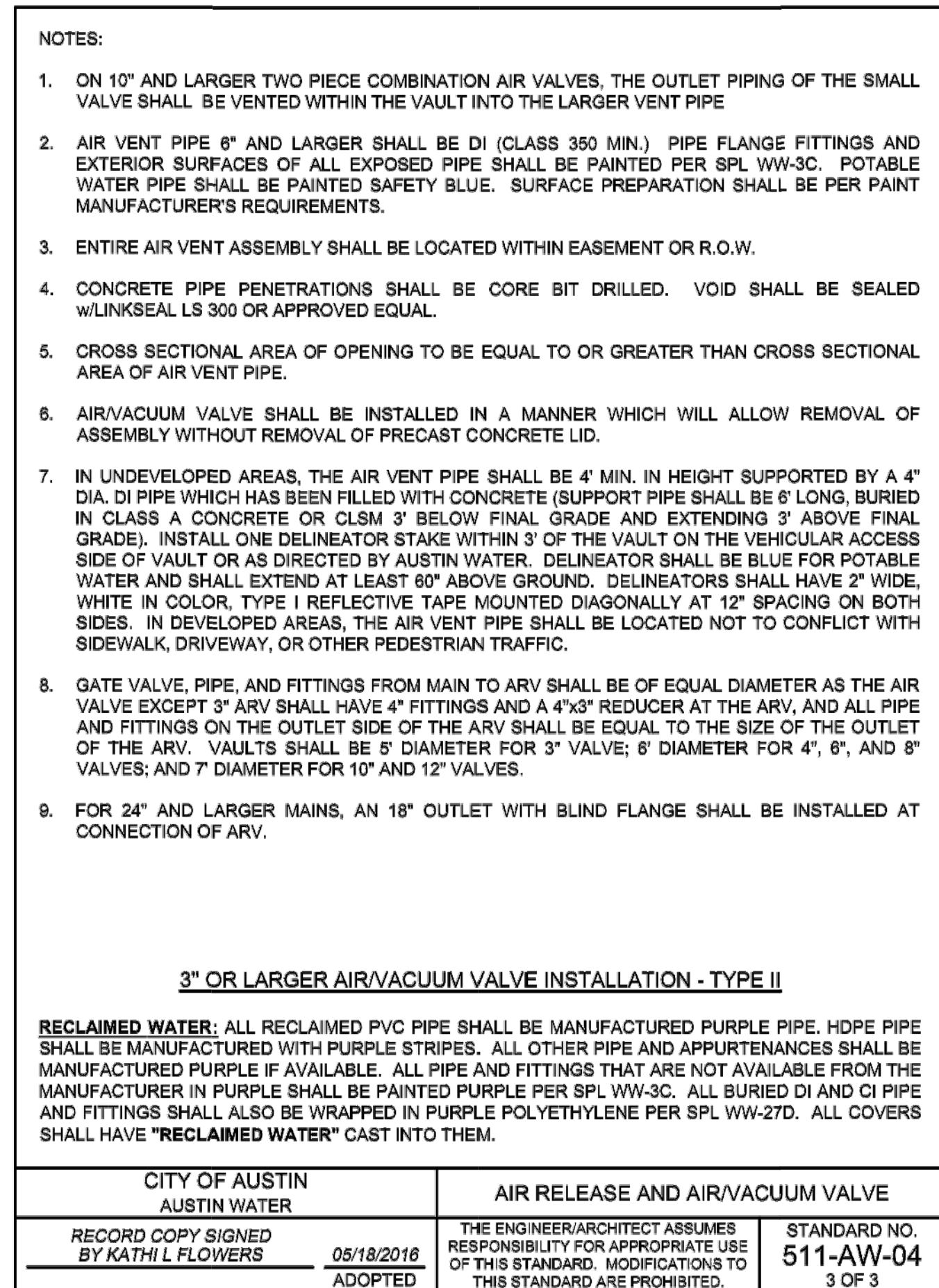
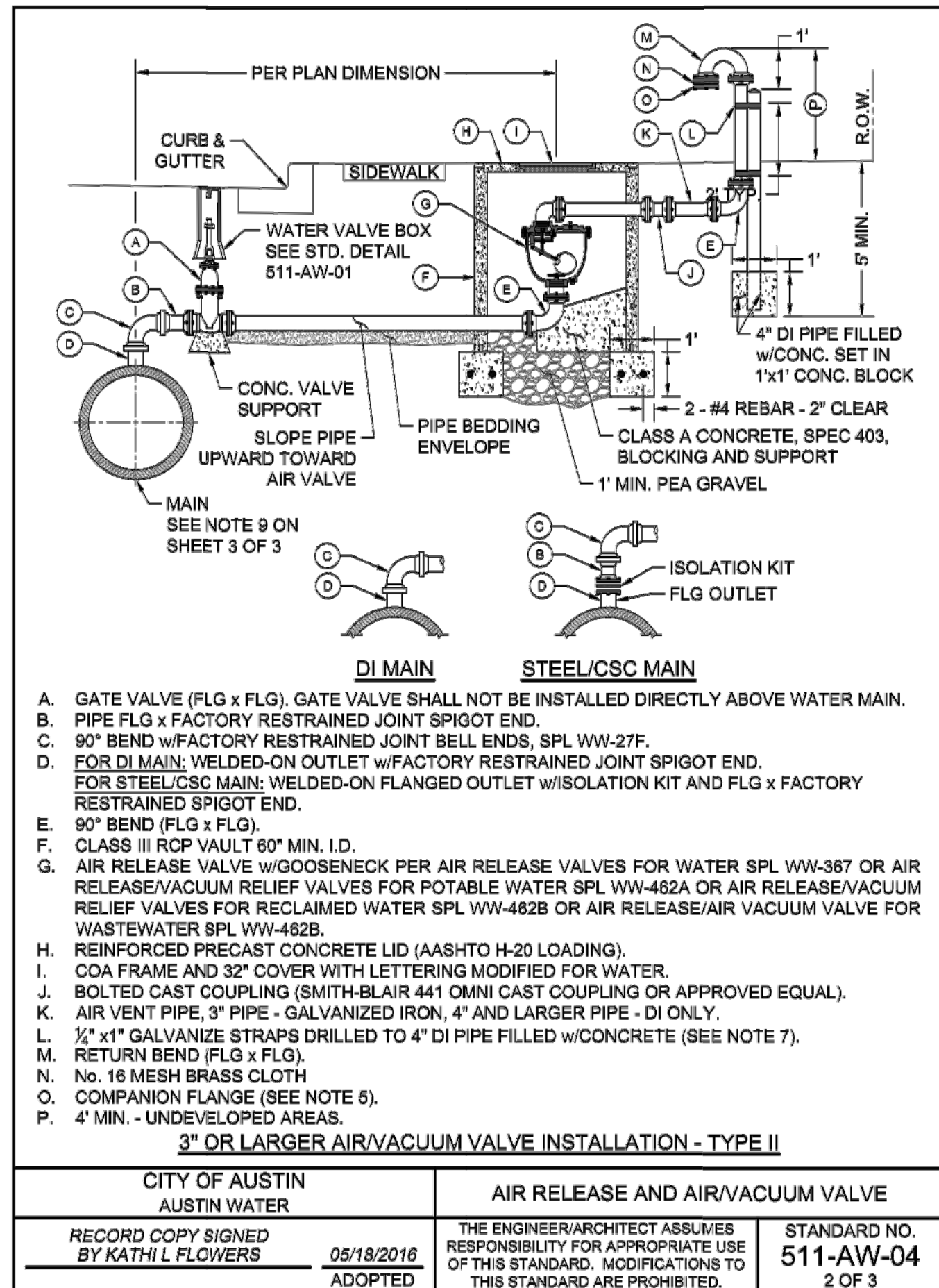
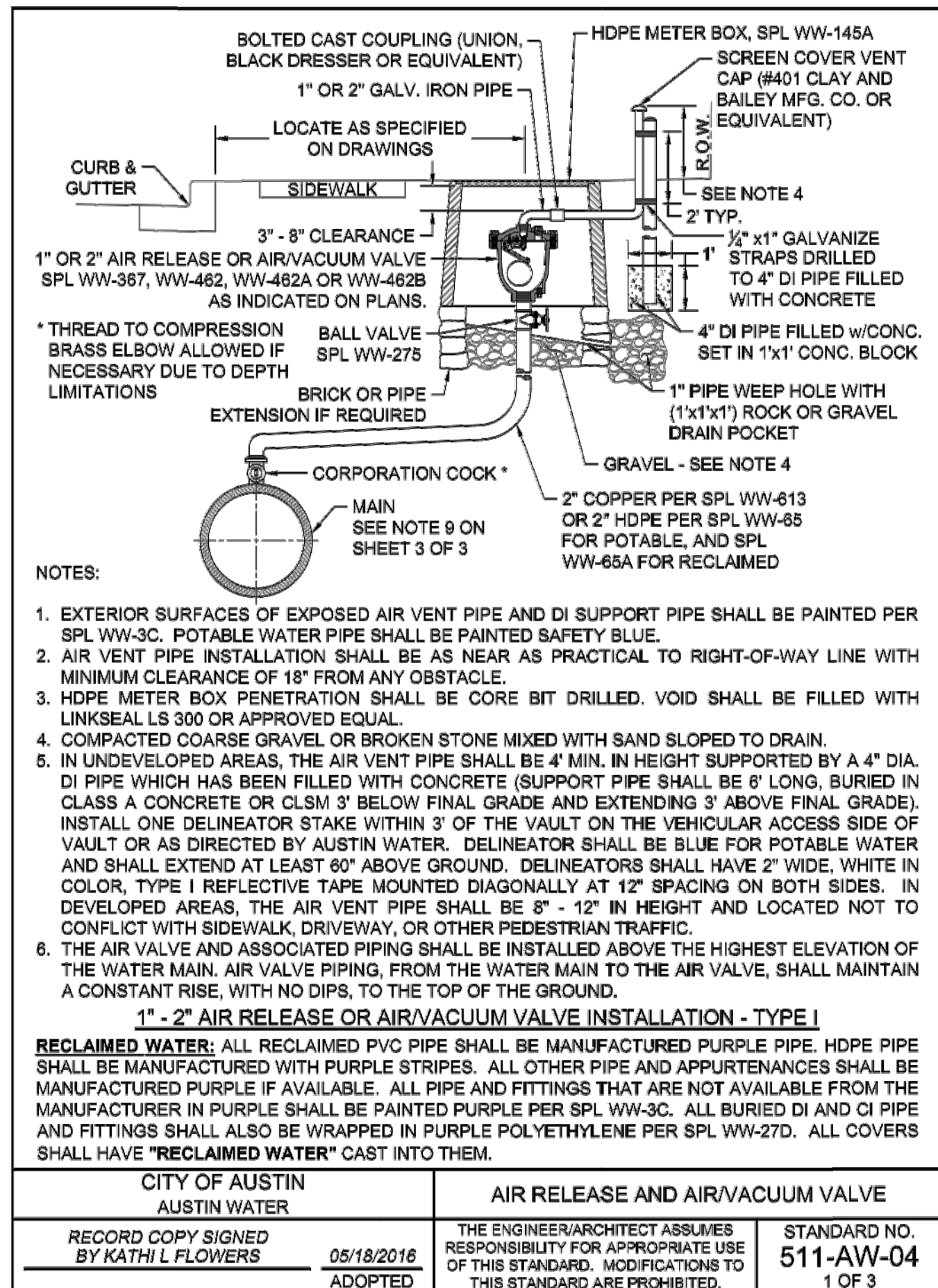
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DATE:

DRAWN: JTC

DESIGNED: EEI

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 49
 OF
 52



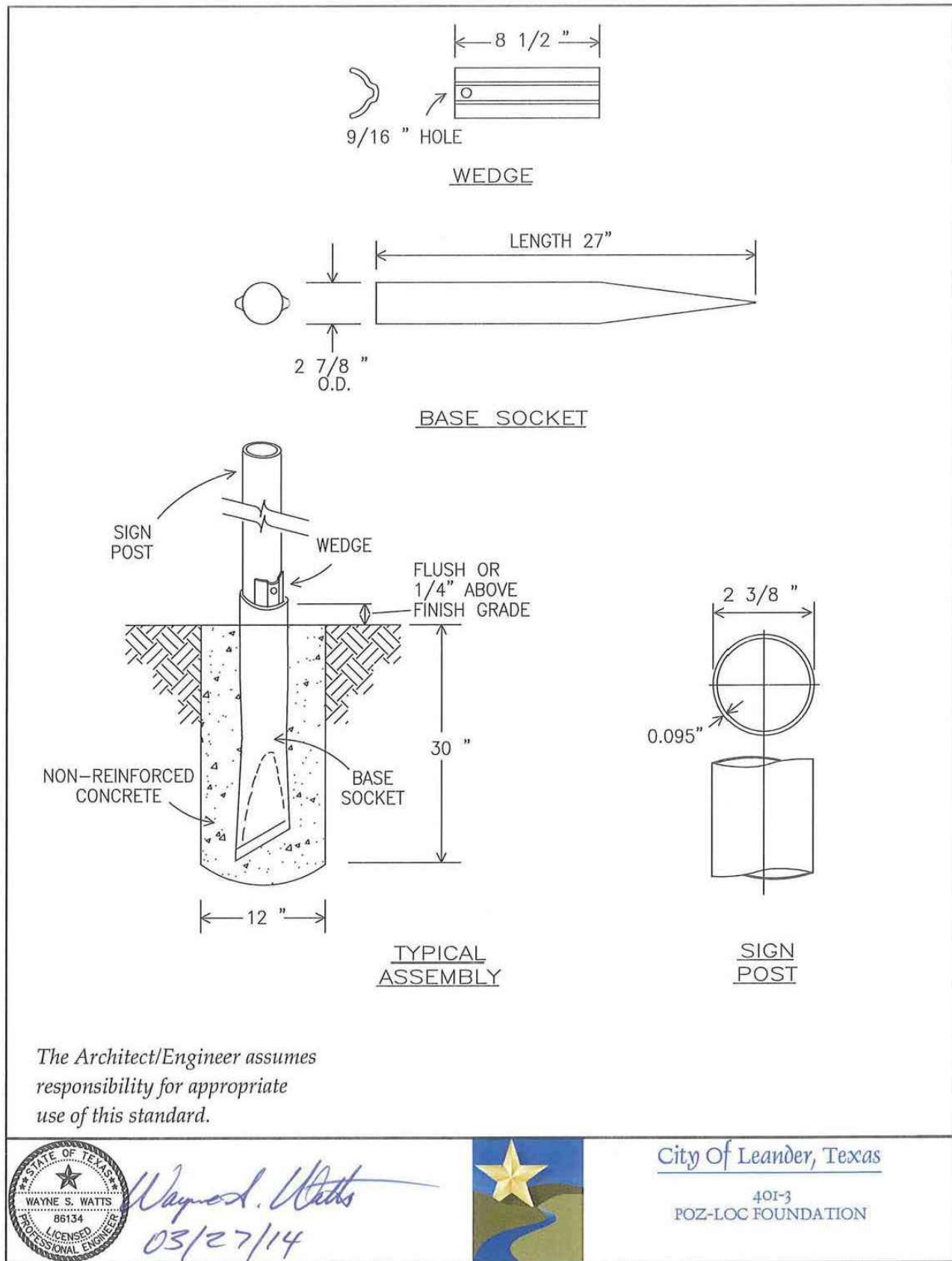
HORIZ. =
 VERT. =
 DRAWING SCALE:
 SURVEYED:
 FILE NAME: RR
 DATE:
 DRAWN: JTC
 DESIGNED: EEI

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 OF
52

LONE STAR LANDING PHASE ONE
 SUBDIVISION IMPROVEMENTS
 CONSTRUCTION DETAILS (7 OF 10)

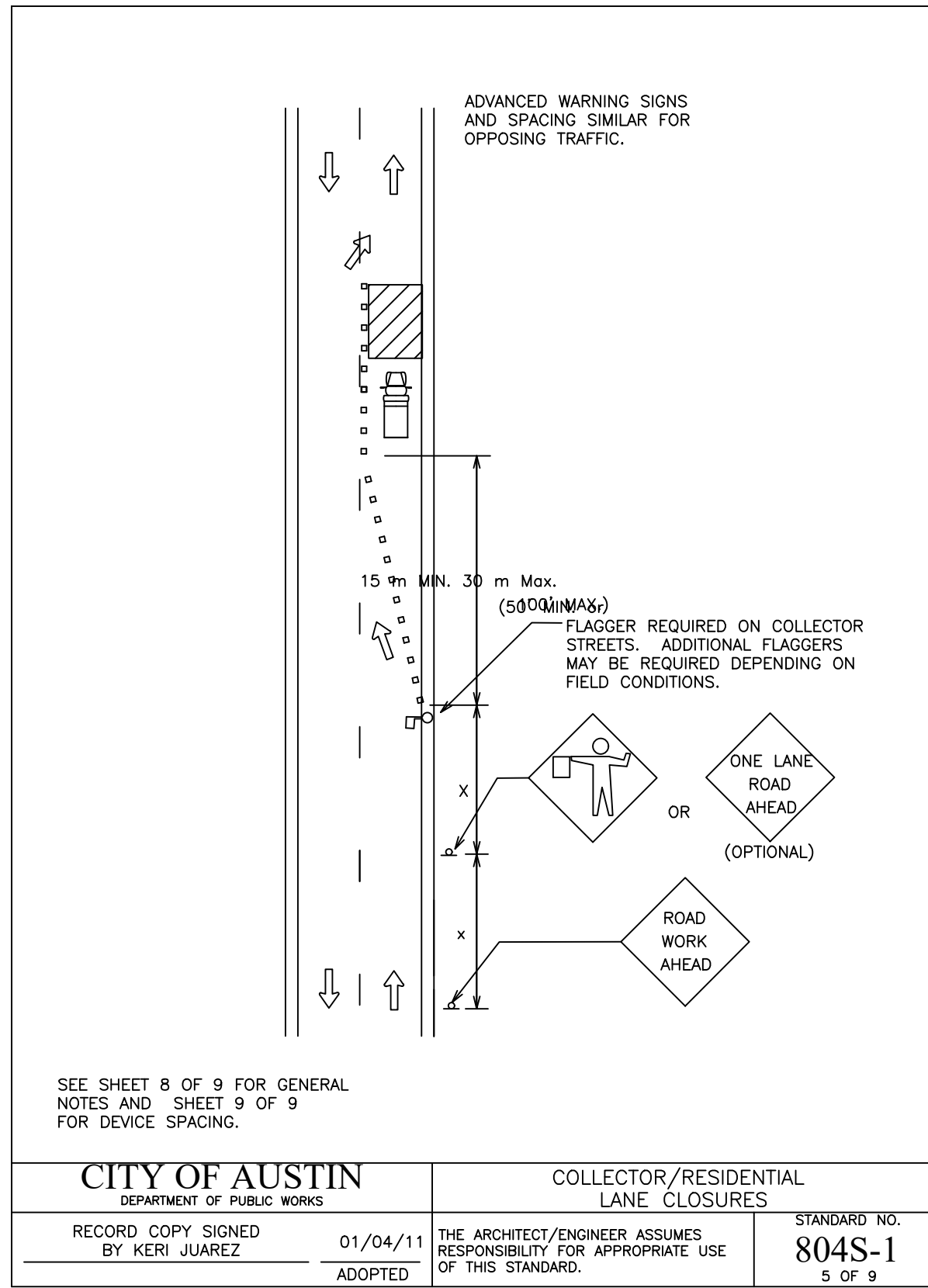
LEANDER, TEXAS 78641 (CITY LIMITS)
 TPBELS FIRM No. 17877
 GARY ELI JONES
 79198
 REGISTERED
 PROFESSIONAL ENGINEER
 Jan 09, 2024
 ELI ENGINEERING, PLLC.
 700 THERESA COVE, CEDAR PARK, TX 78613
 512-919-0818 (F) 512-552-0560

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WAYNE S. WATTS
REGISTERED PROFESSIONAL ENGINEER
No. 10334
03/27/14

City Of Leander, Texas
491-3
POZ-LOC FOUNDATION



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
RECORD COPY SIGNED BY KERI JUAREZ 01/04/11 ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1 5 OF 9

1. ALL SETUPS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL.
2. TO DETERMINE APPROPRIATE DEVICES AND SIGN SIZES TO BE USED, REFER TO STANDARD 804S-5, SHEETS 5, 6 AND 7 OF 11.
3. FOR INTERMEDIATE-TERM SITUATIONS, WHEN IT IS NOT FEASIBLE TO REMOVE AND RESTORE PAVEMENT MARKINGS, THE CHANNELIZING MUST BE MADE DOMINANT BY USING A VERY CLOSE DEVICE SPACING. THIS IS ESPECIALLY IMPORTANT IN LOCATIONS OF CONFLICTING INFORMATION, SUCH AS WHERE TRAFFIC IS DIRECTED OVER A DOUBLE YELLOW CENTERLINE. IN SUCH LOCATIONS, A MAXIMUM CHANNELIZING DEVICE SPACING OF 3 m (10') IS REQUIRED.
4. FOR LONG TERM STATIONARY WORK, ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED AND CENTERLINE STRIPING PROVIDED WHERE TWO WAY TRAFFIC IS IN ADJACENT LANES.
5. FOR TEMPORARY PAVEMENT MARKING REQUIREMENTS SEE STANDARD 804S-3.
6. FOR ONE-WAY AND MULTI-LANE ROADWAYS THE "LANE BLOCKED" SIGN MAY BE USED IN LIEU OF THE "LANE CLOSED AHEAD" SIGN. THE NUMBER OF DIGITS ON THE SIGN SHALL NOT BE GREATER THAN THE NUMBER OF LANES PRESENT ON THE ROADWAY. THE "X" SHALL BE PLACED UNDER THE NUMBER OF LANE(S) BLOCKED.
7. FOR FLAGGING OPERATION REQUIREMENTS SEE STANDARD 804S-2.
8. CONTRACTOR SHALL PROVIDE SIDEWALK CLOSURES, CROSSWALK CLOSURES OR WALKWAY BYPASS WHEREVER PEDESTRIAN MOVEMENTS ARE AFFECTED BY CONSTRUCTION ACTIVITIES. ALL SIDEWALKS AND CROSSWALKS SHALL BE ACCESSIBLE WHEN CONTRACTOR IS NOT WORKING UNLESS APPROVED BY THE TRANSPORTATION DIVISION.
9. FOR EXCAVATION PROTECTION AND SAFETY FENCE REQUIREMENTS SEE STANDARD 804S-4.
10. THE USE OF ARROW DISPLAYS ARE REQUIRED ON ALL LANE CLOSURES. THE CONTRACTOR SHALL PROVIDE ONE (1) STAND-BY UNIT IN GOOD WORKING CONDITION AT THE JOB SITE, READY FOR USE IF THE OPERATION REQUIRES 24-HOUR A DAY LANE CLOSURE SET-UPS.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
RECORD COPY SIGNED BY KERI JUAREZ 01/04/11 ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1 8 OF 9

Typical Transition Lengths and Suggested Maximum Spacing of Devices

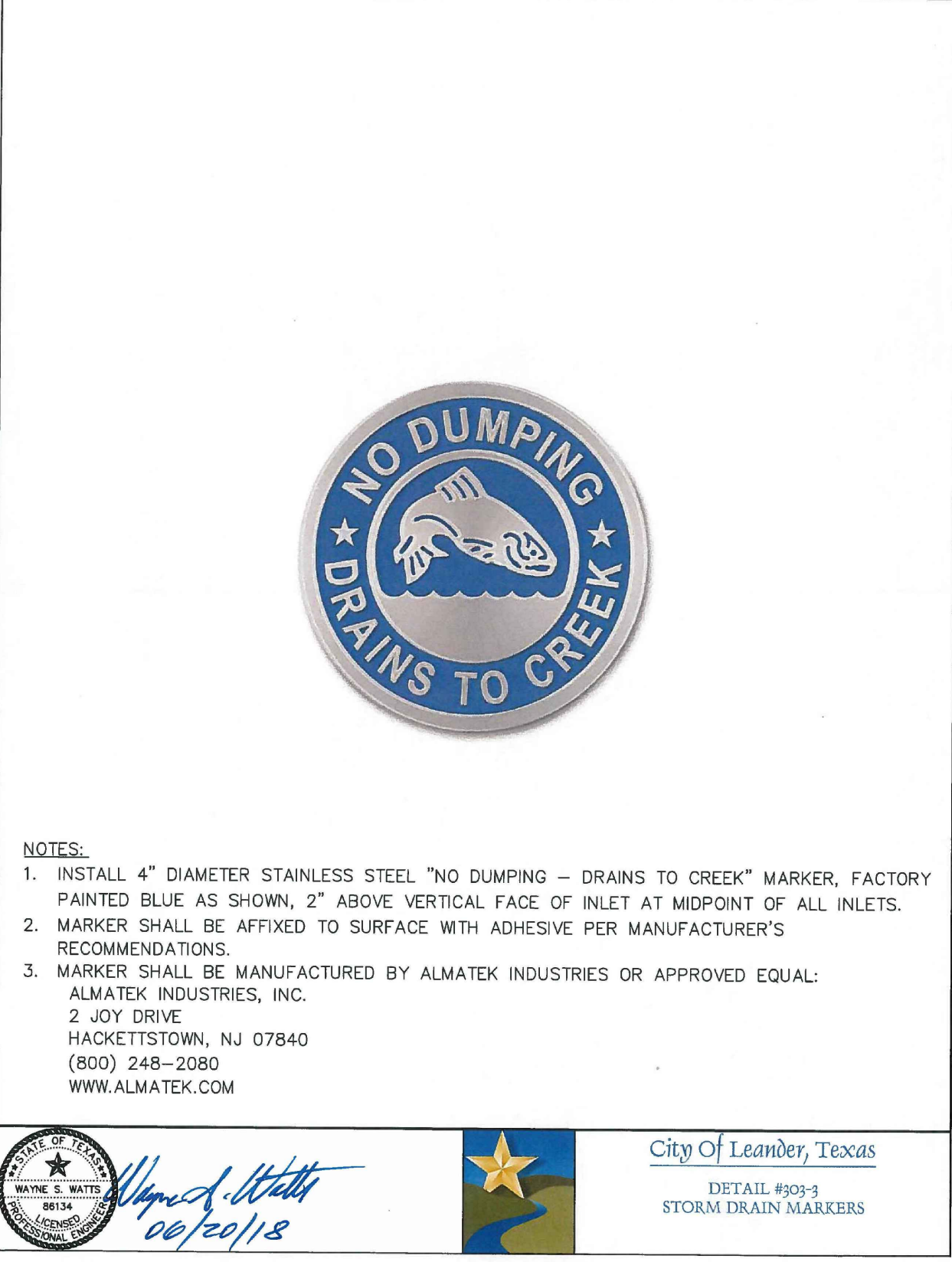
Speed KMPH	Posted Speed MPH	Formula	3.0(10) Offset Meters (feet)	3.3(11) Offset Meters (feet)	3.6(12) Offset Meters (feet)	On a taper Meters (feet)	On a tangent Meters (feet)	"X" Dimension
50	30	L=WS ² 60	45 (150)	50 (165)	55 (180)	9 (30)	15-20 (50-75)	40 (120)
55	35		65 (205)	70 (225)	75 (240)	10 (35)	25-25 (70-80)	50 (160)
65	40	L=WS ² 60	80 (265)	90 (295)	100 (320)	12 (40)	25-30 (80-100)	75 (240)
70	45		135 (450)	150 (495)	165 (540)	13 (45)	25-30 (90-110)	100 (320)
80	50	L=WS ² 60	150 (500)	165 (550)	180 (600)	15 (50)	30-35 (100-125)	120 (400)
90	55		165 (550)	185 (605)	200 (660)	16 (55)	35-40 (110-140)	150 (500)
95	60	L=WS ² 60	180 (600)	200 (660)	220 (720)	18 (60)	40-45 (120-150)	180 (600)
105	65		195 (650)	215 (715)	235 (780)	19 (65)	40-50 (130-165)	210 (700)
115	70	L=WS ² 60	215 (700)	235 (770)	255 (840)	21 (70)	45-55 (140-175)	240 (800)

LEGEND
 □ Channelizing devices
 ▣ Trailer mounted flashing arrow board
 ○ Flagger

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
RECORD COPY SIGNED BY KERI JUAREZ 01/04/11 ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1 9 OF 9

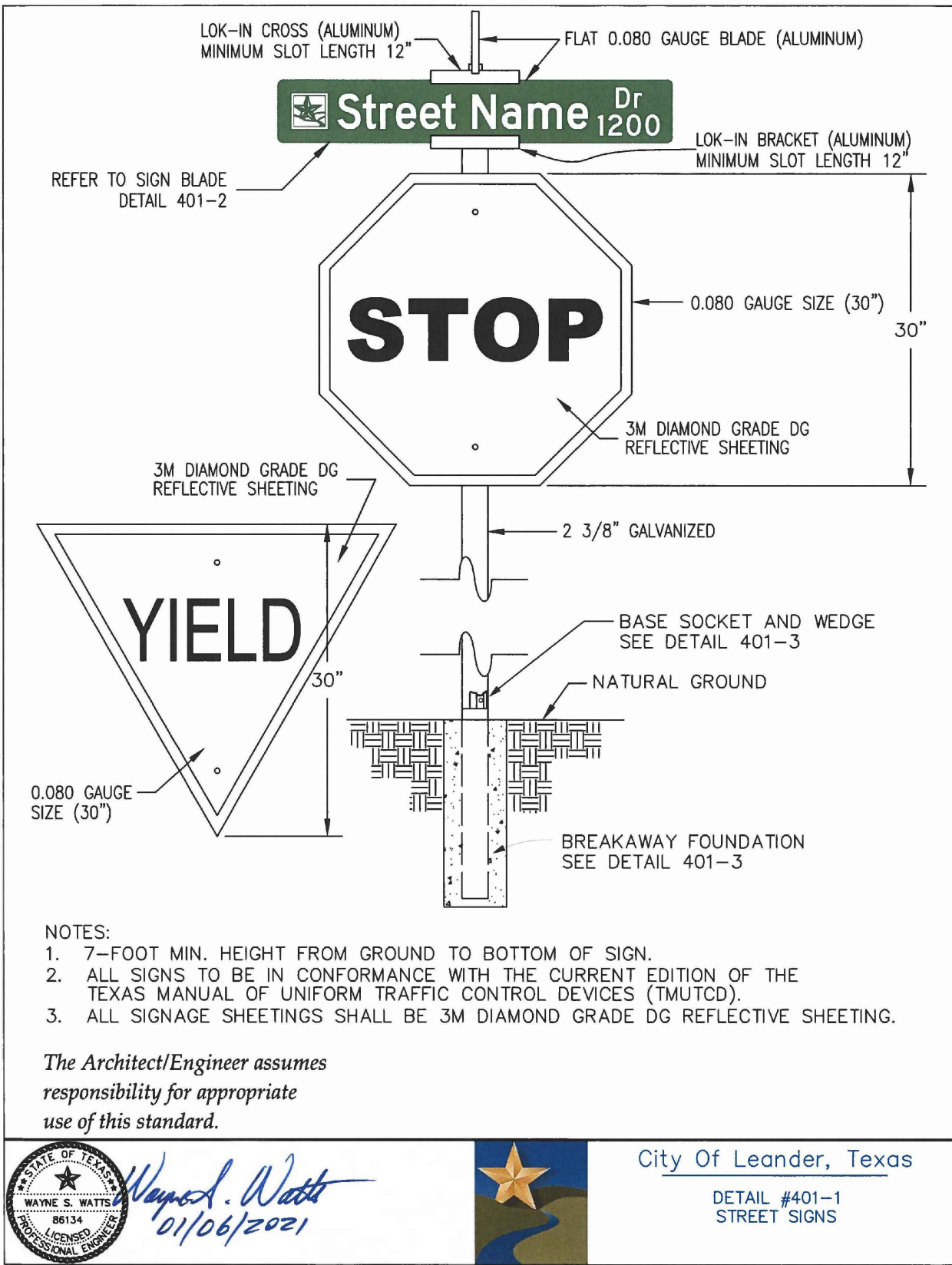


Jan 09, 2024
 TPBELS FIRM No. 17877
 GARY ELI JONES
 79198
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 STATE OF TEXAS
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 700 THERESA COVE, CEDAR PARK, TX 78613
 512-918-0819 (F) 512-532-0560
 elijones@gmail.com



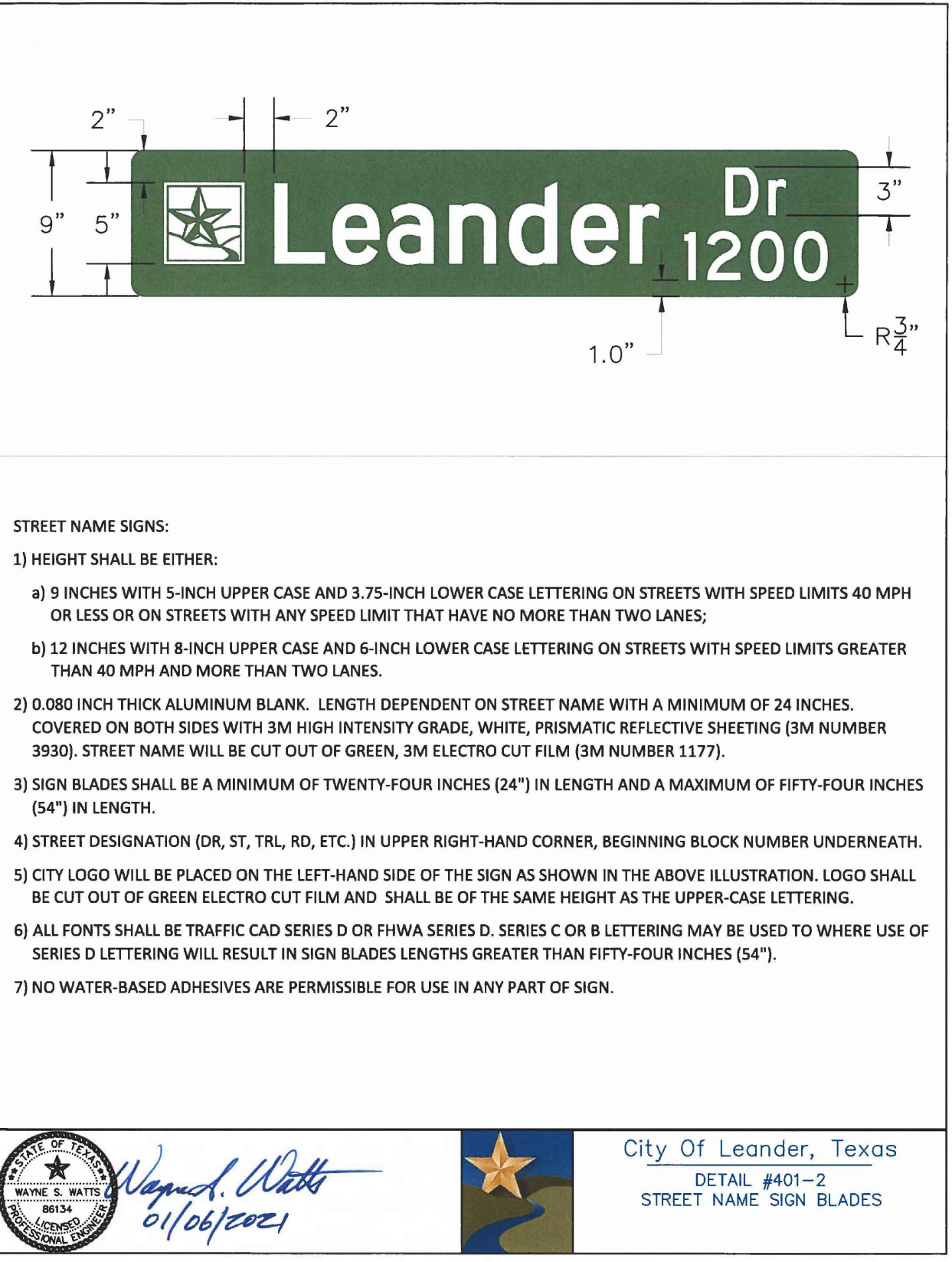
WAYNE S. WATTS
REGISTERED PROFESSIONAL ENGINEER
No. 10334
06/20/18

City Of Leander, Texas
DETAIL #303-3
STORM DRAIN MARKERS



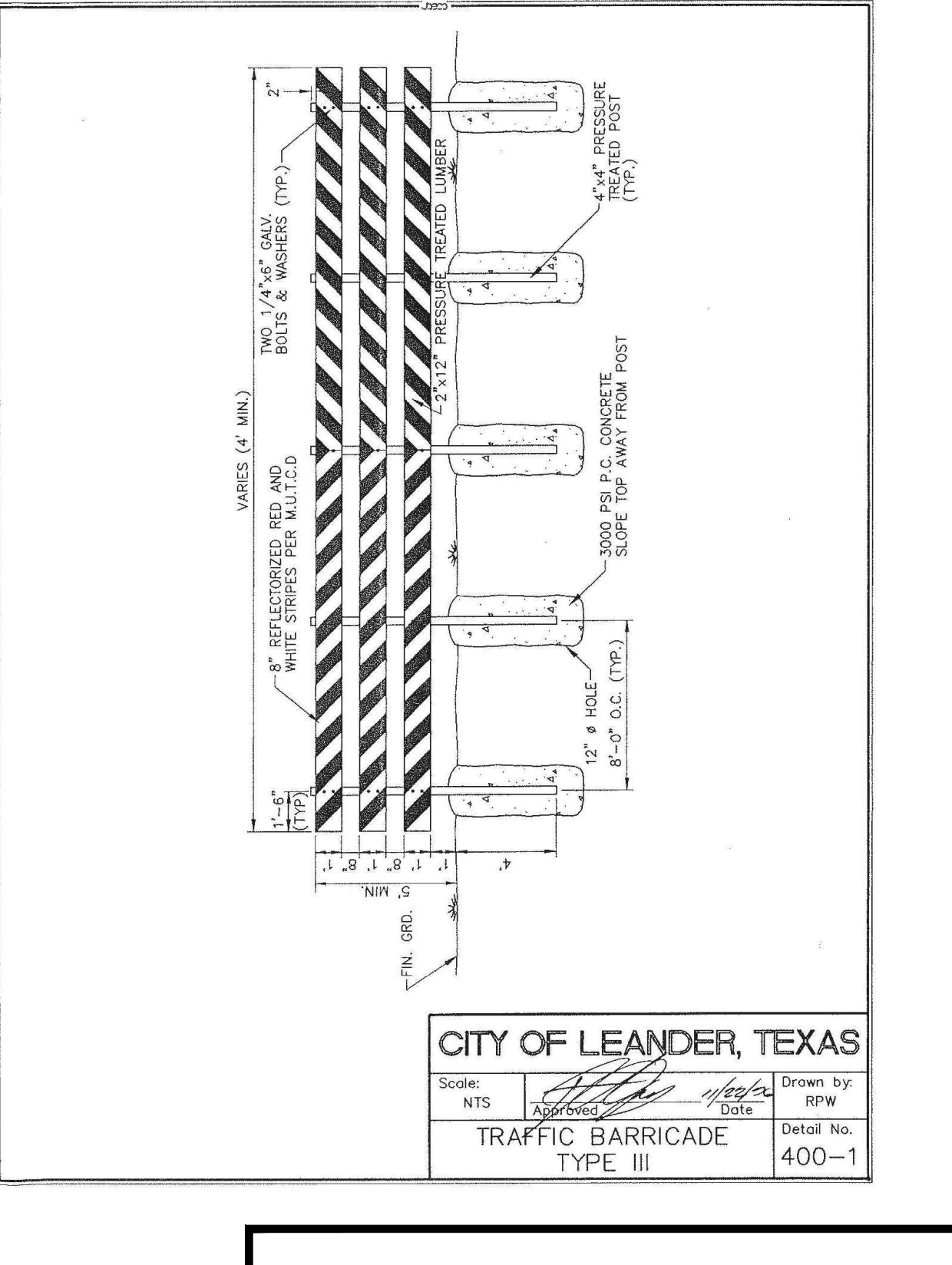
WAYNE S. WATTS
REGISTERED PROFESSIONAL ENGINEER
No. 10334
01/06/2021

City Of Leander, Texas
DETAIL #401-1
STREET SIGNS



WAYNE S. WATTS
REGISTERED PROFESSIONAL ENGINEER
No. 10334
01/06/2021

City Of Leander, Texas
DETAIL #401-2
STREET NAME SIGN BLADES



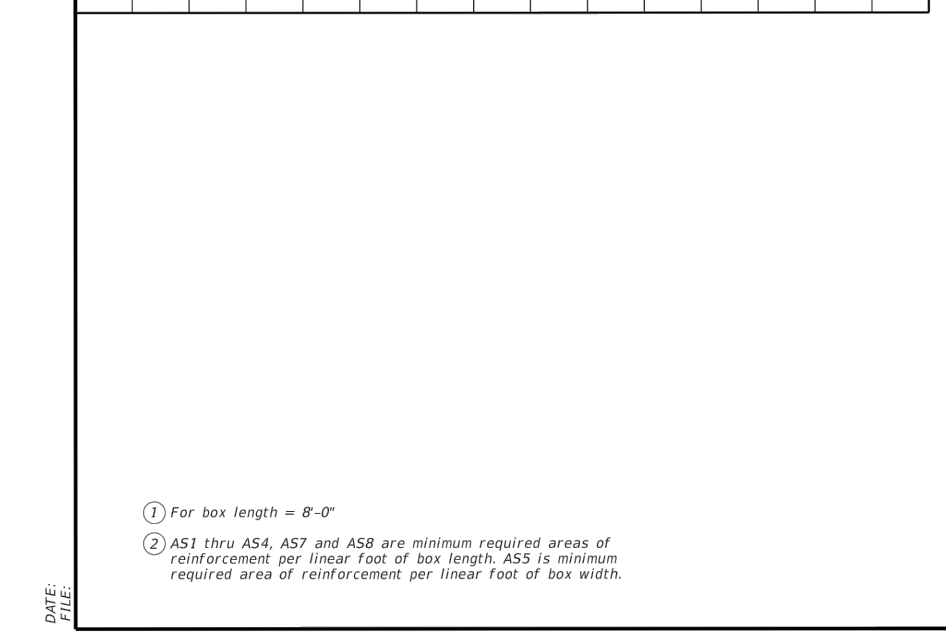
LEANDER, TEXAS 78641 (CITY LIMITS)
 LONE STAR LANDING PHASE ONE
 SUBDIVISION IMPROVEMENTS
 CONSTRUCTION DETAILS (9 OF 10)

DRAWING SCALE: HORIZ. = VERT. =
 SURVEYED: RR
 FILE NAME:
 DATE:
 DRAWN: JTC
 DESIGNED: EEI

SHEET
 51
 OF
 52

BOX DATA

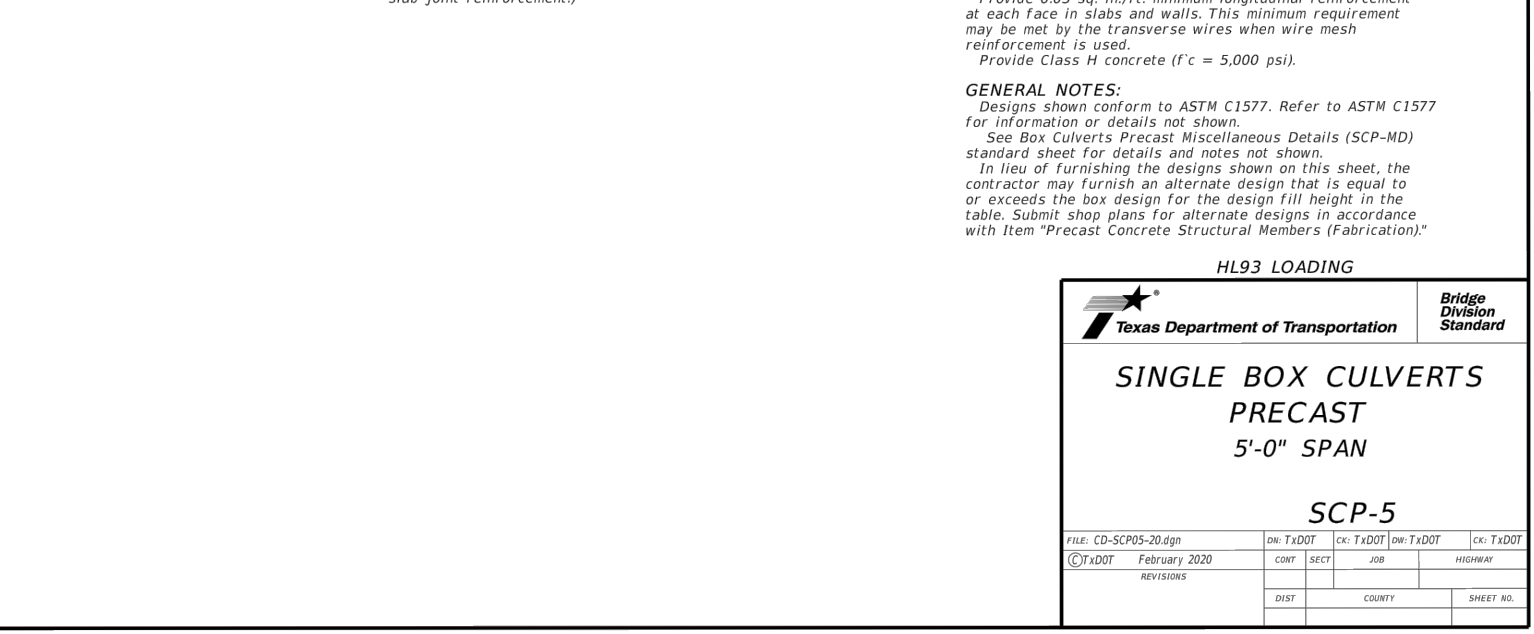
SECTION DIMENSIONS	REINFORCING (sq. ft. / ft.)	Wt. (tons)
S 2 8 7 6 < 2	0.19 0.27 0.18 0.14	0.19 0.17 6.0
S 2 6 6 6 < 2	0.22 0.20 0.18 0.14	0.19 5.1
S 2 6 6 6 3-5	0.44 0.16 0.14 0.14	0.19 5.1
S 2 6 6 6 6 10	0.36 0.15 0.14 0.14	0.19 5.1
S 2 6 6 6 6 15	0.36 0.20 0.18 0.14	0.19 5.1
S 2 6 6 6 6 20	0.36 0.26 0.23 0.14	0.19 5.1
S 2 6 6 6 6 25	0.36 0.33 0.29 0.14	0.19 5.1
S 2 6 6 6 6 30	0.36 0.39 0.34 0.14	0.19 5.1
S 3 8 7 6 < 2	0.19 0.31 0.21 0.14	0.19 0.19 6.6
S 3 6 6 6 2-3	0.45 0.18 0.24 0.14	0.19 5.7
S 3 6 6 6 6 10	0.36 0.14 0.16 0.14	0.19 5.7
S 3 6 6 6 6 15	0.36 0.16 0.17 0.14	0.19 5.7
S 3 6 6 6 6 20	0.36 0.21 0.22 0.14	0.19 5.7
S 3 6 6 6 6 25	0.36 0.27 0.28 0.14	0.19 5.7
S 3 6 6 6 6 30	0.36 0.33 0.34 0.14	0.19 5.7
S 4 8 7 6 < 2	0.19 0.33 0.24 0.14	0.19 0.19 7.2
S 4 6 6 6 2-3	0.45 0.16 0.22 0.14	0.19 6.3
S 4 6 6 6 6 10	0.36 0.14 0.18 0.14	0.19 6.3
S 4 6 6 6 6 15	0.36 0.15 0.14 0.23 0.14	0.19 6.3
S 4 6 6 6 6 20	0.36 0.17 0.30 0.14	0.19 6.3
S 4 6 6 6 6 25	0.36 0.21 0.38 0.14	0.19 6.3
S 4 6 6 6 6 30	0.36 0.25 0.44 0.14	0.19 6.3
S 5 8 7 6 < 2	0.19 0.35 0.26 0.14	0.19 0.19 7.8
S 5 6 6 6 2-3	0.45 0.14 0.29 0.14	0.19 6.9
S 5 6 6 6 6 10	0.36 0.15 0.21 0.14	0.19 6.9
S 5 6 6 6 6 15	0.36 0.16 0.19 0.20 0.14	0.19 6.9
S 5 6 6 6 6 20	0.36 0.21 0.27 0.14	0.19 6.9
S 5 6 6 6 6 25	0.36 0.25 0.31 0.14	0.19 6.9
S 5 6 6 6 6 30	0.36 0.31 0.39 0.14	0.19 6.9
S 6 8 7 6 < 2	0.19 0.37 0.28 0.14	0.19 0.19 8.4



1 For box length = 8'-0"
2 AS1 thru AS4, AS7 and AS8 are minimum required areas of reinforcement per linear foot of box length. AS5 is minimum required area of reinforcement per linear foot of box width.

TABLE OF DIMENSIONS AND REINFORCING STEEL

Dimensions	Variable Reinforcing		Estimated Quantities per ft. of wing (2-wings)	Estimated Quantities per ft. of wall (1-towall)
	Bars #1	Bars #2		
2'-0" 2'-10" 10' 1'-0"	#4	#4	48.64	0.406
2'-0" 2'-10" 10' 1'-0"	#4	#4	49.31	0.424
2'-0" 2'-10" 10' 1'-0"	#4	#4	49.98	0.444
2'-0" 2'-10" 10' 1'-0"	#4	#4	53.32	0.462
2'-0" 2'-10" 10' 1'-0"	#4	#4	53.98	0.481
2'-0" 2'-10" 10' 1'-0"	#4	#4	55.77	0.532
2'-0" 2'-10" 10' 1'-0"	#4	#4	59.77	0.568
2'-0" 2'-10" 10' 1'-0"	#4	#4	67.46	0.668
2'-0" 2'-10" 10' 1'-0"	#4	#4	80.67	0.730
2'-0" 2'-10" 10' 1'-0"	#4	#4	85.05	0.768
2'-0" 2'-10" 10' 1'-0"	#4	#4	96.54	0.902
2'-0" 2'-10" 10' 1'-0"	#4	#4	139.04	0.962
2'-0" 2'-10" 10' 1'-0"	#4	#4	144.47	1.000
2'-0" 2'-10" 10' 1'-0"	#4	#4	156.93	1.136
2'-0" 2'-10" 10' 1'-0"	#4	#4	196.27	1.234
2'-0" 2'-10" 10' 1'-0"	#4	#4	230.13	1.438
2'-0" 2'-10" 10' 1'-0"	#4	#4	283.41	1.592
2'-0" 2'-10" 10' 1'-0"	#4	#4	348.72	1.804
2'-0" 2'-10" 10' 1'-0"	#4	#4	432.94	2.046
2'-0" 2'-10" 10' 1'-0"	#4	#4	489.52	2.302
2'-0" 2'-10" 10' 1'-0"	#4	#4	559.72	2.448



1 Skew = 0°
2 At discharge end, chaffer may be 1/2 minimum.
3 For 15° skew = 1"
4 For 30° skew = 2"
5 For 45° skew = 3"
6 Quantities shown are for two Type PW-1 wings. Adjust concrete volume for Type PW-2. To determine estimated quantities for two wings, multiply the calculated values by 1.4. Quantities shown do not include weight of bars D1.
7 Provide weepholes for the 5'-0" and greater. Fill around weepholes with coarse gravel.
8 Extend Bars E2 1'-6" minimum into the wingwall footing.
9 Lap Bars M1 1'-6" minimum with Bars M2.
10 Place Bars E as shown. Equally spaced at 8" maximum. Provide at least two pairs of Bars G per wing.
11 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with concrete rail or curb taller than 1'-0", refer to the Extended Curb Details (ECD) standard sheet. For structures with 1631 or 1631S Rail, refer to the Mounting Details (MCD) standard sheet. For 1631 and 1631S Rails (1631-1M) standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than 1631 or 1631S.
12 For vehicle safety, the following requirements must be met:
• For structures without bridge rail, construct curbs no more than 3' above finished grade.
• For structures with bridge rail, construct curb flush with finished grade. Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
13 1'-0" typical, 2'-0" when the Box Culvert Rail Mounting Details (RAC) standard sheet is referred to elsewhere in the plans.
14 3'-0" for Hw < 4.
15 6" for Hw < 4.

DESIGNER NOTES:
Type PW-1 can be used for all applications and must be used if falling is to be mounted to the wingwall. Type PW-2 can be used for applications without a railing mounted to the wingwall.
MATERIAL NOTES:
Provide Class C concrete (f'c=3600 psi).
Provide Grade 60 reinforcing steel.
Provide additional reinforcing steel if required (see GENERAL NOTES).
GENERAL NOTES:
Designs in accordance with AASHTO LRFD Bridge Design Specifications.
Depth of toe/walls for wingwalls and culverts may be reduced or eliminated when founded on solid rock, when directed by the Engineer.
See Box Culvert Supplement (BCS) standard sheet for wingwall type and additional dimensions and information. Quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for the Contractor's information only.
Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.

CONCRETE WINGWALLS WITH PARALLEL WINGS FOR BOX CULVERTS TYPES PW-1 AND PW-2

PW

See Box Culvert Supplement (BCS) standard sheet for wingwall type and additional dimensions and information. Quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for the Contractor's information only.

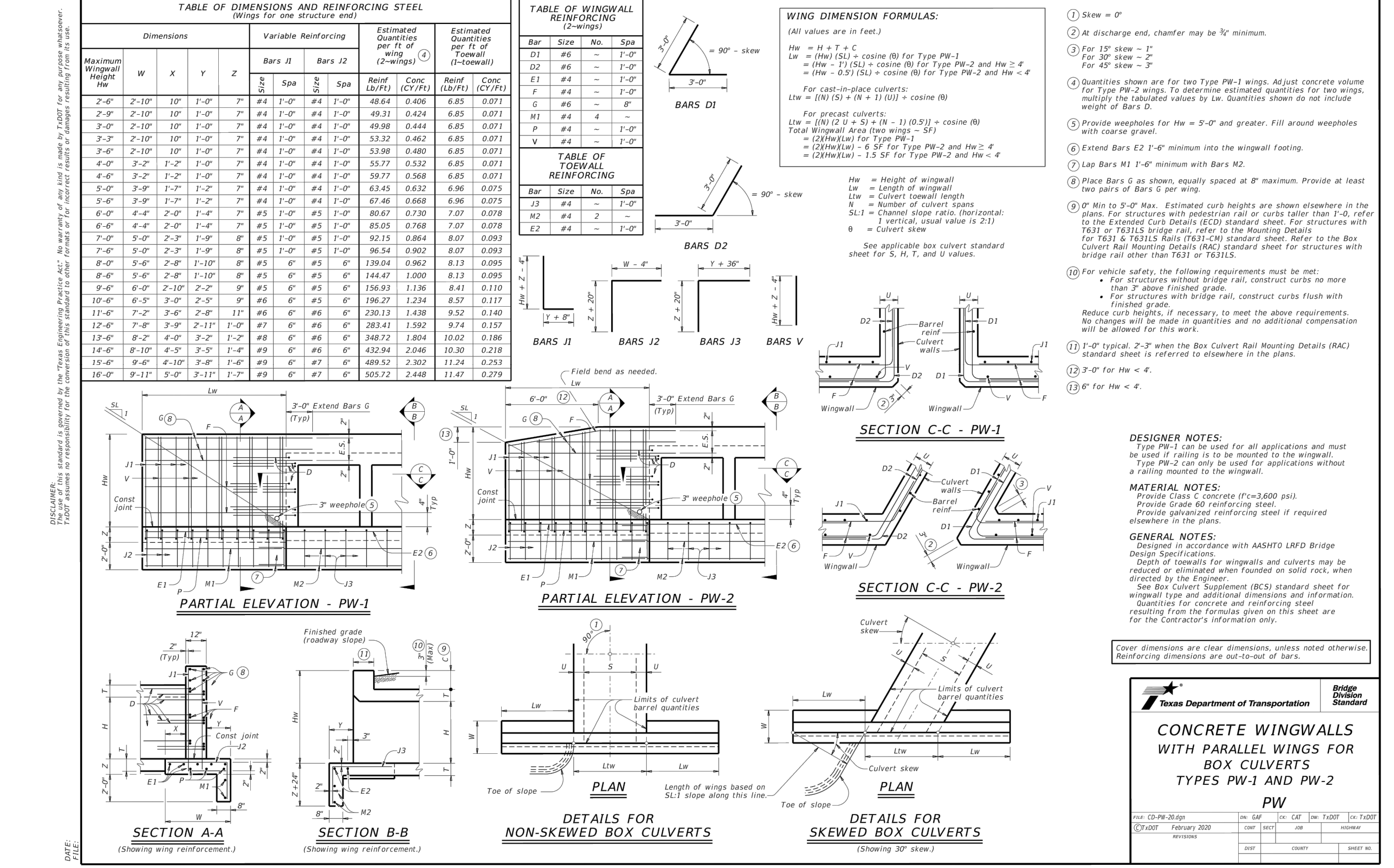
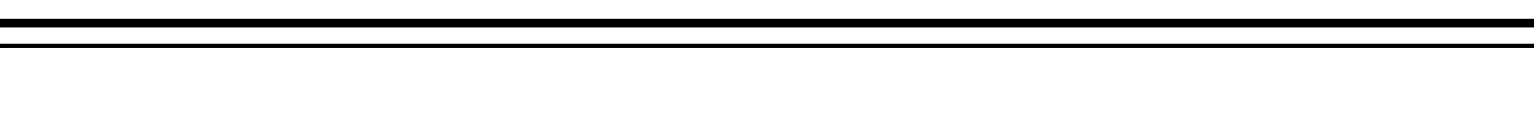
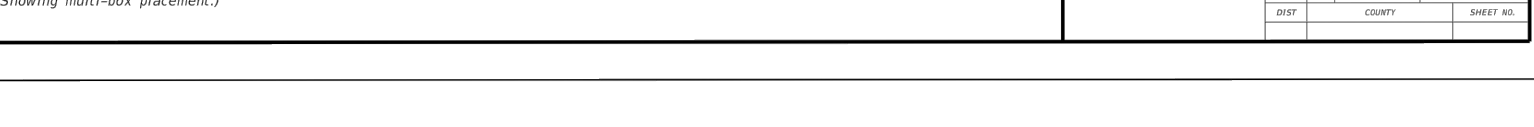
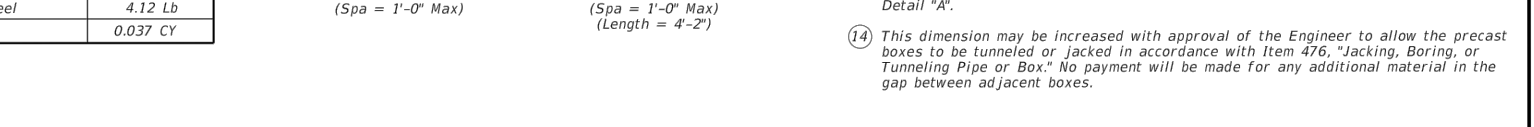
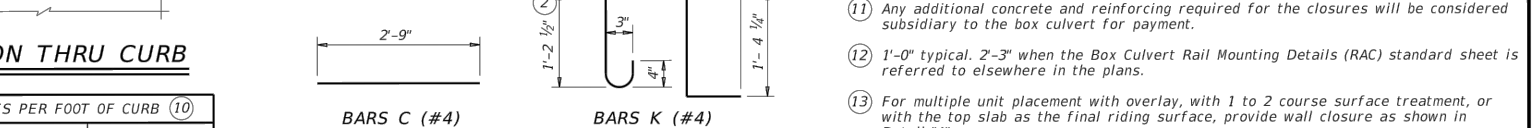
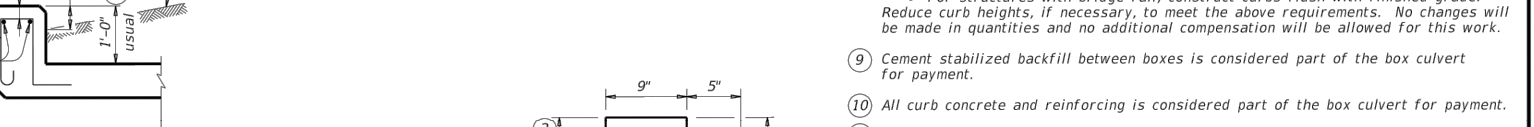
HL93 LOADING

BRIDGE DIVISION STANDARD

SINGLE BOX CULVERTS PRECAST 5'-0" SPAN

SCP-5

See Box Culvert Supplement (BCS) standard sheet for details and notes not shown.
In lieu of formwork, the design shown on this sheet, the contractor shall provide an interior wall reinforcement that is equal to or exceeds the box design for the design fill height. In the table below, the contractor shall provide an interior wall reinforcement with Item "Precast Concrete Structural Members (Fabrication)".



GENERAL NOTES:
1. Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 3' from the edge of pavement. This distance may vary due to pavement leveling or other conditions. Edge lines are not required in curb and gutter sections of roadways.
2. The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, shoulders, berms and aprons. The traveled way shall be measured from the inside of edge line to the inside of edge line of a two-lane roadway.

MATERIAL SPECIFICATIONS

PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Method of Specifications as specified by the plans.

GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Divided Highway.

TYPICAL STANDARD PAVEMENT MARKINGS

PM (1) - 20

SPACING	10'	15'	20'
STOP SIGN	10'	15'	20'
STOP SIGN	10'	15'	20'
STOP SIGN	10'	15'	20'

NOTES:
1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs are optional as determined by the Engineer.
2. Install median striping (double yellow centerlines and stop bars/yield triangles) on a 50' or greater median centerline can be placed. Stop bars shall only be used with stop signs. Yield triangles shall only be used with yield signs.
3. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

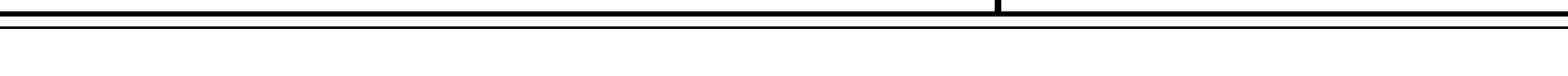
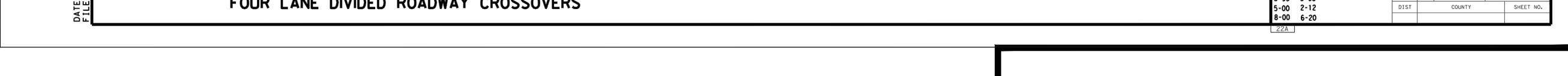
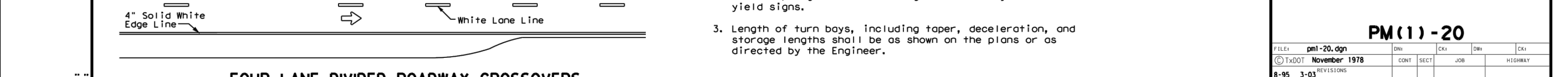
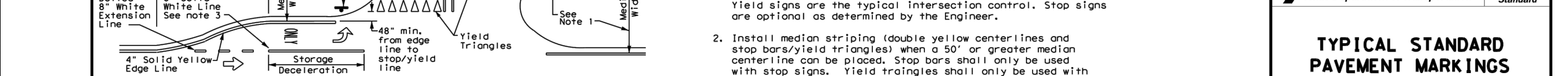
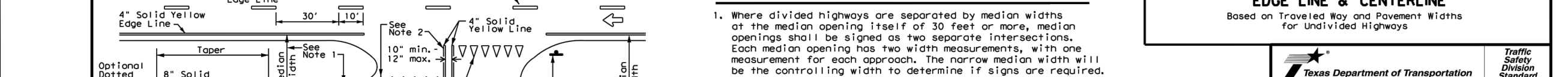
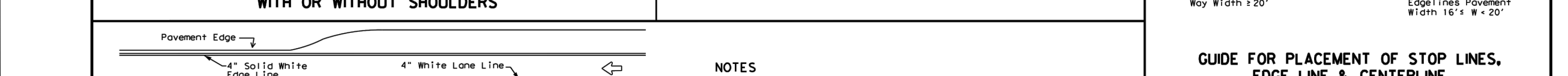
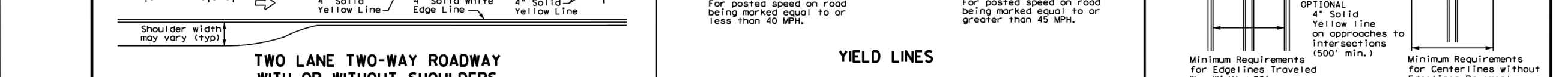
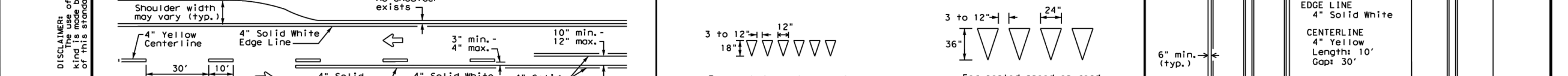
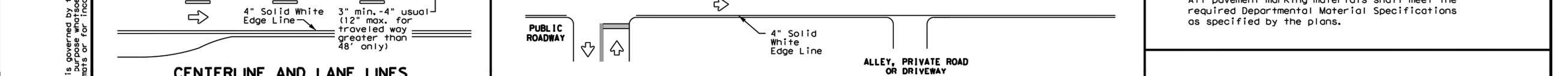
HL93 LOADING

BRIDGE DIVISION STANDARD

BOX CULVERTS PRECAST MISCELLANEOUS DETAILS

SCP-MD

See Box Culvert Supplement (BCS) standard sheet for details and notes not shown.
In lieu of formwork, the design shown on this sheet, the contractor shall provide an interior wall reinforcement that is equal to or exceeds the box design for the design fill height. In the table below, the contractor shall provide an interior wall reinforcement with Item "Precast Concrete Structural Members (Fabrication)".



GARY ELI JONES
79198
REGISTERED PROFESSIONAL ENGINEER

Jan 09, 2024

ELI ENGINEERING
79198
REGISTERED PROFESSIONAL ENGINEER

700 THERESA COVE, CEDAR PARK, TX 78613
512-819-0819 (F) 512-552-0560

LEANDER, TEXAS 78641 (CITY LIMITS)

LONE STAR LANDING PHASE ONE

SUBDIVISION IMPROVEMENTS

CONSTRUCTION DETAILS (10 OF 10)

DRAWING SCALE: HORIZ. = VERT. =

SURVEYED: RR

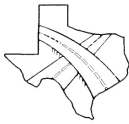
FILE NAME:

DATE: JTC

DRAWN: EEL

DESIGNED:

SHEET 52 OF 52



Firm # 17877

February 18, 2024

Texas Commission on Environmental Quality
Region 11 Field Office (Austin)
2800 S. IH 35, Suite 100
Austin, Texas 78704

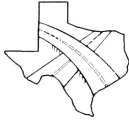
**Re: Lone Star Landing Phase 1
Contributing Zone Plan Permit
Attachment N-Inspection, Maintenance, Repair and Retrofit Plan**

To Whom It May Concern:

A plan for the inspection, maintenance, repair, and if necessary, retrofit of the subdivision is attached. It includes procedures for documenting inspections, maintenance, repairs, and if necessary, retrofits as well as record keeping procedures. The plan has been prepared and certified by the engineer that designed the subdivision. The owner or responsible party has signed the plan.

If you have any questions or need further assistance, please contact me at 512-658-8095.

Gary Eli Jones, P.E.
Authorized Agent



Firm # 17877

February 18, 2024

Mr. Mallikarjun Gilakattula
Lone Star Landing Texas, LLC
3320 Prentiss Lane
Leander, TX 78641

**Re: Lone Star Landing Phase 1
Contributing Zone Plan
Attachment N – CZP - Operation & Maintenance Plan for BMP**

To Mr. Gilakattula:

TCEQ requires the property owner to keep operation, maintenance, and inspections records of the BMP features including the grassy swale and batch detention pond.

General Guidelines:

- **Accessibility:** You should maintain accessibility to the BMP at all times. Equipment and personnel required to maintain and inspect the BMP should not be obstructed under reasonable conditions. Due to the vertical walls on the entire perimeter of the pond, maintenance access will be provided via 6-ft access gates located at the curb openings to each side of the ponds. The vertical drop is less than four (4) feet therefore, access with small ladders with trimmers can be used to mow and maintain the pond. Larger equipment will have to be lifted down into the pond from the asphalt paved drive adjacent to the pond.
- **Material Disposal:** Stormwater pollutants include a variety of substances that are deposited in the BMP. Federal and state laws and regulations may apply to the disposal of substances removed from the BMP. In order to dispose of substances removed from the BMP you must 1) characterize the waste 2) classify the waste based on character 3) properly dispose the waste according to current state (30TAC 330 or 335) and federal rules (40 CFR Subchapter C or D). The sediment must be determined inert for on-site disposal.

At a minimum, you should keep written records indicating the following:

Subject	Frequency
Pest management	Develop an integrated pest management plan for vegetated areas. Specify how problem weeds and insects will be controlled with minimal or no use of insecticides and herbicides.
Inspect swales & filters	Twice per year, once after a major rainfall event.
Inspect outlet structure	Twice per year, once after a major rainfall event.
Mow and maintain area	As needed such that grass is less than 18" tall or twice per year.
Remove sediment	Remove sediment that reaches 3 inches in depth over any spot or covers vegetation. Replace eroded areas with compacted fill and re-seed as necessary to maintain

Maintenance Guidelines for Batch Detention Basins

Batch detention basins may have somewhat higher maintenance requirements than an extended detention basin since they are active stormwater controls. The maintenance activities are identical to those of extended detention basins with the addition of maintenance and inspections of the automatic controller and the valve at the outlet.

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 and 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 and 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.

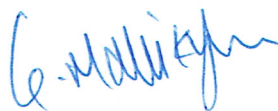
All maintenance and repairs made to the BMP should be documented along with the inspection report.

Sincerely,

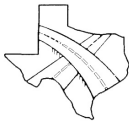
Concurrence & Acceptance:



Gary Eli Jones, P.E.



Mallik Gilakattula



Firm # 17877

April 8, 2024

Texas Commission on Environmental Quality
Region 11 Field Office (Austin)
2800 S. IH 35, Suite 100
Austin, Texas 78704

**Re: Lone Star Landing
Contributing Zone Permit
Attachment P-Measures for Minimizing Surface Stream Contamination**

To Whom It May Concern:

The permanent BMP that is proposed is a batch detention pond on the lower elevations of the project. The batch detention pond will provide permanent water quality controls. Temporary BMP;s will be provided to minimize and control contamination during construction until permanent vegetation is established.

If you have any questions or need further assistance, please contact me at 512-658-8095.

Gary Eli Jones, P.E.
Authorized Agent

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: Gary Eli Jones, P.E.

Date: 2/18/2024

Signature of Customer/Agent:



Regulated Entity Name: Lone Star Landing Phase 1

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: Brushy Creek

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

Occurrences contributing to a spill may occur during scheduled maintenance of construction equipment. There are no special potential sources of contamination with this site other than normal construction activities for site and building construction. Temporary BMPs including silt fence, rock berms, settling basin, and concrete washout will be on site prior to construction and monitored per SWPPP. Caution is to be exercised to prevent any existing ground surfaces, or new ground surfaces to become contaminated. Once the refueling staging area is no longer needed, the area is to be returned to its original condition, or better. Concrete curing compound and fuel leakage shall be contained downstream of the pond outlet structure. Contractor shall follow the steps below in preventing and responding to spills as outlined in TCEQ publication RG-348, *Technical Guidance on Best Management Practices* (Revised July 2005).

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 runoff during rainfall to the extent that it doesn't compromise clean up activities.

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

1-118

(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 provisions 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.

1-119

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>.

Vehicle and Equipment Maintenance

- (1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
- (2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately
- (3) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- (4) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- (5) Place drip pans or absorbent materials under paving equipment when not in use.
- (6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- (7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- (8) Oil filters disposed of in trashcans or dumpsters can leak oil and pollute

stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.

(9) Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

(1) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.

(2) Discourage “topping off” of fuel tanks.

(3) Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

Concrete Washout Areas

The purpose of concrete washout areas is to prevent or reduce the discharge of pollutants to stormwater from concrete waste by conducting washout offsite, performing onsite washout in a designated area, and training employees and subcontractors.

The following steps will help reduce stormwater pollution from concrete wastes:

- Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.
- Avoid mixing excess amounts of fresh concrete.
- Perform washout of concrete trucks in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped onsite, except in designated areas.

For onsite washout:

- Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
- Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.

Below grade concrete washout facilities are typical. These consist of a lined excavation sufficiently large to hold expected volume of washout material. Above grade facilities are used if excavation is not practical. Temporary concrete washout facility (type above grade) should be constructed as shown on the details at the end of this section, with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.

When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of. Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

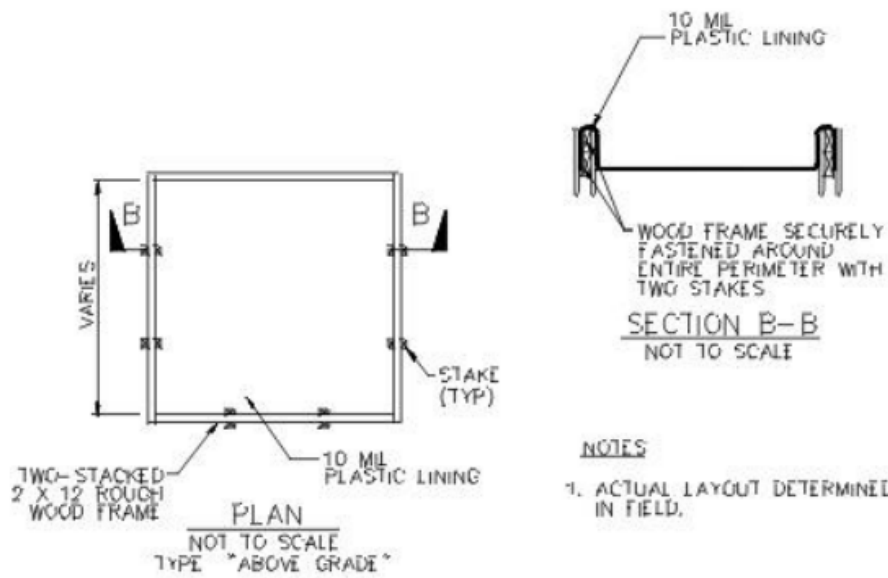
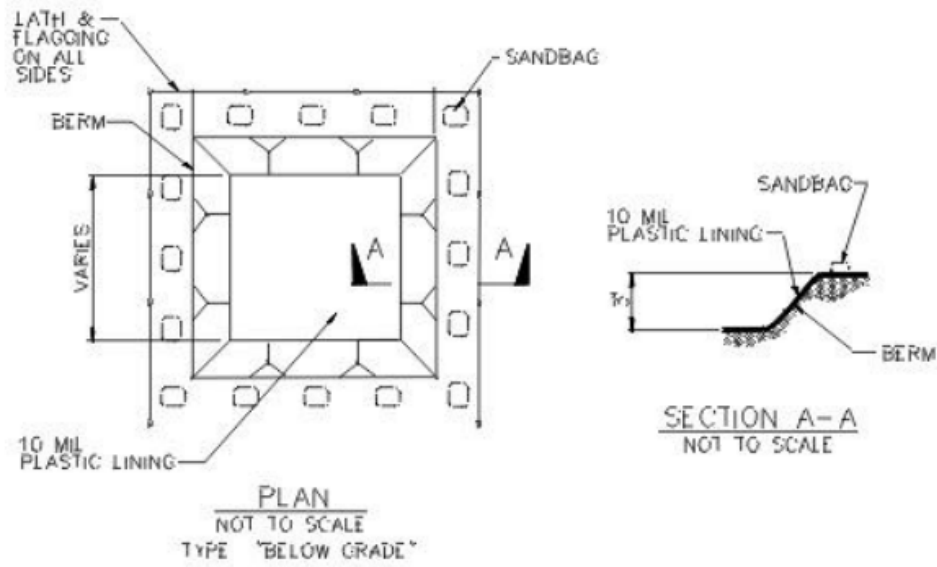


Figure: Schematics of Concrete Washout Areas

REPORTABLE QUANTITIES (RQ)

Refer to: (https://www.tceq.texas.gov/response/spills/spill_rq.html)

Kind of spill	Where discharged	Reportable quantity	Rule, statute, or responsible agency
Hazardous substance	onto land	"Final RQ" in Table 302.4 in 40 CFR 302.4 (PDF)	30 TAC 327 ↗
	into water	"Final RQ" or 100 lbs, whichever is less	
Any oil	coastal waters	as required by the Texas General Land Office	Texas General Land Office ↗
Crude oil, oil that is neither a petroleum product nor used oil	onto land	210 gallons (five barrels)	30 TAC 327 ↗
	directly into water	enough to create a sheen	
Petroleum product, used oil	onto land, from an exempt PST facility	210 gallons (five barrels)	30 TAC 327 ↗
	onto land, or onto land from a non-exempt PST facility	25 gallons	
	directly into water	enough to create a sheen	
Associated with the exploration, development and production of oil, gas, or geothermal resources	under the jurisdiction of the Railroad Commission of Texas	as required by the Railroad Commission of Texas	Railroad Commission of Texas ↗
Industrial solid waste or other substances	into water	100 lbs	30 TAC 327 ↗
From petroleum storage tanks, underground or aboveground	into water	enough to create a sheen on water	30 TAC 334 ↗ .75-81
From petroleum storage tanks, underground or aboveground	onto land	25 gallons or equal to the RQ under 40 CFR 302 ↗	30 TAC 327 ↗
Other substances that may be useful or valuable and are not ordinarily considered to be waste, but will cause pollution if discharged into water in the state	into water	100 lbs	30 TAC 327 ↗

ATTACHMENT “B”

Potential Sources of Contamination

Occurrences contributing to a spill may occur during scheduled maintenance of construction equipment. There are no special potential sources of contamination with this site other than normal construction activities for site and building construction. Temporary BMPs including construction entrance, silt fence and concrete washout will be on site prior to construction and monitored per SWPPP. Caution is to be exercised to prevent any existing ground surfaces, or new ground surfaces to become contaminated. Once the refueling staging area is no longer needed, the area is to be returned to its original condition, or better. Concrete curing compound and fuel leakage shall be contained downstream of the pond outlet structure. Contractor shall follow the steps below in preventing and responding to spills as outlined in TCEQ publication RG-348, *Technical Guidance on Best Management Practices* (Revised July 2005).

ATTACHMENT "C"

Sequence of Major Activities

<u>Description</u>	<u>Area (acres)</u>
1. Install all erosion control	1.82
2. Conduct pre-construction conference	N/A
3. Excavate ponds	0.80
4. Establish subgrade on site	2.68
5. Install all Wastewater lines	1.12
6. Install all Water lines	1.09
7. Install all Storm drain and channels	1.69
8. Process and compact subgrade to final grades	2.68
9. Install paving	1.07
10. Final grade ponds and outlet controls	0.80
11. Install all landscape and irrigation, re-vegetate all disturbed areas	4.48
12. Grading of Lots and home construction	10.56
13. Remove temporary erosion control subsequent to establishment of vegetation	1.82

ATTACHMENT “F”

Structural Practices

There will be channels and box culvert storm drain to convey the offsite drainage area through the site and around the proposed batch detention pond. This is the natural drainage pattern and the proposed drainage improvements will convey the offsite drainage through the property down to the floodplain where it has always drained. No improvements are proposed to divert storm water run-off from its existing drainage pattern. All unpaved areas will be re-vegetated according to City of Leander & TCEQ Specifications for re-vegetation of disturbed areas.

ATTACHMENT “D”

Temporary Best Management Practices

Silt fence and rock berms will be installed to intercept storm water runoff originating within the project, prior to discharge to existing drainage conveyances.

A stabilized construction entrance will be installed at both proposed roadways off of CR 177 to minimize construction vehicles transporting sediment onto neighboring roadways. This site contains no surface streams.

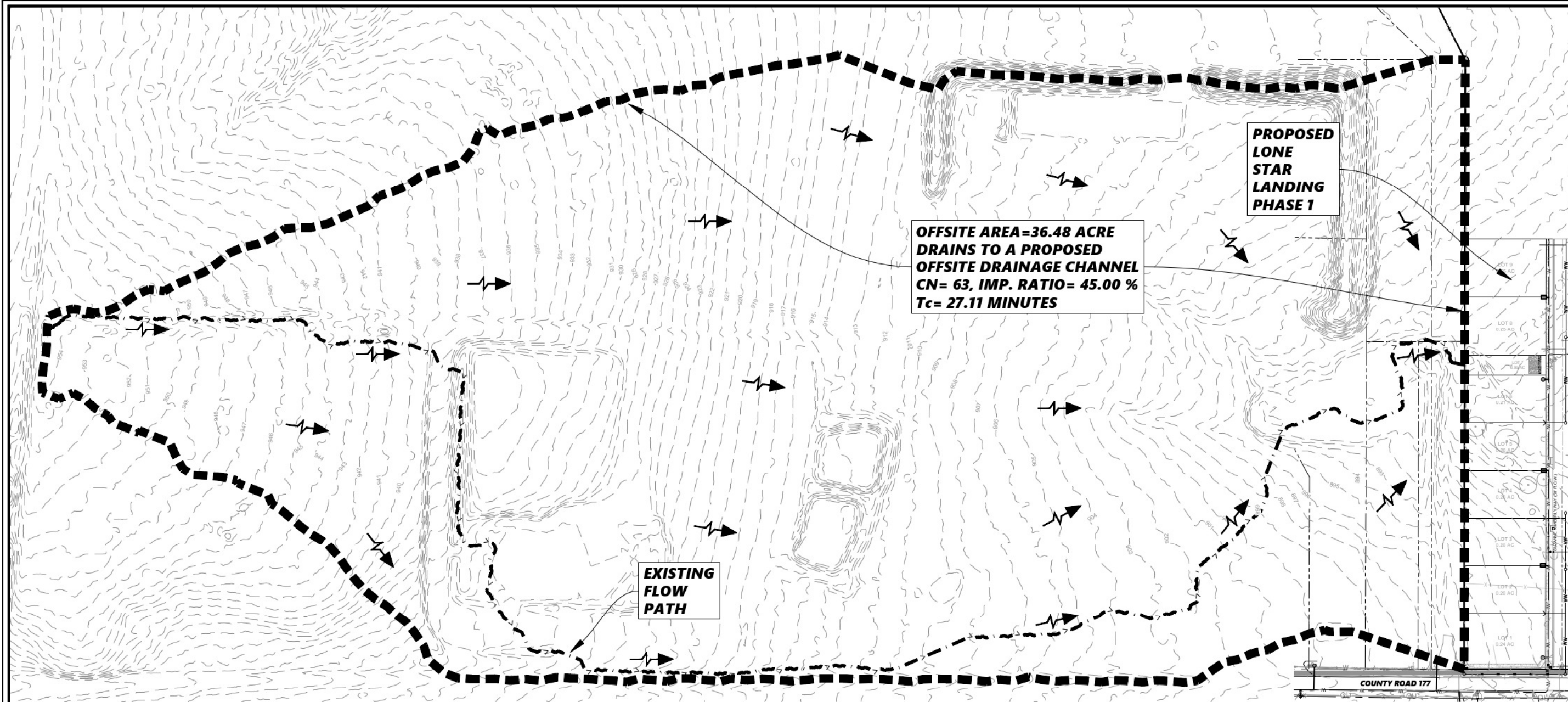
There will be a concrete washout on site for concrete trucks and a temporary staging & storage area to utilize during construction.

ATTACHMENT “G”

Drainage Area Map

Included in the attached Set of Construction Plans. There are no areas greater than 10 acres that will be disturbed at one time. The initial Phase 1 construction will include the streets, utilities and batch detention pond proposed for the subdivision. The limits of construction for the initial phase is 4.48 acres. Phase 2 will include construction of the homes and lot grading. The batch detention pond will effectively serve as a settling basin for Phase 1 and Phase 2 until permanent vegetation is established.

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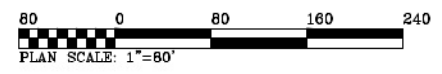
Drainage Area	EXISTING		IMPERVIOUS			GRASS		
	Total Area (Ac)	Total Area (sf)	Area Impervious (sf)	Area Impervious (Ac)	Area Impervious (%)	Area Grass (sf)	Area Grass (Ac)	Area Grass (%)
OFFSITE	36.48	1,589,069	0	0.00	0.0%	1,589,069	36.48	100.0%

Time of Concentration Calculations		Sheet Flow				Shallow Conc. Flow				Total		
Existing Flows		Area	Area	L	n	S	T _t	L	Surface Type	S	T _t	T _c
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(min)
OFFSITE	EXS. OFFSITE RUNOFF TO BYPASS CHANNEL	36.48	1,589,080	100	0.150	0.020	8.85	3,100	Unpaved	0.0250	20.25	27.11

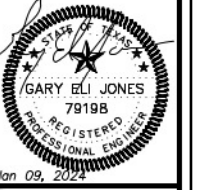
Existing Conditions				
	2yr	10yr	25yr	100yr
OFFSITE	64.28	116.83	155.92	225.89

LEGEND

- EXISTING FLOW PATH
- EXISTING DRAINAGE AREA BOUNDARY
- EXISTING FLOW DIRECTION



NO.	DATE	REVISION	BY



ELI ENGINEERING, PLLC.

 700 THERESA COVE, CEDAR PARK, TX 78613



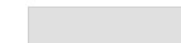
 512-816-0819 (F) 512-532-0560

LONE STAR LANDING PHASE ONE
SUBDIVISION IMPROVEMENTS
 OFFSITE DRAINAGE PLAN AND CALCULATIONS

DRAWING SCALE:	HORIZ. =	VERT. =
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	

SHEET
13
 OF
52

LEGEND

-  PERVIOUS AREAS
-  PROPOSED LOT AREAS. (3500 SQ. FT IMPERVIOUS AREA PER LOT)
-  BYPASS AREAS

NOTE: CITY OF LEANDER DRAINAGE CRITERIA WAS USED FOR ALL CALCULATIONS

Time of Concentration Calculations				Sheet Flow				Shallow Conc. Flow			Total	
Existing Flows		Area	Area	L	n	S	T _t	L	Surface Type	S	T _t	T _c
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(min)
EX DA-1	SOUTH EAST PROPERTY CORNER	15.37	669,369	100	0.150	0.036	6.98	785	Unpaved	0.0200	5.73	11.72

Drainage Area	EXISTING		IMPERVIOUS			GRASS		
	Total Area (Ac)	Total Area (sf)	Area (sf)	Area (Ac)	Area (%)	Area (sf)	Area (Ac)	Area (%)
EX DA-1	15.37	669,364	0	0.00	0.0%	669,364	15.37	100.0%

Drainage Area	PROPOSED		IMPERVIOUS			GRASS		
	Total Area (Ac)	Total Area (sf)	Area (sf)	Area (Ac)	Area (%)	Area (sf)	Area (Ac)	Area (%)
PR DA-1	13.22	575,811	251,489	5.77	43.68%	324,322	7.45	56.3%
PR DA-2	2.15	93,553	8,750	0.20	9.4%	84,803	1.95	90.6%

Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
EX DA-1	15.37	0.0%	65	16.07	18.04	49.55	74.00	119.20

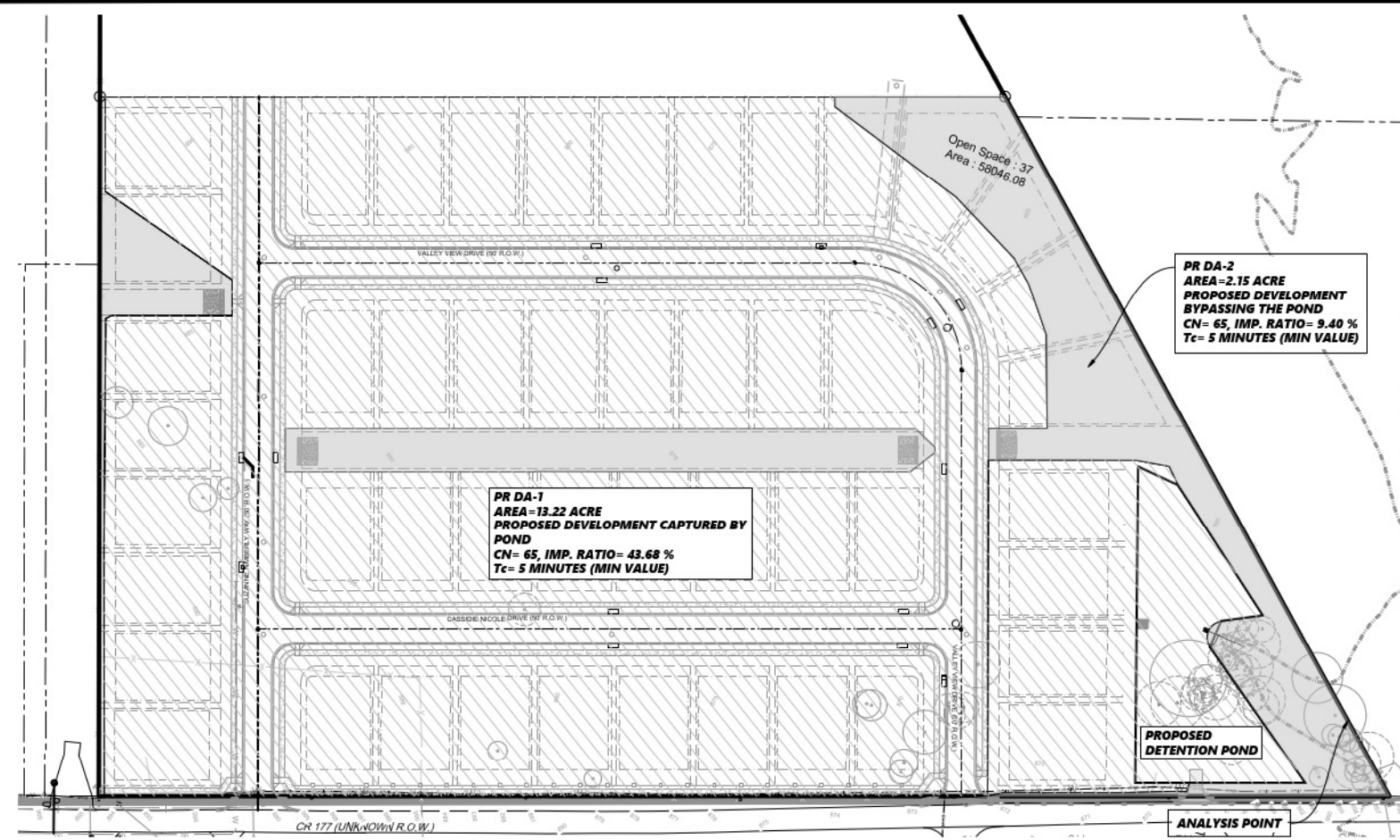
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
PR DA-1	13.22	43.68%	65	5.00	42.28	76.95	102.50	148.32
PR DA-2	2.15	9.35%	65	5.00	4.85	11.50	16.70	26.14
AP-1	ANALYSIS POINT				17.29	46.72	72.16	118.51

EXISTING		PROPOSED	
Analysis Point 1: South-East of the property			
2 YR	18.04 CFS	Existing Flows	Proposed Flows
10 YR	49.55 CFS	18.04 CFS	17.60 CFS
25 YR	74.00 CFS	49.55 CFS	47.90 CFS
100 YR	119.20 CFS	74.00 CFS	73.22 CFS
		119.20 CFS	119.10 CFS

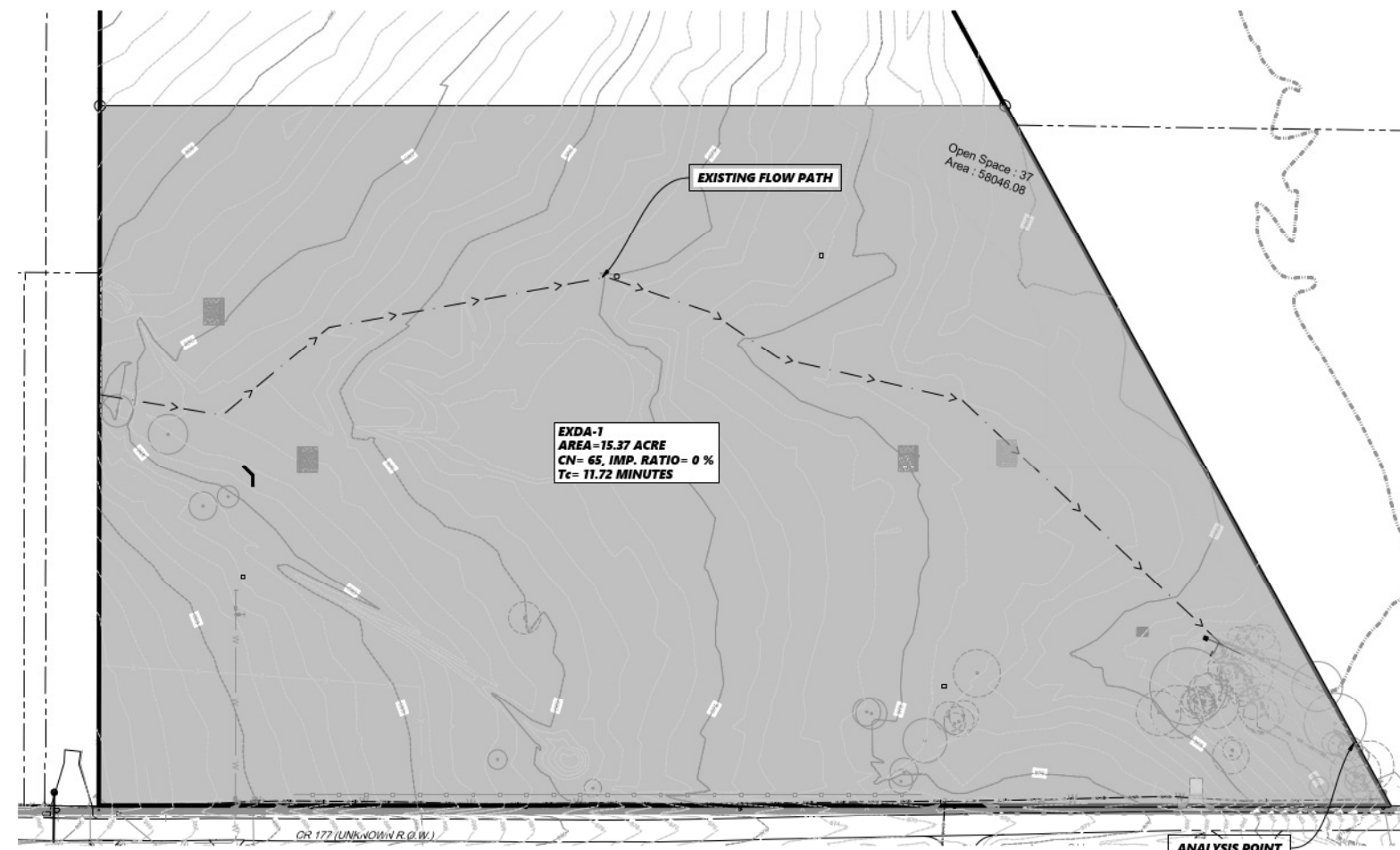
NOTE: ALL PROPOSED FLOWS LEAVING THE PROPERTY ARE LESS THAN OR EQUAL TO EXISTING CONDITION FLOWS

Analysis Point	Peak Pre-Dev Flows (cfs)		Peak Flow Entering Pond (cfs)	Peak Flow Leaving Pond (cfs)	Peak Elevation (m.s.l.)	Freeboard (ft)
	Peak Pre-Dev Flows (cfs)	Peak Post-Dev Flows (cfs)				
2-YR	18.04	17.60	42.28	15.40	862.40	2.6
10-YR	49.55	47.90	76.95	40.82	863.04	2.0
25-YR	74.00	73.22	102.50	61.90	863.45	1.5
100-YR	119.20	119.10	148.28	99.65	864.05	1.0

ELEV	CONTOUR AREA SQ. FT	STORAGE CU FT	STORAGE ACRE FT	DISCHARGE (CFS)
859	0	0.00	0	0
860	11,760.00	5880.00	0.134986572	0
861	25,630.00	24575.00	0.564165818	0
861.134	25,660.42	28,024.70	0.643360144	0.00
862	25,867.00	50319.00	1.156168251	8.78
863	26,100.00	76297.00	1.751542599	39.38
864	26,300.00	102497.00	2.353013379	96.91
865	26,520.00	128907.00	2.959305108	171.04



PROPOSED CONDITIONS
SCALE= 1:80



EXISTING CONDITIONS
SCALE= 1:80



Jan 09, 2024
 TPELS FIRM No. 17517
ELI ENGINEERING
 ELI ENGINEERING, PLLC.
 700 THERESA COVE, CEDAR PARK, TX 78613
 512-816-0819 (F) 512-552-0560

LEANDER, TEXAS 78641 (CITY LIMITS)
LONE STAR LANDING PHASE ONE
 SUBDIVISION IMPROVEMENTS
 PROPOSED POND PRE POST

DRAWING SCALE:	HORIZ =	VERT =
SURVEYED:	FILE NAME:	RR
DATE:	DRAWN:	JTC
DESIGNED:	EEL	

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.

Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.

Characters shown in red are data entry fields.

Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_{II} \times P)$

where: L_M TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load
 A_{II} = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County = Williamson	
Total project area included in plan = 15.37 acres	
Predevelopment impervious area within the limits of the plan = 0.00 acres	
Total post-development impervious area within the limits of the plan = 5.97 acres	
Total post-development impervious cover fraction = 0.39	
P = 32 inches	
L_M TOTAL PROJECT = 5196 lbs.	

IC CALCULATIONS FYI

	3500	168000	TOTAL IC
48 SF Lots < 10,000 SF	3500	168000	
Streets	2420	72600	
Sidewalks	2420	19360	
		259960	5.97

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = **1**

BYPASS IC CALCS

	50%	3500	1750	TOTAL
Lot 8, Blk A	50%	3500	1750	
Lot 8, Blk D	25%	3500	875	
Lot 9, Blk D	50%	3500	1750	
Lot 10, Blk D	50%	3500	1750	
Lot 11, Blk D	50%	3500	1750	
Lot 12, Blk D	75%	3500	2625	
Total IC Bypass:		10500	0.24	
Total Area Bypass:			2.15	

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = **1** "PR DA-1"

Total drainage basin/outfall area = 13.22 acres
Predevelopment impervious area within drainage basin/outfall area = 0.00 acres
Post-development impervious area within drainage basin/outfall area = 5.73 acres
Post-development impervious fraction within drainage basin/outfall area = 0.43
L_M THIS BASIN = 4987 lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**
Removal efficiency = **91** percent

- Aqualogic Cartridge Filter
- Bioretention
- Contech Storm Filter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

4. Calculate Maximum TSS Load Removed (L_{R}) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (BMP \text{ efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = 13.22 acres
A_i = 5.73 acres
A_p = 7.49 acres
L_R = 5891 lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired L_M THIS BASIN = **5196** lbs.
 F = **0.88**

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

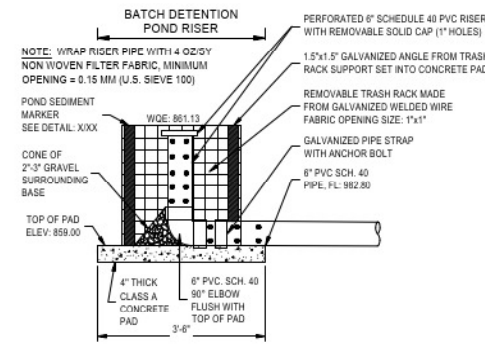
Rainfall Depth = **1.50** inches
 Post Development Runoff Coefficient = **0.32**
 On-site Water Quality Volume = **23257** cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = **0.00** acres
 Off-site impervious cover draining to BMP = **0.00** acres
 Impervious fraction of off-site area = **0**
 Off-site Runoff Coefficient = **0.00**
 Off-site Water Quality Volume = **0** cubic feet

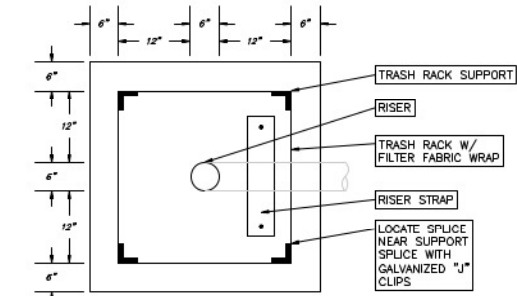
Storage for Sediment = **4651**
 Total Capture Volume (required water quality volume(s) x 1.20) = **27908** cubic feet

BATCH DETENTION POND	
Contributing Drainage Area =	"PR DA-1"
Total Drainage Area =	15.37 acre
Pre-Development I.C. =	- acre
Post-Development I.C. =	6 acre
Post-Development I.C. Fraction =	0
L_M TOTAL PROJECT =	5,196 lbs
AC =	13.22 acre
AI =	5.73 acre
AP =	7.49 acre
LR =	5,891 lbs
Desired L_M this basin =	5,196 lbs
Fraction of Annual Runoff (F) =	1
Rainfall Depth =	2 inch
Post Development Runoff Coefficient =	0
On-site Water Quality Volume =	23,257 cubic ft
Off-site area draining to BMP =	BYPASS acre
Off-site impervious cover draining to BMP =	- acre
Impervious fraction of off-site area =	-
Off-site Runoff Coefficient =	-
Off-site Water Quality Volume =	- cubic ft
Storage for Sediment =	4,651 cubic ft
Total Capture Volume Required =	27,908 cubic ft
Total Capture Volume Provided =	28,000 cubic ft



WATER QUALITY RISER PIPE SECTION

A NTS

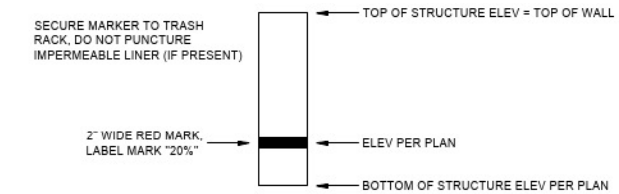


BATCH DETENTION POND RISER PIPE

B NTS

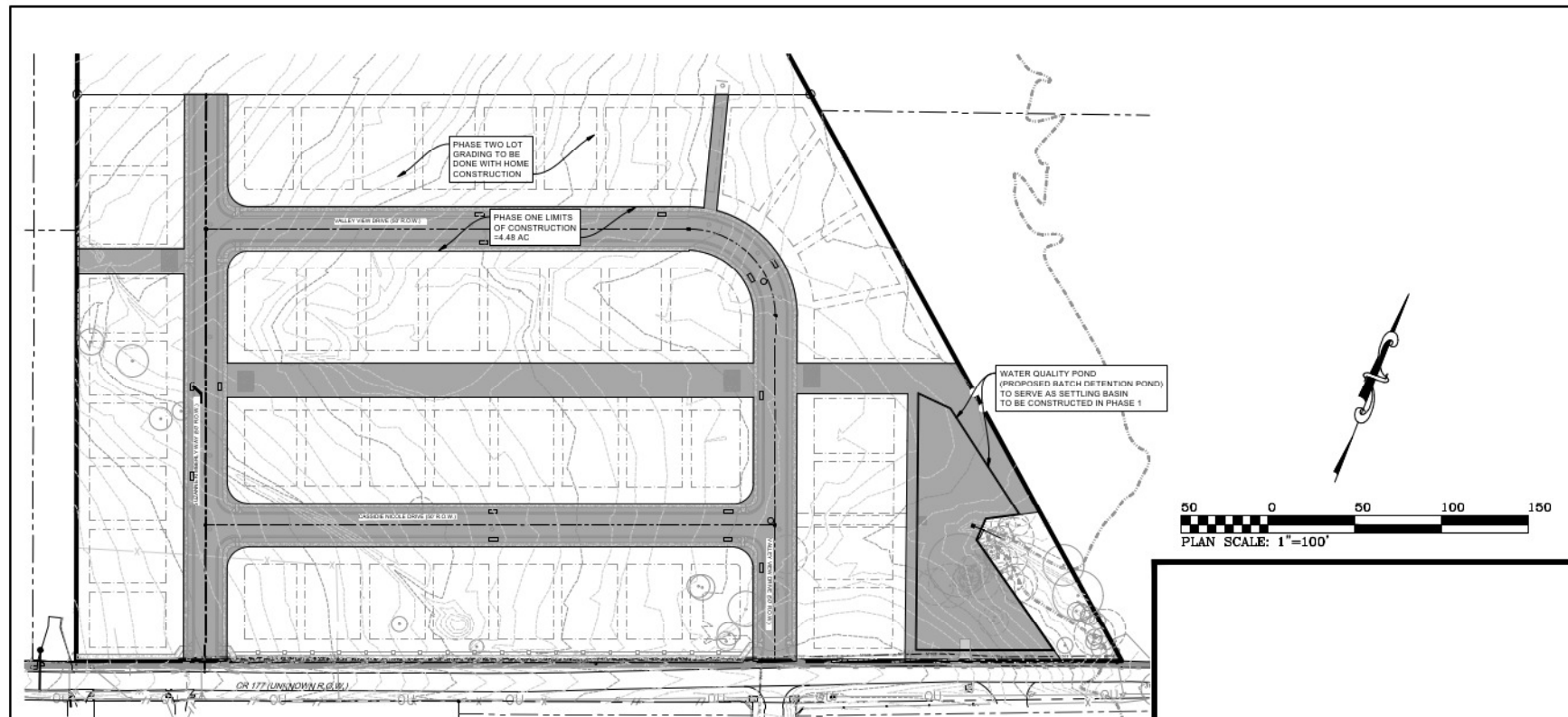
NOTES:

- POST THE FOLLOWING SIGN UNDER THE VISIBLE ALARM FOR EMERGENCY CONTACT:
 EMERGENCY CONTACT:
 OWNER: XXX-XXX-XXXX
 TCEQ: 512-339-2929
- POND BOTTOM SHALL BE VEGETATED PER THE SEEDING SPECIFICATION ON THE EROSION CONTROL PLAN SHEET.



WATER QUALITY POND SEDIMENT MARKER

C NTS



TCEQ LIMITS OF CONSTRUCTION EXHIBIT



APR 06, 2024
 TPELS FIRM NO. 17517
ELI ENGINEERING
 ELI ENGINEERING, PLLC.
 700 THERESA COVE, CEDAR PARK, TX 78613
 512-818-0818 (F) 512-532-0560

LEANDER, TEXAS 78641 (CITY LIMITS)
LONE STAR LANDING PHASE ONE
 SUBDIVISION IMPROVEMENTS
 PROPOSED DRAINAGE AREA MAP

DRAWING SCALE:	HORIZ =	VERT =
SURVEYED:	RR	
FILE NAME:		
DATE:		
DRAWN:	JTC	
DESIGNED:	EEL	

ATTACHMENT "I"

Inspection & Maintenance for Temporary BMPs

SUMMARY OF EROSION AND SEDIMENT CONTROL MAINTENANCE/INSPECTION PROCEDURES

Silt Fence Inspection and Maintenance Guidelines:

- (1) Inspect all fencing weekly, and after any rainfall.
- (2) Remove sediment when buildup reaches 6 inches.
- (3) Replace any torn fabric or install a second line of fencing parallel to the torn section.
- (4) Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
- (5) When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

Inlet Protection Inspection and Maintenance Guidelines:

- (1) Inspection should be made weekly and after each rainfall. Repair or replacement should be made promptly as needed by the contractor.
- (2) Remove sediment when buildup reaches a depth of 3 inches. Removed sediment should be deposited in a suitable area and in such a manner that it will not erode.
- (3) Check placement of device to prevent gaps between device and curb.
- (4) Inspect filter fabric and patch or replace if torn or missing.
- (5) Structures should be removed and the area stabilized only after the remaining drainage area has been properly stabilized.

Temporary Construction Entrance/Exit Inspection and Maintenance Guidelines:

- (1) The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.
- (2) All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
- (3) When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.
- (4) When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
- (5) All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
- A maintenance inspection report will be made after each inspection. A copy of the report forms to be used are included in this WPAP.

- The site job superintendent will select the individuals who will be responsible for inspections, maintenance and repair activities, and filling out the inspection and maintenance reports.
- Personnel selected for inspection and maintenance responsibilities will receive training from the site job superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

FINAL STABILIZATION/TERMINATION CHECKLIST

1. All soil disturbing activities are complete
2. Temporary erosion and sediment control measures have been removed or will be removed at an appropriate time.
3. All areas of the construction site not otherwise covered by a permanent pavement or structure have been stabilized with a uniform perennial vegetative cover with a density of 70% or equivalent measures have been employed.

**CONTRIBUTING ZONE (CZP)
INSPECTION AND MAINTENANCE REPORT FORM**

STABILIZATION MEASURES

INSPECTOR: _____ DATE: _____

QUALIFICATIONS OF INSPECTOR:

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL: _____

AREA	DATE SINCE LAST RAINFALL	DATE OF NEXT DISTURBANCE	STABILIZED? (YES/NO)	STABILIZED WITH	CONDITION

STABILIZATION REQUIRED:

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

**CONTRIBUTING ZONE (CZP)
INSPECTION AND MAINTENANCE REPORT FORM**

SILT FENCE

INSPECTOR: _____ DATE: _____

QUALIFICATIONS OF INSPECTOR:

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL: _____

IS THE BOTTOM OF THE FABRIC STILL BURIED? _____

IS THE FABRIC TORN OR SAGGING? _____

ARE THE POSTS TIPPED OVER? _____

HOW DEEP IS THE SEDIMENT? _____

MAINTENANCE REQUIRED FOR SILT FENCE: _____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

**CONTRIBUTING ZONE (CZP)
INSPECTION AND MAINTENANCE REPORT FORM**

STABILIZED CONSTRUCTION EXIT

INSPECTOR: _____ DATE: _____

QUALIFICATIONS OF INSPECTOR:

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL: _____

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD? _____

IS THE GRAVEL CLEAN OR FILLED WITH SEDIMENT? _____

DOES ALL TRAFFIC USE THE STABILIZED EXIT TO LEAVE THE JOB SITE? _____

IS THE CULVERT BENEATH THE EXIT WORKING? _____

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION EXIT: _____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

ATTACHMENT “J”

Schedule of Interim and Permanent Soil Stabilization Practices

All areas within the project limits that are disturbed during construction will be revegetated and restabilized immediately following construction activities. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

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

I Mallik Gilakattula,
Print Name

Member,
Title - Owner/President/Other

of Texas Lone Star Landing, LLC,
Corporation/Partnership/Entity Name

have authorized Gary Eli Jones, P.E.
Print Name of Agent/Engineer

of Eli Engineering, PLLC
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:

[Handwritten Signature]
Applicant's Signature

02/22/2024
Date

THE STATE OF TEXAS §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Mallik Gilakatulla, 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 21 day of Feb., 2024

[Handwritten Signature]

NOTARY PUBLIC

Hetal Patel

Typed or Printed Name of Notary



MY COMMISSION EXPIRES: 11.27.2026

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Lone Star Landing Phase 1

Regulated Entity Location: 800 CR 177, Leander, TX 78641

Name of Customer: Texas Lones Star Landing, LLC

Contact Person: Mallik Gilakattula

Phone: 512-761-8025

Customer Reference Number (if issued):CN _____

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

San Antonio Regional Office

Mailed to: TCEQ - Cashier

Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

Site Location (Check All That Apply):

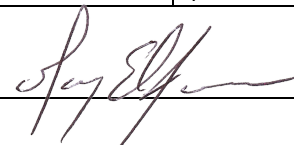
Recharge Zone

Contributing Zone

Transition Zone

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
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	15.37 Acres	\$ 4000
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: 2/18/2024

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	\$1,500
	5 < 10	\$3,000
	10 < 40	\$4,000
	40 < 100	\$6,500
	100 < 500	\$8,000
	≥ 500	\$10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1	\$3,000
	1 < 5	\$4,000
	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$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

<i>Project</i>	<i>Fee</i>
Extension of Time Request	\$150



TCEQ Use Only

TCEQ Core Data Form

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.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> 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		RN

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	05/21/2021	
<input checked="" type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> 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:	
Texas Lone Star Landing			
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
0804384728	32082665699		
11. Type of Customer:	<input checked="" type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Other:	
12. Number of Employees		13. Independently Owned and Operated?	
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following:			
<input checked="" type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other:			
15. Mailing Address:	3220 Prentiss Lane		
	City	Leander	State TX ZIP 78641 ZIP + 4 3372
16. Country Mailing Information (if outside USA)		17. E-Mail Address (if applicable)	
		mallik246@gmail.com	
18. Telephone Number	19. Extension or Code	20. Fax Number (if applicable)	
(512) 761-8025		() -	

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)
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> 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.)
Lone Star Landing Phase 1

23. Street Address of the Regulated Entity: <i>(No PO Boxes)</i>	800 CR 177								
	City	Leander	State	TX	ZIP	78641	ZIP + 4		
24. County	Williamson								
Enter Physical Location Description if no street address is provided.									
25. Description to Physical Location:	East and West sides of Ronal Reagan Blvd, just north of CR 258, Liberty Hill, TX								
26. Nearest City					State	TX		Nearest ZIP Code	78641
27. Latitude (N) In Decimal:	30.572990			28. Longitude (W) In Decimal:	-97.794870				
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds				
30	34	22.764	97	47	41.532				
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)				
1521			236115						
33. What is the Primary Business of this entity? <i>(Do not repeat the SIC or NAICS description.)</i>									
Single Family Residential									
34. Mailing Address:	3320 Prentiss Lane								
	City	Leander	State	TX	ZIP	78641	ZIP + 4		
35. E-Mail Address:		mallik246@gmail.com							
36. Telephone Number			37. Extension or Code		38. Fax Number <i>(if applicable)</i>				
(512) 761-8025					() -				

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.

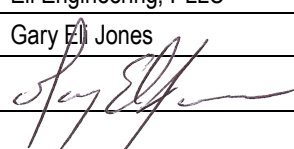
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

SECTION IV: Preparer Information

40. Name:	Gary Eli Jones	41. Title:	Design Engineer
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 658-8095		() -	gejtexas@gmail.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:	Eli Engineering, PLLC	Job Title:	Design Engineer
Name <i>(In Print)</i> :	Gary Eli Jones	Phone:	(512) 658-8095
Signature:		Date:	1/10/2022