CONTRIBUTING ZONE PLAN

FOR

LIBERTY HILL CREDIT UNION

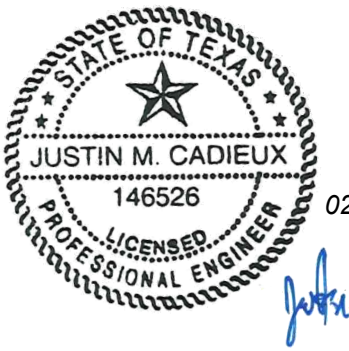
135 US-183,

IN

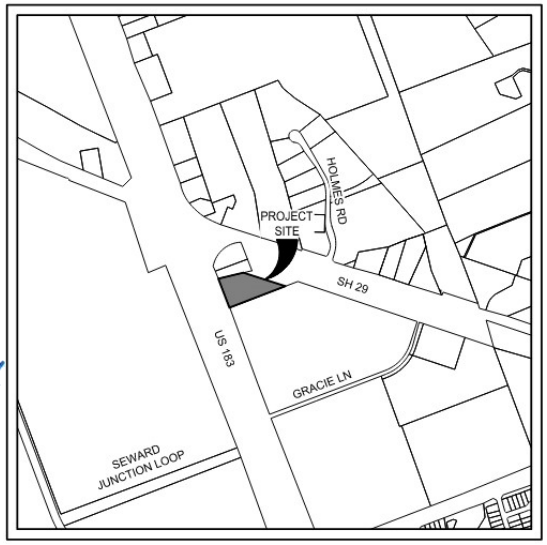
LIBERTY HILL, TEXAS 78642

PREPARED FOR

LEVEL 5, LLC
2326 WASHINGTON BLVD, FOURTH FLOOR
OGDEN, UTAH 84401



02/09/2026



QUIDDITY

912 S. Capital of Texas Highway, Suite 300
Austin, Texas 78746
Tel: 512.441.9493
Fax: 512.445.2286

January 2026

Contributing Zone Plan Checklist

- **Edwards Aquifer Application Cover Page (TCEQ-20705)**
- **Contributing Zone Plan Application (TCEQ-10257)**

  Attachment A - Road Map
  Attachment B - USGS Quadrangle Map
  Attachment C - Project Narrative
  Attachment D - Factors Affecting Surface Water Quality
  Attachment E - Volume and Character of Stormwater
  Attachment F - Suitability Letter from Authorized Agent (if OSSF is proposed)
  Attachment G - Alternative Secondary Containment Methods (if AST with an alternative method of secondary containment is proposed)
  Attachment H - AST Containment Structure Drawings (if AST is proposed)
  Attachment I - 20% or Less Impervious Cover Declaration (if project is multi-family residential, a school, or a small business and 20% or less impervious cover is proposed for the site)
  Attachment J - BMPs for Upgradient Stormwater
  Attachment K - BMPs for On-site Stormwater
  Attachment L - BMPs for Surface Streams
  Attachment M - Construction Plans
  Attachment N - Inspection, Maintenance, Repair and Retrofit Plan
  Attachment O - Pilot-Scale Field Testing Plan, if BMPs not based on Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs
  Attachment P - Measures for Minimizing Surface Stream Contamination

- **Storm Water Pollution Prevention Plan (SWPPP)**

  -OR-

- **Temporary Stormwater Section (TCEQ-0602)**

  Attachment A - Spill Response Actions
  Attachment B - Potential Sources of Contamination
  Attachment C - Sequence of Major Activities
  Attachment D - Temporary Best Management Practices and Measures
  Attachment E - Request to Temporarily Seal a Feature, if sealing a feature
  Attachment F - Structural Practices
  Attachment G - Drainage Area Map
  Attachment H - Temporary Sediment Pond(s) Plans and Calculations
  Attachment I - Inspection and Maintenance for BMPs
  Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

- **Copy of Notice of Intent (NOI)**
- **Agent Authorization Form (TCEQ-0599), if application submitted by agent**

- **Application Fee Form (TCEQ-0574)**
- **Check Payable to the "Texas Commission on Environmental Quality"**
- **Core Data Form (TCEQ-10400)**

912 S Capital of Texas Hwy Suite 300
Austin, Texas 78746
Tel: 512.441.9493
www.quiddity.com

January 8, 2026

Water Section Manager
Texas Commission on Environmental Quality
Region 11 Office
12100 Park 35 Circle, Bldg A, Rm 179
Austin, Texas 78753

Re: Contributing Zone Plan
Liberty Hill Credit Union
Liberty Hill, Texas

To Whom It May Concern:

On behalf of our client, Level 5, LLC, we are pleased to submit this Contributing Zone Plan for your consideration. Please find enclosed the following items for your review:

1. Edwards Aquifer Application Cover Page (TCEQ-20705)
2. Contributing Zone Plan Application With Attachments A-P (TCEQ-10257)
3. Construction Plans (Attachment M of CZP Application)
4. Storm Water Pollution Prevention Plan (SWPPP)
5. Notice of Intent (NOI)
6. Agent Authorization Form (TCEQ-0599)
7. Application Fee Form (TCEQ-0574)
8. Core Data Form (TCEQ-10400)

If you have any questions about any of the items included in this submittal, please call (512) 685-5152.

Sincerely,

Justin Cadieux, P.E.
Project Manager

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: Liberty Hill Credit Union						**2. Regulated Entity No.:** N/A (New)			
3. Customer Name: United Heritage Credit Union						**4. Customer No.:** CN602752404			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**		2.661	
9. Application Fee:	$4000		**10. Permanent BMP(s):**			Sedimentation Filtration Pond			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson		**14. Watershed:**			South Fork San Gabriel River			

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.)	__	__	_X_
Region (1 req.)	__	__	_X_
County(ies)	__	__	_X_
Groundwater Conservation District(s)	__Edwards Aquifer Authority __Barton Springs/ Edwards Aquifer __Hays Trinity __Plum Creek	__Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	__Austin __Buda __Dripping Springs __Kyle __Mountain City __San Marcos __Wimberley __Woodcreek	__Austin __Bee Cave __Pflugerville __Rollingwood __Round Rock __Sunset Valley __West Lake Hills	__Austin __Cedar Park __Florence __Georgetown __Jerrell __Leander _X_Liberty Hill __Pflugerville __Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	__	__	__	__	__
Region (1 req.)	__	__	__	__	__
County(ies)	__	__	__	__	__
Groundwater Conservation District(s)	__ Edwards Aquifer Authority __Trinity-Glen Rose	__Edwards Aquifer Authority	__Kinney	__EAA __Medina	__EAA __Uvalde
City(ies) Jurisdiction	__Castle Hills __Fair Oaks Ranch __Helotes __Hill Country Village __Hollywood Park __San Antonio (SAWS) __Shavano Park	__Bulverde __Fair Oaks Ranch __Garden Ridge __New Braunfels __Schertz	NA	__San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Justin M. Cadieux, P.E. Print Name of Customer/Authorized Agent 01/19/2026 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.

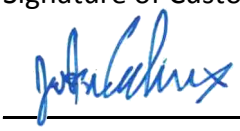
Signature

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: Justin M. Cadieux, P.E.

Date: 01/19/2026

Signature of Customer/Agent:



Regulated Entity Name: Liberty Hill Credit Union

Project Information

1. County: Williamson
2. Stream Basin: South Fork San Gabriel River
3. Groundwater Conservation District (if applicable): N/A
4. Customer (Applicant):

   Contact Person: Michael Ver Schuur
   Entity: United Heritage Credit Union
   Mailing Address: 12515 Research Blvd, Bldg 5
   City, State: Austin, TX Zip: 78759
   Telephone: (512) 435-4545 Fax: _____
   Email Address: mverschu@uhcu.org

5. Agent/Representative (If any):

Contact Person: Justin M. Cadieux, P.E.
Entity: Quiddity Engineering, LLC
Mailing Address: 912 S. Capital of Texas Highway, Suite 300
City, State: Austin, TX Zip: 78746
Telephone: (512) 685-5152 Fax: _____
Email Address: jcadieux@quiddity.com

6. Project Location:

[X] The project site is located inside the city limits of Liberty Hill
[ ] 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. [X] 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.

135 US-183, Liberty Hill, Texas 78642 (WCAD Parcel R496126)

8. [X] **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. [X] **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:

[X] Project site boundaries.
[X] USGS Quadrangle Name(s).

10. [X] **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:

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

11. Existing project site conditions are noted below:

[ ] Existing commercial site
[ ] Existing industrial site
[ ] Existing residential site

- [X] Existing paved and/or unpaved roads
- [X] Undeveloped (Cleared)
- [ ] Undeveloped (Undisturbed/Not cleared)
- [ ] Other: _____

12. The type of project is:

- [ ] Residential: # of Lots: _____
- [ ] Residential: # of Living Unit Equivalents: _____
- [X] Commercial
- [ ] Industrial
- [ ] Other: _____

13. Total project area (size of site): 2.661 Acres

    Total disturbed area: 2.661 Acres

14. Estimated projected population: 0

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

Table 1 - Impervious Cover

Impervious Cover of Proposed Project	*Sq. Ft.*	*Sq. Ft./Acre*	*Acres*
Structures/Rooftops	2774	÷ 43,560 =	0.064
Parking	1557	÷ 43,560 =	0.036
Other paved surfaces	43900	÷ 43,560 =	1.008
Total Impervious Cover	48231	÷ 43,560 =	1.107

Total Impervious Cover 1.107 **÷ Total Acreage** 2.661 **X 100 =** 41.6 **% Impervious Cover**

16. [X] **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. [X] Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

For Road Projects Only

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

- [ ] N/A

18. Type of project:

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

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

- ☐ Concrete
- ☐ Asphaltic concrete pavement
- ☐ Other: _____

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

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

21. Pavement Area:

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

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

☒ N/A

26. Wastewater will be disposed of by:

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

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

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

☒ Sewage Collection System (Sewer Lines):
The sewage collection system will convey the wastewater to the Liberty Hill Wastewater Treatment Plant (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

☐ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

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

☒ N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-

Total x 1.5 = 0 **Gallons**

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

one tank system, the containment structure is sized to capture one and one-half (1 1/2) times the cumulative storage capacity of all systems.

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

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

Table 3 - Secondary Containment

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

Total: 0 **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" = 30 '.

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): 48491C0275E, 9/26/2008

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

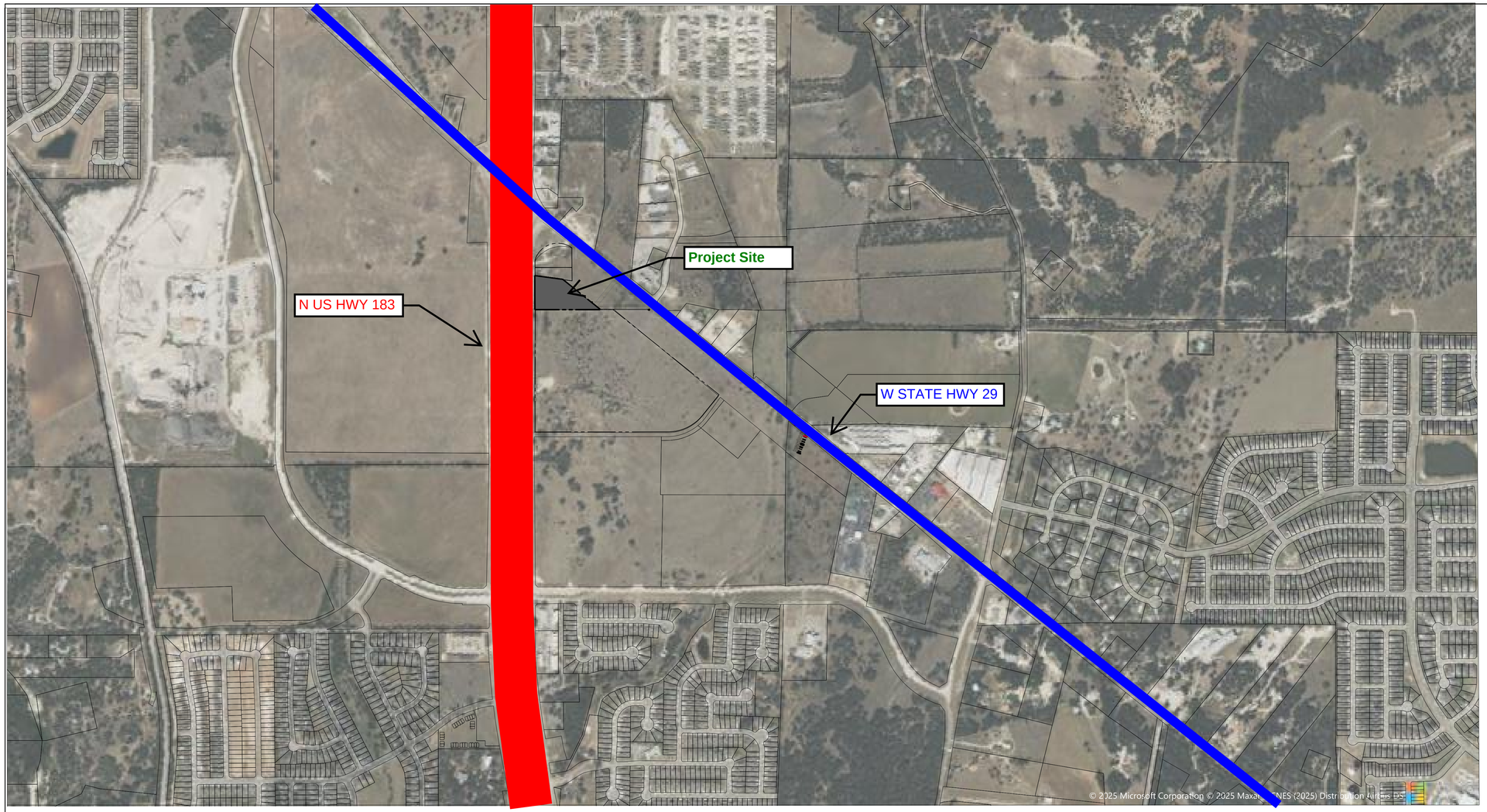
61. [X] Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.

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

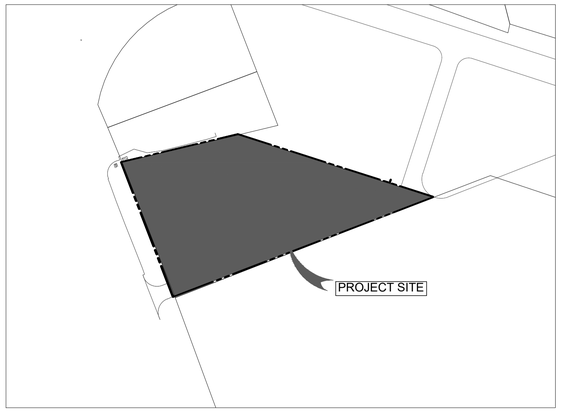
[ ] The Temporary Stormwater Section (TCEQ-0602) is included with the application.

Attachment A: Road Map



500 0 250 500

SCALE: 1" = 500'



150 0 75 150

SCALE: 1" = 150'

LIBERTY HILL CREDIT UNION

ROADWAY MAP

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SCALE: 1" = 500'
DATE: 7/10/2025
JOB NO: 15234-0018-01

K:\15234\15234-0018-01 Liberty Hill Credit Union\2 Design Phase\CAD\Plans\Site\EXHIBIT\CZP ATTACHMENT A ROADWAY MAP.dwg

Attachment B: USGS Quadrangle Map

USGS
science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
OnDemand Topo

7.5-MINUTE TOPO QUADRANGLE
TEXAS - CUSTOM EXTENT
7.5-MINUTE TOPO

-97.9371° 602 000mE 03 04 05 06 07 08 09 10 11 12 13 -97.8121°
30.7140° 3398 000mN 30.5888° 3385 000mN

Site Location

GEORGETOWN
Liberty Hill
LEANDER
Santa Rita Ranch
Anderson Cemetery
Hunt Cemetery
Cementerio Mexicano De Las Tres Marias
Smith Cemetery
Flying H Ranch Airport
Whitehead Cemetery
Miller Cemetery
Cedar Brake Cemetery
Huddleston Cemetery
Wells Cemetery
Upchurch Cemetery
North Fork San Gabriel River
South Fork San Gabriel River
Middle Fork San Gabriel River
Hunt Hollow
Anderson Br
Dyess Br
Hamilton Br
Jenkins Br
Rig Sandy Cr
North Fork Brushy Cr
CO RD 247
CO RD 255
CO RD 257
CO RD 259
CO RD 263
CO RD 270
CO RD 272
CO RD 280
CO RD 283
CO RD 285
CO RD 287
CO RD 289
CO RD 290
CO RD 291
CO RD 293
CO RD 295
CO RD 297
CO RD 299
CO RD 301
CO RD 303
CO RD 305
CO RD 307
CO RD 309
CO RD 311
CO RD 313
CO RD 315
CO RD

LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

Attachment C: Project Narrative

Liberty Hill Credit Union is located at the address of 135 US-183, Liberty Hill, TX 78642. The Liberty Hill Credit Union project is to be constructed an approximate 2.661-acre tract at the intersection of State Highway 29 and US-183 within the existing Starr Corner Subdivision (Doc. No. 2008026989). This tract is located within the city limits of Liberty Hill and within the limits of the South Fork San Gabriel River watershed and contributing zone of the Edwards Aquifer. No portion of this tract is located within a FEMA floodplain, as shown on FIRM Panel No. 48491C0275E dated 9/26/2008.

The 2.66-acre site is currently undeveloped with trees located sparsely throughout the property and with an access drive located at the south property boundary. Existing impervious cover for this project was found to be 14.8% impervious cover which includes an adjacent access drive to be constructed by the southern Liberty Hill Crossing development to the south. The proposed impervious cover for this project was found to be 41.6% impervious cover including a 2,774 square foot building, sidewalk & pavement.

In existing conditions, a 1.82-acre drainage area designated as OF-1 is located north of the property generates runoff that is ultimately directed towards the project site. OF-1 combination with 1.86-acre drainage area E-1 & 0.12-acre drainage area OP-1 direct flow across the site to the southwest where it is captured by a culvert at the US-183 frontage and conveyed further south. Drainage Area E-2 (0.35 acre) & E-3 (0.33 acre) direct flow further south towards different portions of the adjacent Liberty Hill Crossing development to the south (currently under construction in which the plans reflect the full-built condition).

In proposed conditions, the overall drainage pattern is maintained. The 2.01-acre offsite drainage area OF-1 contributes runoff towards the property where it is captured by an onsite drainage channel & conveyed to the southwest where it is captured by the US-183 frontage & culvert. Flow from area OF-1 bypasses the proposed onsite pond & BMP for the development. The 1.69 onsite drainage area P-1 contains a majority of the proposed development which directs flow to a proposed detention & sedimentation-filtration pond located at the western property boundary. Runoff within the proposed development will be captured & conveyed via a combination of sheet flow & inlets. The captured & treated runoff is then released towards the existing channel & culvert located along the US-183 frontage where it is conveyed further south. The 0.12-acre onsite drainage area OP-1 also directs flow towards the US-183 frontage. Both the 0.25-acre and 0.24-acre onsite drainage areas OP-2 and OP-3 direct flow towards the Liberty Hill Crossing development to the south consistent with existing conditions. The proposed sedimentation-filtration pond has been sized to treat runoff from additional future development within the property for an additional .21 acres of impervious cover. Please see **Attachment M** for the existing/proposed drainage area maps, pond sheets & TSS calculations.

LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

Attachment D: Factors Affecting Surface Water Quality

Factors that may affect surface water quality are as follows:

Site Development Criteria

- The site will be used for commercial development
- When necessary, rock rip-rap or concrete outfall aprons will be designed to reduce runoff velocities resulting in settlement of suspended solids and minimizing scouring conditions.

Construction Stage

- Clearing will disturb areas and create the potential for pollutants to runoff from rainfall.
- Temporary BMP's will be maintained throughout construction and will include measure such as a stabilized construction entrance/exit, silt fencing, inlet protection, rock berms, a temporary sediment basin and other measures which will reduce TSS in runoff leaving the site.

Vehicular Traffic

- Mud or fine particles may be dropped from vehicular traffic
- Fluids may be dropped from vehicular traffic.

Landscape and Property Maintenance

- Pesticides or herbicides used for landscape maintenance may not be applied at a proper rate and may leak into groundwater or runoff into surface drains.
- Fine particles may be washed from driveway surfaces into roadways and drains.
- Natural vegetative filter strips and wet pond will be utilized to treat TSS coming from the site, which will minimize the impact of TSS from impervious areas.
- A maintenance plan will be implemented for all temporary BMP's in accordance with SWPPP and for all Permanent BMP's in accordance with **Attachment N**.

LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

Attachment E: Volume and Character of Stormwater

The stormwater runoff calculations included in this section were based on the NRCS Method using HEC- HMS modeling in conjunction with drainage criteria specified by the City of Liberty Hill (defers to Round Rock Drainage Specifications). In the attached drainage area maps (also provided under **Attachment M**) for the proposed Liberty Hill Credit Union site (2.661 acres) all analysis points show that the proposed impervious cover does not negatively impact downstream conditions using the Atlas 14 2, 10, 25, & 100 – year storms events. The hydrologic analysis shows that the proposed sedimentation-filtration & detention pond has the capacity to store runoff from the ultimate development for the Atlas 14 100-year storm event.

A hydrologic analysis was conducted to convert precipitation data to runoff values for the given site. Precipitation values were taken from the NOAA Precipitation Frequency Data Server. Atlas-14 rainfall depths were converted to runoff using Depth Duration Frequencies and TR-55 methodologies in HEC-HMS v 4.11. The National Resources Conservation Service (NRCS) web soil survey shows the site to be a hydrologic soil types EaD & DnB (Eckrant cobbly clay & Denton silty clay respectively). These types fall under the hydrologic soil group "D", which has a low infiltration rate when saturated and exhibits the highest runoff potential of all hydrological soil groups.

In existing conditions, a 1.82-acre drainage area designated as OF-1 (0% IC) north of the property generates runoff that is ultimately directed towards the project site. OF-1 in combination with a 1.86-acre drainage area E-1 (0% IC) & 0.12-acre drainage area OP-1 (85.2% IC) direct flow across the site to the southwest where it is captured by a channel & culvert at the US-183 frontage and conveyed further south. Drainage Area E-2 (0.35 acre & 46.6% IC) & E-3 (0.33 acre & 38.7% IC) direct flow further south towards different portions of the adjacent Liberty Hill Crossing development to the south (currently under construction in which the plans reflect the full-built condition). Both E-2, E-3 & OP-1 include impervious cover from the adjacent access drive to be constructed by the Liberty Hill Crossing development to the south.

In proposed conditions, the overall drainage pattern is maintained. The 2.01-acre offsite drainage area OF-1 (0% IC) contributes runoff towards the property where it is captured by an onsite drainage channel & conveyed to the southwest where it is captured by the US-183 frontage & culvert. Flow from area OF-1 bypasses the proposed onsite pond & BMP for the development. The 1.69 onsite drainage area P-1 (38.2% IC) contains a majority of the proposed development which directs flow to a proposed detention & sedimentation-filtration pond located at the western property boundary. Runoff within the proposed development will be captured & conveyed via a combination of sheet flow & inlets. The captured & treated runoff is then released towards the existing channel & culvert located along the US-183 frontage where

it is conveyed further south. The 0.12-acre onsite drainage area OP-1 (85.2% IC) also directs flow towards the US-183 frontage. Both the 0.25-acre and 0.24-acre onsite drainage areas OP-2 (83.5% IC) and OP-3 (62.4% IC) direct flow towards the Liberty Hill Crossing development to the south consistent with existing conditions. The proposed sedimentation-filtration pond has been sized to treat runoff from additional future development within the property for an additional .21 acres of impervious cover.

The attached Existing and Proposed Drainage Area Maps (also provided in **Attachment M**) for the proposed site are included in this section and show the drainage areas and flow patterns within the project. The area utilized for this CZP application is shown/marked in the proposed drainage area map. The drainage area map sheets also show the pre- and post-development runoff rates at all analysis points including the offsite runoff flow paths, as well as a table summarizing the components of the HEC-HMS model for both the existing and proposed conditions. Regarding all analysis points, the pre-developed rates are slightly increased compared to the post-developed conditions.

For HEC-HMS modeling, the existing impervious cover was held to match existing conditions at 14.7%. To reflect the post-developed conditions, the proposed Impervious cover was modified from the existing condition to show the increases in impervious cover (building, pavement & sidewalk) to 41.6% Please see **Attachment M** for the existing/proposed drainage area maps, pond sheets & TSS calculations.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

$P_2 =$ 3.94 *in.*

$$t_{ch} = \frac{0.007(n_{ch} L_{ch})^{0.8}}{P_2^{0.5} S_{ch}^{0.4}} \qquad t_{sc} = \frac{L_{sc}}{3600\, K S_{sc}^{0.5}} \qquad t_{ch} = \frac{L_{ch}}{\left(3600 \frac{1.49}{n} R^{2/3} S_{ch}^{1/2}\right)}$$

DA	IC	Area	Total Length	L_{ch} sheet flow length	S_{ch} flow slope (ft/ft)	surface description	P_2 2-yr, 24-hr rainfall depth (in.)	n_{ol} overland flow roughness coeff.	t_{ch} sheet flow travel time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 16.13 - unpaved sufr.	t_{sc} shallow conc. flow time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} conc. flow slope (ft/ft)	K 20.3282 - paved sufr.	t_{sc} conc. flow time (hr)	t_c time of conc. (hr)	t_c time of conc. (min)	t_L lag time (min)	t_L lag time with min (min)
E-1	0.0%	1.86	250	100	0.023	Short-grass Prairie	3.94	0.150	**0.14**	150	0.023	16.13	**0.02**					**0.16**	**9.4**	**5.62**	**5.6**
E-2	46.6%	0.35	198	100	0.013	Short-grass Prairie	3.94	0.150	**0.17**	58	0.023	16.13	**0.01**	40	0.023	20.3282	**0.00**	**0.18**	**11.0**	**6.58**	**6.6**
E-3	38.7%	0.33	206	100	0.014	Short-grass Prairie	3.94	0.150	**0.17**	60	0.018	16.13	**0.01**	46	0.018	20.3282	**0.00**	**0.18**	**11.1**	**6.65**	**6.6**
OP-1	85.2%	0.12	154	100	0.032	Concrete	3.94	0.015	**0.02**					54	0.568	20.3282	**0.00**	**0.02**	**1.2**	**0.73**	**3.0**
OF-1	0.0%	1.82	330	100	0.013	Short-grass Prairie	3.94	0.150	**0.17**	230	0.021	16.13	**0.03**					**0.20**	**12.1**	**7.24**	**7.2**
Reach -1			250							250	0.023	16.13	**0.03**					**0.03**	**1.7**	**1.02**	**-**

Analysis Point 1 Comparison

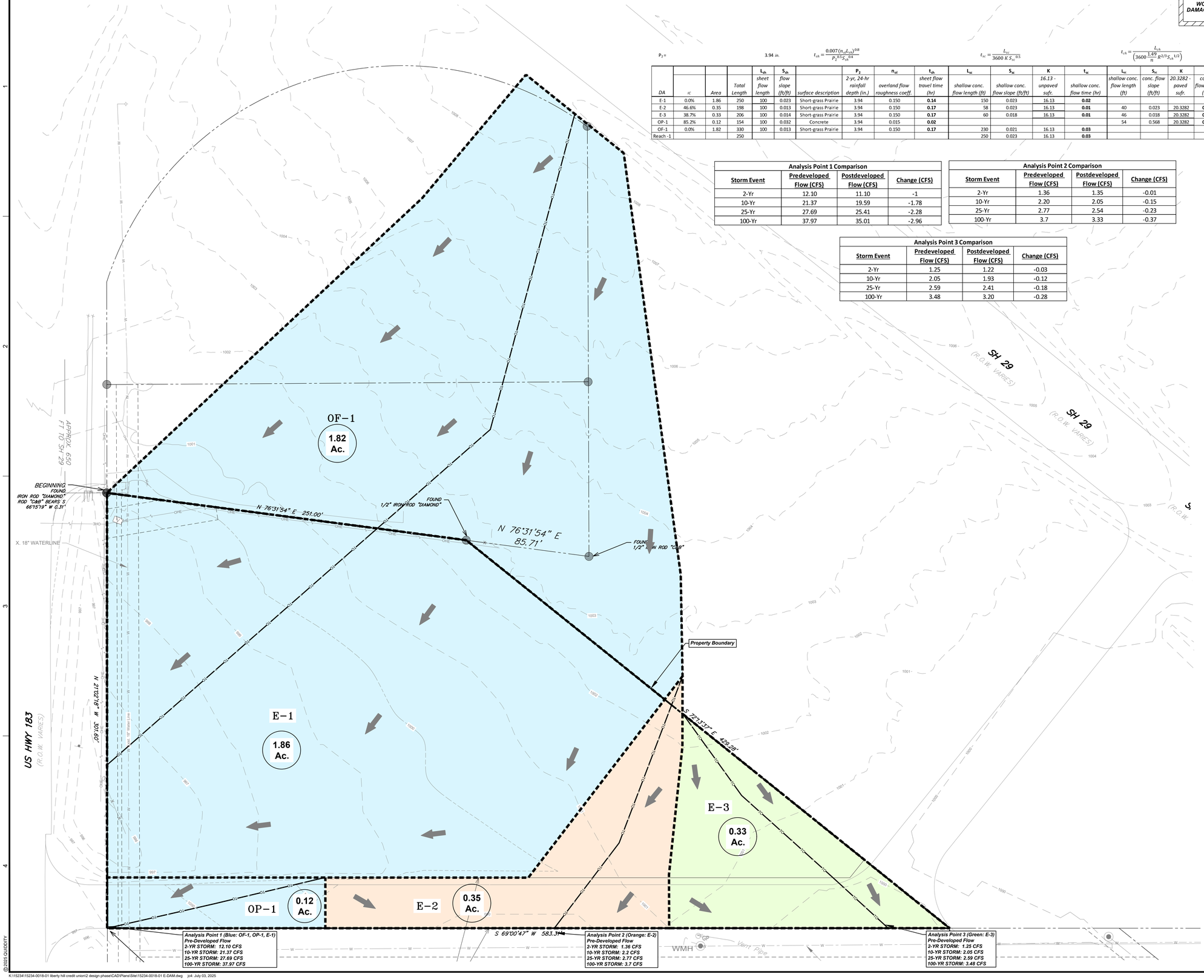
Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	12.10	11.10	-1
10-Yr	21.37	19.59	-1.78
25-Yr	27.69	25.41	-2.28
100-Yr	37.97	35.01	-2.96

Analysis Point 2 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.36	1.35	-0.01
10-Yr	2.20	2.05	-0.15
25-Yr	2.77	2.54	-0.23
100-Yr	3.7	3.33	-0.37

Analysis Point 3 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.25	1.22	-0.03
10-Yr	2.05	1.93	-0.12
25-Yr	2.59	2.41	-0.18
100-Yr	3.48	3.20	-0.28



30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE

DAMAP LEGEND

- 1.82 Ac. — DRAINAGE AREA IN ACRES
- DRAINAGE AREA LINE
- A-1 — DRAINAGE AREA NUMBER
- FLOW DIRECTION
- TC — TC — TIME OF CONCENTRATION

NOTES:
1. PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS, THE TR-55 METHOD WAS UTILIZIED TO CALCULATE THE TIME OF CONCENTRATION FOR EACH DRAINAGE AREA.
2. RAINFALL INTENSITY OBTAINED FROM NOAA ATLAS 14 FOR SITE LOCATION.
3. HEC-HMS 4.11 MODEL WAS UTILIZED TO CALCULATE PREDEVELOPMENT & POST DEVELOPMENT FLOWS

No.	Date	REVISIONS	App.

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SCALE: —— DESIGNED BY: JYC
DATE: Oc - July 2025 CHECKED BY: JMC
JOB NO.: 152334-0018-01 DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

EXISTING DRAINAGE AREA MAP

SHEET NO. 14 OF 28

2025-XX-SDP

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P_2 = 3.94 *in.*

$$t_{ch} = \frac{0.007(n_{ch}L_{ch})^{0.8}}{P_2^{0.5}S_{ch}^{0.4}}$$

$$t_{sc} = \frac{L_{sc}}{3600\,K\,S_{sc}^{0.5}}$$

$$t_{ch} = \frac{L_{ch}}{\left(3600\frac{1.49}{n}R^{2/3}S_{ch}^{1/2}\right)}$$ Channel

name	IC	Area	Total Length	L_{sh} sheet flow length	S_{sh} sheet flow slope (ft/ft)	surface description	P_2 2-yr, 24-hr rainfall depth (in.)	n_{sc} flow roughness coeff.	t_{sh} sheet flow travel time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 20.3282 - paved sufr.	t_{sc} shallow conc. flow time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 16.13 - unpaved sufr.	t_{sc} shallow conc. flow time (hr)	L_{ch} channel Length (ft)	S_{ch} channel flow slope (ft/ft)	n Manning's roughness coeff.	R hydraulic radius (ft)	t TC (hr)	t_c time of conc. (hr)	t_c time of conc. (min)	t_L lag time (min)	t_L lag time with min (min)
P-1	38.2%	1.69	409	100	0.025	Grass	3.94	0.150	**0.13**					309	0.006	16.13	**0.07**						**0.20**	**12.2**	**7.33**	**7.3**
P-2	0%	0.16	157	100	0.063	Grass	3.94	0.150	**0.09**					57	0.007	16.13	**0.01**						**0.10**	**6.3**	**3.78**	**3.8**
OP-1	85.2%	0.12	154	100	0.032	Concrete	3.94	0.015	**0.02**					54	0.041	16.13	**0.00**						**0.02**	**1.4**	**0.86**	**3.0**
OP-2	83.5%	0.25	165	100	0.034	Concrete	3.94	0.015	**0.02**	65	0.067	20.3282	**0.00**	65	0.002	16.13	**0.03**						**0.05**	**2.8**	**1.70**	**3.0**
OP-3	62.4%	0.24	172	100	0.045	Concrete	3.94	0.015	**0.02**	72	0.005	20.3282	**0.01**										**0.03**	**1.9**	**1.13**	**3.0**
OF-1	0%	2.01	424	100	0.015	Grass	3.94	0.150	**0.16**					324	0.013	16.13	**0.05**						**0.21**	**12.9**	**7.73**	**7.7**
Reach-1																		127	0.011	0.04	0.467	0.02	**0.02**	**0.9**	**0.54**	**-**

Analysis Point 1 Comparison

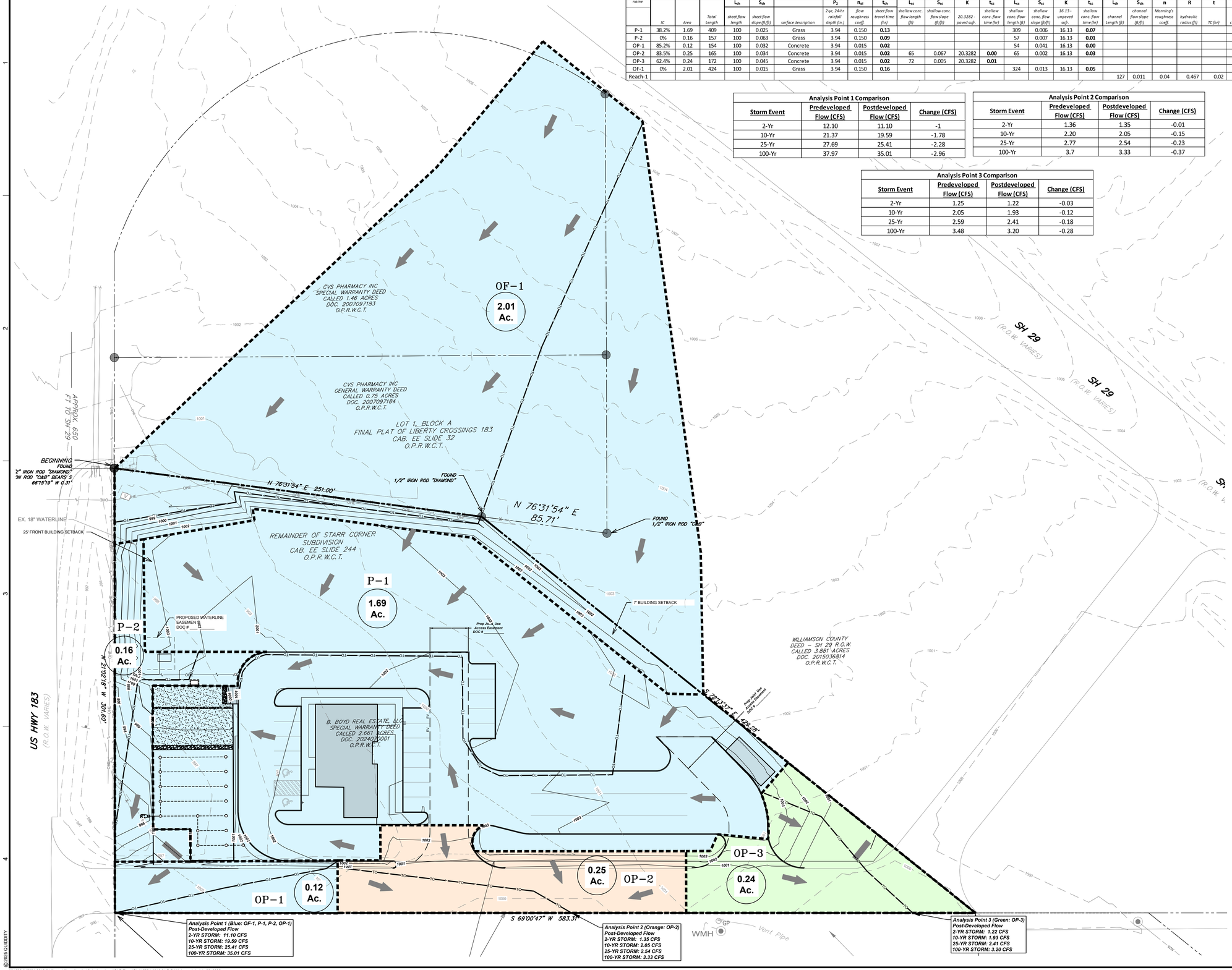
Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	12.10	11.10	-1
10-Yr	21.37	19.59	-1.78
25-Yr	27.69	25.41	-2.28
100-Yr	37.97	35.01	-2.96

Analysis Point 2 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.36	1.35	-0.01
10-Yr	2.20	2.05	-0.15
25-Yr	2.77	2.54	-0.23
100-Yr	3.7	3.33	-0.37

Analysis Point 3 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.25	1.22	-0.03
10-Yr	2.05	1.93	-0.12
25-Yr	2.59	2.41	-0.18
100-Yr	3.48	3.20	-0.28



30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WW — WASTEWATER W/ MANHOLE
- WW — WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OHE — OVERHEAD ELECTRIC W/POWER POLE
- 700 — GROUND CONTOUR

DAMAP LEGEND

- 1.82 Ac. — DRAINAGE AREA IN ACRES
- DRAINAGE AREA LINE
- A-1 — DRAINAGE AREA NUMBER
- FLOW DIRECTION
- TC — TC — TIME OF CONCENTRATION

NOTES:

1. PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS, THE TR-55 METHOD WAS UTILIZED TO CALCULATE THE TIME OF CONCENTRATION FOR EACH DRAINAGE AREA.
2. RAINFALL INTENSITY OBTAINED FROM NOAA ATLAS 14 FOR SITE LOCATION.
3. HEC-HMS 4.11 MODEL WAS UTILIZED TO CALCULATE PREDEVELOPMENT & POST DEVELOPMENT FLOWS

REVISIONS

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SCALE: ____ DESIGNED BY: JYC
DATE: Oc - July 2025 CHECKED BY: JMC
JOB NO.: 152334-0018-01 DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED
PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

PROPOSED DRAINAGE AREA MAP

SHEET NO. 15 OF 28

2025-XX-SDP

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FLOWS (Post Development - Channel)

C Values	2 yr	10 yr	25 yr	100 yr
Grass	0.33	0.38	0.42	0.49
Concrete	0.75	0.83	0.88	0.97

Note

*Grass is assumed to be Fair Condition and Average Slope

*All Impervious Cover is assumed to be Concrete (Conservative Approach)

NOTES:
1. PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS, THE TR-55 ETHOD WAS UTILZIED TO CALCULATE THE TIME OF CONCENTRATION FOR EACH DRAINAGE AREA.
2. RAINFALL INTENSITY OBTAINED FROM NOAA ATLAS 14 FOR SITE LOCATION.
3. THE RATIONAL METHOD WAS UTILIZED TO CALCULATE THE PROPOSED FLOWS FOR THE 100 YEAR STORM EVENT UTILIZING NOAA ATLAS 14 RAINFALL INTENSITES FOR THE SITE LOCATION.

DA	Area (ac.)	I.C. (%)	C2	C10	C25	C100	I2 (in/hr)	I10 (in/hr)	I25 (in/hr)	I100 (in/hr)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
OF-1	2.01	0.00%	0.33	0.38	0.42	0.49	4.11	6.11	8.56	9.71	2.73	4.67	7.23	9.56

Rational Method Calculation for Drainage Ditch

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Tuesday, Jun 17 2025

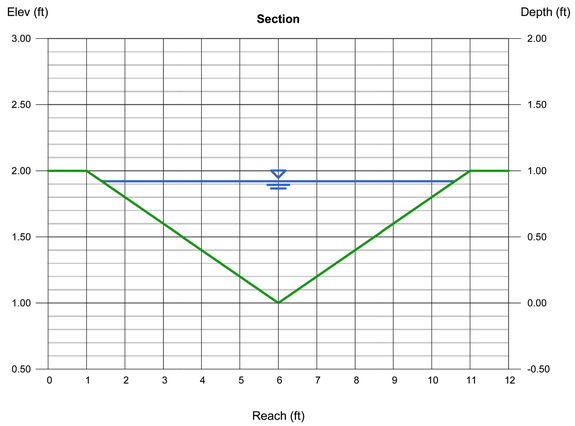
DRAINAGE DITCH

Triangular
Side Slopes (z:1) = 5.00, 5.00
Total Depth (ft) = 1.00

Invert Elev (ft) = 1.00
Slope (%) = 1.08
N-Value = 0.040

Calculations
Compute by: Known Q
Known Q (cfs) = 9.56

Highlighted
Depth (ft) = 0.92
Q (cfs) = 9.560
Area (sqft) = 4.23
Velocity (ft/s) = 2.26
Wetted Perim (ft) = 9.38
Crit Depth, Yc (ft) = 0.75
Top Width (ft) = 9.20
EGL (ft) = 1.00



Drainage Ditch A
100 - YR Storm Channel Calculation

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DESIGNED BY: JYC
CHECKED BY: JMC
DRAWN BY: KS
SCALE:
DATE: Oc – July 2025
JOB NO.: 152334-0018-01

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

DRAINAGE CALCULATIONS

SHEET NO.
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Attachment F: Sustainability Letter from Authorized Agent

Attachment F is not applicable to this project.

Attachment G: Alternative Secondary Containment Methods

Attachment G is not applicable to this project.

Attachment H: Alternative Secondary Containment Methods

Attachment H is not applicable to this project.

Attachment I: 20% or Less Impervious Cover Waiver

Attachment I is not applicable to this project.

LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

Attachment J: BMPs for Upgradient Stormwater

Offsite area OF-1 represents a 1.82-acre undeveloped offsite drainage area to the north that generates runoff that flows into the project site. Ultimately in existing conditions, this flow is directed to the US-183 frontage where it is conveyed further south by an existing channel & culvert. In proposed conditions, the area is to remain undeveloped and follow the same general drainage pattern until it reaches the project site. A drainage ditch is proposed along the northern property line to divert flow west around the development and the onsite detention pond and ultimately towards the US-183 frontage & culvert. Runoff generated from this offsite area is not expected to come in contact with pollutants generated by the proposed development as it is diverted around the development. All runoff within the development shall be directed towards the permanent BMP (sedimentation-filtration pond) on site for treatment. As the offsite area is to remain undeveloped in which runoff is diverted around the proposed development, no BMP or method of treatment is proposed for the upgradient stormwater.

The impervious cover for offsite area OF-1 was assumed at 0% for existing conditions and will remain at 0% for existing conditions. Please see the attached existing and proposed drainage area map sheets and within **Attachment M.**

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

$P_2 =$ 3.94 *in.*

$$t_{ch} = \frac{0.007(n_{ch} L_{ch})^{0.8}}{P_2^{0.5} S_{ch}^{0.4}} \qquad t_{sc} = \frac{L_{sc}}{3600\, K S_{sc}^{0.5}} \qquad t_{ch} = \frac{L_{ch}}{\left(3600 \frac{1.49}{n} R^{2/3} S_{ch}^{1/2}\right)}$$

DA	IC	Area	Total Length	L_{ch} sheet flow length	S_{ch} flow slope (ft/ft)	surface description	P_2 2-yr, 24-hr rainfall depth (in.)	n_{ol} overland flow roughness coeff.	t_{ch} sheet flow travel time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 16.13 - unpaved sufr.	t_{sc} shallow conc. flow time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} conc. flow slope (ft/ft)	K 20.3282 - paved sufr.	t_{sc} conc. flow time (hr)	t_c time of conc. (hr)	t_c time of conc. (min)	t_L lag time (min)	t_L lag time with min (min)
E-1	0.0%	1.86	250	100	0.023	Short-grass Prairie	3.94	0.150	**0.14**	150	0.023	16.13	**0.02**					**0.16**	**9.4**	**5.62**	**5.6**
E-2	46.6%	0.35	198	100	0.013	Short-grass Prairie	3.94	0.150	**0.17**	58	0.023	16.13	**0.01**	40	0.023	20.3282	**0.00**	**0.18**	**11.0**	**6.58**	**6.6**
E-3	38.7%	0.33	206	100	0.014	Short-grass Prairie	3.94	0.150	**0.17**	60	0.018	16.13	**0.01**	46	0.018	20.3282	**0.00**	**0.18**	**11.1**	**6.65**	**6.6**
OP-1	85.2%	0.12	154	100	0.032	Concrete	3.94	0.015	**0.02**					54	0.568	20.3282	**0.00**	**0.02**	**1.2**	**0.73**	**3.0**
OF-1	0.0%	1.82	330	100	0.013	Short-grass Prairie	3.94	0.150	**0.17**	230	0.021	16.13	**0.03**					**0.20**	**12.1**	**7.24**	**7.2**
Reach -1			250							250	0.023	16.13	**0.03**					**0.03**	**1.7**	**1.02**	**-**

Analysis Point 1 Comparison

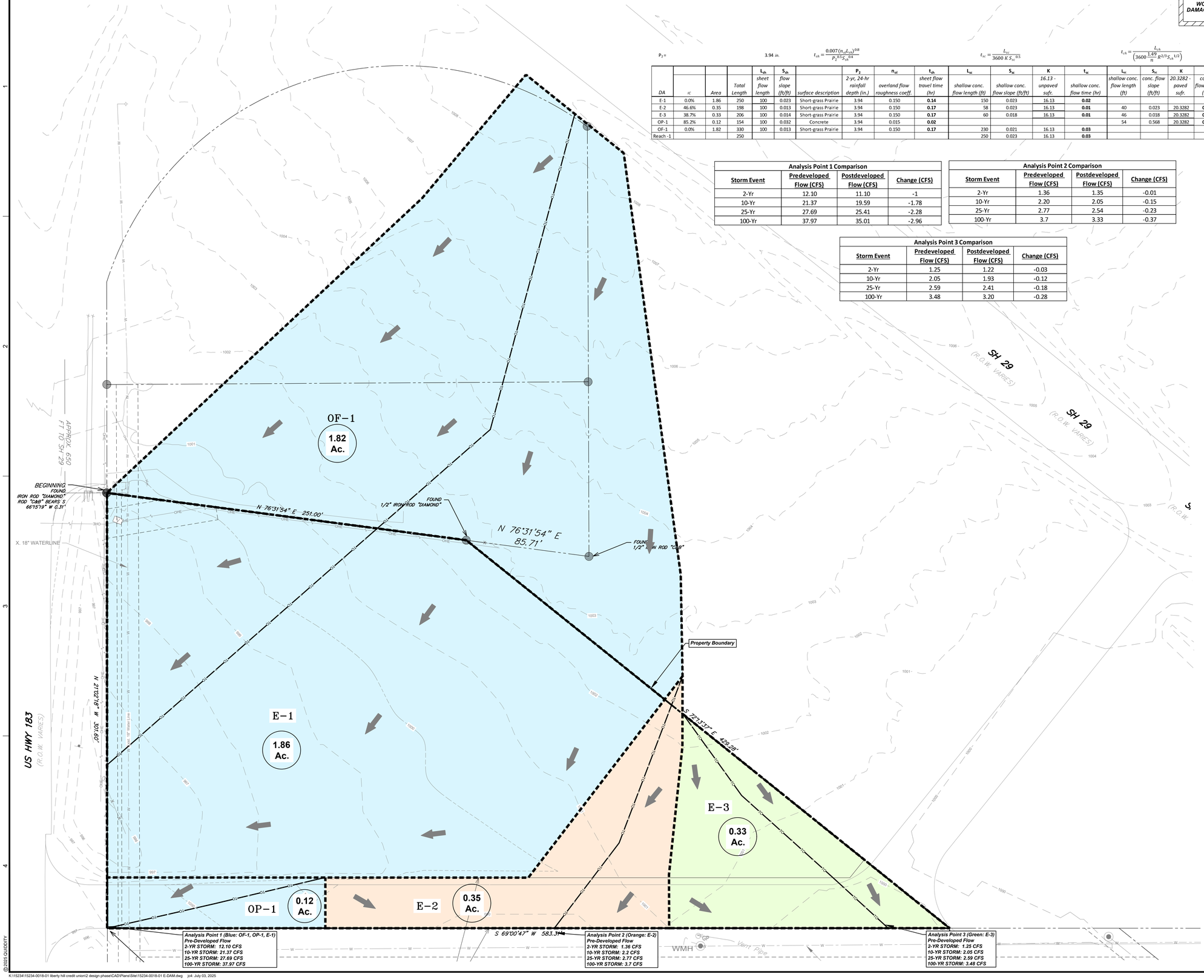
Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	12.10	11.10	-1
10-Yr	21.37	19.59	-1.78
25-Yr	27.69	25.41	-2.28
100-Yr	37.97	35.01	-2.96

Analysis Point 2 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.36	1.35	-0.01
10-Yr	2.20	2.05	-0.15
25-Yr	2.77	2.54	-0.23
100-Yr	3.7	3.33	-0.37

Analysis Point 3 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.25	1.22	-0.03
10-Yr	2.05	1.93	-0.12
25-Yr	2.59	2.41	-0.18
100-Yr	3.48	3.20	-0.28



30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE

DAMAP LEGEND

- 1.82 Ac. — DRAINAGE AREA IN ACRES
- DRAINAGE AREA LINE
- A-1 — DRAINAGE AREA NUMBER
- FLOW DIRECTION
- TC — TC — TIME OF CONCENTRATION

NOTES:
1. PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS, THE TR-55 METHOD WAS UTILIZIED TO CALCULATE THE TIME OF CONCENTRATION FOR EACH DRAINAGE AREA.
2. RAINFALL INTENSITY OBTAINED FROM NOAA ATLAS 14 FOR SITE LOCATION.
3. HEC-HMS 4.11 MODEL WAS UTILIZED TO CALCULATE PREDEVELOPMENT & POST DEVELOPMENT FLOWS

No.	Date	REVISIONS	App.

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DATE: Oc - July 2025 CHECKED BY: JMC
JOB NO.: 152334-0018-01 DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
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135 US-183, LIBERTY HILL, TEXAS 78642

EXISTING DRAINAGE AREA MAP

SHEET NO. 14 OF 28

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P_2 = 3.94 *in.*

$$t_{ch} = \frac{0.007(n_{ch}L_{ch})^{0.8}}{P_2^{0.5}S_{ch}^{0.4}}$$

$$t_{sc} = \frac{L_{sc}}{3600\,K\,S_{sc}^{0.5}}$$

$$t_{ch} = \frac{L_{ch}}{\left(3600\frac{1.49}{n}R^{2/3}S_{ch}^{1/2}\right)}$$ Channel

name	IC	Area	Total Length	L_{sh} sheet flow length	S_{sh} sheet flow slope (ft/ft)	surface description	P_2 2-yr, 24-hr rainfall depth (in.)	n_{sc} flow roughness coeff.	t_{sh} sheet flow travel time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 20.3282 - paved sufr.	t_{sc} shallow conc. flow time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 16.13 - unpaved sufr.	t_{sc} shallow conc. flow time (hr)	L_{ch} channel Length (ft)	S_{ch} channel flow slope (ft/ft)	n Manning's roughness coeff.	R hydraulic radius (ft)	t TC (hr)	t_c time of conc. (hr)	t_c time of conc. (min)	t_L lag time (min)	t_L lag time with min (min)
P-1	38.2%	1.69	409	100	0.025	Grass	3.94	0.150	**0.13**					309	0.006	16.13	**0.07**						**0.20**	**12.2**	**7.33**	**7.3**
P-2	0%	0.16	157	100	0.063	Grass	3.94	0.150	**0.09**					57	0.007	16.13	**0.01**						**0.10**	**6.3**	**3.78**	**3.8**
OP-1	85.2%	0.12	154	100	0.032	Concrete	3.94	0.015	**0.02**					54	0.041	16.13	**0.00**						**0.02**	**1.4**	**0.86**	**3.0**
OP-2	83.5%	0.25	165	100	0.034	Concrete	3.94	0.015	**0.02**	65	0.067	20.3282	**0.00**	65	0.002	16.13	**0.03**						**0.05**	**2.8**	**1.70**	**3.0**
OP-3	62.4%	0.24	172	100	0.045	Concrete	3.94	0.015	**0.02**	72	0.005	20.3282	**0.01**										**0.03**	**1.9**	**1.13**	**3.0**
OF-1	0%	2.01	424	100	0.015	Grass	3.94	0.150	**0.16**					324	0.013	16.13	**0.05**						**0.21**	**12.9**	**7.73**	**7.7**
Reach-1																		127	0.011	0.04	0.467	0.02	**0.02**	**0.9**	**0.54**	**-**

Analysis Point 1 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	12.10	11.10	-1
10-Yr	21.37	19.59	-1.78
25-Yr	27.69	25.41	-2.28
100-Yr	37.97	35.01	-2.96

Analysis Point 2 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.36	1.35	-0.01
10-Yr	2.20	2.05	-0.15
25-Yr	2.77	2.54	-0.23
100-Yr	3.7	3.33	-0.37

Analysis Point 3 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.25	1.22	-0.03
10-Yr	2.05	1.93	-0.12
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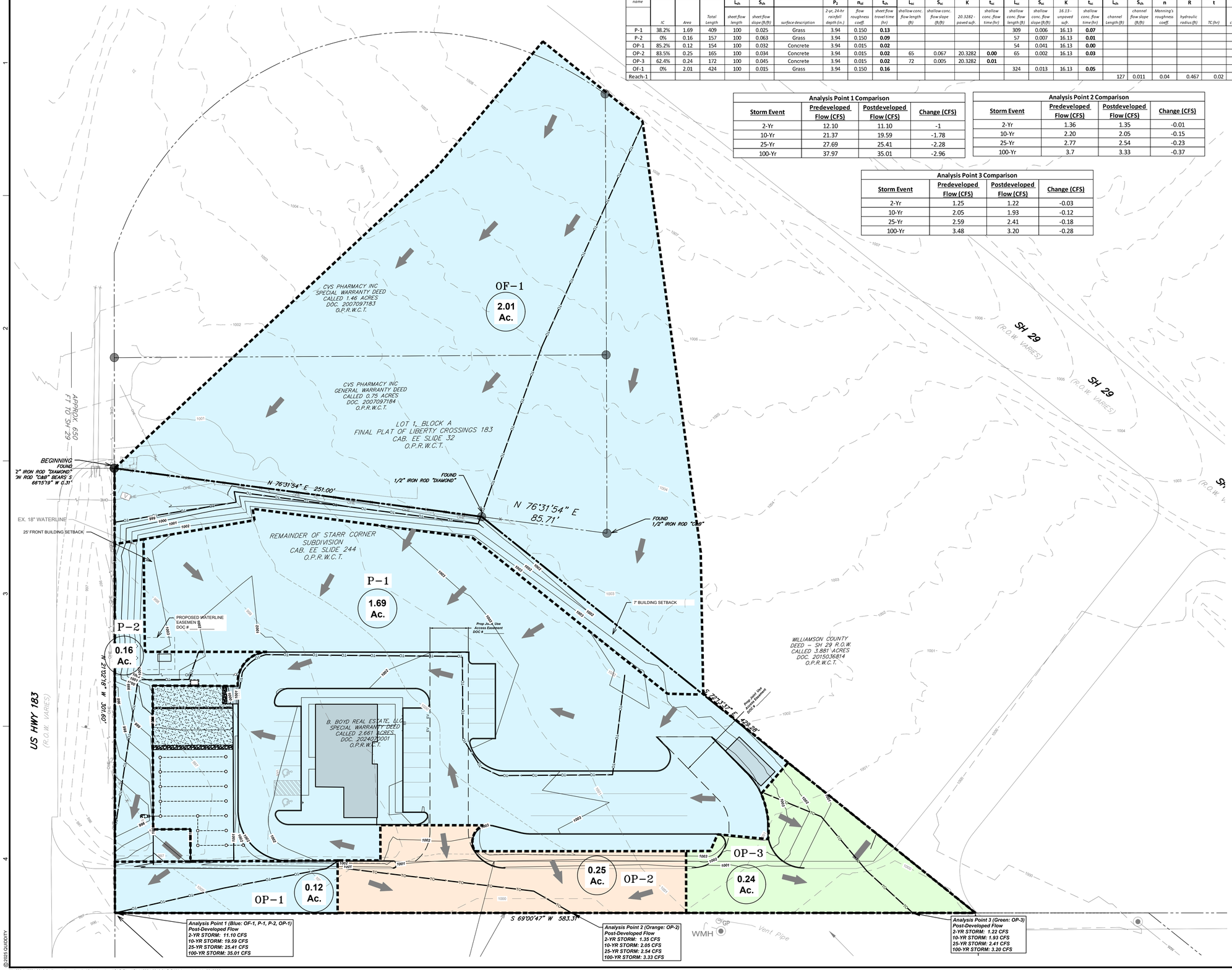
100-Yr	3.48	3.20	-0.28



30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WW — WASTEWATER W/ MANHOLE
- WW — WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OHE — OVERHEAD ELECTRIC W/POWER POLE
- 700 — GROUND CONTOUR

DAMAP LEGEND

- 1.82 Ac. — DRAINAGE AREA IN ACRES
- DRAINAGE AREA LINE
- A-1 — DRAINAGE AREA NUMBER
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NOTES:

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PROFESSIONAL ENGINEER
07/03/2025

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PROPOSED DRAINAGE AREA MAP

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FLOWS (Post Development - Channel)

C Values	2 yr	10 yr	25 yr	100 yr
Grass	0.33	0.38	0.42	0.49
Concrete	0.75	0.83	0.88	0.97

Note

*Grass is assumed to be Fair Condition and Average Slope

*All Impervious Cover is assumed to be Concrete (Conservative Approach)

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DA	Area (ac.)	I.C. (%)	C2	C10	C25	C100	I2 (in/hr)	I10 (in/hr)	I25 (in/hr)	I100 (in/hr)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
OF-1	2.01	0.00%	0.33	0.38	0.42	0.49	4.11	6.11	8.56	9.71	2.73	4.67	7.23	9.56

Rational Method Calculation for Drainage Ditch

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Tuesday, Jun 17 2025

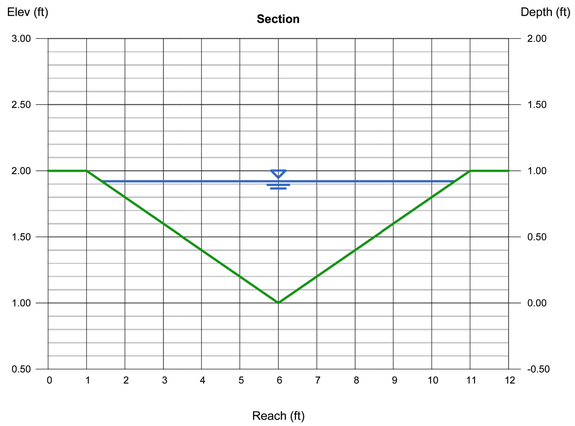
DRAINAGE DITCH

Triangular
Side Slopes (z:1) = 5.00, 5.00
Total Depth (ft) = 1.00

Invert Elev (ft) = 1.00
Slope (%) = 1.08
N-Value = 0.040

Calculations
Compute by: Known Q
Known Q (cfs) = 9.56

Highlighted
Depth (ft) = 0.92
Q (cfs) = 9.560
Area (sqft) = 4.23
Velocity (ft/s) = 2.26
Wetted Perim (ft) = 9.38
Crit Depth, Yc (ft) = 0.75
Top Width (ft) = 9.20
EGL (ft) = 1.00



Drainage Ditch A
100 - YR Storm Channel Calculation

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DRAINAGE CALCULATIONS

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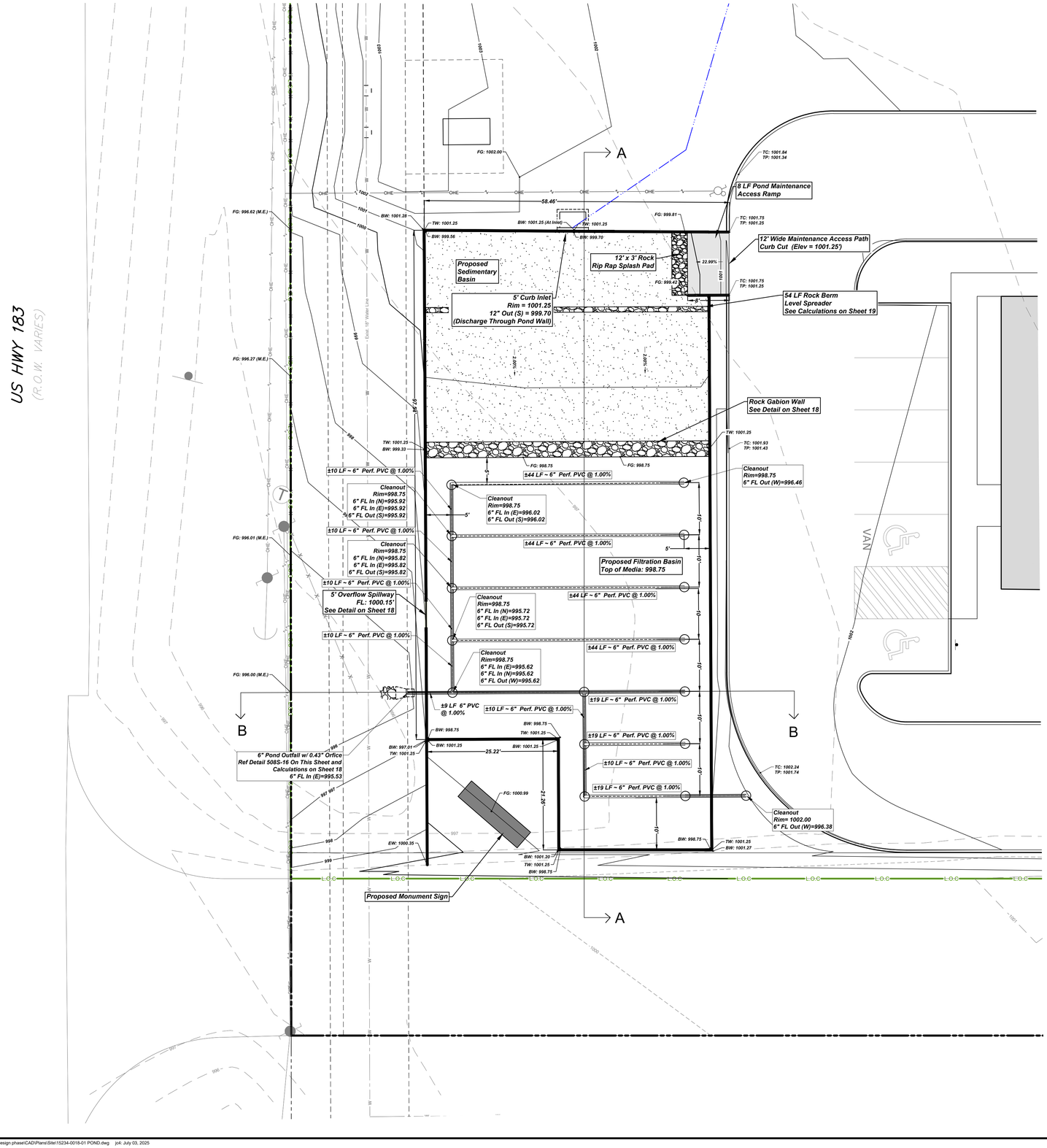
LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

Attachment K: BMPs for On-Site Stormwater

Sand Filter Systems (Sedimentation-Filtration), as described in TCEQ's "Complying with the Edwards Rules: Technical Guidance Manual on Best Management Practices", Section 3.2.5 (RG-348), is an approved Best Management Practice (BMP) for this development. This methodology provides a Total Suspended Solids (TSS) removal efficiency of 89 percent, as documented in the referenced manual.

The drainage analysis for this project was based on the applicable drainage requirements of the City of Liberty Hill (deferred to City of Round Rock Drainage Specifications). A stacked sedimentation-filtration (sand filter system) and detention pond has been proposed to capture & treat stormwater runoff generated from drainage area P-1 (1.69 acres & 38.2% IC). Drainage area P-1 encompasses a majority of the proposed development (building, sidewalk & pavement). Runoff from this area will be collected onsite via a combination of sheet flow & inlets and directed towards the onsite pond. The proposed impervious cover directed towards the pond is identified as 1.11 acres in total (including 0.39 acres of existing impervious cover from access drive). However, the proposed pond & BMP has been sized to treat an additional 0.21 acres of impervious cover for future development within the P-1 area (building, pavement, sidewalk).

Calculations have been provided to show that the proposed improvement will adequately remove the required amount of TSS in accordance with TCEQ RG-348 requirements for the impervious cover & improvements constructed by the ultimate proposed development. Included in Appendix B are the TSS regulations and calculations for the proposed conditions for the site area.



EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

PROPOSED LEGEND

- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- 700 — GROUND CONTOUR
- TC — TOP OF CURB
- TP — TOP OF PAVEMENT
- FG — FINISHED GROUND
- TW — TOP OF WALL
- TS — TOP OF SIDEWALK

Pond Portion	Combined Detention & Water Quality Pond Volume Table					
	WSE (ft)	Area (SF)	Incremental Volume (cubic ft)	Incremental Volume (acre-ft)	Cumulative Total Volume (cubic ft)	Cumulative Total Volume (acre-ft)
WQ	998.75	3,511	0	0.000	0	0.000
	999	3,969	934.39	0.021	934.39	0.021
	999.25	4,305	1032.82	0.024	1967.21	0.045
	999.5	4,709	2059.7	0.047	3092.52	0.071
	999.75	5,139	2264.88	0.052	4324.58	0.099
	1000	5,494	3390.4	0.078	5655.28	0.130
	1000.15	5,670	3102.48	0.071	6492.88	0.149
Water Quality Elevation & Volume = 1000.15 ft (6,500 cu ft)						
Detention	1000.25	5,771	3962.48	0.162	7064.96	0.162
	1,000.50	5,912	8531.16	0.034	8531.16	0.196
	1,000.75	5,928	6048.64	0.196	10011.12	0.230
	1,001.00	5,944	2963.89	0.068	11495.05	0.264
	1,001.25	5,944	7310.35	0.239	13358.99	0.307
Max Water Quality & Detention Elevation/Volume = 1001.25 ft (13,359 cu ft)						

Combined Detention & Water Quality Pond Volume Table

Detention Pond Analysis & Volume Table					
Storm Event	Peak Pond Inflow (CFS)	Peak Pond Outflow (CFS)	Detention Volume (Acre-ft)	Detention Volume (ft^3)	WSE (ft)
Water Quality Elevation & Volume = 1000.15 ft (6,493 cu ft)					
2-Yr	6.09	4.74	0.0600	2614	1000.6
10-Yr	10.00	8.18	0.0900	3920	1000.8
25-Yr	12.67	10.56	0.1100	4792	1001.0
100-Yr	17.04	14.54	0.1300	5663	1001.1

Detention Analysis & Volume Table

Stacked Partial Sedimentation and Detention Pond

SCALE:1" = 10'

No.	Date	REVISIONS	App.

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912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

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CHECKED BY: JMC
DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED
PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

POND PLAN

SHEET NO. 17 OF 28

2025-XX-SDP

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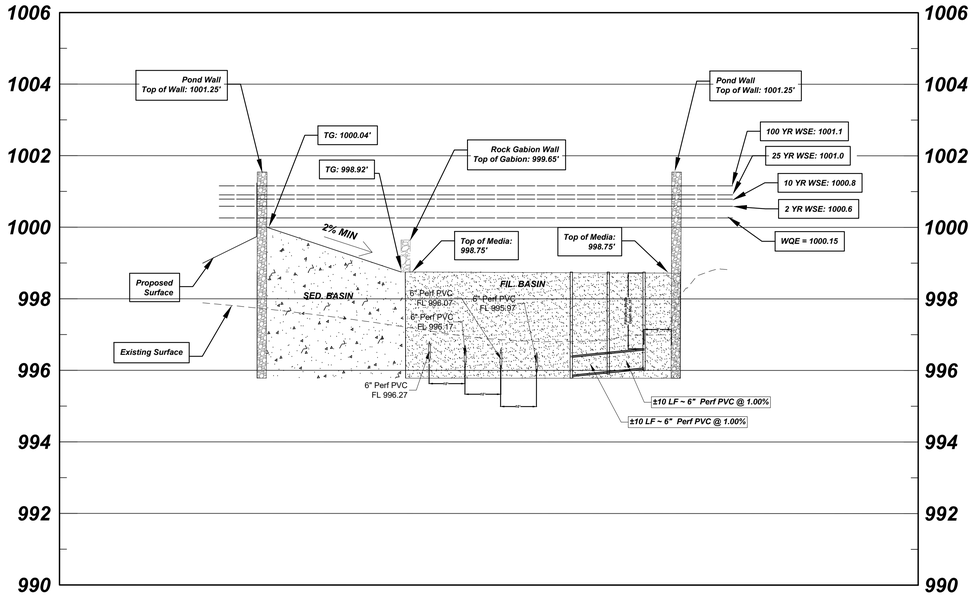
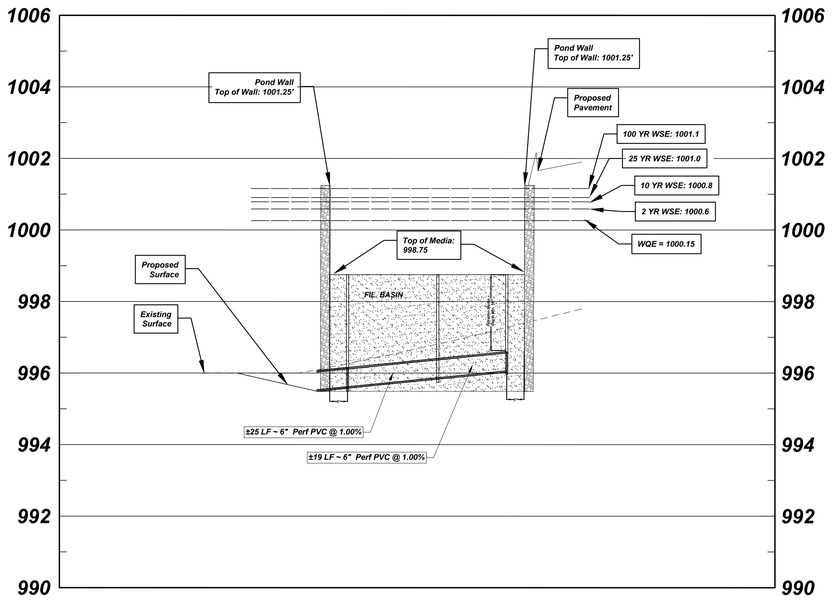
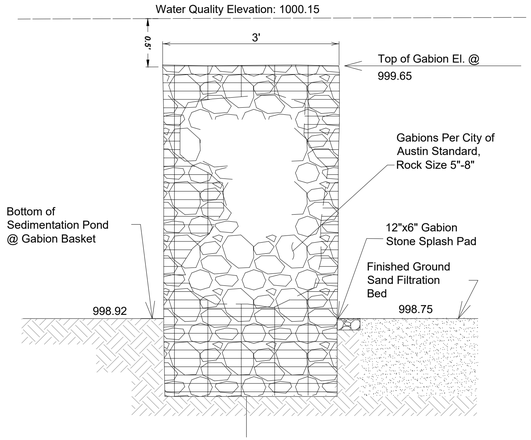
Cross Section A-A Profile

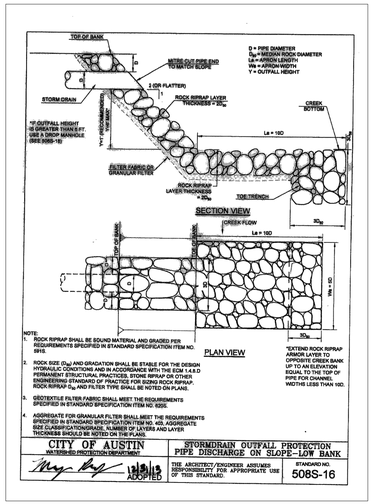


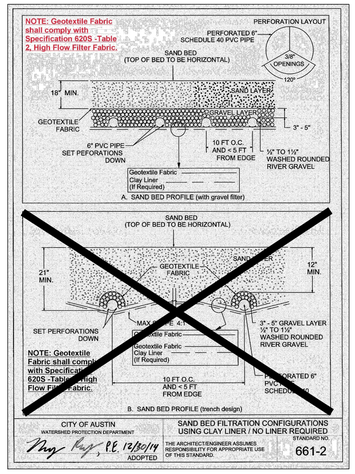
Cross Section B-B Profile

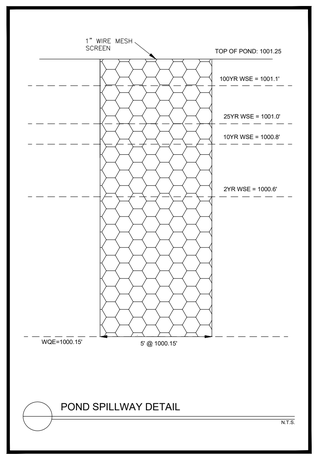




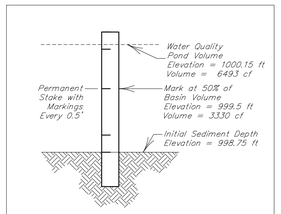
Rock Gabion
N.T.S







POND SPILLWAY DETAIL
N.T.S



	SEDIMENT DEPTH MARKER

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K:\15234\15234-0018-01 liberty hill credit union\2 design phase\CAD\Plans\Site\15234-0018-01 POND.dwg jo4: July 03, 2025

REVISIONS

No.	Date	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23004 & 10064300
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: —
DESIGNED BY: JYC
DATE: Oc – July 2025
CHECKED BY: JMC
JOB NO.: 152334-0018-01
DRAWN BY: KS

JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

POND PROFLE & DETAILS

SHEET NO.
18 OF **28**

2025-XX-SDP

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Liberty Hill Credit Union
Date Prepared: 6/1/2025

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 * =	1.75	acres	
Predevelopment impervious area within the limits of the plan * =	0.00	acres	
Total post-development impervious area within the limits of the plan* =	1.32	acres	
Total post-development impervious cover fraction * =	0.75		
P =	32	inches	
$L_{M\ TOTAL\ PROJECT}$ =	1149	lbs.	

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	1.75	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.32	acres
Post-development impervious fraction within drainage basin/outfall area =	0.75	
$L_{M\ THIS\ BASIN}$ =	1149	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Sand Filter
Removal efficiency = 89 percent

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: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

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 =	1.75	acres
A_I =	1.32	acres
A_P =	0.43	acres
L_R =	1307	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 1149 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 =	0.56	
On-site Water Quality Volume =	5383	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 =	1077	
Total Capture Volume (required water quality volume(s) x 1.20) =	6459	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin =	6459	cubic feet	
Minimum filter basin area =	299	square feet	
Maximum sedimentation basin area =	2691	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	673	square feet	For maximum water depth of 8 feet

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	6459	cubic feet	
Minimum filter basin area =	538	square feet	
Maximum sedimentation basin area =	2153	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	135	square feet	For maximum water depth of 8 feet

TSS Calculations

Pond Portion	Combined Detention & Water Quality Pond Volume Table					
	WSE (ft)	Area (SF)	Incremental Volume (cubic ft)	Incremental Volume (acre-ft)	Cumulative Total Volume (cubic ft)	Cumulative Total Volume (acre-ft)
WQ	998.75	3,511	0	0.000	0	0.000
	999	3,969	934.39	0.021	934.39	0.021
	999.25	4,305	1032.82	0.024	1967.21	0.045
	999.5	4,709	2059.7	0.047	3092.52	0.071
	999.75	5,139	2264.88	0.052	4324.58	0.099
	1000	5,494	3390.4	0.078	5655.28	0.130
	1000.15	5,670	3102.48	0.071	6492.88	0.149
Water Quality Elevation & Volume = 1000.15 ft (6,500 cu ft)						
Detention	1000.25	5,771	3962.48	0.162	7064.96	0.162
	1,000.50	5,912	8531.16	0.034	8531.16	0.196
	1,000.75	5,928	6048.64	0.196	10011.12	0.230
	1,001.00	5,944	2963.89	0.068	11495.05	0.264
	1,001.25	5,944	7310.35	0.239	13358.99	0.307
Max Water Quality & Detention Elevation/Volume = 1001.25 ft (13,359 cu ft)						

Combined Detention & Water Quality Pond Volume Table

Detention Pond Analysis & Volume Table					
Storm Event	Peak Pond Inflow (CFS)	Peak Pond Outflow (CFS)	Detention Volume (Acre-Ft)	Detention Volume (ft^3)	WSE (ft)
Water Quality Elevation & Volume = 1000.15 ft (6,493 cu ft)					
2-Yr	6.00	4.60	0.0600	2614	1000.6
10-Yr	9.80	8.00	0.0900	3920	1000.8
25-Yr	12.33	10.29	0.1100	4792	1000.9
100-Yr	16.55	14.17	0.1300	5663	1001.1

Detention Analysis & Volume Table

Rock Berm Level Spreader - Pond Inflow

100-year Design Storm Flow Rate =		16.55 cfs
WEIR EQUATION	Q = 3.0 * L* (h)^1.5	L = 54.0
h = (Q/3L)^0.6667 =	0.22 FT	
Area=	11.8 sf	
Velocity =	**1.40 fps**	

Flow into pond < 2 fps, therefore, non-erosive

Rock Berm Level Spreader Calculations

ORIFICE SIZING FOR UNDERDRAIN SYSTEM - FALLING HEAD METHOD

SURFACE AREA	5944 SF
MINIMUM DRAWDOWN TIME = 48 HR 48HRS = 172,800 SEC	= 172800 SEC
h1=	1000.15 FT
h2=	995.62 FT
A0=-2*1672*(0^0.5-7.19^0.5)/(0.6*172800*(2*32.2)^0.5)	0.0010 FT
D = (4*A/pi)0.5 =	0.04 FT
Q= Volume/Time	0.39 CFS
	0.43 inch orifice

THEREFORE, POND WILL DRAWDOWN IN 48 HOURS

Orifice Sizing Calculations

App. | No. | Date | REVISIONS

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-22004 & 10064300
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: | DESIGNED BY: JYC
DATE: Oct - July 2025 | CHECKED BY: JMC
JOB NO.: 152334-0018-01 | DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642
DETENTION & WATER QUALITY CALCULATIONS

SHEET NO. 19 OF 28

2025-XX-SDP

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Attachment L: BMPs for Surface Streams

Attachment L is not applicable to this project.

Attachment M: Construction Plans

DATE OF INITIAL SUBMITTAL: January 5, 2026

DEVELOPER:
LEVEL 5
2326 WASHINGTON BLVD, FOURTH FLOOR
OGDEN, UTAH 30346
404-761-0008
ATTN: JASON PATTY

ENGINEER:
QUIDDITY ENGINEERING, INC.
912 S. CAPITAL OF TEXAS HWY SUITE 300
AUSTIN, TEXAS 78746
512-441-9493
ATTN: JUSTIN M. CADIEUX, P.E.

LANDSCAPE ARCHITECT:
QUIDDITY ENGINEERING
4500 MERCANTILE PLAZA DR SUITE 210
FORT WORTH, TEXAS 76137
ATTN: JORDAN KAYLOR, PLA

OWNER:
LUKE KASSLER
115 PERIMETER CENTER PLACE, SUITE 850
ATLANTA, GEORGIA 30346
404-761-0008

ARCHITECT:
THE BECK GROUP
3500 LENOX RD NE, SUITE 250
ATLANTA, GA 30326
(404)-245-8524
ATTO: JOANNA ROBINSON

LEGAL DESCRIPTION:
S9648 - STARR CORNER SUB, LOT 1/PT, ACRES 2.661

RELATED CASES: N/A

ZONING: (C3) GENERAL COMMERCIAL/RETAIL

WATERSHED: SOUTH FORK SAN GABRIEL RIVER

FEMA FIRM:
48491C0275E, 9/26/2008

SITE DEVELOPMENT PLANS

FOR

LIBERTY HILL CREDIT UNION

135 US-183,

LIBERTY HILL, TEXAS 78642

FOR

LEVEL 5

SHEET INDEX

SHEET NUMBER	SHEET DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	TCEQ NOTES
4	FINAL PLAT (1 of 2)
5	FINAL PLAT (2 of 2)
6	EXISTING CONDITIONS
7	DEMOLITION PLAN
8	PRE-CONSTRUCTION EROSION CONTROL PLAN
9	MID-CONSTRUCTION EROSION CONTROL PLAN
10	SITE AND DIMENSION CONTROL PLAN
11	PRIVATE UTILITY PLAN
12	WATER SERVICE CONNECTIONS
13	PRIVATE WASTEWATER SERVICE CONNECTIONS
14	FIRE PROTECTION PLAN
15	EXISTING DRAINAGE AREA MAP
16	PROPOSED DRAINAGE AREA MAP
17	DRAINAGE CALCULATIONS
18	POND PLAN
19	POND PROFLE & DETAILS
20	DETENTION & WATER QUALITY CALCULATIONS
21	GRADING PLAN
22	PAVING PLAN
23	EROSION CONTROL DETAILS
24	SITE CONSTRUCTION DETAILS
25	WATER DETAILS
26	WASTEWATER DETAILS
27	LANDSCAPE - GENERAL NOTES & PLANT SCHEDULE
28	LANDSCAPE - PLANTING PLANS
29	LANDSCAPE - PLANTING SPECIFICATIONS & DETAILS

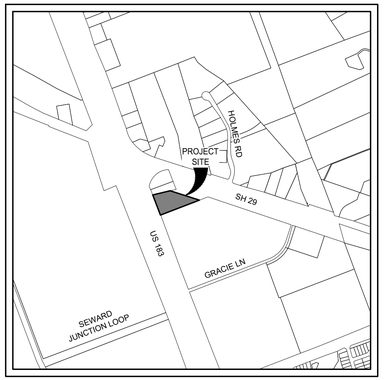
DATE OF INIT. SUBMITTAL: 1/5/26

DWG ISSUANCE: CC - JAN 2026

LIBERTY HILL CREDIT UNION SITE DEVELOPMENT PLANS

GENERAL PLAN NOTES:

1. RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY ENGINEERS.
2. WATERSHED STATUS: THIS PROJECT IS LOCATED IN THE SOUTH FORK SAN GABRIEL RIVER WATERSHED, AND IS LOCATED OVER ` THE EDWARDS AQUIFER CONTRIBUTING ZONE.
3. THIS PROPERTY DOES NOT LIE WITHIN THE AE ZONE AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP AND PANEL NO. 48491C0275E FOR WILLIAMSON COUNTY, TEXAS DATED 9/26/2008.
4. RETAINING WALLS OVER FOUR FEET IN HEIGHT, MEASURED FROM THE TOP OF THE FOOTING TO THE TOP OF THE WALL, SHALL BE STRUCTURALLY ENGINEERED.
5. THERE ARE NO NATURAL SLOPES EXCEEDING 15% ON THIS SITE.
6. DETENTION AND WATER QUALITY FACILITIES PROPOSED WITH THIS SITE PLAN ARE TO BE PRIVATELY MAINTAINED.
7. THE PROPOSED INTERNAL WASTEWATER COLLECTION LINES ARE PRIVATE AND ARE NOT SUBJECT TO MAINTENANCE BY THE CITY OF LIBERTY HILL.



VICINITY MAP
1" = 1000'

LIBERTY HILL FIRE/WILCO ESD # 4
FIRE DESIGN CODE: IFC 2021 WITH LOCAL AMENDMENTS
INTENDED USE: COMMERCIAL
HIGH RISE: No
BUILDING AREA(SF): 2,774 SF
REQUIRED FIRE FLOW PER IFC 2021 = 1500 GPM

FIRE HYDRANT FLOW TEST DATE: JUNE 23, 2025
FIRE HYDRANT FLOW TEST LOCATION: 135 US 183 LIBERTY HILL, TEXAS 78642
FIRE HYDRANT FLOW TEST TYPE: REQUIRED FIRE FLOW

RESIDUAL HYDRANT
100,082,630 (2006 American Darling Valve)
STATIC PRESSURE = 80 PSI
RESIDUAL PRESSURE = 75 PSI

FLOW HYDRANT
100,082,629 (2006 American Darling Valve)
PITOT PRESSURE READING = 50 PSI
FLOW RATE = 1186 GPM
NOZZEL SIZE = 2.5 INCHES
NOZZEL COEFFICIENT = 0 .9

AVAILABLE FIRE FLOW @ 20 PSI= 4,540 GPM

APPROVED BY:

JENNIFER GLAESS, P.E.
CITY ENGINEER, CITY OF LIBERTY HILL DATE

MCKENZI HICKS, INTERIM DIRECTOR OF PLANNING
CITY OF LIBERTY HILL DATE

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED
PROFESSIONAL ENGINEER

January 5, 2026

JUSTIN M. CADIEUX, P.E.

CC - JAN 2026

REVISIONS/CORRECTIONS

NO.	DESCRIPTION	SHEET # DELETE (D) REVISE (R) ADD (A)	PLAN SET SHEET TOTAL	IMP COVER NET CHANGE (SF)	IMP COVER TOTAL SITE (SF/%)	APPROVAL DATE	IMAGE DATE

BENCHMARK INFORMATION:

THE ELEVATIONS (AND/OR CONTOURS) SHOWN HEREON ARE REFERENCED TO T.B.M. "A" (COTTON GIN SPINDLE IN POWER POLE, ELEV: 999.31', NAVD88, GEOID18) AND WERE DETERMINED AS A RESULT OF AN ON THE GROUND SURVEY COMPLETED ON APRIL 17, 2025.

PREPARED BY

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23290 & 10046100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

JOB NUMBER 152334-0018-01

TEXAS ONE CALL SYSTEM
1-800-245-4545
CALL BEFORE YOU. TEXAS ONE CALL PARTICIPANTS REQUEST 72 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST

QUIDDITY
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JOB NUMBER 152334-0018-01

SHEET NO. 1 OF 29

2025-15-CON

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GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK STANDARD SPECIFICATIONS MANUAL.

2. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

3. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER, WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS AS APPROPRIATE. FAILURE TO COMPLETE THIS STEP PRIOR TO THE COMMENCEMENT OF CONSTRUCTION MAY RESULT IN SIGNIFICANT DELAYS AND/OR EXPENDITURES FOR WHICH THE CITY SHALL NOT BE HELD LIABLE.

4. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC., SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.

5. THE CONTRACTOR SHALL GIVE THE CITY OF LIBERTY HILL PLANNING AND DEVELOPMENT DEPARTMENT 48 HOURS' NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION BY BOTH CALLING (512) 548-5519 AND EMAILING PLANNING@LIBERTYHILLTX.GOV.

6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THIS INCLUDES ANY AREAS LOCATED OUTSIDE OF THE DEFINED LIMITS OF CONSTRUCTION (LOC), IN RIGHTS-OF-WAY (ROW), OR LOCATED ON ADJACENT PROPERTIES. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.

7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF LIBERTY HILL, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES, AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.

8. THE ENGINEER SHALL FURNISH THE CITY OF LIBERTY HILL WITH ACCURATE "AS-BUILT" DRAWINGS FOLLOWING THE COMPLETION OF ALL CONSTRUCTION. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THESE "AS-BUILT" DRAWINGS SHALL MEET ALL APPLICABLE REQUIREMENTS TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO FINAL SITE INSPECTION APPROVAL. CHANGES TO APPROVED, CONSTRUCTION-STAMPED PLANS SHALL REQUIRE AN APPROVED SITE PLAN OR STORMWATER PERMIT AMENDMENT THAT IS APPROVED BY THE CITY PRIOR TO FIELD USE.

9. THE CITY OF LIBERTY HILL SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.

10. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE CONTRACTOR'S WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER AND/OR DIRECTOR OF PUBLIC WORKS.

11. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.

12. PRIOR TO FINAL SITE INSPECTION APPROVAL, THE ENGINEER/DEVELOPER/OWNER SHALL SUBMIT TO THE PLANNING AND DEVELOPMENT DEPARTMENT DOCUMENTATION THAT THE SITE WAS INSPECTED BY A TDLR OR A REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND THAT THE SITE IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE TABA.

13. AVAILABLE PERMANENT BENCHMARKS WITH VERTICAL DATUM INFORMATION THAT MAY BE UTILIZED FOR THE CONSTRUCTION OF THIS PROJECT ARE DESCRIBED AS FOLLOWS: [LIST ANY/ALL BENCHMARKS TO BE USED THAT INCLUDE HORIZONTAL (EX: NAD 83) AND VERTICAL (EX: NAVD88) DATUMS AS WELL AS GEOID (ex: 12B)]

14. THE CITY OF LIBERTY HILL HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA). IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE COMPLIANCE WITH ALL LEGISLATION RELATED TO ACCESSIBILITY WITHIN THE LIMITS OF CONSTRUCTION SHOWN IN THESE PLANS.

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

16. CONTRACTORS ON SITE SHALL HAVE AN APPROVED SET OF PLANS AT ALL TIMES. FAILURE TO HAVE AN APPROVED PLAN SET MAY RESULT IN A STOP WORK ORDER.

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH, IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL, SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT SHALL BE PROVIDED AS PART OF A PACKAGE REQUIRED PRIOR TO THE PRE-CONSTRUCTION MEETING AND ANY CONSTRUCTION ACTIVITIES.

2. IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4 FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.

3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION, IT IS FOUND THAT TRENCHES ARE, IN FACT, 5 FEET OR MORE IN DEPTH {OR} TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED, AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, ARE SUBMITTED TO THE CITY OF LIBERTY HILL FOR REVIEW AND APPROVAL.

STREET AND DRAINAGE NOTES:

1. ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY OF LIBERTY HILL PUBLIC WORKS DEPARTMENT, AND THEY SHALL BE GIVEN A MINIMUM OF 24 HOURS' NOTICE PRIOR TO ANY TESTING BY BOTH CALLING (512) 548-5529 AND EMAILING PUBWORKS@LIBERTYHILLTX.GOV.

2. PUBLIC ROADWAYS CONSTRUCTED AS PART OF ANY DEVELOPMENT PERMIT SHALL BE FREE FROM DEFECTS, PATCHES, OR REPAIRS PRIOR TO ACCEPTANCE BY THE CITY OF LIBERTY HILL. ROADWAYS SHALL HAVE A CLEAR SURFACE FREE FROM ANY GOUGES, MARRING, OR CRACKING TO BE CONSIDERED SUITABLE TO THE CITY OF LIBERTY HILL PUBLIC WORKS DEPARTMENT. NO NEW ROADWAYS SHALL BE ACCEPTED UNTIL ALL CONSTRUCTION TRAFFIC RELATED TO THIS OR ANY ASSOCIATED PERMIT HAS CEASED, AND THE ROADWAY IS OPEN TO AND EXCLUSIVELY USED BY THE GENERAL PUBLIC.

3. ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA). THE CITY OF LIBERTY HILL HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE ADA OR ANY OTHER ACCESSIBILITY LEGISLATION AND DOES NOT WARRANT OR APPROVE THEM FOR ANY ACCESSIBILITY STANDARDS.

4. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.

5. THE DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT, INCLUDING GAS, ELECTRIC, TELEPHONE, TELECOMMUNICATIONS, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.

6. STREET RIGHTS-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS REQUESTED TO AND ACCEPTED BY THE CITY ENGINEER.

7. BARRICADES BUILT TO CITY OF LIBERTY HILL STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.

8. ALL REINFORCED CONCRETE PIPE (R.C.P.) SHALL BE A MINIMUM CLASS III. ALL PUBLIC R.C.P. SHALL BE A MINIMUM OF 18-INCHES IN DIAMETER.

9. THE SUBGRADE MATERIAL FOR THE STREETS SHOWN HEREIN WAS TESTED BY_____ ON THIS DATE: _____ AND THE PAVING SECTIONS DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF LIBERTY HILL DESIGN CRITERIA. THE PAVING SECTIONS . ARE TO BE CONSTRUCTED AS FOLLOWS:

STREET STATION	FLEX BASE. THICKNESS	HMAC THICKNESS	LIME STAB. THICKNESS

9. THE GEOTECHNICAL ENGINEER SHALL INSPECT THE SUBGRADE FOR COMPLIANCE WITH THE DESIGN ASSUMPTIONS MADE DURING PREPARATION OF THE ACCEPTED GEOTECHNICAL REPORT. ANY ADJUSTMENTS THAT ARE REQUIRED SHALL BE MADE THROUGH REVISION OF THE CONSTRUCTION PLANS AND ADDENDUM TO ANY ACCEPTED GEOTECHNICAL REPORT.

10. WHERE PLASTICITY INDEX (PI) IS OVER 20, SUBGRADES MUST BE STABILIZED UTILIZING A METHOD ACCEPTABLE TO THE CITY ENGINEER. THE GEOTECHNICAL ENGINEER SHALL RECOMMEND AN APPROPRIATE SUBGRADE STABILIZATION IF SULFATES ARE DETERMINED TO BE PRESENT. WHEN UTILIZING LIME FOR SOIL STABILIZATION, PLACEMENT SHALL BE IN THE FORM OF LIME SLURRY, NOT PELLETS.

Field Density Control Requirements

Soil Description	Density, Percent	Moisture Content
	Tex-113-E	
PI<15	≥ 98% D_s* and ≤ 105% D_s	N/A
15 ≤ PI ≤ 35	≥ 98% D_s and ≤ 102% D_s	≥ W_{opt} + 3%
PI > 35	≥ 95% D_s and ≤100% D_s	≥ W_{opt} +3%

WATER AND WASTEWATER NOTES:

1. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 200), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200 PSI, DR 9).

2. PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 150), SDR26 HIGHER PRESSURE RATED (160 PSI), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241 OR D3034, MAX. DR-26) AND DUCTILE IRON (AWWA C-100, MIN. CLASS 200).

3. UNLESS OTHERWISE ACCEPTED BY THE CITY ENGINEER, MINIMUM DEPTH OF COVER FOR ALL LINES OUTSIDE OF THE PAVEMENT SHALL BE 42" BELOW FINISHED GRADE AND 30" BELOW SUBGRADE FOR ALL LINES LOCATED IN PAVED AREAS.

4. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-100, MIN. CLASS 200).

5. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH A MINIMUM OF 8-MIL POLYETHYLENE AND SEALED WITH DUCT TAPE OR AN EQUIVALENT ACCEPTABLE BY THE CITY ENGINEER.

6. THE CONTRACTOR SHALL CONTACT THE CITY OF LIBERTY HILL PUBLIC WORKS DEPARTMENT BY BOTH CALLING (512) 548-5529 AND EMAILING PUBWORKS@LIBERTYHILLTX.GOV TO COORDINATE UTILITY TIE-INS AND NOTIFY THEM AT LEAST 48 HOURS PRIOR TO CONNECTING TO ANY EXISTING LINES.

7. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF THE PAVEMENT SHALL HAVE BOLTED COVERS. CORE CONNECTIONS TO FIBERGLASS MANHOLES SHALL NOT BE ALLOWED.

8. THE CONTRACTOR MUST OBTAIN A BULK WATER PERMIT OR PURCHASE AND INSTALL A WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST ALWAYS BE POSSESSED BY ANY PARTIES WHO UTILIZE WATER.

9. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE SCHEDULED WITH THE CITY OF LIBERTY HILL PUBLIC WORKS DEPARTMENT BY BOTH CALLING (512) 548-5529 AND EMAILING PUBWORKS@LIBERTYHILLTX.GOV.

10. THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE, SHALL PERFORM STERILIZATION OF ALL POTABLE WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING TEST GAUGES), SUPPLIES (INCLUDING CONCENTRATED CHLORINE DISINFECTING MATERIAL), AND NECESSARY LABOR REQUIRED FOR THE STERILIZATION PROCEDURE. THE STERILIZATION PROCEDURE SHALL BE MONITORED BY CITY OF LIBERTY HILL PERSONNEL. WATER SAMPLES WILL BE COLLECTED BY THE CITY OF LIBERTY HILL TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM. WHERE MEANS OF FLUSHING IS NECESSARY, THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE, SHALL PROVIDE FLUSHING DEVICES AND REMOVE SAID DEVICES PRIOR TO FINAL APPROVAL BY THE CITY OF LIBERTY HILL.

11. SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY PERSONNEL. AT THE CONTRACTOR'S REQUEST AND IN THE CONTRACTOR'S PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY OF LIBERTY HILL 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. THE CONTRACTOR SHALL SUPPLY A CHECK OR MONEY ORDER, PAYABLE TO THE CITY OF LIBERTY HILL, TO COVER THE FEE CHARGED FOR TESTING EACH WATER SAMPLE. CITY OF LIBERTY HILL FEE AMOUNTS MAY BE OBTAINED THROUGH THE CITY OF LIBERTY HILL PLANNING AND DEVELOPMENT DEPARTMENT BY BOTH CALLING (512) 548-5519 AND EMAILING PLANNING@LIBERTYHILLTX.GOV.

12. THE CONTRACTOR, AT CONTRACTOR'S EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY CITY OF LIBERTY HILL PERSONNEL.

13. THE CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY OF LIBERTY HILL PUBLIC WORKS DEPARTMENT AND PROVIDE NO LESS THAN 24 HOURS' NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING BY BOTH CALLING (512) 548-5529 AND EMAILING PUBWORKS@LIBERTYHILLTX.GOV.

14. THE CONTRACTOR (OR SUBCONTRACTORS) SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF LIBERTY HILL PERSONNEL.

15. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.

16. ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:

WATER SERVICE	"W" ON TOP OF CURB
WASTEWATER SERVICE	"S" ON TOP OF CURB
VALVE	"V" ON FACE OF CURB

TOOLS FOR MARKING THE CURB SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF MARKING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN AREAS WITHOUT CURBS. SUCH MEANS OF MARKING SHALL BE AS SPECIFIED BY THE ENGINEER AND ACCEPTED BY THE CITY OF LIBERTY HILL.

17. CONTACT THE CITY OF LIBERTY HILL PUBLIC WORKS DEPARTMENT FOR ASSISTANCE IN OBTAINING EXISTING WATER AND WASTEWATER LOCATIONS BY BOTH CALLING (512) 548-5529 AND EMAILING PUBWORKS@LIBERTYHILLTX.GOV.

18. WILLIAMSON COUNTY ESD NO. 4 SHALL BE NOTIFIED 48 HOURS PRIOR TO TESTING OF ANY BUILDING SPRINKLER PIPING SO THAT THE FIRE DEPARTMENT MAY BE PRESENT TO MONITOR SUCH TESTING BY BOTH CALLING (512) 515-5165 AND EMAILING MDICKENS@LIBERTYHILLFIRE.ORG.

19. SAND, AS DESCRIBED IN 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

20. 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 (7AM - 4PM) AND POSSIBLY BETWEEN 12 A.M. AND 6 A.M.

21. ALL WASTEWATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REGULATIONS, 30 TAC CHAPTER 213 AND 317, AS APPLICABLE. ALL WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH TCEQ REGULATIONS, 30 TAC CHAPTER 290. WHENEVER TCEQ AND CITY OF LIBERTY HILL SPECIFICATIONS CONFLICT, THE MORE STRINGENT SHALL APPLY.

22. ALL FIRE LINES MUST BE A MINIMUM OF 6" IN DIAMETER.

23. ALL FIRE LINES MUST BE HYDROSTATIC TESTED AT 200 PSI FOR A MINIMUM OF 2 HOURS, TO BE VERIFIED BY THE FIRE CODE OFFICIAL.

24. ALL FIRE LINES MUST BE SUPPORTED BY CONCRETE THRUST BLOCKING WHERE NECESSARY. THE BLOCKING MUST BE VERIFIED BY THE FIRE CODE OFFICIAL PRIOR TO COVER UP.

TRAFFIC MARKING NOTES:

1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS, OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (TMUTCD), LATEST EDITION.

2. ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND, THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK, AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF LIBERTY HILL UNIFIED DEVELOPMENT CODE.

2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.

3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. INSTALLATION AND CONDITION SHALL BE REGULARLY INSPECTED BY THE CITY OF LIBERTY HILL FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.

4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL REVEGETATION HAS BEEN ESTABLISHED AND APPROVAL RECEIVED FROM THE CITY OF LIBERTY HILL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.

5. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.

FFIRE DEPARTMENT NOTES:

1. GENERAL: ALL DEVELOPMENTS SHALL COMPLY WITH THE CURRENT FIRE CODE, APPENDICES, AND ANY LOCAL AMENDMENTS AS ADOPTED BY THE CITY OF LIBERTY HILL.

2. COMBUSTIBLE MATERIALS ON-SITE: ALL WATER LINES SHALL BE TESTED AND FIRE HYDRANTS IN-SERVICE, PRIOR TO BRINGING COMBUSTIBLE MATERIALS (WOOD, PACKAGING, PLASTICS, ETC.) ON ANY JOB SITE.

3. FIRE LANES: FIRE APPARATUS ACCESS ROADS/DRIVES SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 26 FEET. IF RAISED CURBING OR MEDIANS COMPROMISE MINIMUM WIDTH, CURBING SHALL BE MOUNTABLE AND RAISED AREA SHALL CONTAIN NO OBSTRUCTIONS SUCH AS LANDSCAPING, SIGNAGE, GROUND-MOUNTED EQUIPMENT, ETC.

4. ALL-WEATHER SURFACE: THE PAVEMENT STRUCTURE FOR FIRE ACCESS ROADS/DRIVES MUST BE ALL- WEATHER SURFACE (ASPHALT/CONCRETE) DESIGNED TO SUPPORT AN 80,000 LB. APPARATUS LOADING.

5. GRADE: THE GRADE THROUGH THE FIRE LANE ACCESS SHALL NOT EXCEED 7% AND NO GRADE BREAKS SHALL EXCEED 3%.

6. TURNING RADII: TURNING RADII SHALL BE A MINIMUM OF 25-FTT INSIDE AND 50-FT OUTSIDE AS MEASURED FROM FACE-OF-CURB (WHEN PRESENT) OR ON DRIVABLE, PAVED SURFACE.

7. VERTICAL CLEARANCE: THE VERTICAL CLEARANCE OVER A DESIGNATED FIRE LANE SHALL NOT BE LESS THAN 13'-6".

8. EMERGENCY RESPONDER RADIO COVERAGE: ADEQUATE EMERGENCY RESPONDER RADIO COVERAGE SHALL BE REQUIRED FOR ALL NEW BUILDINGS. A PRE-ENHANCEMENT RADIO SURVEY SHALL BE REQUIRED AT THE 80% CONSTRUCTION PHASE FOR CERTAIN BUILDING TYPES BASED ON THE SIZE OF THE BUILDING. PRE- ENHANCEMENT RADIO SURVEY REQUIREMENTS INCLUDE THE FOLLOWING BUILDING TYPES:

- GREATER THAN (5) STORIES
- BELOW GRADE PLANE
- WOOD FRAMED CONSTRUCTION GREATER THAN 50,000 SF
- CONCRETE OR METAL FRAMED CONSTRUCTION GREATER THAN 25,000 SF

9. REQUIRED FIRE FLOWS: A PROJECT'S MINIMUM FIRE FLOW FOR THE LARGEST BUILDING SHALL BE MEASURED AT (20) PSI RESIDUAL PRESSURE THAT IS AVAILABLE FOR FIREFIGHTING PER THE FLOWS ON TABLES B105.1 OR B105.2 OF THE INTERNATIONAL FIRE CODE (IFC), APPENDIX B. DISCLAIMER: IT IS THE RESPONSIBILITY OF THE DEVELOPER AND ENGINEER TO ENSURE THESE MINIMUM FIRE FLOW REQUIREMENTS FOR THE SITE ARE MET VIA FLOW TESTING AND WATER MODELING.

10. FIRE DEPARTMENT CONNECTIONS: ALL FDC'S MUST BE OF THE REMOTE TYPE AND CONSTRUCTED TO THE CURRENT ADOPTED FDC DETAIL. THE FDC SHALL HAVE A FIRE HYDRANT LOCATED WITHIN 100' OF THE FDC. FDC SHALL BE IDENTIFIED ON THE SITE VIA SIGNAGE. (WCESD NO. 4 FDC DETAIL MUST BE ATTACHED TO PLANS.)

11. GATES: IF GATES ARE PROVIDED ALONG ANY FIRE ACCESS ROAD/DRIVE, MINIMUM PASSABLE WIDTH SHALL NOT BE LESS THAN (20) FEET AND SHALL COMPLY WITH IFC APPENDIX D AND LIBERTY HILL CODE OF ORDINANCES REGARDING EMERGENCY ACCESS SYSTEMS. GATES WILL REQUIRE A KNOX- BOX® KEY SWITCH.

12. FIRE LANES MUST BE PAINTED WITH A MINIMUM OF A 6" RED STRIPE AND 4" WHITE LETTERS STATING, "FIRE LANE - TOW AWAY ZONE." (WCESD NO. 4 FIRE LANE DETAIL MUST BE ATTACHED TO PLANS.)

13. ALL NEW CONSTRUCTION PROJECTS ARE REQUIRED TO HAVE A MINIMUM OF TWO FIRE HYDRANTS, ONE WITHIN 300' OF THE BUILDING AND ONE WITHIN 500' OF THE BUILDING. IF PRE-EXISTING FIRE HYDRANTS ARE IN PLACE MEETING THESE REQUIREMENTS, THEY MAY BE USED FOR THE NEW PROJECT.

14. ALL NEW FIRE HYDRANTS MUST MEET THE CURRENT ADOPTED WCESD NO. 4 STANDARDS. (WCESD NO. 4 FIRE HYDRANT DETAIL MUST BE ATTACHED TO PLANS.)

15. FIRE LANES EXCEEDING 150' IN LENGTH MUST BE PROVIDED WITH WIDTH AND TURNAROUND PROVISIONS IN ACCORDANCE WITH IFC APPENDIX D.

CITY OF GEORGETOWN UTILITY GENERAL CONSTRUCTION NOTES (FOR WATER ONLY):

1. THESE CONSTRUCTION PLANS WERE PREPARED, SEALED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE, BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR CONSTRUCTION OF THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS AND CODES.

2. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.

3. THE SITE CONSTRUCTION PLANS SHALL MEET ALL REQUIREMENTS OF THE APPROVED SITE PLAN.

4. WASTEWATER MAINS AND SERVICE LINES SHALL BE SDR 26 PVC.

5. WASTEWATER MAINS SHALL BE INSTALLED WITHOUT HORIZONTAL OR VERTICAL BENDS.

6. MAXIMUM DISTANCE BETWEEN WASTEWATER MANHOLES IS 500 FEET.

7. WASTEWATER MAINS SHALL BE LOW PRESSURE AIR TESTED AND MANDREL TESTED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.

8. WASTEWATER MANHOLES SHALL BE VACUUM TESTED AND COATED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.

9. WASTEWATER MAINS SHALL BE CAMERA TESTED BY THE CONTRACTOR AND SUBMITTED TO THE CITY ON DVD FORMAT PRIOR TO PAVING THE STREETS.

10. PRIVATE WATER SYSTEM FIRE LINES SHALL BE TESTED BY THE CONTRACTOR TO 200 PSI FOR 2 HOURS.

11. PRIVATE WATER SYSTEM FIRE LINES SHALL BE DUCTILE IRON PIPING FROM THE WATER MAIN TO THE BUILDING SPRINKLER SYSTEM, AND 200 PSI C900 PVC FOR ALL OTHERS.

12. PUBLIC WATER SYSTEM MAINS SHALL BE 150 PSI C900 PVC AND TESTED BY THE CONTRACTOR AT 200 PSI FOR 15 MINUTES AND 150 PSI FOR 2 HOURS.

13. ALL BENDS AND CHANGES IN DIRECTION ON WATER MAINS SHALL BE RESTRAINED AND THRUST BLOCKED.

14. LONG FIRE HYDRANT LEADS SHALL BE RESTRAINED.

15. ALL WATER LINES ARE TO BE BACTERIA TESTED BY THE CONTRACTOR ACCORDING TO THE CITY STANDARDS AND SPECIFICATIONS.

16. WATER AND SEWER MAIN CROSSINGS SHALL MEET ALL REQUIREMENTS OF THE TCEQ AND THE CITY.

17. FLEXIBLE BASE MATERIAL FOR PUBLIC STREETS SHALL BE TXDOT TYPE A GRADE 1.

18. HOT MIX ASPHALTIC CONCRETE PAVEMENT SHALL BE TYPE D UNLESS OTHERWISE SPECIFIED AND SHALL BE A MINIMUM OF 2 INCHES THICK ON PUBLIC STREETS AND ROADWAYS.

19. ALL SIDEWALK RAMPS ARE TO BE INSTALLED WITH THE PUBLIC INFRASTRUCTURE.

20. A MAINTENANCE BOND IS REQUIRED TO BE SUBMITTED TO THE CITY PRIOR TO ACCEPTANCE OF THE PUB

Texas Commission on Environmental Quality
Contributing Zone 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

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any ground disturbance or construction activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.

2. All contractors conducting regulated activities associated with this project should be provided with complete copies of the approved Contributing Zone Plan (CZP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractor(s) should keep copies of the approved plan and approval letter on-site.

3. No hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.

4. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.

5. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.

6. Sediment must be removed from the sediment traps or sedimentation basins when it occupies 50% of the basin's design capacity.

7. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.

8. All excavated material that will be stored on-site must have proper E&S controls.

9. If portions of the site will have a cease in construction activity lasting longer than 14 days, soil

stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.

10. The following records should be maintained and made available to the TCEQ upon request:
    - the dates when major grading activities occur;
    - the dates when construction activities temporarily or permanently cease on a portion of the site; and
    - the dates when stabilization measures are initiated.

11. The holder of any approved CZP must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

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

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

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

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

Austin Regional Office 12100 Park 35 Circle, Building A Austin, Texas 78753-1808 Phone (512) 339-2929 Fax (512) 339-3795	San Antonio Regional Office 14250 Judson Road San Antonio, Texas 78233-4480 Phone (210) 490-3096 Fax (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

REVISIONS

No.	Date	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23264 & 10046100
9112 S. Capital of Texas Hwy., Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: ____ DESIGNED BY: JYC
DATE: CC - Jan 2026 CHECKED BY: JMC
JOB NO.: 152334-0018-01 DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

TCEQ NOTES

SHEET NO.
3 OF **29**

2025-XX-SDP

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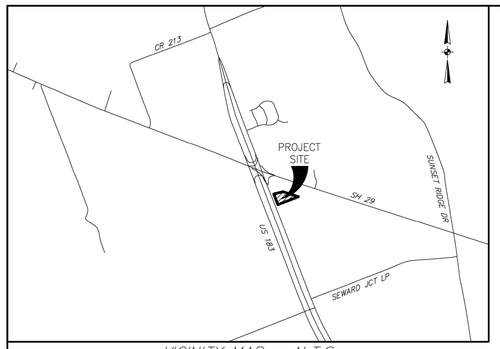
K:\15234\15234-0018-01 Liberty Hill Credit Union\2 Design Phase\CAD\Plans\Site\15234-0018-01 COVER.dwg jc4: January 05, 2026

REPLAT OF THE REMAINDER OF STARR CORNER SUBDIVISION

2.661 ACRES OF LAND SITUATED IN THE JOHN B. ROBINSON SURVEY, ABSTRACT NO. 521, LIBERTY HILL, WILLIAMSON COUNTY, TEXAS



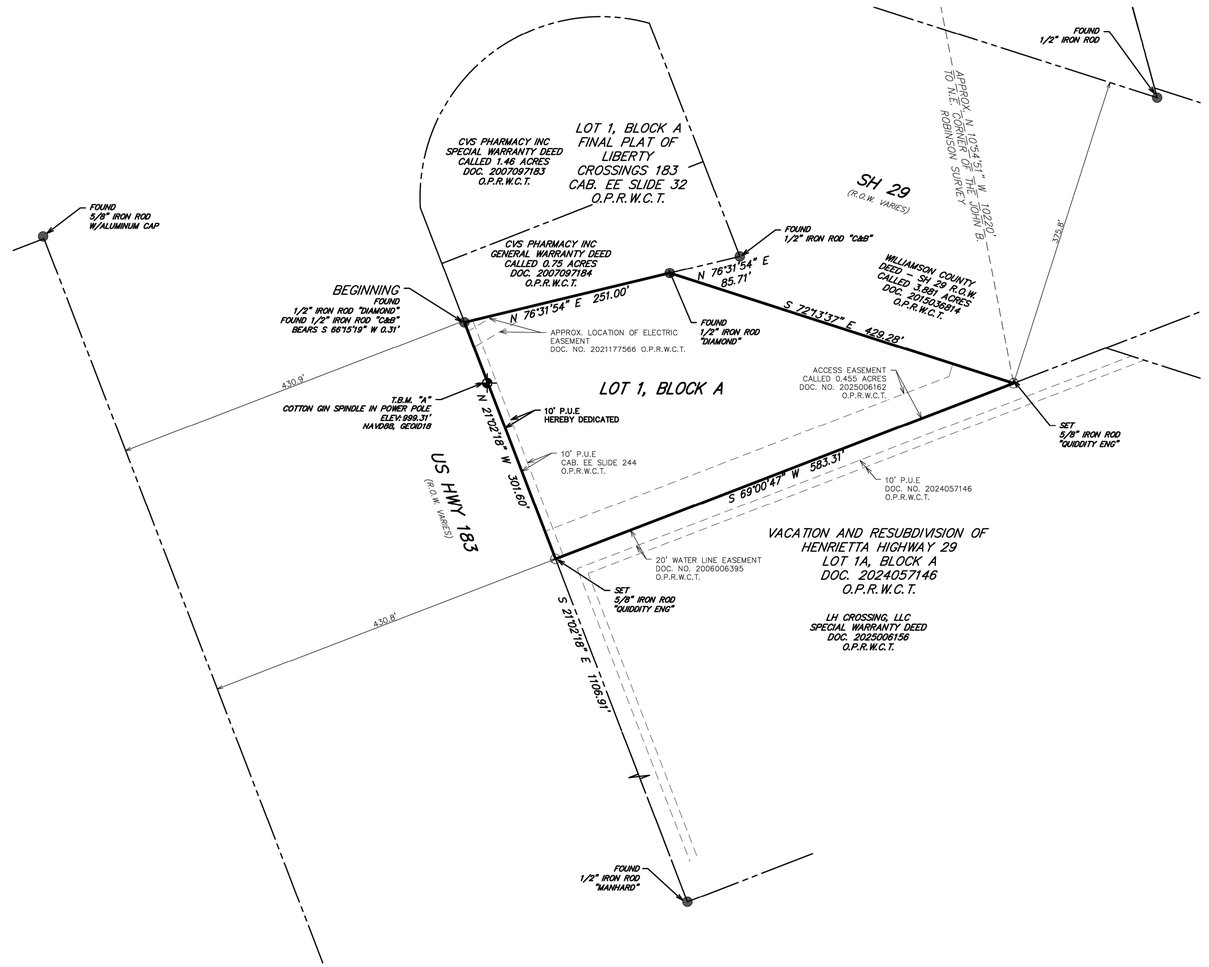
VICINITY MAP – N.T.S.

SCALE – 1" = 100'

0 100 200 300

LEGEND

- IRON ROD FOUND AS NOTED
- 5/8" IRON ROD SET W/CAP STAMPED "QUIDDITY ENG."
- PROPOSED SIDEWALK LOCATION
- SUBJECT PROPERTY LINE
- ADJOINING PROPERTY LINE
- EASEMENT LINE
- O.R.W.C.T. OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS



PROPERTY OWNER:
B. BOYD REAL ESTATE, LLC

ACREAGE:
2.661 ACRES

SURVEYOR:
QUIDDITY ENGINEERING
912 S. CAPITAL OF TEXAS HWY, STE 300
AUSTIN, TEXAS 78746

NUMBER OF BLOCKS:
1

NUMBER OF LOTS:
1

SUBMITTAL DATE:
JULY 21, 2025

PATENT SURVEY:
JOHN B ROBINSON SURVEY, ABSTRACT 521

ENGINEER:
QUIDDITY ENGINEERING
912 S. CAPITAL OF TEXAS HWY, STE 300
AUSTIN, TEXAS 78746

BEARING BASIS NOTE:

HORIZONTAL DATUM BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, TEXAS CENTRAL ZONE, USING THE TRIMBLE CORS NETWORK.

FILE: K:\15234\15234-0015-01 Liberty Hill Credit Union – Preliminary\1 Surveying Phase\CAD Files\Working Dwg\15234-0015-01 Plat.dwg	
JOB NO: 15234-0015-01	DRAWN BY: TJS
DATE: 06/23/2025	CHECKED BY:
SCALE: 1"=100'	

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. 10046100
912 S. Capital of Texas Highway, Suite 150 • Austin, TX 78746 • 512.441.9493

SHEET 1 OF 2

K:\15234\15234-0015-01 Liberty Hill Credit Union – Preliminary\1 Surveying Phase\CAD Files\Working Dwg\15234-0015-01 Plat.dwg

#2025-4-RPL

No. Date REVISIONS App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23294 & 10046100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: | DESIGNED BY: JYC
DATE: CC - Jan 2026 | CHECKED BY: JMC
JOB NO.: 152334-0018-01 | DRAWN BY: KS

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

FINAL PLAT (1 OF 2)

SHEET NO. 4 OF 29

2025-XX-SDP

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K:\15234\15234-0018-01 Liberty Hill Credit Union\2 Design Phase\CAD\Plans\Site\15234-0018-01 COVER.dwg jc4 January 05, 2026

REPLAT OF THE REMAINDER OF STARR CORNER SUBDIVISION

2.661 ACRES OF LAND SITUATED IN THE JOHN B. ROBINSON SURVEY, ABSTRACT NO. 521, LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

LEGAL DESCRIPTION:

BEING a 2.661 acre tract of land situated in the John B. Robinson Survey, Abstract No. 521, Liberty Hill, Williamson County, Texas, being all of a called 2.661 acre tract of land described in that Special Warranty Deed to B. Boyd Real Estate, LLC in Document No. 2024070001 of the Official Public Records of Williamson County, Texas, also being the remaining portion of the STARR CORNER SUBDIVISION plat as recorded in Cabinet EE, Slide 244 of the Official Public Records of Williamson County, Texas; said 2.661 acre tract of land being more particularly described as follows, with bearings based on the Texas Coordinate System of 1983, Central Zone:

BEGINNING: at a 1/2–inch iron rod with cap stamped "Diamond" found on the eastern right–of–way line of U.S. Highway 183 (right–of–way varies) for the northwestern corner of said 2.661 acre tract, the northwestern corner of said remainder of STARR CORNER SUBDIVISION, for the southwestern corner of Lot 1, Block A of the LIBERTY CROSSINGS 183 subdivision as recorded in Cabinet EE, Slide 32 of the Official Public Records of Williamson County, Texas, for the POINT OF BEGINNING and the northwestern corner of this herein described tract, from which a 1/2–inch iron rod with cap stamped "C&B" found bears South 66°15'19" West a distance of 0.31 feet;

THENCE: North 76°31'54" East a distance of 251.00 feet with the northern line of said 2.661 acre tract, the northern line of said remainder of STARR CORNER SUBDIVISION, the southern line of said Lot 1, Block A to a 1/2–inch iron rod with cap stamped "Diamond" found on the southwestern right–of–way line of State Highway 29 (right–of–way varies) for the northernmost corner of said 2.661 acre tract, for the northernmost corner of this herein described tract, from which a 1/2–inch iron rod with cap stamped "C&B" found on the southwestern right–of–way line of State Highway 29 for the southeastern corner of said Lot 1, Block A bears North 76°31'54" East a distance of 85.71 feet;

THENCE: South 72°13'37" East a distance of 429.28 feet with the southwestern right–of–way line of State Highway 29, the northeastern line of said 2.661 acre tract, the northeastern remaining line of said STARR CORNER SUBDIVISION to a 5/8–inch iron rod with cap stamped "Quiddity Eng" set on the northern line of Lot 1A, Block A of the VACATION AND RESUBDIVISION OF HENRIETTA HIGHWAY 29 plat as recorded in Document No. 202405714G of the Official Public Records of Williamson County, Texas for the easternmost corner of said 2.661 acre tract, for the easternmost corner of this herein described tract;

THENCE: South 69°00'47" West a distance of 583.31 feet with the southern line of said 2.661 acre tract, the southern line of said remainder of STARR CORNER SUBDIVISION, the northern line of said Lot 1A, Block A to a 5/8–inch iron rod with cap stamped "Quiddity Eng" set on the eastern right–of–way line of U.S. Highway 183 for the southwestern corner of said 2.661 acre tract, the southwestern corner of said STARR CORNER SUBDIVISION, the northwestern corner of said Lot 1A, Block A, for the southwestern corner of this herein described tract, from which a 1/2–inch iron rod with cap stamped "Manhard" found for the southwestern corner of said Lot 1A, Block A bears South 21°02'18" East a distance of 1106.91 feet;

THENCE: North 21°02'18" West a distance of 301.60 feet with the eastern right–of–way line of U.S. Highway 183, the western line of said 2.661 acre tract, the western line of said STARR CORNER SUBDIVISION to the POINT OF BEGINNING and CONTAINING an area of 2.661 acres of land.

BEARING BASIS NOTE:

HORIZONTAL DATUM BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, TEXAS CENTRAL ZONE, USING THE TRIMBLE CORS NETWORK.

GENERAL NOTES:

1. Building setbacks shall be in accordance with Chapter 4, Zoning and Lot Design Standards, City of Liberty Hill Unified Development Code.
2. Sidewalks shall be constructed in accordance with Chapter 5, Subdivisions & Public Improvements, City of Liberty Hill Unified Development Code.
3. No obstructions, including but not limited to fencing or storage, shall be permitted in any drainage easements shown hereon.
4. A ten foot (10') P.U.E. abutting and along the street side property line is hereby dedicated for all street side property lots shown hereon.
5. Utility providers for this development are
   Water: City of Georgetown
   Wastewater: City of Liberty Hill
   Electric: Pedernales Electric Cooperative.
6. Sidewalks shall be constructed in accordance with the City of Round Rock's Design and Construction Standards.
7. There no areas within the boundaries of this subdivision in the 100–year floodplain as defined by FIRM Map Number 48491C0275E, effective date of September 26, 2008.
8. This subdivision is subject to all general notes and restrictions appearing on the plat of Starr Corner Subdivision, recorded in Cabinet EE Slide 244 of the Plat Records of Williamson County, Texas.
9. The landowner assumes all risks associated with improvements located in the right– of–way,or road widening easements. By placing anything in the right–of–way or road widening easements, the landowner indemnifies and holds the City of Liberty Hill, Williamson County, their officers, agents and employees harmless from any liability owing to property defects or negligence not attributable to them and acknowledges that the improvements may be removed by the City and/or County and that the owner of the improvements will be responsible for the relocation and/or replacement of the improvements.
10. The building of all streets, roads, and other public thoroughfares and any bridges or culverts necessary to be constructed or placed is the responsibility of the owners of the tract of land covered by this plat in accordance with the plans and specifications prescribed by the City of Liberty Hill and/or Williamson County, Texas. Neither the City of Liberty Hill nor Williamson County assumes any obligation to build any of the streets, roads, or other public thoroughfares shown on this plat or of constructing any of the bridges or drainage improvements in connection therewith. Neither the City of Liberty Hill nor Williamson County assumes any responsibility for drainage ways or easements in the subdivision, other than those draining or protecting the road system and streets in their respective jurisdictions.
11. Neither the City of Liberty Hill nor Williamson County assumes any responsibility for the accuracy of representations by other parties in this plat. Floodplain data, in particular, may change depending on subsequent development. It is further understood that the owners of the tract of land covered by this plat must install at their own expense all traffic control devices and signage that may be required before the streets in the subdivision have finally been accepted for maintenance by the City and / or County.
12. Unless otherwise noted herein, all easements dedicated to the City of Liberty Hill by this plat shall be EXCLUSIVE to the City of Liberty Hill, and Grantor covenants that Grantor and Grantor's heirs, successors, and assigns shall not convey any other easement, license, or conflicting right to use in any manner, the area (or any portion thereof) covered by this grant.
13. All easements dedicated to the City of Liberty Hill by this plat additionally include the following rights: (1) the right of the City to change the size of any facilities installed, maintained, or operated within the easement area; (2) the right of the City to relocate any facilities within the easement area; and (3) the right of the City to remove from the easement area all trees and parts thereof, or other obstructions, which endanger or may interfere with the efficiency and maintenance of any facilities within the easement area.
14. A recorded encroachment or license agreement between Williamson County and the property owner authorizing the wastewater service line within County right–of–way shall be provided prior to City issuance of any site development permit or building permit for this property.

THE STATE OF TEXAS
COUNTY OF WILLIAMSON

That B. Boyd Real Estate LLC, a Texas Limited Liability Company, as the owner of that certain 2.661acre tract of land recorded in Document No. 2024070001 of the Official Records of Williamson County, Texas do hereby certify that there are no lien holders and dedicate to the public forever use of the streets, alleys, easements and all other lands intended for public dedication as shown hereon to be known as the

REPLAT OF THE REMAINDER OF STARR CORNER SUBDIVISION.

_____
B. Boyd Real Estate LLC

_____
Benny M. Boyd, President

THE STATE OF TEXAS
COUNTY OF WILLIAMSON

This instrument was acknowledged before me on the _____ day of _____, 20____, by Benny M. Boyd, as Presidnet of B. Boyd Real Estate LLC, a Texas Limited Liability Company, on behalf of said B. Boyd Real Estate LLC.

_____
Notary Public State of Texas

Printed Name:

My Commission Expires:

THE STATE OF TEXAS
COUNTY OF WILLIAMSON

That I, Thomas J. Sawyer RPLS, do hereby certify 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 Chapter 5, Subdivisions, Public Improvements, City of Liberty Hill Unified Development Code.

_____ 12/18/2025
Signature and Seal of Licensed Surveyor Date

STATE OF TEXAS · REGISTERED · THOMAS J. SAWYER · 7082 · PROFESSIONAL · LAND SURVEYOR

THE STATE OF TEXAS
COUNTY OF WILLIAMSON

That I, Justin C. Cadieux PE, do hereby certify that the information on this plat complies with Chapter 5, Subdivisions, Public Improvements, City of Liberty Hill Unified Development Code and the Design and Construction Standards adopted by the City of Liberty Hill, Texas.

_____ _____
Signature and Seal of Licensed Engineer Date

I, McKenzi Hicks, Interim Director of Planning, designee, of the City of Liberty Hill, Texas, under the authority granted me in Section 3.09.02 of the Unified Development Code, in accordance with the Texas Local Government Code, do hereby certify this plat as approved for filing of record with the County Clerk of Williamson County, Texas.

_____ _____ _____
McKenzi Hicks, Interim Director of Planning Date

STATE OF TEXAS
COUNTY OF WILLIAMSON

I, NANCY E. RISTER, CLERK OF COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION, WAS FILED FOR RECORD IN MY OFFICE ON THE _____ DAY OF _____, 20____, A.D. AT _____ O'CLOCK __M., AND WAS DULY RECORDED ON THIS THE _____ DAY OF, _____, 20____, A.D. AT _____ O'CLOCK __M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN INSTRUMENT NO._____.

_____
BY: NANCY E. RISTER CLERK, COUNTY COURT WILLIAMSON COUNTY, TEXAS

FILE: K:\15234\15234–0015–01 Liberty Hill Credit Union – Preliminary\1 Surveying Phase\CAD Files\Working Dwg\15234–0015–01 Plat.dwg			
JOB NO:	15234–0015–01	DRAWN BY:	TJS
DATE:	06/23/2025	CHECKED BY:	
SCALE:	1"=100'		

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. 10046100
912 S. Capital of Texas Highway, Suite 150 • Austin, TX 78746 • 512.441.9493

SHEET 2 OF 2

K:\15234\15234–0015–01 Liberty Hill Credit Union – Preliminary\1 Surveying Phase\CAD Files\Working Dwg\15234–0015–01 Plat.dwg

#2025–4–RPL

REVISIONS

No.	Date	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-10046100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

DESIGNED BY: JYC
CHECKED BY: JMC
DRAWN BY: KS
SCALE:
DATE: CC - Jan 2026
JOB NO.: 152334-0018-01

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

FINAL PLAT (2 OF 2)

SHEET NO.
5 OF **29**

2025-XX-SDP

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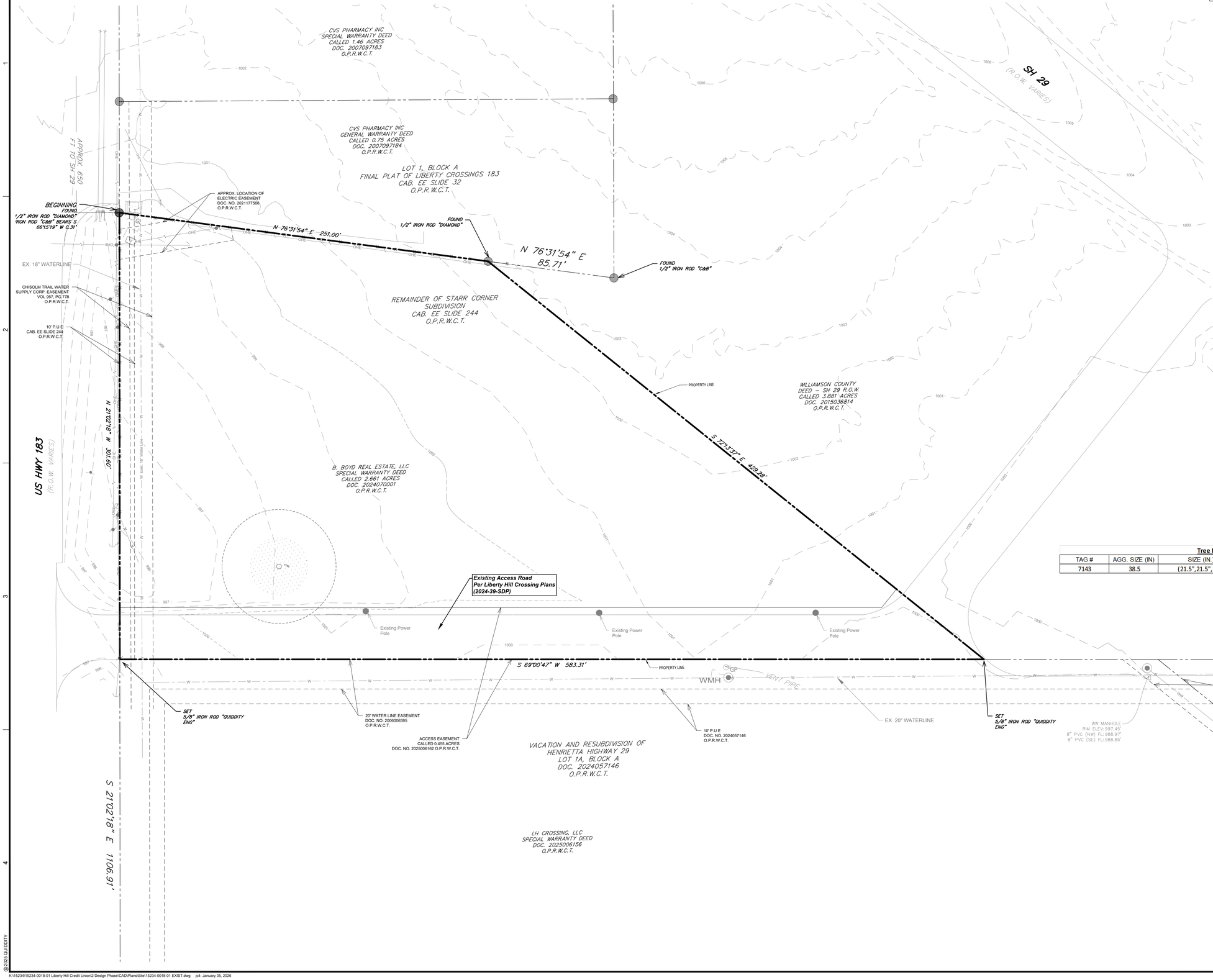
K:\15234\15234-0018-01 Liberty Hill Credit Union\2 Design Phase\CAD\Plans\Site\15234-0018-01 COVER.dwg jc4: January 05, 2026

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



Tree List					
TAG #	AGG. SIZE (IN)	SIZE (IN.)	TYPE	NOTES	REMOVED (Y/N)
7143	38.5	(21.5",21.5",13")	Live Oak	Multi-stem	Y

30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

TREE LEGEND

- TREE TO REMAIN (8"-18")
- TREE TO BE REMOVED (8"-18")
- PROTECTED TREE TO REMAIN (19"-23")
- PROTECTED TREE TO BE REMOVED (19"-23")
- HERITAGE TREE TO REMAIN (24"+)
- HERITAGE TREE TO BE REMOVED (24"+)

No.	Date	REVISIONS	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23294 & 10046100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: | DESIGNED BY: JYC
DATE: CC - Jan 2026 | CHECKED BY: JMC
JOB NO.: 152334-0018-01 | DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

EXISTING CONDITIONS

SHEET NO. **6** OF **29**

2025-XX-SDP

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THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CVS PHARMACY INC
SPECIAL WARRANTY DEED
CALLED 1.46 ACRES
DOC. 2007097183
O.P.R.W.C.T.

CVS PHARMACY INC
GENERAL WARRANTY DEED
CALLED 0.75 ACRES
DOC. 2007097184
O.P.R.W.C.T.

LOT 1, BLOCK A
FINAL PLAT OF LIBERTY CROSSINGS 183
CAB. EE SLIDE 32
O.P.R.W.C.T.

REMAINDER OF STARR CORNER
SUBDIVISION
CAB. EE SLIDE 244
O.P.R.W.C.T.

B. BOYD REAL ESTATE, LLC
SPECIAL WARRANTY DEED
CALLED 2.661 ACRES
DOC. 2024070001
O.P.R.W.C.T.

WILLIAMSON COUNTY
DEED - SH 29 R.O.W.
CALLED 3.881 ACRES
DOC. 2015036814
O.P.R.W.C.T.

VACATION AND RESUBDIVISION OF
HENRIETTA HIGHWAY 29
LOT 1A, BLOCK A
DOC. 2024057146
O.P.R.W.C.T.

LH CROSSING, LLC
SPECIAL WARRANTY DEED
DOC. 2025006156
O.P.R.W.C.T.

SH 29
(R.O.W. VARIES)

US HWY 183
(R.O.W. VARIES)

APPROX. 650 FT TO SH 29

BEGINNING
FOUND
1/2" IRON ROD "DIAMOND"
IRON ROD "C&B" BEARS S
66°15'19" W 0.31'

APPROX. LOCATION OF
ELECTRIC EASEMENT
DOC. NO. 2021177568
O.P.R.W.C.T.

N 76°31'54" E 251.00'

FOUND
1/2" IRON ROD "DIAMOND"

N 76°31'54" E
85.71'

FOUND
1/2" IRON ROD "C&B"

EX. 18" WATERLINE

CHISOLM TRAIL WATER
SUPPLY CORP. EASEMENT
VOL 957, PG.778
O.P.R.W.C.T.

10' P.U.E
CAB. EE SLIDE 244
O.P.R.W.C.T.

N 21°02'18" W 301.60'

W. Exist. 16" Water Line

PROPERTY LINE

S 27°13'37" E 429.28'

L.O.C

Existing Tree To
Be Removed

Existing Access Road
Per Liberty Hill Crossing Plans
(2024-39-SDP)

Existing Power
Pole

S 69°00'47" W 583.31'

PROPERTY LINE

SET
5/8" IRON ROD "QUIDDITY
ENG"

20' WATER LINE EASEMENT
DOC. NO. 2006006395
O.P.R.W.C.T.

ACCESS EASEMENT
CALLED 0.455 ACRES
DOC. NO. 2025006162 O.P.R.W.C.T.

10' P.U.E
DOC. NO. 2024057146
O.P.R.W.C.T.

GP

WMH

VENT PIPE

EX. 20" WATERLINE

SET
5/8" IRON ROD "QUIDDITY
ENG"

WW MANHOLE
RIM ELEV: 997.45'
8" PVC (NW) FL: 988.97'
8" PVC (SE) FL: 988.85'

15' WASTEWATER LINE EASEMENT
DOC. NO. 2014050223
O.P.R.W.C.T.

S 21°02'18" E 1106.91'

Tree List

TAG #	AGG. SIZE (IN)	SIZE (IN.)	TYPE	NOTES	REMOVED (Y/N)
7143	38.5	(21.5",21.5",13")	Live Oak	Multi-stem	Y

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

TREE LEGEND

- TREE TO REMAIN (8"-18")
- TREE TO BE REMOVED (8"-18")
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- PROTECTED TREE TO BE REMOVED (19"-23")
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- HERITAGE TREE TO BE REMOVED (24"+)

DEMOLITION LEGEND

- L.O.C — LIMITS OF CONSTRUCTION
- DEMOLITION AREA
- DEMOLITION LINE
- TP TP TP — TREE PROTECTION

REVISIONS

No.	Date	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23290 & 10046100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: 30 SCALE | DESIGNED BY: JYC
DATE: CC - Jan 2026 | CHECKED BY: JMC
JOB NO.: 152334-0018-01 | DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

DEMOLITION PLAN

SHEET NO. **7** OF **29**

2025-XX-SDP

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CVS PHARMACY INC
SPECIAL WARRANTY DEED
CALLED 1.46 ACRES
DOC. 2007097183
O.P.R.W.C.T.

CVS PHARMACY INC
GENERAL WARRANTY DEED
CALLED 0.75 ACRES
DOC. 2007097184
O.P.R.W.C.T.

LOT 1, BLOCK A
FINAL PLAT OF LIBERTY CROSSINGS 183
CAB. EE SLIDE 32
O.P.R.W.C.T.

REMAINDER OF STARR CORNER
SUBDIVISION
CAB. EE SLIDE 244
O.P.R.W.C.T.

B. BOYD REAL ESTATE, LLC
SPECIAL WARRANTY DEED
CALLED 2.661 ACRES
DOC. 2024070001
O.P.R.W.C.T.

WILLIAMSON COUNTY
DEED – SH 29 R.O.W.
CALLED 3.881 ACRES
DOC. 2015036814
O.P.R.W.C.T.

VACATION AND RESUBDIVISION OF
HENRIETTA HIGHWAY 29
LOT 1A, BLOCK A
DOC. 2024057146
O.P.R.W.C.T.

LH CROSSING, LLC
SPECIAL WARRANTY DEED
DOC. 2025006156
O.P.R.W.C.T.

SH 29
(R.O.W. VARIES)

US HWY 183
(R.O.W. VARIES)

APPROX. 650 FT TO SH 29

BEGINNING
FOUND
1/2" IRON ROD "DIAMOND"
IRON ROD "C&B" BEARS S
66°15'19" W 0.31'

N 76°31'54" E 251.00'

FOUND
1/2" IRON ROD "DIAMOND"

N 76°31'54" E
85.71'

FOUND
1/2" IRON ROD "C&B"

EX. 18" WATERLINE

APPROX. LOCATION OF ELECTRIC EASEMENT
DOC. NO. 2021177566 O.P.R.W.C.T.

10' P.U.E
CAB. EE SLIDE 244
O.P.R.W.C.T.

PROPERTY LINE

S 27°13'37" E 429.28'

N 21°02'18" W 301.60'

S 21°02'18" E 1106.91'

S 69°00'47" W 583.31'

Proposed 115 LF of Silt Fence

Construction Staging
Spoils
Concrete Washout Area
25'
25'
15'
25'

Proposed 155 LF of Silt Fence

Proposed 452 LF of Silt Fence

Proposed 16 LF of Mulch Sock

Proposed 16 LF of Mulch Sock

Proposed 144 LF of Silt Fence

Proposed 87 LF of Mulch Sock

Proposed 94 LF of Silt Fence

Proposed 284 LF of Silt Fence

SCE

ACCESS ROAD ON PROPERTY

ACCESS ROAD ON PROPERTY

Existing Power Pole

Existing Power Pole

Existing Power Pole

VENT PIPE

GP

WMH

PROPERTY LINE

SET
5/8" IRON ROD "QUIDDITY ENG"

20' WATER LINE EASEMENT
DOC. NO. 2006006395
O.P.R.W.C.T.

ACCESS EASEMENT
CALLED 0.455 ACRES
DOC. NO. 2025006162 O.P.R.W.C.T.

10' P.U.E
DOC. NO. 2024057146
O.P.R.W.C.T.

EX. 20" WATERLINE

SET
5/8" IRON ROD "QUIDDITY ENG"

WW MANHOLE
RIM ELEV: 997.45'
8" PVC (NW) FL: 988.97'
8" PVC (SE) FL: 988.85'

30 0 15 30
SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

EROSION LEGEND

- SILT FENCE
- INLET PROTECTION
- ROCK BERM
- TREE PROTECTION
- MULCH LOG
- STABILIZED CONSTRUCTION ENTRANCE
- CONSTRUCTION STAGING AREA
- TEMPORARY SPOILS AREA

No.	Date	REVISIONS	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23004 & 10046100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: 30 SCALE
DATE: CC - Jan 2026
JOB NO.: 152334-0018-01
DESIGNED BY: JYC
CHECKED BY: JMC
DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

PRE-CONSTRUCTION EROSION CONTROL PLAN

SHEET NO.
8 OF 29

2025-XX-SDP

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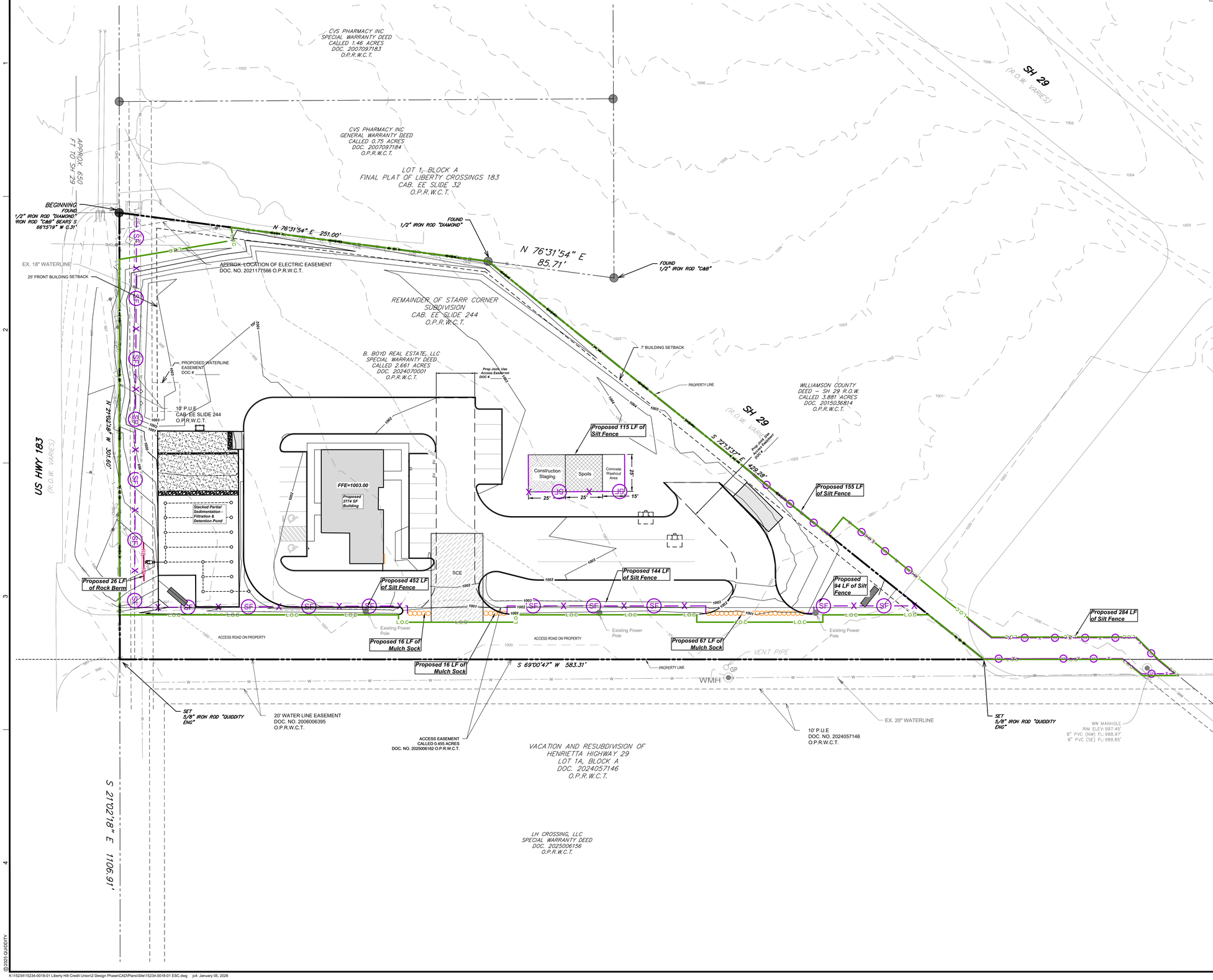

30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

PROPOSED LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- GROUND CONTOUR
- LIMITS OF CONSTRUCTION

EROSION LEGEND

- SILT FENCE
- INLET PROTECTION
- ROCK BERM
- TREE PROTECTION
- MULCH LOG
- STABILIZED CONSTRUCTION ENTRANCE
- CONSTRUCTION STAGING AREA
- TEMPORARY SPOILS AREA

No.	Date	REVISIONS	App.

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Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23004 & 10046100
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SCALE: 30 SCALE
DESIGNED BY: JYC
DATE: CC - Jan 2026
CHECKED BY: JMC
JOB NO.: 152334-0018-01
DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5

LIBERTY HILL CREDIT UNION

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MID-CONSTRUCTION EROSION CONTROL PLAN

SHEET NO.
9
OF 29

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30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE

PROPOSED LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- LIMITS OF CONSTRUCTION
- ADA ROUTE
- FIRE LANE

NOTE:

1. *ANY MAINTENANCE/REPAIRS OF THE PAVEMENT WITHIN THE WASTEWATER EASEMENT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.*

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BUILDING ZONING DATA

ZONING: C-3	ALLOWABLE	PROVIDED
Building Coverage	N/A	2.4%
	N/A	2,774 SF
Impervious Cover	85%	27.0%
	98,520 SF	48,231 SF
Building Height	45 FT	25 FT
Max F.A.R.	N/A	0.02:1.0
Site Area	115,906 SF	115,906 SF

IMPERVIOUS COVER
SOUTH FORK SAN GABRIEL RIVER WATERSHED

	EXISTING	PROPOSED	NET TOTAL
Building	0	2,774 SF	2,774 SF
Pavement	16,986	43,900 SF	26,914 SF
Sidewalk/Misc Conc.	0	1,557 SF	1,557 SF
Total	16,986	48,231 SF	31,245 SF
Site Area	115,906 SF	115,906 SF	115,906 SF
Impervious Cover	14.7%	27.0%	27.0%

Maximum 85% IC for C-3 (General Commercial/Retail) Zoning

BUILDING

Building Cover	2,774 SF	2.4%
Gross SF	2,774 SF	
Floor-to-Area-Ratio	0.02:1.0	
Impervious Cover	31,245 SF	27%
Foundation Type	Conc. Slab Underground	
Use	Commercial	
Site Area	115,906 SF	

PARKING

	REQUIRED	PROVIDED
Standard	11	18
HANDICAP	1	2
Van	1	1
Standard	1	1

REVISIONS

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STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

SITE AND DIMENSION CONTROL PLAN

SHEET NO.
10 OF **29**

2025-XX-SDP

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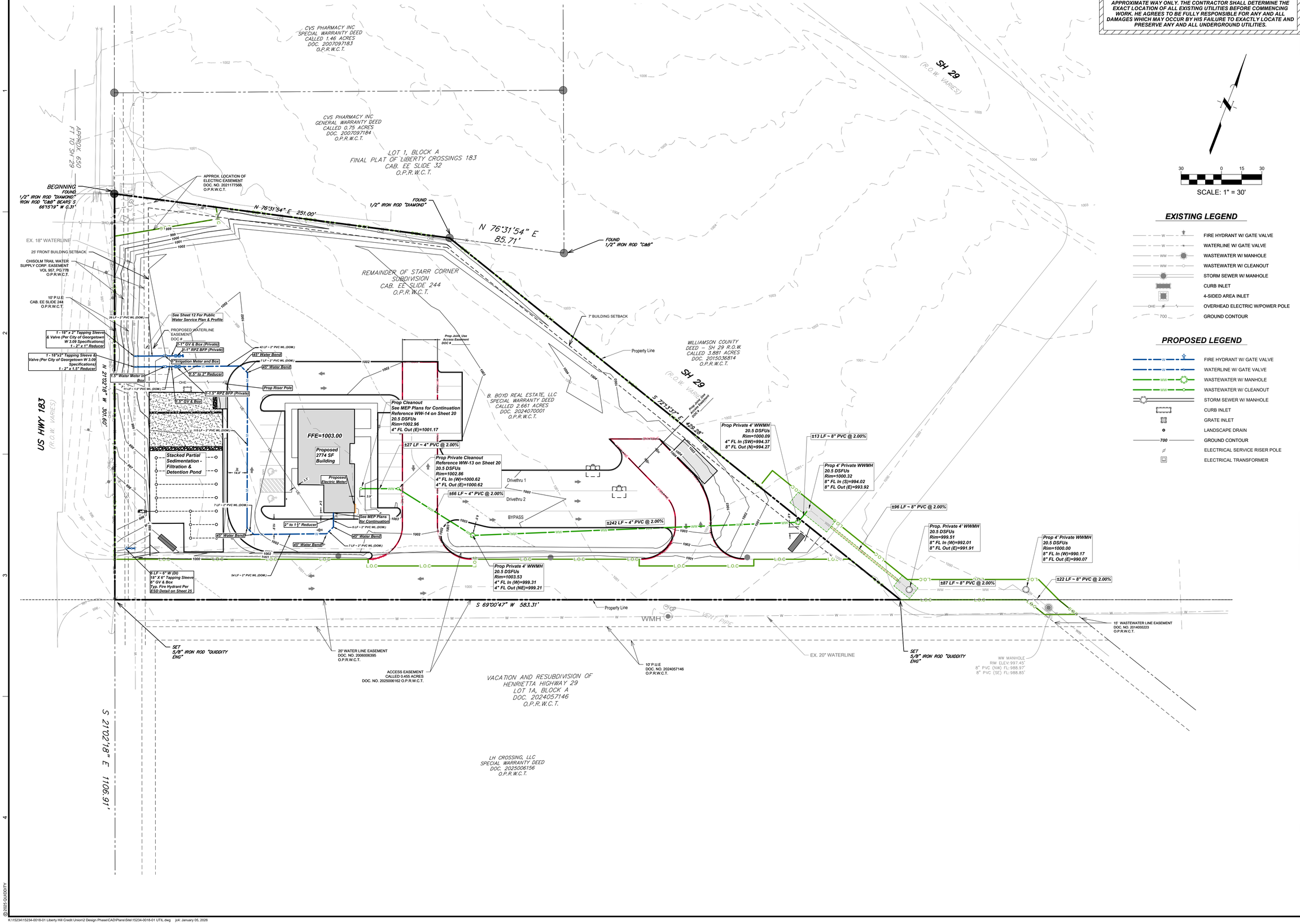

30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

PROPOSED LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- GROUND CONTOUR
- ELECTRICAL SERVICE RISER POLE
- ELECTRICAL TRANSFORMER

No.	Date	REVISIONS	App.

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STATE OF TEXAS
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146526
LICENSED
PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

PRIVATE UTILITY PLAN

SHEET NO. **11** OF **29**

2025-XX-SDP

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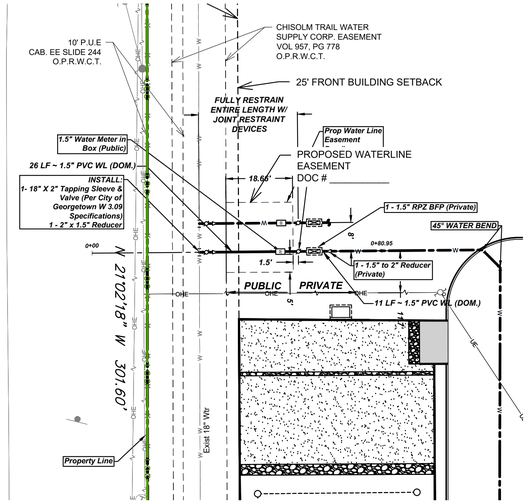
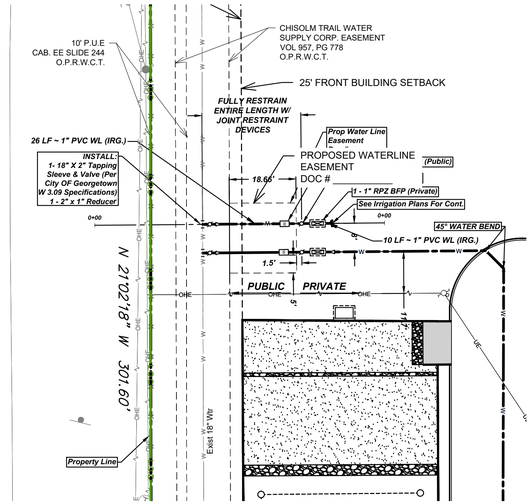
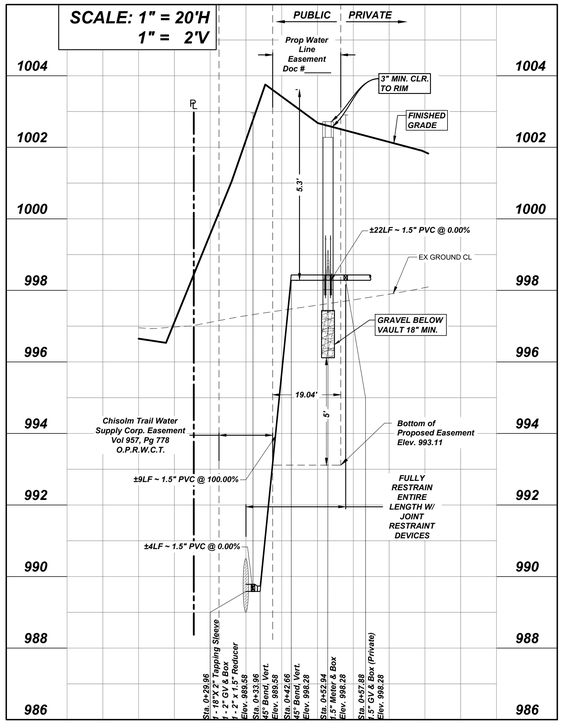
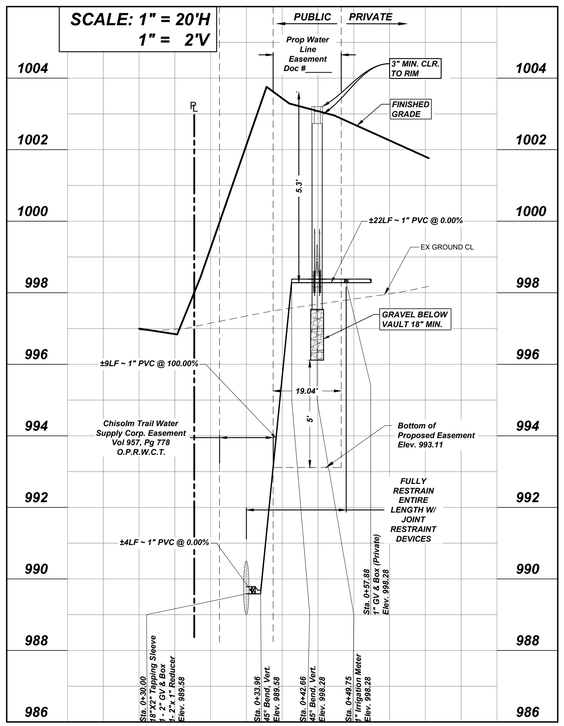




WTR SERVICE CONNECTION



IRRIGATION WATER SERVICE



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20 0 10 20

SCALE: 1" = 20'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

PROPOSED LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- GROUND CONTOUR
- WATER CROSSING SEE TCEQ SECTION 217.53.

No.	Date	REVISIONS	App.

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STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

WATER SERVICE CONNECTIONS

SHEET NO. **12** OF **29**

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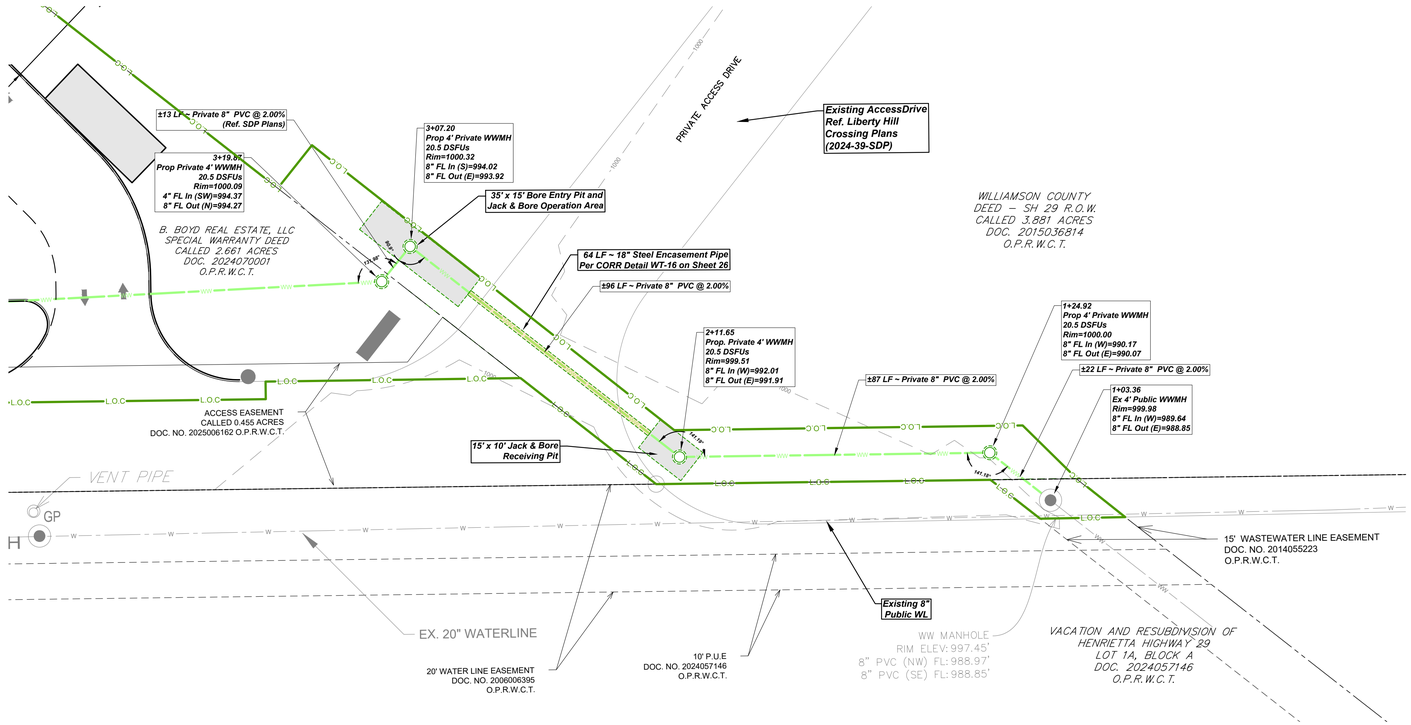
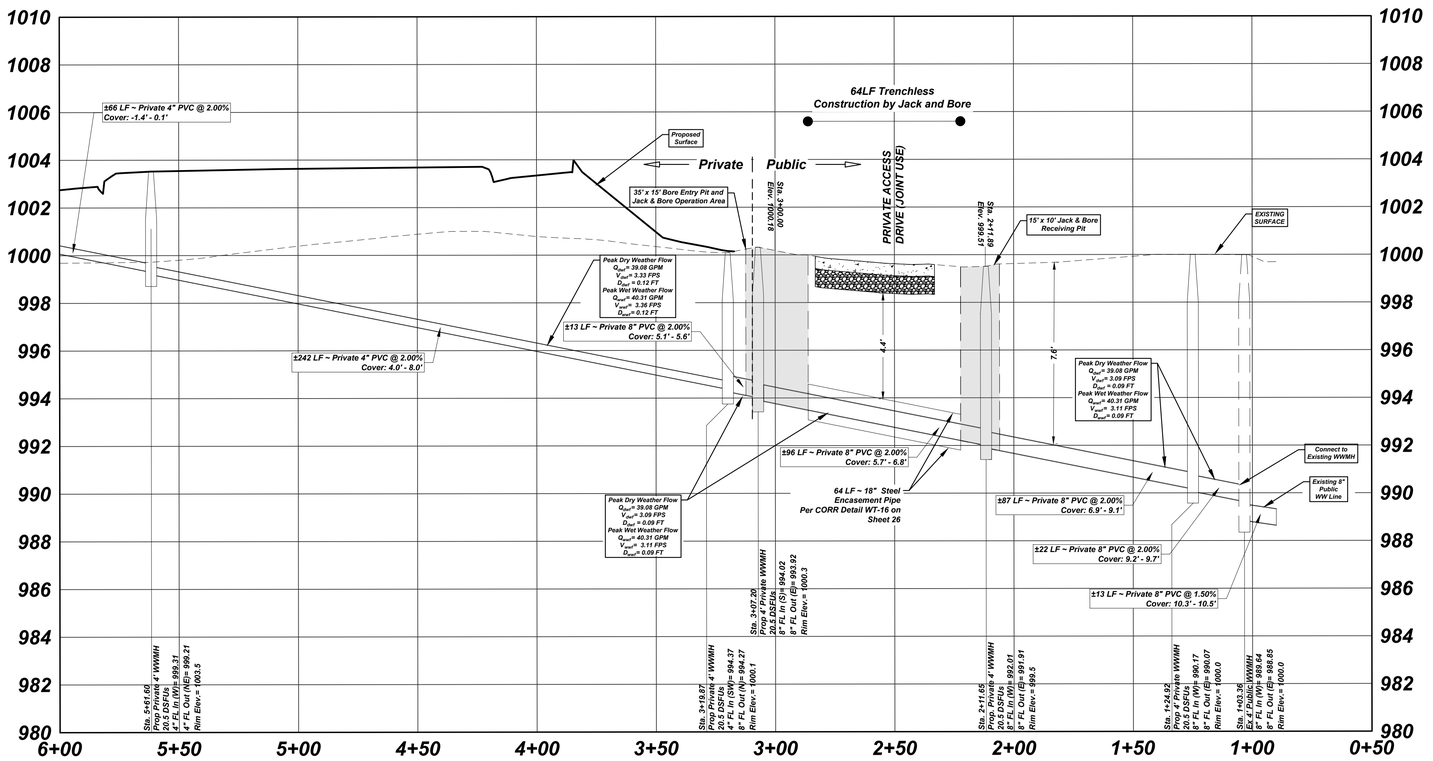


Sanitary Sewer Line A



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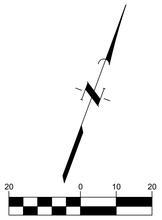


SCALE: 1" = 20'

EXISTING LEGEND

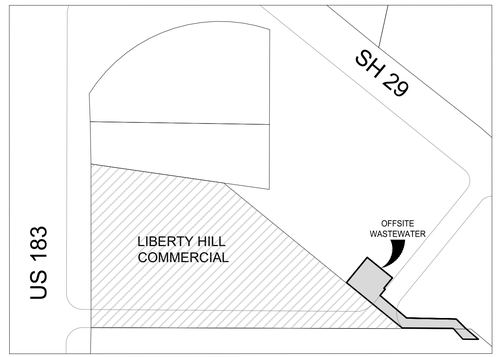
- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

PROPOSED LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- GROUND CONTOUR
- ELECTRICAL SERVICE RISER POLE
- ELECTRICAL TRANSFORMER
- WATER & WASTEWATER CROSSING SEE TCEQ SECTION 217.53. (PIPE DESIGN) TABLE C.1.
- JACK & BORE W/ STAGING AREAS
- JACK & BORE PIPE INSTALL

UTILITY NOTES:

1. ***CONTRACTOR TO FIELD VERIFY FLOW LINE OF THE EXISTING WASTEWATER MAIN AND CONTACT ENGINEER IF IT IS NOT ACCURATE.***



KEY MAP
N.T.S.

No.	Date	REVISIONS	App.

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JOB NO.: 152334-0018-01 | DRAWN BY: CAD

JUSTIN M. CADIEUX 146526 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS 01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

PRIVATE WASTEWATER SERVICE CONNECTIONS

SHEET NO. **13** OF **29**

2025-15-CON

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K:\15234\15234-0018-01 Liberty Hill Credit Union\2 Design Phase\CAD\Plans\Offsite Wastewater\15234-0018-01 WASTERWATER.dwg jck: January 05, 2026

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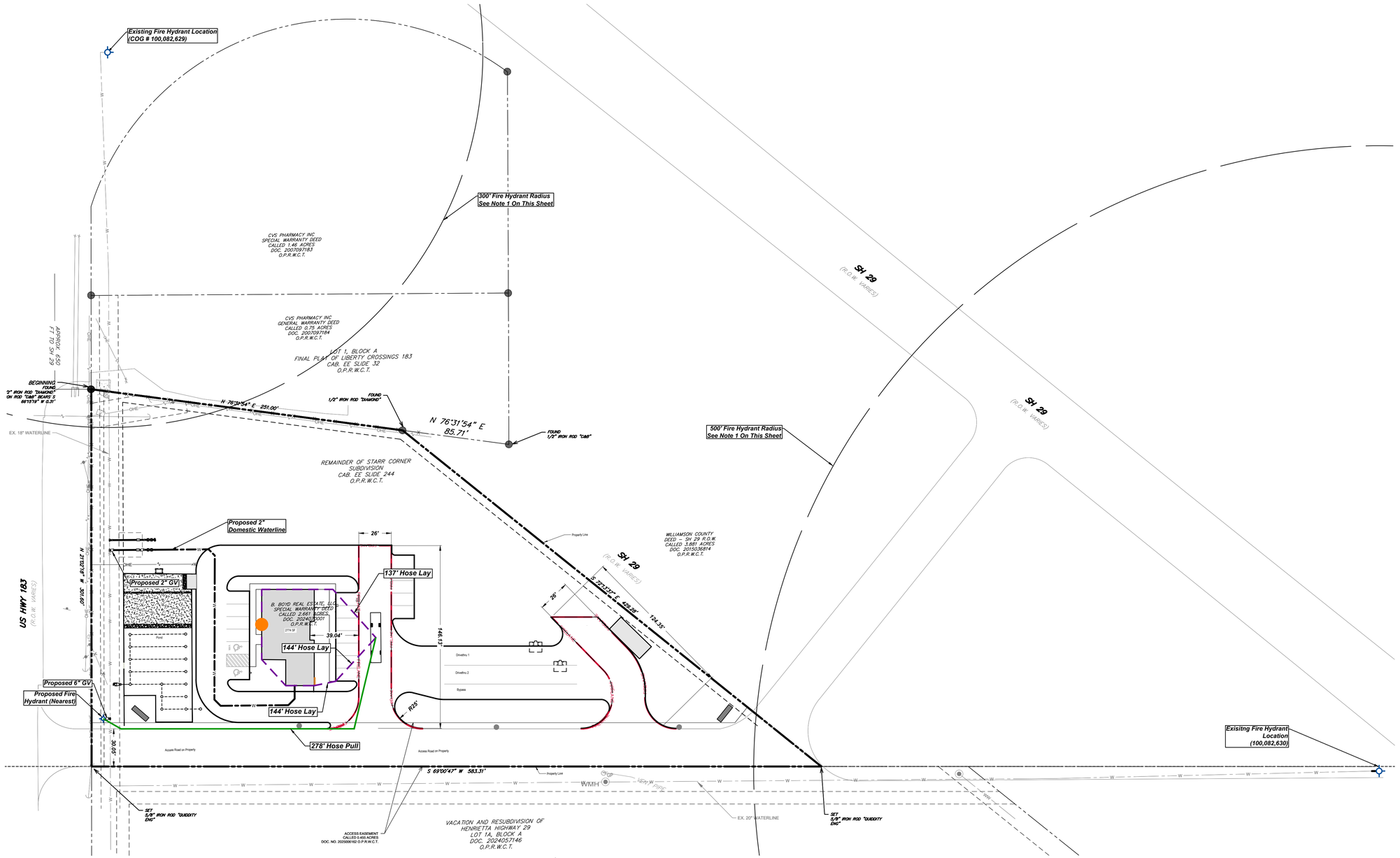

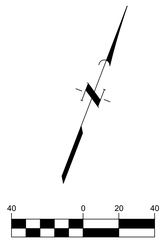

SCALE: 1" = 40'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE

PROPOSED LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- LIMITS OF CONSTRUCTION

FIRE LEGEND

- FIRE LANE
- HOSE LAY (350' MAX.)
- HOSE PULL (150' MAX.)
- FIRE HYDRANT 1 HOSE PULL
- FIRE HYDRANT 2 HOSE PULL
- FIRE HYDRANT
- LONGEST LAY POINT
- ADA ROUTE
- FIRE HYDRANT RADIUS

Notes:

1. ***Building Info:***
   - ***Building Construction Type: II-B***
   - ***Building Height: 25 FT / 1 STORY***
   - ***Building Footprint Area: 2,774 SQ FT***
   - ***No Automatic Sprinkler System***
2. ***Per Williamson County ESD No. 4 requirements, a minimum of two (2) fire hydrants are required for this project. One (1) fire hydrant must be located within 300 feet of the property boundary, and a second hydrant must be located within 500 feet.***
3. ***See Sheet 22 for Fire Lane pavement design and section.***
4. ***See Sheet 24 for Fire Lane detail.***
5. ***See Sheet 25 for WILCO ESD #4 Fire Hydrant detail.***
6. ***See Cover Sheet for Fire Flow Information and Sheet 25 for Fire Flow Test results.***

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STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER
01/05/2026

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FIRE PROTECTION PLAN

SHEET NO. **14** OF **29**

2025-XX-SDP

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$P_2 =$ 3.94 *in.*

$$t_{ch} = \frac{0.007(n_{ch}L_{ch})^{0.8}}{P_2^{0.5}S_{ch}^{0.4}} \qquad t_{sc} = \frac{L_{sc}}{3600\,K\,S_{sc}^{0.5}} \qquad t_{ch} = \frac{L_{ch}}{\left(3600\,\frac{1.49}{n}R^{2/3}S_{ch}^{1/2}\right)}$$

DA	IC	Area	Total Length	L_{sh} sheet flow length	S_{sh} flow slope (ft/ft)	surface description	P_2 2-yr, 24-hr rainfall depth (in.)	n_{sl} overland flow roughness coeff.	t_{sh} sheet flow travel time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 16.13 - unpaved sufr.	t_{sc} shallow conc. flow time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} conc. flow slope (ft/ft)	K 20.3282 - paved sufr.	t_{sc} conc. flow time (hr)	t_c time of conc. (hr)	t_c time of conc. (min)	t_L lag time (min)	t_L lag time with min (min)
E-1	0.0%	1.86	250	100	0.023	Short-grass Prairie	3.94	0.150	**0.14**	150	0.023	16.13	**0.02**					**0.16**	**9.4**	**5.62**	**5.6**
E-2	46.6%	0.35	198	100	0.013	Short-grass Prairie	3.94	0.150	**0.17**	58	0.023	16.13	**0.01**	40	0.023	20.3282	**0.00**	**0.18**	**11.0**	**6.58**	**6.6**
E-3	38.7%	0.33	206	100	0.014	Short-grass Prairie	3.94	0.150	**0.17**	60	0.018	16.13	**0.01**	46	0.018	20.3282	**0.00**	**0.18**	**11.1**	**6.65**	**6.6**
OP-1	85.2%	0.12	154	100	0.032	Concrete	3.94	0.015	**0.02**					54	0.568	20.3282	**0.00**	**0.02**	**1.2**	**0.73**	**3.0**
OF-1	0.0%	1.82	330	100	0.013	Short-grass Prairie	3.94	0.150	**0.17**	230	0.021	16.13	**0.03**					**0.20**	**12.1**	**7.24**	**7.2**
Reach -1			250							250	0.023	16.13	**0.03**					**0.03**	**1.7**	**1.02**	**-**

Analysis Point 1 Comparison

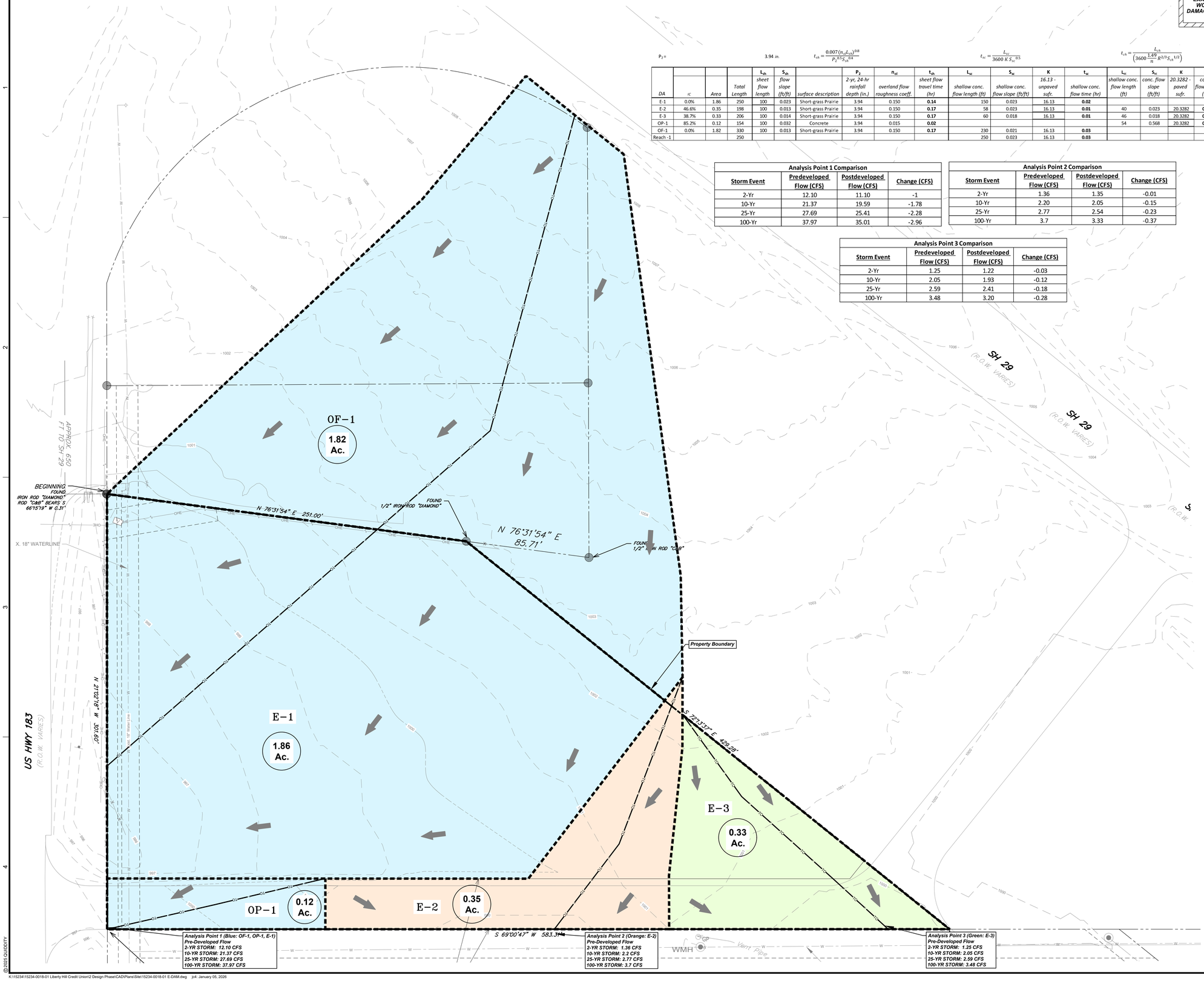
Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	12.10	11.10	-1
10-Yr	21.37	19.59	-1.78
25-Yr	27.69	25.41	-2.28
100-Yr	37.97	35.01	-2.96

Analysis Point 2 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.36	1.35	-0.01
10-Yr	2.20	2.05	-0.15
25-Yr	2.77	2.54	-0.23
100-Yr	3.7	3.33	-0.37

Analysis Point 3 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.25	1.22	-0.03
10-Yr	2.05	1.93	-0.12
25-Yr	2.59	2.41	-0.18
100-Yr	3.48	3.20	-0.28



30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

DAMAP LEGEND

- 1.82 Ac. — DRAINAGE AREA IN ACRES
- DRAINAGE AREA LINE
- A-1 — DRAINAGE AREA NUMBER
- FLOW DIRECTION
- TC — TC — TIME OF CONCENTRATION

NOTES:
1. PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS, THE TR-55 METHOD WAS UTILIZIED TO CALCULATE THE TIME OF CONCENTRATION FOR EACH DRAINAGE AREA.
2. RAINFALL INTENSITY OBTAINED FROM NOAA ATLAS 14 FOR SITE LOCATION.
3. HEC-HMS 4.11 MODEL WAS UTILIZED TO CALCULATE PREDEVELOPMENT & POST DEVELOPMENT FLOWS

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DESIGNED BY: JYC
CHECKED BY: JMC
DRAWN BY: KS
SCALE:
DATE: CC - Jan 2026
JOB NO.: 152334-0018-01

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

EXISTING DRAINAGE AREA MAP

SHEET NO. **15** OF **29**

2025-XX-SDP

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K:\15234\15234-0018-01 Liberty Hill Credit Union\2 Design Phase\CAD\Plans\Site\15234-0018-01 E-DAM.dwg jo4: January 05, 2026

P_2 = 3.94 *in.*

$$t_{ch} = \frac{0.007(n_{ch}L_{ch})^{0.8}}{P_2^{0.5}S_{ch}^{0.4}}$$

$$t_{sc} = \frac{L_{sc}}{3600\,K\,S_{sc}^{0.5}}$$

$$t_{ch} = \frac{L_{ch}}{\left(3600\frac{1.49}{n}R^{2/3}S_{ch}^{1/2}\right)}$$ Channel

name	IC	Area	Total Length	L_{sh} sheet flow length	S_{sh} sheet flow slope (ft/ft)	surface description	P_2 2-yr, 24-hr rainfall depth (in.)	n_{sc} flow roughness coeff.	t_{sh} sheet flow travel time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 20.3282 - paved sufr.	t_{sc} shallow conc. flow time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 16.13 - unpaved sufr.	t_{sc} shallow conc. flow time (hr)	L_{ch} channel Length (ft)	S_{ch} channel flow slope (ft/ft)	n Manning's roughness coeff.	R hydraulic radius (ft)	t TC (hr)	t_c time of conc. (hr)	t_c time of conc. (min)	t_L lag time (min)	t_L lag time with min (min)
P-1	38.2%	1.69	409	100	0.025	Grass	3.94	0.150	**0.13**					309	0.006	16.13	**0.07**						**0.20**	**12.2**	**7.33**	**7.3**
P-2	0%	0.16	157	100	0.063	Grass	3.94	0.150	**0.09**					57	0.007	16.13	**0.01**						**0.10**	**6.3**	**3.78**	**3.8**
OP-1	85.2%	0.12	154	100	0.032	Concrete	3.94	0.015	**0.02**					54	0.041	16.13	**0.00**						**0.02**	**1.4**	**0.86**	**3.0**
OP-2	83.5%	0.25	165	100	0.034	Concrete	3.94	0.015	**0.02**	65	0.067	20.3282	**0.00**	65	0.002	16.13	**0.03**						**0.05**	**2.8**	**1.70**	**3.0**
OP-3	62.4%	0.24	172	100	0.045	Concrete	3.94	0.015	**0.02**	72	0.005	20.3282	**0.01**										**0.03**	**1.9**	**1.13**	**3.0**
OF-1	0%	2.01	424	100	0.015	Grass	3.94	0.150	**0.16**					324	0.013	16.13	**0.05**						**0.21**	**12.9**	**7.73**	**7.7**
Reach-1																		127	0.011	0.04	0.467	0.02	**0.02**	**0.9**	**0.54**	**-**

Analysis Point 1 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	12.10	11.10	-1
10-Yr	21.37	19.59	-1.78
25-Yr	27.69	25.41	-2.28
100-Yr	37.97	35.01	-2.96

Analysis Point 2 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.36	1.35	-0.01
10-Yr	2.20	2.05	-0.15
25-Yr	2.77	2.54	-0.23
100-Yr	3.7	3.33	-0.37

Analysis Point 3 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.25	1.22	-0.03
10-Yr	2.05	1.93	-0.12
25-Yr	2.59	2.41	-0.18
100-Yr	3.48	3.20	-0.28

OF-1
2.01 Ac.

P-1
1.69 Ac.

P-2
0.16 Ac.

OP-1
0.12 Ac.

OP-2
0.25 Ac.

OP-3
0.24 Ac.

CVS PHARMACY INC
SPECIAL WARRANTY DEED
CALLED 1.46 ACRES
DOC. 2007097183
O.P.R.W.C.T.

CVS PHARMACY INC
GENERAL WARRANTY DEED
CALLED 0.75 ACRES
DOC. 2007097184
O.P.R.W.C.T.

LOT 1, BLOCK A
FINAL PLAT OF LIBERTY CROSSINGS 183
CAB. EE SLIDE 32
O.P.R.W.C.T.

REMAINDER OF STARR CORNER
SUBDIVISION
CAB. EE SLIDE 244
O.P.R.W.C.T.

B. BOYD REAL ESTATE, LLC
SPECIAL WARRANTY DEED
CALLED 2.661 ACRES
DOC. 2024027001
O.P.R.W.C.T.

WILLIAMSON COUNTY
DEED – SH 29 R.O.W.
CALLED 3.881 ACRES
DOC. 2015036814
O.P.R.W.C.T.

BEGINNING
FOUND
"2" IRON ROD "DIAMOND"
ON ROD "CAB" BEARS S
68°53'19" W 0.31'

FOUND
1/2" IRON ROD "DIAMOND"

FOUND
1/2" IRON ROD "CAB"

N 76°31'54" E 251.00'

N 76°31'54" E
85.71'

S 27°13'37" E 429.28'

S 69°00'47" W 583.31'

N 21°02'18" W 301.60'

APPROX. 650 FT TO SH 29

EX. 18" WATERLINE

25' FRONT BUILDING SETBACK

7' BUILDING SETBACK

PROPOSED WATERLINE EASEMENT
DOC # ____

Prop Jo.-A. Use Access Easement
DOC # ____

From John Abe Access Easement
DOC # 2024027001

US HWY 183
(R.O.W. VARIES)

SH 29
(R.O.W. VARIES)

WMH

GP

Vent Pipe

Analysis Point 1 (Blue: OF-1, P-1, P-2, OP-1)
Post-Developed Flow
2-YR STORM: 11.10 CFS
10-YR STORM: 19.59 CFS
25-YR STORM: 25.41 CFS
100-YR STORM: 35.01 CFS

Analysis Point 2 (Orange: OP-2)
Post-Developed Flow
2-YR STORM: 1.35 CFS
10-YR STORM: 2.05 CFS
25-YR STORM: 2.54 CFS
100-YR STORM: 3.33 CFS

Analysis Point 3 (Green: OP-3)
Post-Developed Flow
2-YR STORM: 1.22 CFS
10-YR STORM: 1.93 CFS
25-YR STORM: 2.41 CFS
100-YR STORM: 3.20 CFS

30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE

DAMAP LEGEND

- 1.82 Ac. — DRAINAGE AREA IN ACRES
- DRAINAGE AREA LINE
- A-1 — DRAINAGE AREA NUMBER
- FLOW DIRECTION
- TIME OF CONCENTRATION

NOTES:
1. PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS, THE TR-55 METHOD WAS UTILIZED TO CALCULATE THE TIME OF CONCENTRATION FOR EACH DRAINAGE AREA.
2. RAINFALL INTENSITY OBTAINED FROM NOAA ATLAS 14 FOR SITE LOCATION.
3. HEC-HMS 4.11 MODEL WAS UTILIZED TO CALCULATE PREDEVELOPMENT & POST DEVELOPMENT FLOWS

REVISIONS

No.	Date	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-22004 & 10040100
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STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
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PROPOSED DRAINAGE AREA MAP

SHEET NO. **16** OF **29**

2025-XX-SDP

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FLOWS (Post Development - Channel)

C Values	2 yr	10 yr	25 yr	100 yr
Grass	0.33	0.38	0.42	0.49
Concrete	0.75	0.83	0.88	0.97

Note

*Grass is assumed to be Fair Condition and Average Slope

*All Impervious Cover is assumed to be Concrete (Conservative Approach)

NOTES:
1. PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS, THE TR-55 ETHOD WAS UTILZIED TO CALCULATE THE TIME OF CONCENTRATION FOR EACH DRAINAGE AREA.
2. RAINFALL INTENSITY OBTAINED FROM NOAA ATLAS 14 FOR SITE LOCATION.
3. THE RATIONAL METHOD WAS UTILIZED TO CALCULATE THE PROPOSED FLOWS FOR THE 100 YEAR STORM EVENT UTILIZING NOAA ATLAS 14 RAINFALL INTENSITES FOR THE SITE LOCATION.

DA	Area (ac.)	I.C. (%)	C2	C10	C25	C100	I2 (in/hr)	I10 (in/hr)	I25 (in/hr)	I100 (in/hr)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
OF-1	2.01	0.00%	0.33	0.38	0.42	0.49	4.11	6.11	8.56	9.71	2.73	4.67	7.23	9.56

Rational Method Calculation for Drainage Ditch

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Tuesday, Jun 17 2025

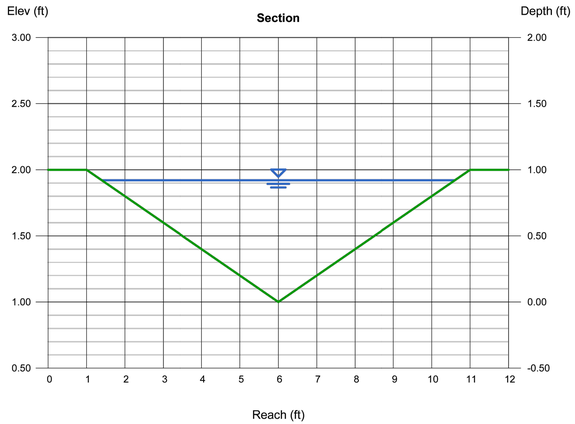
DRAINAGE DITCH

Triangular
Side Slopes (z:1) = 5.00, 5.00
Total Depth (ft) = 1.00

Invert Elev (ft) = 1.00
Slope (%) = 1.08
N-Value = 0.040

Calculations
Compute by: Known Q
Known Q (cfs) = 9.56

Highlighted
Depth (ft) = 0.92
Q (cfs) = 9.560
Area (sqft) = 4.23
Velocity (ft/s) = 2.26
Wetted Perim (ft) = 9.38
Crit Depth, Yc (ft) = 0.75
Top Width (ft) = 9.20
EGL (ft) = 1.00



Drainage Ditch A
100 - YR Storm Channel Calculation

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DATE: CC - Jan 2026
JOB NO.: 152334-0018-01

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

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DRAINAGE CALCULATIONS

SHEET NO.
17 OF **29**

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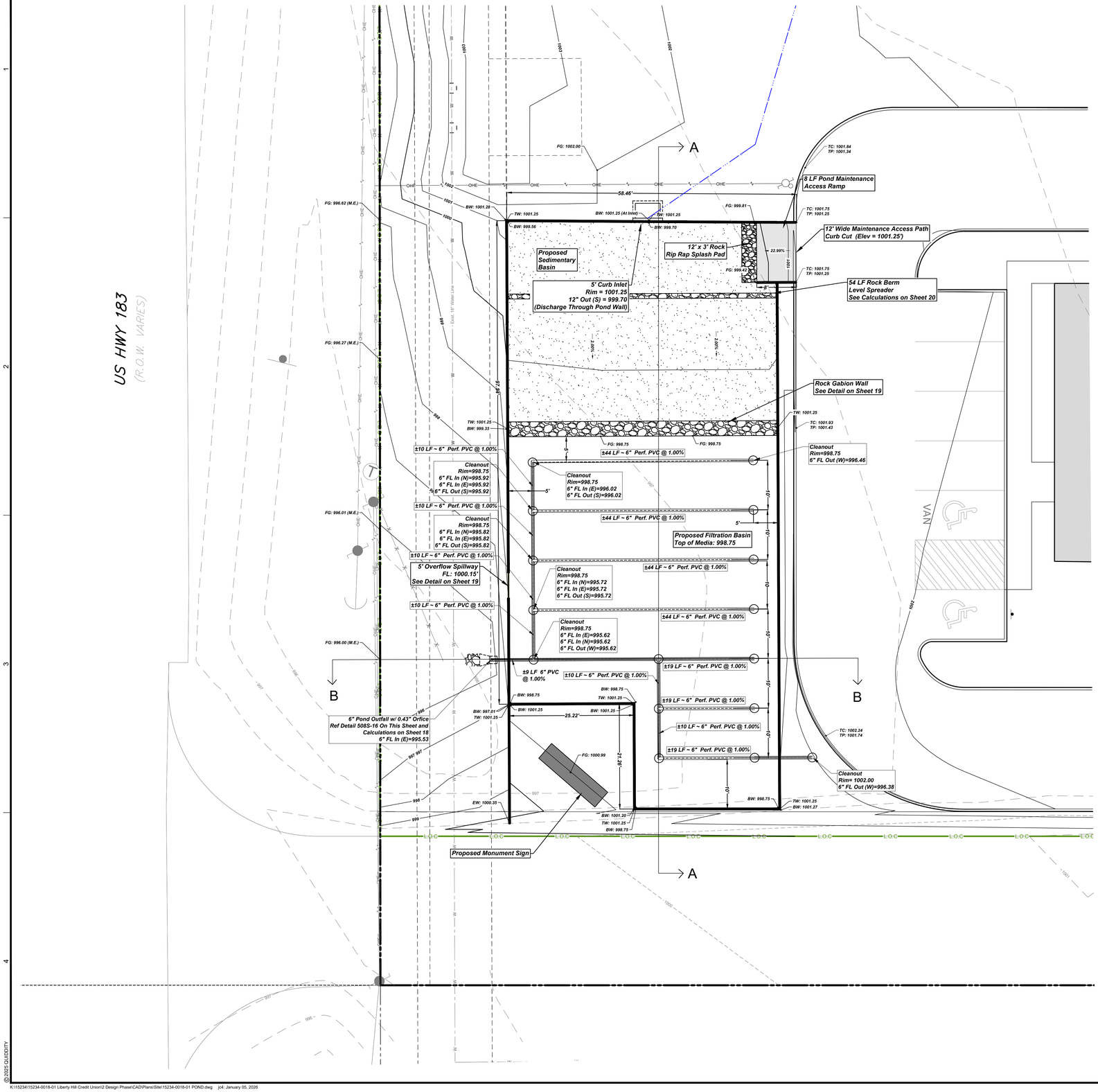

10 0 5 10

SCALE:1" = 10'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

PROPOSED LEGEND

- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- 700 — GROUND CONTOUR
- TC — TOP OF CURB
- TP — TOP OF PAVEMENT
- FG — FINISHED GROUND
- TW — TOP OF WALL
- TS — TOP OF SIDEWALK

Pond Portion	Combined Detention & Water Quality Pond Volume Table					
	WSE (ft)	Area (SF)	Incremental Volume (cubic ft)	Incremental Volume (acre-ft)	Cumulative Total Volume (cubic ft)	Cumulative Total Volume (acre-ft)
WQ	998.75	3,511	0	0.000	0	0.000
	999	3,969	934.39	0.021	934.39	0.021
	999.25	4,305	1032.82	0.024	1967.21	0.045
	999.5	4,709	2059.7	0.047	3092.52	0.071
	999.75	5,139	2264.88	0.052	4324.58	0.099
	1000	5,494	3390.4	0.078	5655.28	0.130
	1000.15	5,670	3102.48	0.071	6492.88	0.149
Water Quality Elevation & Volume = 1000.15 ft (6,500 cu ft)						
Detention	1000.25	5,771	3962.48	0.162	7064.96	0.162
	1,000.50	5,912	8531.16	0.034	8531.16	0.196
	1,000.75	5,928	6048.64	0.196	10011.12	0.230
	1,001.00	5,944	2963.89	0.068	11495.05	0.264
	1,001.25	5,944	7310.35	0.239	13358.99	0.307
Max Water Quality & Detention Elevation/Volume = 1001.25 ft (13,359 cu ft)						

Combined Detention & Water Quality Pond Volume Table

Detention Pond Analysis & Volume Table					
Storm Event	Peak Pond Inflow (CFS)	Peak Pond Outflow (CFS)	Detention Volume (Acre-ft)	Detention Volume (ft^3)	WSE (ft)
Water Quality Elevation & Volume = 1000.15 ft (6,493 cu ft)					
2-Yr	6.09	4.74	0.0600	2614	1000.6
10-Yr	10.00	8.18	0.0900	3920	1000.8
25-Yr	12.67	10.56	0.1100	4792	1001.0
100-Yr	17.04	14.54	0.1300	5663	1001.1

Detention Analysis & Volume Table

Stacked Partial Sedimentation and Detention Pond

No.	Date	REVISIONS	App.

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01/05/2026

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POND PLAN

SHEET NO.
18 OF 29

2025-XX-SDP

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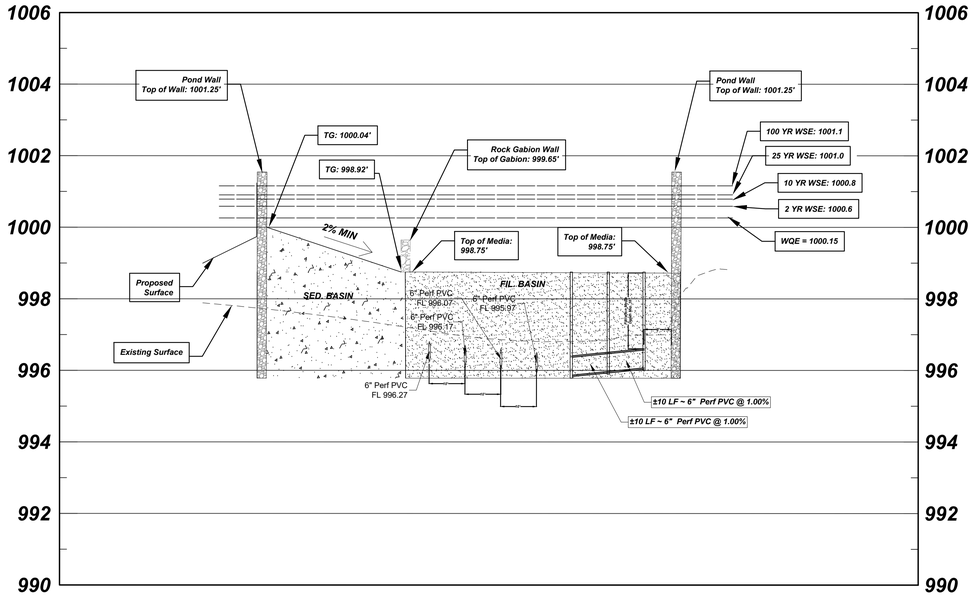
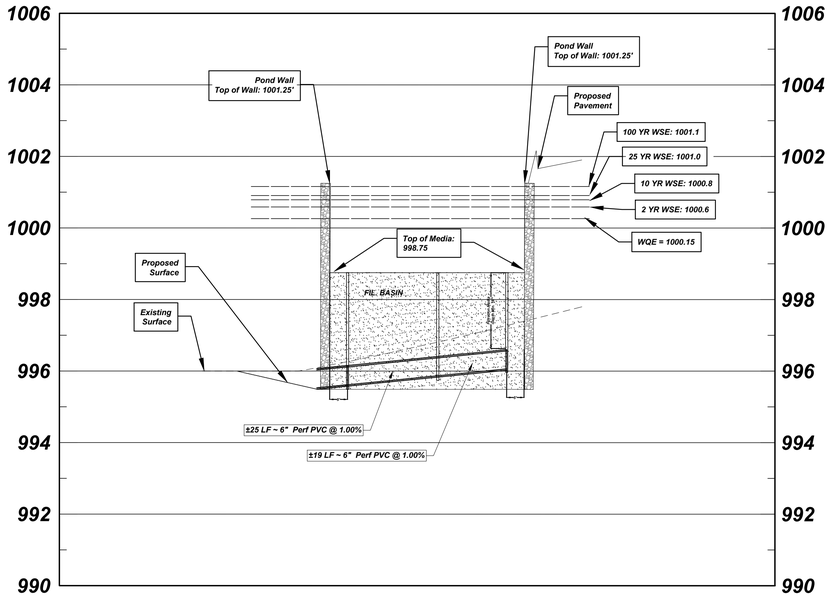
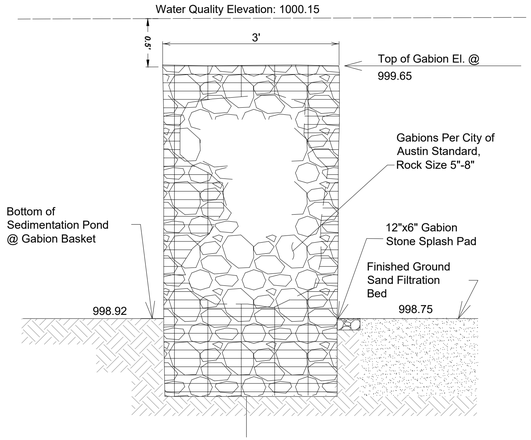
Cross Section A-A Profile

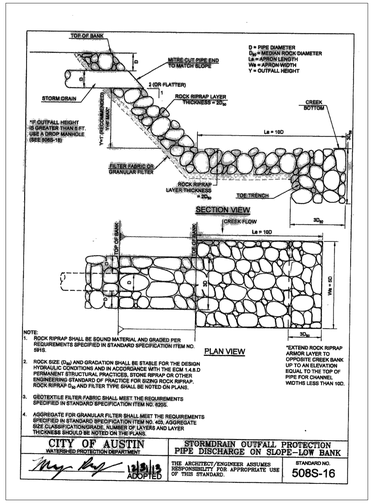


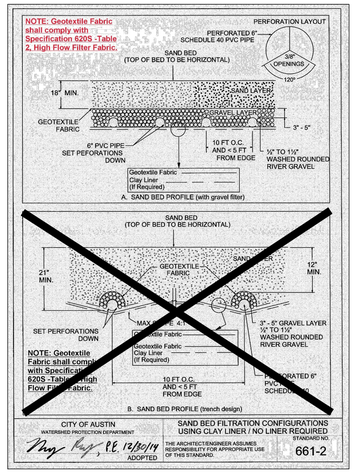
Cross Section B-B Profile

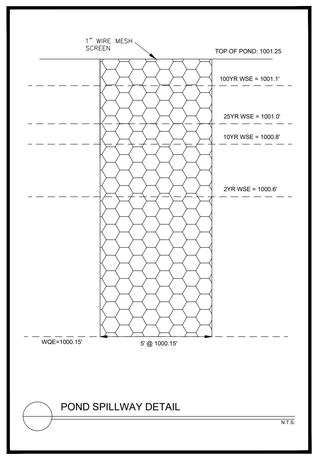




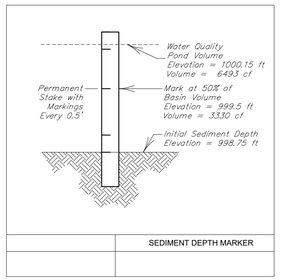
Rock Gabion
N.T.S







POND SPILLWAY DETAIL
N.T.S



	SEDIMENT DEPTH MARKER

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STATE OF TEXAS
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146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

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135 US-183, LIBERTY HILL, TEXAS 78642

POND PROFLE & DETAILS

SHEET NO.
19 OF 29

2025-XX-SDP

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Liberty Hill Credit Union
Date Prepared: 6/1/2025

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 * =	1.75	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	1.32	acres
Total post-development impervious cover fraction * =	0.75	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	1149	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	1.75	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.32	acres
Post-development impervious fraction within drainage basin/outfall area =	0.75	
$L_{M\ THIS\ BASIN}$ =	1149	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Sand Filter
Removal efficiency = 89 percent

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: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

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 =	1.75	acres
A_I =	1.32	acres
A_P =	0.43	acres
L_R =	1307	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 1149 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 =	0.56	
On-site Water Quality Volume =	5383	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 =	1077	
Total Capture Volume (required water quality volume(s) x 1.20) =	6459	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin =	6459	cubic feet	
Minimum filter basin area =	299	square feet	
Maximum sedimentation basin area =	2691	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	673	square feet	For maximum water depth of 8 feet

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	6459	cubic feet	
Minimum filter basin area =	538	square feet	
Maximum sedimentation basin area =	2153	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	135	square feet	For maximum water depth of 8 feet

TSS Calculations

Pond Portion	Combined Detention & Water Quality Pond Volume Table					
	WSE (ft)	Area (SF)	Incremental Volume (cubic ft)	Incremental Volume (acre-ft)	Cumulative Total Volume (cubic ft)	Cumulative Total Volume (acre-ft)
WQ	998.75	3,511	0	0.000	0	0.000
	999	3,969	934.39	0.021	934.39	0.021
	999.25	4,305	1032.82	0.024	1967.21	0.045
	999.5	4,709	2059.7	0.047	3092.52	0.071
	999.75	5,139	2264.88	0.052	4324.58	0.099
	1000	5,494	3390.4	0.078	5655.28	0.130
	1000.15	5,670	3102.48	0.071	6492.88	0.149
Water Quality Elevation & Volume = 1000.15 ft (6,500 cu ft)						
Detention	1000.25	5,771	3962.48	0.162	7064.96	0.162
	1,000.50	5,912	8531.16	0.034	8531.16	0.196
	1,000.75	5,928	6048.64	0.196	10011.12	0.230
	1,001.00	5,944	2963.89	0.068	11495.05	0.264
	1,001.25	5,944	7310.35	0.239	13358.99	0.307
Max Water Quality & Detention Elevation/Volume = 1001.25 ft (13,359 cu ft)						

Combined Detention & Water Quality Pond Volume Table

Detention Pond Analysis & Volume Table					
Storm Event	Peak Pond Inflow (CFS)	Peak Pond Outflow (CFS)	Detention Volume (Acre-Ft)	Detention Volume (ft^3)	WSE (ft)
Water Quality Elevation & Volume = 1000.15 ft (6,493 cu ft)					
2-Yr	6.00	4.60	0.0600	2614	1000.6
10-Yr	9.80	8.00	0.0900	3920	1000.8
25-Yr	12.33	10.29	0.1100	4792	1000.9
100-Yr	16.55	14.17	0.1300	5663	1001.1

Detention Analysis & Volume Table

Rock Berm Level Spreader - Pond Inflow

100-year Design Storm Flow Rate =		16.55 cfs
WEIR EQUATION	Q = 3.0 * L* (h)^1.5	L = 54.0
h = (Q/3L)^0.6667 =	0.22 FT	
Area=	11.8 sf	
Velocity =	**1.40 fps**	

Flow into pond < 2 fps, therefore, non-erosive

Rock Berm Level Spreader Calculations

ORIFICE SIZING FOR UNDERDRAIN SYSTEM - FALLING HEAD METHOD

SURFACE AREA	5944 SF
MINIMUM DRAWDOWN TIME = 48 HR 48HRS = 172,800 SEC	= 172800 SEC
h1=	1000.15 FT
h2=	995.62 FT
A0=-2*1672*(0^0.5-7.19^0.5)/(0.6*172800*(2*32.2)^0.5)	0.0010 FT
D = (4*A/pi)0.5 =	0.04 FT
Q= Volume/Time	0.39 CFS
	0.43 inch orifice

THEREFORE, POND WILL DRAWDOWN IN 48 HOURS

Orifice Sizing Calculations

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STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642
DETENTION & WATER QUALITY CALCULATIONS

SHEET NO. 20 OF 29

2025-XX-SDP

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THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

DOC. 2007097184
O.P.R.W.C.T.

LOT 1, BLOCK A
FINAL PLAT OF LIBERTY CROSSINGS 183
CAB. EE SLIDE 32
O.P.R.W.C.T.

REMAINDER OF STARR CORNER SUBDIVISION
CAB. EE SLIDE 244
O.P.R.W.C.T.

B. BOYD REAL ESTATE, LLC
SPECIAL WARRANTY DEED
CALLED 2.661 ACRES
DOC. 2024070001
O.P.R.W.C.T.

VACATION AND RESUBDIVISION OF
HENRIETTA HIGHWAY 29
LOT 1A, BLOCK A
DOC. 2024057146
O.P.R.W.C.T.

APPROX. LOCATION OF ELECTRIC EASEMENT DOC. NO. 2021177566 O.P.R.W.C.T.

FOUND 1/2" IRON ROD "DIAMOND"

FOUND 1/2" IRON

N 76°31'54" E 251.00'

N 76°31'54" E 85.71'

S 72°13'37" E 429.28'

S 69°00'47" W 583.31'

N 21°02'18" W 301.60'

Property Line Drainage Ditch End See Detail On This Sheet

Grade Break Line (High Point)

Flow Captured at Inlet Discharged Through Wall Outlet

Pond Maintenance Ramp (12' Curb Cut - Pavement Low Point)

Pond

See Sheet 18 For Detailed Pond Grading

See Sheet 18 For Pond Discharge Grading

Proposed Monument Sign

FFE=1003.00

2774 SF

Drivethru 1

Drivethru 2

Bypass

Dumpster Enclosure (Ref. Arch Plans For Grading Information)

Property Line

(R.O.W. VARIES)

Access Road on Property

Match Existing Grading Plans Per Liberty Hill Crossing Plans (2024-39-SDP)

SET 5/8" IRON ROD "QUIDDITY ENG"

20' WATER LINE EASEMENT
DOC. NO. 2006006395
O.P.R.W.C.T.

ACCESS EASEMENT
CALLED 0.455 ACRES
DOC. NO. 2025006162 O.P.R.W.C.T.

10' P.U.E
DOC. NO. 2024057146
O.P.R.W.C.T.

EX. 20" WATERLINE

WMH

VENT PIPE

GP

PROPERTY LINE DRAINAGE CHANNEL
N.T.S.

SCALE: 1" = 20'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

PROPOSED LEGEND

- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- 700 GROUND CONTOUR
- TC TOP OF CURB
- TP TOP OF PAVEMENT
- FG FINISHED GROUND
- TW TOP OF WALL
- TS TOP OF SIDEWALK
- ADA ROUTE
- DRAINAGE DITCH CENTERLINE

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JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
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GRADING PLAN

SHEET NO. **21** OF **29**

2025-XX-SDP

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DOC. 2007097184
O.P.R.W.C.T.

LOT 1, BLOCK A
FINAL PLAT OF LIBERTY CROSSINGS 183
CAB. EE SLIDE 32
O.P.R.W.C.T.

N 76°31'54" E 251.00'

FOUND
1/2" IRON ROD "DIAMOND"

N 76°31'54" E
85.71'

FOUND
1/2" IRON ROD "C&B"

REMAINDER OF STARR CORNER
SUBDIVISION
CAB. EE SLIDE 244
O.P.R.W.C.T.

N 21°27'18" W 301.01'

B. BOYD REAL ESTATE, LLC
SPECIAL WARRANTY DEED
CALLED 2.661 ACRES
DOC. 2024070001
O.P.R.W.C.T.

WILLIAMSON COUNTY
DEED – SH 29 R.O.W.
CALLED 3.881 ACRES
DOC. 2015036814
O.P.R.W.C.T.

SH 29
(R.O.W. VARIES)

S 72°13'37" E 429.28'

S 69°00'47" W 583.31'

WMH

VENT PIPE

8" WATERLINE

SET
5/8" IRON ROD "QUIDDITY ENG"

Existing Access Road
Per Liberty Hill Crossing Plans
(2024-39-SDP)

ACCESS EASEMENT
CALLED 0.455 ACRES
DOC. NO. 2025006162 O.P.R.W.C.T.

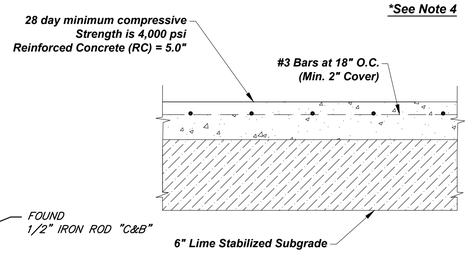
VACATION AND RESUBDIVISION OF
HENRIETTA HIGHWAY 29
LOT 1A, BLOCK A
DOC. 2024057146
O.P.R.W.C.T.

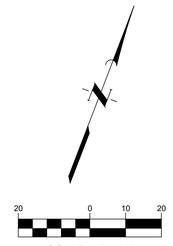
Existing Access Road
Per Liberty Hill Crossing Plans
(2024-39-SDP)

SET
5/8" IRON
ENG"

LIGHT PAVEMENT SECTIONS

*See Note 4





EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE

PAVING LEGEND

- LIGHT-DUTY PAVEMENT
- PROPOSED SIDEWALK
- LIMITS OF CONSTRUCTION
- FIRE LANE

Construction Notes:

1. The pavement section materials thickness shall be in accordance with the latest Geotechnical Report by Holt Engineering, Inc, Project No. 04-10525, dated 04/23/2025. See report for more details regarding strength/ reinforcement requirements and joint information.
2. The subgrade material was tested by Holt Engineering. The results are described in the Geotechnical Report dated April 23, 2025.
3. Per geotechnical report, a flexible pavement section is not recommended for heavy-duty areas.
4. See Geotechnical report file No. 04-10525 by Holt Engineering dated 23 April 2025. Pavement section provided for reference and Geotech Report to ultimately govern pavement section. Pavement design is based on light passenger vehicular traffic with occasional 80,000 lb vehicle (fire/truck). If updates to this assumption are desired an addendum to Geotech report will be required.

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PAVING PLAN

SHEET NO.
22 OF *29*

2025-XX-SDP

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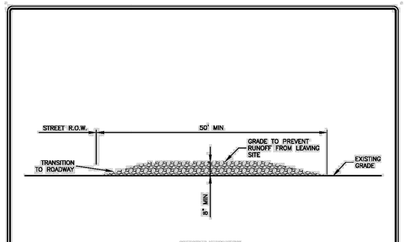


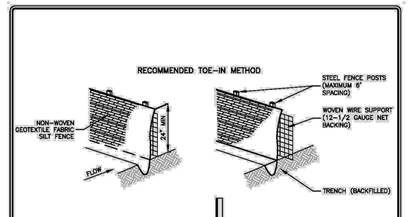
CROSS SECTION

NOTES:

1. STONE SIZE SHALL BE 3" – 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	STABILIZED CONSTRUCTION ENTRANCE DETAIL	EC-09

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)



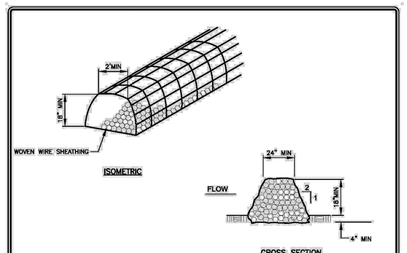
CROSS SECTION

NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1) FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	SILT FENCE DETAIL	EC-10

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)



CROSS SECTION

NOTES:

1. USE ONLY OPEN GRADED ROCK (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. 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.
4. IF SEDIMENT REACHES A DEPTH OF 4", THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

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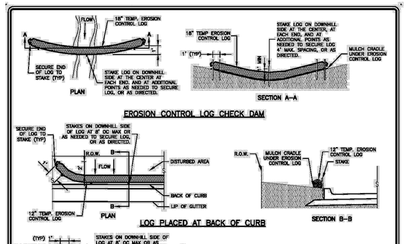
APPROVED 03-25-11 DATE	ROCK BERM DETAIL	EC-12

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

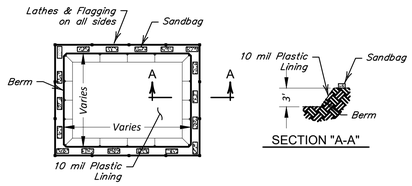


NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 6".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF LOGS DURING CONSTRUCTION TO ENSURE PROPER PERFORMANCE.
3. LOGS SHALL CONSIST OF 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE CONTAINMENT MESH, STUFFED WITH FILTER MATERIAL.
4. STUFF LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE DENSITY THAT WILL HOLD SHAPE WITHOUT EXCESSIVE DEFORMATION. FILTER MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR WOOD FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS,100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL, EXCLUDING STRAW AND HAY.
5. STAKES SHALL BE 2" X 2" WOOD, 4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED.

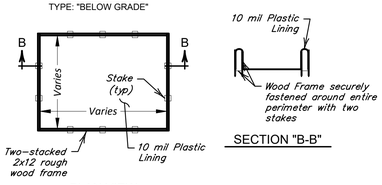
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	EROSION CONTROL LOG DETAIL	EC-17

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)



PLAN VIEW
TYPE: "BELOW GRADE"

SECTION "A-A"



PLAN VIEW
TYPE: "ABOVE GRADE"

SECTION "B-B"

CONCRETE WASHOUT AREA
(NTS)

NOTES:

1. Actual layout to be determined in the field.
2. Temporary concrete washout facility should be constructed 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.
3. The pit shall be located in an area easily accessible to construction traffic. The pit shall be located at least 50 feet from sensitive features, storm drains, open ditches, or water bodies and protected from storm water runoff.
4. When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. All materials used to construct the temporary facility should be removed from the site and disposed of. Holes, depressions or other ground disturbance caused by the removal of the temporary facilities should be backfilled and repaired.
5. Excess concrete shall not be disposed of within the pit.

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STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

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EROSION CONTROL DETAILS

SHEET NO. 23 OF 29

2025-XX-SDP

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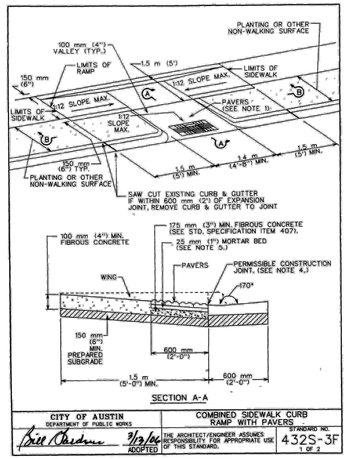
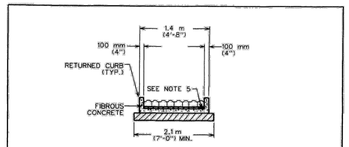


SECTION A-A

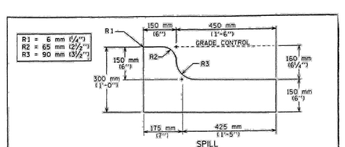
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	COMBINED SIDEWALK CURB RAMP WITH PAVERS	STANDARD NO.
Bill Barnes 3/1/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	432S-3F 1 OF 2



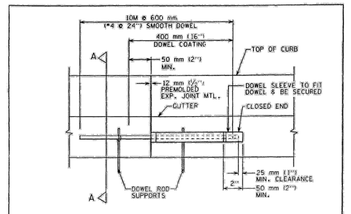
SECTION B-B

GENERAL NOTES:
1. THIS STANDARD IS APPLICABLE FOR RAMP CONSTRUCTION WITHIN RIGHT-OF-WAY OR EASEMENT ONLY.
2. PAVERS WILL HAVE DETECTABLE WARNING THAT CONSISTS OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 23 mm (0.9"), A NOMINAL HEIGHT OF 5 mm (0.2") AND A NOMINAL CENTER TO CENTER SPACING OF 60 mm (2.35"), AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT (Re: ADAAG SECTION 4.29.2). MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. A BASKET WEAVE PAVER PATTERN SHALL BE USED UNLESS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. PAVER PATTERN VARIES PER MANUFACTURER'S RECOMMENDATIONS. REFER TO STANDARD DETAIL 432S-5 FOR PAVER BASE PREPARATION DETAILS.
3. THE CURB, GUTTER AND RAMP SYSTEM SHALL BE CONSTRUCTED TO MAINTAIN ALL RUNOFF FROM A 25 YEAR FREQUENCY STORM WITHIN THE RIGHT-OF-WAY (DRAINAGE CRITERIA MANUAL SECTION 1.2.2.B).
4. TYPICAL SIDEWALK WIDTHS AND CURB RADII ARE SHOWN FOR ILLUSTRATION ONLY. REFER TO THE TRANSPORTATION CRITERIA MANUAL FOR SIDEWALK WIDTHS, CURB RADII AND CURB BASIC REQUIREMENTS.
5. THE PERMISSIBLE CONSTRUCTION JOINT BETWEEN THE PAVERS AND THE ADJOINING SURFACE SHALL BE LIMITED TO 6 mm (1/4") JOINT SIZE. GAPS LARGER THAN 6 mm (1/4") MUST BE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. ALL JOINTS BETWEEN BRICKS AND ADJOINING SURFACE SHALL BE MORTAR FILLED UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
6. MORTAR SHALL CONFORM TO STD. SPECIFICATION ITEM 403S.3.5. MORTAR AND GROUT. ALL OTHER CONCRETE SHALL CONFORM TO STD. SPECIFICATION ITEM 403S, CONCRETE FOR STRUCTURES, UNLESS OTHERWISE NOTED.
7. CURB RAMPS WITH 100 mm (4") CONCRETE VALLEY MAY ONLY BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK DIAGONALLY ACROSS THE RAMP.

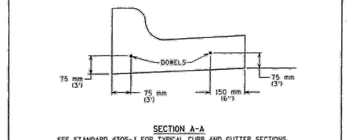
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	COMBINED SIDEWALK CURB RAMP WITH PAVERS	STANDARD NO.
Bill Barnes 3/1/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	432S-3F 2 OF 2



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	CURB AND GUTTER SECTION	STANDARD NO.
Lino Rivera 9/29/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	430S-1

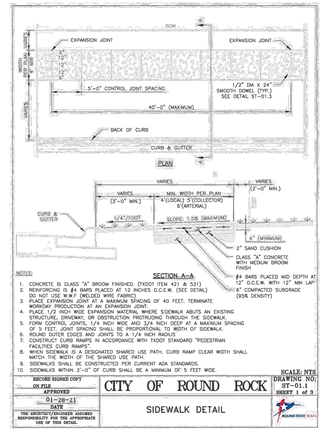


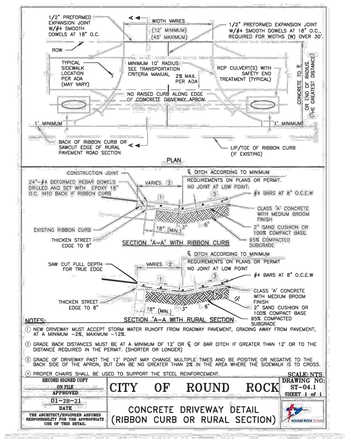
CURB EXPANSION JOINT DOWEL DETAIL

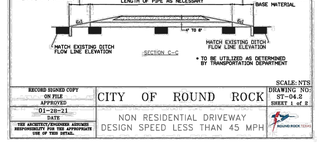


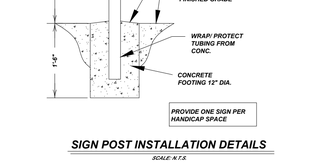
SECTION A-A
SEE STANDARD 430S-1 FOR TYPICAL CURB AND GUTTER SECTIONS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	CURB EXPANSION JOINT DOWEL DETAIL	STANDARD NO.
Lino Rivera 9/29/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	430S-3



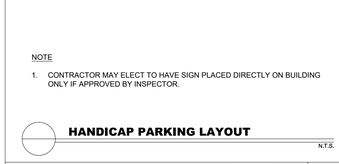






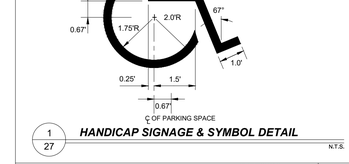
NOTES:
1. SIDEWALKS SHALL BE CONSTRUCTED PER CURRENT AOA STANDARDS.
2. PROPER CHAIRS SHALL BE USED TO SUPPORT THE STEEL REINFORCEMENT.

SCALE: NTS
RECORD SIGNED COPY ON FILE
APPROVED 01-28-21
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.
CITY OF ROUND ROCK
SIDEWALK & SHARED USE PATH DETAIL
DRAWING NO: ST-01.3
SHEET 3 of 3



NOTES:
1. PLACE 1/2 INCH EXPANSION JOINTS AT LOCATIONS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. FORM CONTROL JOINTS 1/4 INCH WIDE AND 3/4 INCH DEEP AT A MAXIMUM SPACING OF 10'. ROUND JOINT EDGES TO A MINIMUM 1/4" RADIUS.
3. IF THE NEAREST EXISTING EXPANSION JOINT IS 5 FEET OR LESS FROM THE DRIVEWAY RADIUS, THEN REMOVE AND REPLACE CURB AND GUTTER TO THE NEAREST EXPANSION JOINT.
4. PROPER CHAIRS SHALL BE USED TO SUPPORT STEEL REINFORCEMENT.

SCALE: NTS
RECORD SIGNED COPY ON FILE
APPROVED 01-28-21
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.
CITY OF ROUND ROCK
CONCRETE DRIVEWAY DETAIL TYPE I RESIDENTIAL
DRAWING NO: ST-02
SHEET 1 of 1



NOTES:
1. PLACE 1/2 INCH EXPANSION JOINTS AT LOCATIONS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. FORM CONTROL JOINTS 1/4 INCH WIDE AND 3/4 INCH DEEP AT A MAXIMUM SPACING OF 10'. ROUND JOINT EDGES TO A MINIMUM 1/4" RADIUS.
3. IF THE NEAREST EXISTING EXPANSION JOINT IS 5 FEET OR LESS FROM THE DRIVEWAY RADIUS, THEN REMOVE AND REPLACE CURB AND GUTTER TO THE NEAREST EXPANSION JOINT. SAWCUT BETWEEN EXISTING CURB/ASPHALT SO THAT NO DAMAGE OCCURS TO EXISTING ROADWAY.
4. PROPER CHAIRS SHALL BE USED TO SUPPORT STEEL REINFORCEMENT.

SCALE: NTS
RECORD SIGNED COPY ON FILE
APPROVED 01-28-21
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.
CITY OF ROUND ROCK
CONCRETE DRIVEWAY DETAIL TYPE II COMMERCIAL OR MULTIFAMILY
DRAWING NO: ST-03.1
SHEET 1 of 2

NOTES:
1. PLACE 1/2 INCH EXPANSION JOINTS AT LOCATIONS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. FORM CONTROL JOINTS 1/4 INCH WIDE AND 3/4 INCH DEEP AT A MAXIMUM SPACING OF 10'. ROUND JOINT EDGES TO A MINIMUM 1/4" RADIUS.
3. IF THE NEAREST EXISTING EXPANSION JOINT IS 5 FEET OR LESS FROM THE DRIVEWAY RADIUS, THEN REMOVE AND REPLACE CURB AND GUTTER TO THE NEAREST EXPANSION JOINT. SAWCUT BETWEEN EXISTING CURB/ASPHALT SO THAT NO DAMAGE OCCURS TO EXISTING ROADWAY.
4. PROPER CHAIRS SHALL BE USED TO SUPPORT STEEL REINFORCEMENT.

SCALE: NTS
RECORD SIGNED COPY ON FILE
APPROVED 01-28-21
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.
CITY OF ROUND ROCK
CONCRETE DRIVEWAY DETAIL TYPE II COMMERCIAL WITH 'ISLAND'
DRAWING NO: ST-03.2
SHEET 2 of 2

SCALE: NTS
RECORD SIGNED COPY ON FILE
APPROVED 01-28-21
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.
CITY OF ROUND ROCK
NON RESIDENTIAL DRIVEWAY DESIGN SPEED GREATER THAN 45 MPH
DRAWING NO: ST-04.1
SHEET 1 of 2

SCALE: NTS
RECORD SIGNED COPY ON FILE
APPROVED 01-28-21
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.
CITY OF ROUND ROCK
NON RESIDENTIAL DRIVEWAY DESIGN SPEED LESS THAN 45 MPH
DRAWING NO: ST-04.2
SHEET 1 of 2

SIGN POST INSTALLATION DETAILS
SCALE: N.T.S.

NOTE
1. CONTRACTOR MAY ELECT TO HAVE SIGN PLACED DIRECTLY ON BUILDING ONLY IF APPROVED BY INSPECTOR.

HANDICAP PARKING LAYOUT
N.T.S.
REVISION DATE:

1/27 HANDICAP SIGNAGE & SYMBOL DETAIL
N.T.S.
REVISION DATE:

No.	Date	REVISIONS	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23004 & 10064300
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

DESIGNED BY: JYC
CHECKED BY: JMC
DRAWN BY: KS
SCALE:
DATE: CC - Jan 2026
JOB NO.: 152334-0018-01

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

SITE CONSTRUCTION DETAILS

SHEET NO. 24 OF 29

2025-XX-SDP

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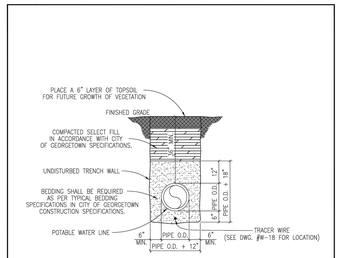
K:\15234\15234-0018-01 Liberty Hill Credit Union\2 Design Phase\CAD\Plans\Site\15234-0018-01 DETLS.dwg jo4: January 05, 2026



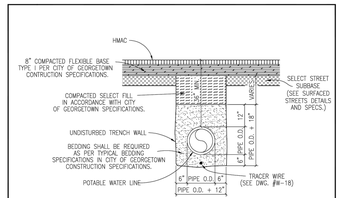
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS

W02



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

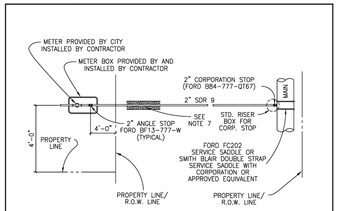
NOTES:
1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY

W22



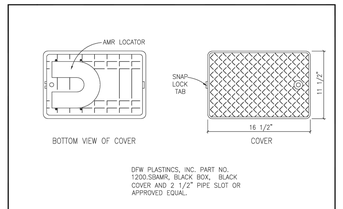
NOTES:
1. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR-9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
2. ANGLE STOP SHALL BE 1" MINIMUM.
3. 1" ANGLE STOPS WITH 3/4" VALVES SHALL NOT BE PERMITTED.
4. MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN 4 METERS PER SERVICE AND SERVICE LINES LARGER THAN 2" IN DIAMETER SHALL BE HANDLED ON AN INDIVIDUAL BASIS.
5. ANGLE STOPS 1 1/2" AND 2" IN SIZE SHALL BE PROVIDED WITH BOTH A LOCKING CAP AND METER FLANGE.
6. ANGLE STOPS SHALL BE INSTALLED 8" BELOW FINISHED GRADE AND MARKED WITH A 2" X 2" X 48" TREATED WOOD STAKE, PAINTED BLUE.
7. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
8. CASING REQUIREMENTS FOR SERVICE LINES CROSSING ROADWAYS SEE DETAIL W-03 NOTE #7.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 01/23/2013

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
SINGLE WATER SERVICE PLAN

W04



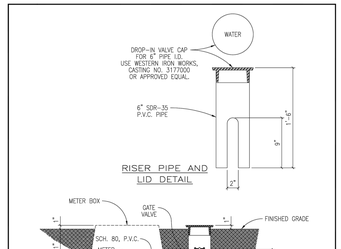
DFW PLASTINCS, INC. PART NO. 1200.SBAMR, BLACK BOX, BLACK COVER AND 2 1/2" PIPE SLOT OR APPROVED EQUAL.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

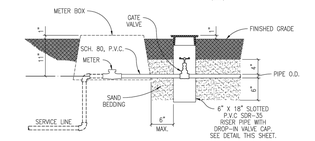
ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
METER BOX (NON-TRAFFIC AREAS)

W23



RISER PIPE AND LID DETAIL



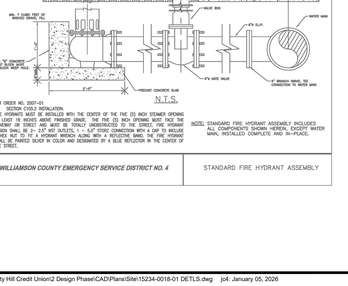
NOTES:
1. GATE VALVE SHALL BE A HAMMOND IB645, CLASS 125, BRONZE GATE, SCREWED BONNET, NON-RISING STEM, SOLID WEDGE DISC WITH THREADED ENDS OR APPROVED EQUAL.
2. DROP-IN VALVE CAP SHALL BE CAST WITH THE WORD "WATER" ON TOP.
3. USE SCHEDULE 80, M.I.P. ADAPTER AS REQUIRED.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CUSTOMER'S CUT-OFF

W20



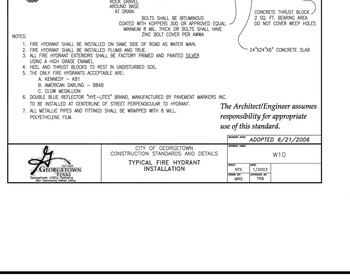
NOTES:
1. VALVE BOX SHALL BE 5 1/4" CAST IRON ADJUSTABLE HAVING AN ADJUSTABLE RANGE OF + OR – 6 INCHES FROM INSTALLED FINISH GRADE.
2. ACCEPTABLE GATE VALVES ARE:
   A. AMERICAN FLOW CONTROL – SERIES 2500
   B. MUELLER – 2360 SERIES
   C. CLOW

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL VALVE SETTING

W07



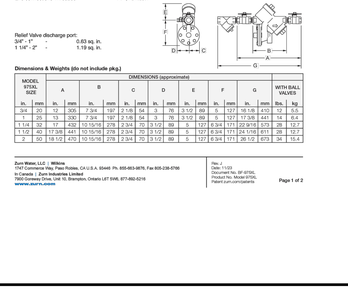
NOTES:
1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET AND AT THE CENTERLINE AS SHOWN ON DETAIL "A".
2. WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE.
3. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR-9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
4. ROTATE THE CORPORATION STOP SO THAT THE OPERATING NUT IS ACTUATED FROM THE VERTICAL POSITION RATHER THAN THE HORIZONTAL. SEE STD. RISER BOX FOR CORP. STOP DETAIL. (CWC # W04).
5. SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO CORPORATION STOP WITH NO FITTINGS IN BETWEEN.
6. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.
7. CASING REQUIRED FOR ALL PAVEMENT CROSSINGS. 4" SDR–26 REQUIRED FOR OPEN–CUT. STEEL CASING PIPE REQUIRED FOR JACK AND BORE. LIMITS OF CASING SHOULD EXTEND SIX FEET BEYOND THE EDGE OF PAVEMENT OR BACK–OF–CURB.
8. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. METER BOX TO BE CAPABLE OF HOUSING ITRON AUTOMATIC METER READING DEVICE. USE DFW–PLASTICS, INC. PART NO. 1200.SBAMR OR APPROVED EQUAL.
11. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY. SEE DETAIL W23.
12. CASING SHALL EXTEND OUT TO WITHIN 4' INSIDE OF THE R.O.W. LINE, ON BOTH SIDES.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 01/23/2013

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL WATER SERVICE–ELEVATION

W03



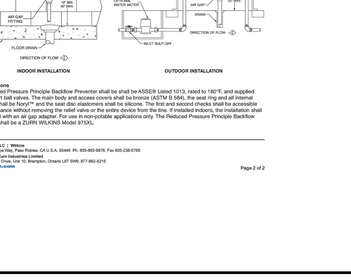
NOTES:
1. SEE VALVE SETTING DETAIL, DWG. #W–07.
2. ACCEPTABLE GATE VALVES ARE:
   A. MUELLER – 2360 SERIES
   B. CLOW

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
INLINE VALVE INSTALLATION

W21



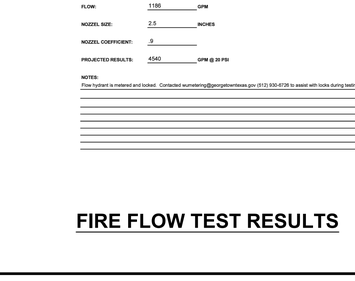
NOTES:
1. TEST STATION SHALL BE HANDLEY INDUSTRIES INC. – 2 INCH CATHODIC TEST STATIONS OR APPROVED EQUAL.
2. THE 15" ABS PLASTIC BOX SHALL BE A FLANGED TOP FOR INSTALLATION AT GROUND LEVEL.
3. ALL TERMINALS ARE TO BE MADE OF SOLID BRASS.
4. PLASTIC LIDS SHALL BE COLOR BLUE AND MARKED "WATER".
5. TEST TERMINALS ARE TO BE INCORPORATED WITH HANDLEY VALVE BOXES.
6. BURY SPLICE SHALL BE 3M DIRECT BURY SPLICE (DBR) OR APPROVED EQUAL.
7. TEST STATIONS SHALL BE INSTALLED AT EACH FIRE HYDRANT LOCATION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRACER WIRE INSTALLATION AND TEST STATION LOCATION

W18



*DEADMAN
TYPICAL SECTION

ALL THRUST BLOCKS SHALL BE FORMED, LAID FORMS SHALL BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO THE POURING OF CONCRETE AND SHALL ALSO BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO COVERING. TYPICAL LOCATIONS WHICH REQUIRE CONCRETE REACTION (THRUST) BLOCKS FOR PRESSURE MAINS FOUR INCHES (4") AND GREATER, SHALL HAVE 2,500 P.S.I. MINIMUM STRENGTH AT TWENTY EIGHT (28) DAYS AND BEAR AGAINST UNDISTURBED STABLE SOILS, AREA OF CONTACT SHALL BE GOVERNED BY PIPE SIZE, MAXIMUM PRESSURE IN PIPE, AND BEARING CAPACITY OF SOIL. PROTECT FITTINGS, BOLTS, ETC. BY COVERING WITH VISQUEEN OR OTHER ACCEPTABLE MATERIAL. CONCRETE SHALL BE A MINIMUM OF TWELVE INCHES (12") THICK.

PIPE SIZE	THRUST BLOCK AREA REQUIRED	PIPE SIZE	THRUST BLOCK AREA REQUIRED	REMARKS
4"	2.0 SQ. FT.	18"	30.0 SQ. FT.	
6"	4.0 SQ. FT.	20"	37.0 SQ. FT.	VALUES ARE FOR 90° BENDS, BASED ON 200 P.S.F. SAFE BEARING LOAD AND PIPE PRESSURE OF 150 P.S.I. PLUS 33% SAFETY FACTOR FOR OTHER SOILS AND PRESSURES, THE AREA REQUIRED IS IN DIRECT PROPORTION.
8"	6.6 SQ. FT.	24"	53.0 SQ. FT.	
10"	10.0 SQ. FT.	27"	80.0 SQ. FT.	
12"	14.0 SQ. FT.	30"	98.0 SQ. FT.	
14"	18.0 SQ. FT.	36"	127.0 SQ. FT.	
16"	24.0 SQ. FT.			

* THE ENGINEER OF RECORD SHALL CALCULATE THE SIZE OF THE DEADMAN REQUIRED AS WELL AS ANY INSTALLATION WHICH IS NOT COVERED BY THE ABOVE.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL THRUST BLOCKS FOR WATER AND FORCE MAIN

W11

FIRE HYDRANTS LACKING INTEGRAL STORZ CONNECTOR SHALL BE REJECTED (NO STORZ ADAPTERS ALLOWED)

RATED FLOW	FIRE HYDRANT BONNET COLOR
1,500 G.P.M. +	LIGHT BLUE
1000 – 1499 G.P.M.	GREEN
500 – 999 G.P.M.	ORANGE
BELOW 500 G.P.M.	RED

N.T.S.

NOTE: STANDARD FIRE HYDRANT ASSEMBLY INCLUDES ALL COMPONENTS SHOWN HEREON, EXCEPT WATER MAIN, INSTALLED COMPLETE AND IN–PLACE.

NOTES:
1. FIRE HYDRANT BRAND AND MODEL SHALL BE APPROVED BY THE CITY OF GEORGETOWN PRIOR TO INSTALLATION. ALL HYDRANTS PURCHASED REQUIRED INCLUDE: FACTORY INSTALLED INTERNAL 5–INCH STORZ PUMPER NOZZLE, 5–INCH FRONT OPERATING NUT, AND (6) 2 1/2" NOZZLES WITH NST THREADS.
2. HYDRANTS SHALL BE PAINTED BLUE IN COLOR. HYDRANTS PURCHASED WITH OTHER COLORS SHALL BE PAINTED BLUE.
3. ALL OUTLET OR CAST IRON FITTINGS AND/OR PIPE SHALL BE CEMENT LINED.
4. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE. ALL FITTINGS SHALL BE EQUIPPED WITH JOINT RESTRAINTS. ALL HYDRANTS SHALL HAVE A MEGALUG ALL ANCHOR FITTING TO BE CONCRETE THRUST BLOCKED.
5. AFTER COMPLETION OF THE HYDRANT INSTALLATION, A FINE FLOW TEST SHALL BE PERFORMED BY THE CONTRACTOR AND WITNESSED BY THE CITY. THE HYDRANT BONNET SHALL BE PAINTED ACCORDING TO THE CHART IN THIS DETAIL. THE HYDRANT BARREL, INCLUDING ALL NOZZLES, CAPS AND CHAINS SHALL BE PAINTED SAFETY YELLOW OR APPROVED EQUAL. THE HYDRANT SHALL BE PAINTED ACCORDING TO THE APPROPRIATE FLOW RATE AS NOTED ON THE TABLE ON THIS SHEET.
6. BLUE, BI–DIRECTIONAL REFLECTIVE PAVEMENT MARKER, MINIMUM 4" DIAMETER, MOUNTED ON THE ROADWAY SURFACE PER MANUFACTURERS' RECOMMENDATION AT THE CENTERLINE OF ROADWAY STATION OFFSET 6 INCHES FROM CENTER OF STREET TOWARD THE HYDRANT. (SEE DETAIL).

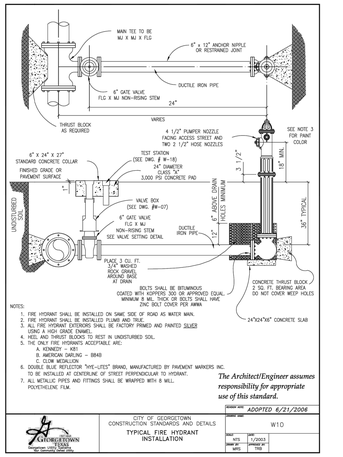
LOCATION:
7. SET P.H. ON LOT LINE EXTENDED WHEN POSSIBLE.
8. HYDRANTS SHALL BE LOCATED NO MORE THAN 6 INCHES BEHIND EXISTING OR FINISHED SIDEWALK.
10. P.H. LOCATED AT STREET INTERSECTIONS SHALL BE PLACED A MINIMUM OF 2 FEET FROM THE BEGINNING OF CURB RADIUS. HYDRANT SIDING SHALL BE POINTED WITHIN 2 FEET IN ALL DIRECTIONS FROM P.A.
11. WHEN LOCATED ON CURVED SIDEWALK, FACE THE PRIC LANE OF TRAVEL MAY UNLESS OTHERWISE NOTED ON PLANS.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD FIRE HYDRANT ASSEMBLY

WILLIAMSON COUNTY EMERGENCY SERVICE DISTRICT NO. 4



NOTES:
1. FIRE HYDRANT SHALL BE INSTALLED ON SAME SIDE OF ROAD AS WATER MAIN.
2. FIRE HYDRANT SHALL BE INSTALLED PLUMB AND TRUE.
3. ALL FIRE HYDRANT EXTERIORS SHALL BE FACTORY PRIMED AND PAINTED SILVER USING A HIGH GRADE ENAMEL.
4. HEEL AND THRUST BLOCKS TO REST IN UNDISTURBED SOIL.
5. THE ONLY FIRE HYDRANTS ACCEPTABLE ARE:
   A. KENNECH – KB1
   B. MUELLER – CENTURION – B848
   C. CLOW MEDALLION
6. DOUBLE BLUE REFLECTOR "PVE–LITE" BRAND, MANUFACTURED BY PAVEMENT MARKERS INC. TO BE INSTALLED AT CENTERLINE OF STREET PERPENDICULAR TO HYDRANT.
7. ALL METALLIC PIPES AND FITTINGS SHALL BE WRAPPED WITH 8 MIL. POLYETHELENE FILM.

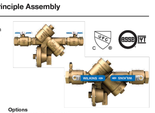
The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL FIRE HYDRANT INSTALLATION

W10

ZURN Model 975XL
Reduced Pressure Principle Assembly



Application
Designed for installation on water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. Assembly shall provide protection where a potential health hazard exists. For non-potable applications only.

Standards Compliance
- ASSE® Listed 1013
- cUPC® Listed
- ULR Classified (less shut-off valves or with OS&Y valves
- C-ULR Classified
- CSA® Certified B64.4
- AWWA compliant C511
- Approved by the Foundation for Cross Connection Control & Hydraulic Research at the University of Southern California
- NYC MEA 425-89-M VOL 3

Materials

Main valve body	Cast Bronze ASTM B 584
Access covers	Cast Bronze ASTM B 584
Fasteners	Stainless Steel, 300 Series
Elastomers	Silicone Buna-N
Polymers	Noryl™
Springs	Stainless Steel, 300 series

Features

Sizes: 3/4", 1", 1-1/4", 1-1/2", 2"	
Maximum working water pressure	175 PSI
Maximum working water temperature	180°F
Hydrostatic test pressure	350 PSI
End connections Threaded	ANSI B1.20.1

Relief Valve discharge port:

3/4" - 1"	0.63 sq. in.
1 1/4" - 2"	1.19 sq. in.

Dimensions & Weights (do not include pkg.)

MODEL 975XL SIZE	DIMENSIONS (approximate)												WITH BALL VALVES	
	A		B		C		D		E		F		G	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg
3/4	20	12	305	7 3/4	197	2 1/8	54	3	76	3 1/2	89	5	127	15 1/8	410	12	5.5
1	25	13	330	7 3/4	197	2 1/8	54	3	76	3 1/2	89	5	127	17 3/8	441	14	6.4
1 1/4	32	17	432	10 15/16	278	2 3/4	70	3 1/2	89	5	127	8 3/4	171	22 9/16	573	25	12.7
1 1/2	40	17 3/8	441	10 15/16	278	2 3/4	70	3 1/2	89	5	127	8 3/4	171	24 1/16	611	28	12.7
2	50	18 1/2	470	10 15/16	278	2 3/4	70	3 1/2	89	5	127	8 3/4	171	26 1/2	673	34	15.4

Zurn Water, LLC | **Wilkins**
1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-0766
In Canada | **Zurn Industries Limited**
1965 Ironwood Drive, Unit 10, Brampton, Ontario L6T 5W6, 877-892-6215
www.zurn.com

Rev. J
Effective 1-1-23
Document No. IM-975XL
Product No. Model 975XL
Patent zurn.com/patents

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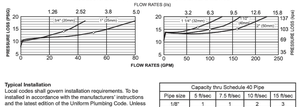
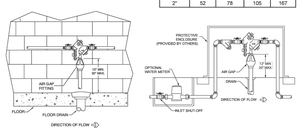
Flow Characteristics

Ⓒ Rated Flow (established by approval agencies)



Typical Installation
Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code. Unless otherwise specified, install assembly in a location with a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

Capacity thru Schedule 40 Pipe				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
1/8"	1	1	2	3
1/4"	2	2	3	5
3/8"	3	4	6	9
1/2"	5	7	9	14
3/4"	8	12	17	25
1"	13	20	27	40
1 1/4"	23	35	47	70
1 1/2"	32	48	63	95
2"	52	78	105	167



INDOOR INSTALLATION OUTDOOR INSTALLATION

Specifications
The Reduced Pressure Principle Backflow Preventer shall be ASSE® Listed 1013, rated to 180°F, and supplied with full port ball valves. The main body and access covers shall be bronze (ASTM B 584), the seat ring and all internal polymers shall be Noryl™ and the seat disc elastomers shall be silicone. The first and second checks shall be accessible for maintenance without removing the relief valve or the entire device from the line. If installed indoors, the installation shall be supplied with an air gap adapter. For use in non-potable applications only. The Reduced Pressure Principle Backflow Preventer shall be a ZURN WILKINS Model 975XL.

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1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-0766
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1965 Ironwood Drive, Unit 10, Brampton, Ontario L6T 5W6, 877-892-6215
www.zurn.com

Page 2 of 2

FIRE FLOW TEST RESULTS

1ST FIRE SAFETY
"Your Trusted Partner in Fire Safety"
PO Box 1238, Cedar Park, TX 78630
512-777-1555

HYDRANT FLOW TEST REPORT

DATE: 6/23/25 TIME: 2:30pm JOB NUMBER:
TECHNICIAN: Jeff Sivil WITNESS:

JOB SITE: CONTACT:
ADDRESS: 135 US 183 TELEPHONE:
CITY ST ZIP: Liberty Hill, Texas 78642 EMAIL:

FLOW HYDRANT: 100, 082, 629 YEAR & BRAND: 2006 American Darling Valve
GPS COORDINATES: 30.692392°N -97874856°W
STATIC/RESIDUAL HYDRANT: 100, 082, 630 YEAR & BRAND: 2006 American Darling Valve
GPS COORDINATES: 30.651885°N -97.871218°W
STATIC PRESSURE: 80 PSI
RESIDUAL PRESSURE: 75 PSI
PITOT PRESSURE: 50 PSI
FLOW: 1186 GPM
NOZZLE SIZE: 2.5 INCHES
NOZZLE COEFFICIENT: .9
PROJECTED RESULTS: 4540 GPM @ 20 PSI

NOTES:
Flow hydrant is metered and locked. Contacted wumetering@georgetowntexas.gov (512) 930-6726 to assist with locks during testing.

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED
PROFESSIONAL ENGINEER
01/05/2026

No.	Date	REVISIONS	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23004 & 10040100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE:
DESIGNED BY: JYC
DATE: CC - Jan 2026
CHECKED BY: JMC
JOB NO.: 152334-0018-01
DRAWN BY: KS

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642
WATER DETAILS

SHEET NO.
25 OF **29**
2025-XX-SDP

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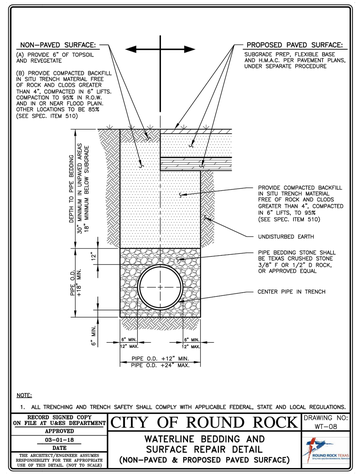
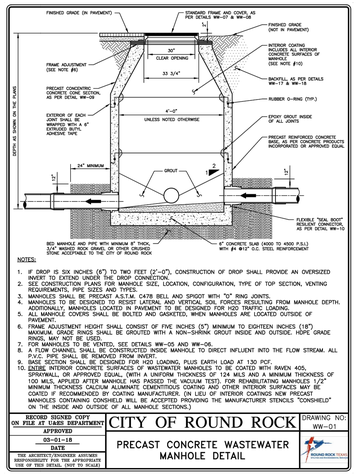


NOTE:

1. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

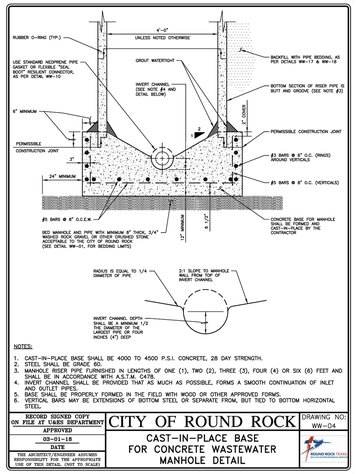
RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WATERLINE BEDDING AND SURFACE REPAIR DETAIL (NON-PAVED & PROPOSED PAVED SURFACE)	WT-08
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. 8" DROP IS SIX INCHES (6") TO TWO FEET (2'-0"), CONSTRUCTION OF DROP SHALL PROVIDE AN OVERSIZED FLOW CHANNEL AS SHOWN ON DETAIL WW-11.
2. SEE CONSTRUCTION PLANS FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZES AND TYPES.
3. MANHOLES SHALL BE PRECAST A.S.T.M. C478 BELL AND SPIGOT WITH O-RING GASKETS.
4. MANHOLES TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH, ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR H20 TRAFFIC LOADING.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETED, WHEN MANHOLES ARE LOCATED OUTSIDE OF PAVEMENT.
6. FRAME ADJUSTMENT HEIGHT SHALL CONSIST OF FIVE INCHES (5") MINIMUM TO EIGHTEEN INCHES (18") MAXIMUM. ADJUSTMENT SHALL BE GROUTED WITH A NON-SHRINK GROUT INSIDE AND OUTSIDE. HDPE GRADE RINGS, MAY NOT BE USED.
7. FOR MANHOLES TO BE VENTED, SEE DETAILS WW-05 AND WW-06.
8. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO THE FLOW STREAM. ALL P.V.C. PIPE SHALL BE REMOVED FROM INVERT.
9. BASE SECTION SHALL BE DESIGNED FOR H20 LOADING, PLUS EARTH LOAD AT 130 PCF.
10. EXTERIOR COATING IS REQUIRED ON ALL PRECAST WASTEWATER MANHOLES TO BE COATED WITH RAVEN 405, "CHEMRAWALL OR APPROVED EQUAL, (WITH A UNIFORM THICKNESS OF 124 MILS AND A MINIMUM THICKNESS OF 100 MILS, APPLIED AFTER MANHOLE HAS PASSED THE VACUUM TEST). FOR REQUIRED MANHOLES 1/2" MINIMUM THICKNESS CALCIUM ALUMINATE CEMENTITIOUS COATING AND OTHER INTERIOR SURFACES MAY BE COATED IF RECOMMENDED BY COATING MANUFACTURER. (IN LIEU OF INTERIOR COATINGS NEW PRECAST MANHOLES CONTAINING CONSHIELD WILL BE ACCEPTED PROVIDING THE MANUFACTURER STENCILS "CONSHIELD" ON THE INSIDE AND OUTSIDE OF ALL MANHOLE SECTIONS.)

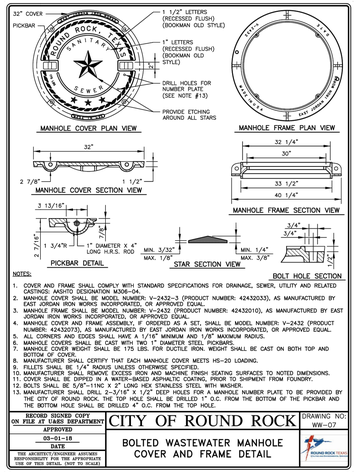
RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	PRECAST CONCRETE WASTEWATER MANHOLE DETAIL	WW-01
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. CAST-IN-PLACE BASE SHALL BE 4000 TO 4500 P.S.I. CONCRETE, 28 DAY STRENGTH.
2. STEEL SHALL BE GRADE 60.
3. MANHOLE RISER PIPE FURNISHED IN LENGTHS OF ONE (1), TWO (2), THREE (3), FOUR (4) OR SIX (6) FEET AND SHALL BE IN ACCORDANCE WITH A.S.T.M. C478.
4. INVERT CHANNEL SHALL BE PROVIDED THAT AS MUCH AS POSSIBLE, FORMS A SMOOTH CONTINUATION OF INLET AND OUTLET PIPES.
5. BASE SHALL BE PROPERLY FORMED IN THE FIELD WITH WOOD OR OTHER APPROVED FORMS.
6. VERTICAL BARS MAY BE EXTENSIONS OF BOTTOM STEEL OR SEPARATE FROM, BUT TIED TO BOTTOM HORIZONTAL STEEL.

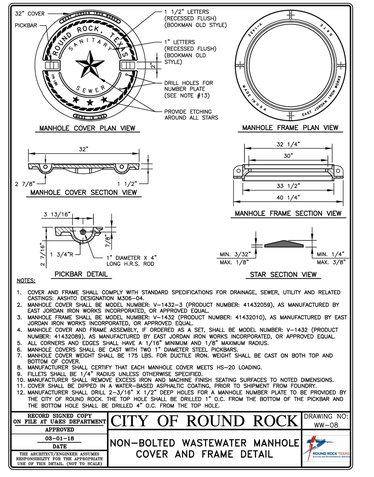
RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	CAST-IN-PLACE BASE FOR CONCRETE WASTEWATER MANHOLE DETAIL	WW-04
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-2432-2 (PRODUCT NUMBER: 42433033), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432073), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND A 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON, WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. BOLTS SHALL BE 5/8"–11NC X 2" LONG HEX STAINLESS STEEL WITH WASHER.
13. MANUFACTURER SHALL DRILL 2–3/8" X 1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF ROUND ROCK. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	BOLTED WASTEWATER MANHOLE COVER AND FRAME DETAIL	WW-07
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-1432-3 (PRODUCT NUMBER: 41432059), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432073), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND A 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON, WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. MANUFACTURER SHALL DRILL 2–3/8" X 1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF ROUND ROCK. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	NON-BOLTED WASTEWATER MANHOLE COVER AND FRAME DETAIL	WW-08
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

NOTES:

1. MINIMUM DROP FROM INLET TO OUTLET OF MANHOLE IS 0.1 FEET AND MAXIMUM DROP IS 2 FEET, UNLESS SPECIAL APPROVAL IS OBTAINED FROM THE CITY OF ROUND ROCK.
2. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
3. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOW.
4. CHANNELS FOR FUTURE CONSTRUCTIONS, SHALL BE CONSTRUCTED WITH PIPE EXTENDING 3" BEYOND EXTERIOR OF MANHOLE WALL, WITH GLUED PLUG.
5. SLOPE MANHOLE BENCH AT 2:1 SLOPE FROM MANHOLE WALL TO CHANNEL.
6. INVERT CHANNEL SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR FOUR INCHES (4") DEEP.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 04-01-10 DATE	WASTEWATER FLOW PATTERNS FOR INVERT CHANNELS DETAIL	WW-11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WASTEWATER SERVICE DETAIL	WW-12
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

NOTES:

1. ALL FITTINGS TO BE SDR 35 SOLVENT WELD FITTINGS.

RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WASTEWATER SERVICE CLEAN-OUT DETAIL (PAVED SURFACE)	WW-13
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

NOTES:

1. ALL PIPE TO BE SDR 26.
2. ALL FITTINGS TO BE SDR 35 SOLVENT WELD FITTINGS.

RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WASTEWATER SERVICE CLEAN-OUT DETAIL (NON-PAVED SURFACE)	WW-14
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

NOTE:

ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WASTEWATER LINE BEDDING AND SURFACE REPAIR DETAIL (NON-PAVED & PROPOSED PAVED SURFACE)	WW-18
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

PIPE SIZE–CARRIER (DIAMETER)	PIPE SIZE–CASING (DIAMETER) (MIN.)	MINIMUM PIPE THICKNESS (INCHES)	
8"	16"	1/4	0.2500
8"	18"	1/4	0.2500
10"	20"	5/16	0.3125
12" = 14"	24"	3/8	0.3750
16" = 18"	30"	7/16	0.4375
20"	36"	1/2	0.5000
24"	42"	1/2	0.5000
30"	48"	1/2	0.5000

NOTES:

1. CASING SPACER CONFIGURATION AND SPACING SHALL BE AS SHOWN ON MANUFACTURER'S DRAWINGS FOR SPECIFIC WORK; THESE MUST BE ACCEPTABLE TO THE CITY OF ROUND ROCK.
2. CASING SPACER SHALL BE AS MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING COMPANY, MODEL CCSI, OR APPROVED EQUAL.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 04-01-10 DATE	PIPE ENCASEMENT DETAIL	WT-16
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

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No.	Date	REVISIONS	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Firm No. F-23290 & 10064100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: —
DATE: CC - Jan 2026
JOB NO.: 152334-0018-01

DESIGNED BY: JYC
CHECKED BY: JMC
DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
01/05/2026

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

WASTEWATER DETAILS

SHEET NO.
26 OF 29

2025-XX-SDP

NOTES

SCOPE OF WORK NOTES

1. CONTRACTOR SHALL COMPLY WITH THE ASSOCIATED NOTES, SPECIFICATIONS, AND DETAILS WITH THIS PROJECT. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR TO COMPLETE SCOPE OF WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
2. CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS, APPROVALS, AND INSPECTIONS RELATED TO SCOPE OF WORK.
3. ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, AND SHALL COMPLY WITH PREVAILING ACCESSIBILITY REQUIREMENTS.
4. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN DOCUMENTS AND ACTUAL SITE CONDITIONS PRIOR TO CONSTRUCTION. DO NOT PROCEED WITH ANY PORTION OF WORK AS INDICATED IN DOCUMENTS IF OBSTRUCTIONS, DISCREPANCIES, OR UNKNOWN CONDITIONS ARE ENCOUNTERED.
5. THE CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING, DIGGING, OR CONSTRUCTION.
6. LIMITS OF WORK INDICATED ON THE DRAWINGS ARE GENERAL IN NATURE AND ARE INTENDED TO DEFINE THE GENERAL VICINITY IN WHICH THE SCOPE OF WORK EXISTS. ACTUAL LIMITS OF WORK SHALL INCLUDE ALL AREAS NECESSARY TO COMPLETE SCOPE OF DESIGN INTENT AND REESTABLISH ALL DISTURBED AREAS.
7. UNLESS OTHERWISE NOTED, ALL EXISTING TREES SHALL BE PROTECTED.

SOIL PREPARATION AND TOPSOIL NOTES

1. GENERAL CONTRACTOR TO PERFORM A SOIL TEST PRIOR TO LANDSCAPE WORK COMMENCING AND SHALL PROVIDE THE PROJECT LANDSCAPE ARCHITECT WITH THE RESULTS. REFERENCE THE SPECIFICATIONS FOR DETAILED REQUIREMENTS.
2. GENERAL CONTRACTOR SHALL ESTABLISH A TOPSOIL MANAGEMENT PLAN/OPERATION THROUGHOUT THE CONSTRUCTION PROCESS. ON-SITE EXCESS EXCAVATIONS AND UTILITY SPOILS THAT ARE FREE OF ROCKS LARGER THAN 3/4", TRASH, DEBRIS, ROOTS, OR OTHER DELETERIOUS MATTER MAY BE USED AS GENERAL EARTH FILL BUT SHALL NOT BE USED AS TOPSOIL.
3. GENERAL CONTRACTOR TO BRING ALL FUTURE PLANTING BED AREAS TO NINE (9) INCHES BELOW FINAL GRADE. ALL AREAS TO RECEIVE TURF GRASS SHALL BE BROUGHT TO SIX (6) INCHES BELOW FINAL GRADE. GENERAL CONTRACTOR TO INSTALL AND/OR COORDINATE THE INSTALLATION OF REQUIRED FERTILE TOPSOIL PER THE TOPSOIL MANAGEMENT PLAN, SOIL TEST RESULTS, AND THESE SPECIFICATIONS AND DETAILS, AND COORDINATE THE TIMING OF ROUGH GRADING, FINE GRADING, AND THE INSTALLATION OF IRRIGATION AND LANDSCAPE IMPROVEMENTS.
4. THE CONTRACTOR'S BID SHALL INCLUDE ALL NECESSARY TOPSOIL (IMPORT MAY BE REQUIRED) TO BACKFILL ALL DISTURBED AREAS.
5. AFTER SCARIFICATION OF THE SOIL, FIVE (5) INCHES OF FERTILE TOPSOIL SHALL BE USED TO BRING DISTURBED, FUTURE SOD TURF AREAS TO ONE (1) INCH BELOW FINAL GRADE.
6. FOR FUTURE PLANTING BED PREPARATION, TILL SOIL AN ADDITIONAL SIX (6) INCHES (FIFTEEN (15) INCHES TOTAL DEPTH BELOW FINAL GRADE), APPLY FERTILIZER PER SOIL TEST RESULTS AND MANUFACTURER'S RECOMMENDATIONS, THEN ADD SIX (6) INCHES OF COMPOST AND TILL INTO A DEPTH OF TWELVE (12) INCHES (SETTLED THICKNESS), BRINGING THE TOP OF BED TO THREE (3) INCHES BELOW FINAL GRADE.
7. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED. PROVIDE UNIFORM ROUNDING AT THE TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE.

JOB CONDITION NOTES

1. GENERAL CONTRACTOR TO COMPLETE WORK PRIOR TO LANDSCAPE CONTRACTOR COMMENCING WORK.
2. ALL REQUIRED LANDSCAPE AREAS SHALL BE IRRIGATED WITH A PERMANENT BELOW-GROUND, AUTOMATIC IRRIGATION SYSTEM THAT IS DESIGNED BY A LICENSED IRRIGATOR.
   a. ALL IRRIGATION SYSTEMS SHALL BE INSTALLED WITH RAIN AND FROST SENSORS AND SHALL MEET ALL APPLICABLE STATE AND LOCAL REGULATIONS.
   b. ALL AREAS OTHER THAN TURF SHALL BE IRRIGATED USING NETAFIM™ OR APPROVED EQUAL SUBTERRANEAN DRIP. DRIP IRRIGATION IS REQUIRED FOR ALL TURF AREAS NARROWER THAN 48" IN WIDTH.
   c. ANY EXISTING IRRIGATION SYSTEMS UTILIZED FOR THE WATERING OF NEWLY INSTALLED LANDSCAPING ARE TO BE INSPECTED FOR FUNCTIONALITY AND REPAIRED AS NECESSARY. CONTRACTOR TO ENSURE THAT THE EXISTING SYSTEM HAS ADEQUATE CAPACITY.
   d. IRRIGATION SYSTEM TO BE INSTALLED PRIOR TO PLANTING INSTALLATION. LOCATE, PROTECT, AND MAINTAIN THE IRRIGATION SYSTEM DURING PLANTING OPERATIONS.

SUBMITTALS AND QUALITY ASSURANCE NOTES

1. THE CONTRACTOR SHALL PROVIDE SUBMITTALS AND SAMPLES TO THE LANDSCAPE ARCHITECT AND RECEIVE APPROVAL IN WRITING FOR SUCH SUBMITTALS BEFORE WORK COMMENCES. REFERENCE THE SPECIFICATIONS FOR DETAILED REQUIREMENTS.
2. DO NOT MAKE PLANT MATERIAL SUBSTITUTIONS WITHOUT WRITTEN CONSENT FROM THE LANDSCAPE ARCHITECT.
3. OWNER'S REPRESENTATIVE SHALL INSPECT ALL PLANT MATERIAL PRIOR TO INSTALLATION.
4. CONTRACTOR SHALL PROVIDE BID PROPOSAL LISTING UNIT PRICES FOR ALL MATERIAL PROVIDED TO THE OWNER'S REPRESENTATIVE AND THE LANDSCAPE ARCHITECT.
5. CONTRACTOR TO PROVIDE A MINIMUM OF TWO (2) COPIES OF RECORD DRAWINGS TO THE OWNER UPON COMPLETION OF WORK.
6. PROVIDE MINIMUM 5% SLOPES AWAY FROM ALL STRUCTURES AND ENSURE POSITIVE DRAINAGE IS ACHIEVED THROUGHOUT.

GENERAL LANDSCAPE NOTES

1. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN, INC., SHALL BE OF SPECIMEN QUALITY, AND SHALL MEET THE MINIMUM REQUIREMENTS AS STATED IN THE PLANT SCHEDULE AND SPECIFICATIONS.
2. QUANTITIES ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY AND ARE NOT GUARANTEED TO BE ACCURATE. QUANTITIES SHOWN ON THE PLAN (INDIVIDUAL SYMBOLS) SHALL TAKE PRECEDENCE OVER LISTED QUANTITIES.
3. THE GENERAL CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN IN THE DRAWINGS.
4. TAKE ALL PRECAUTIONS CUSTOMARY IN GOOD TRADE PRACTICE IN PREPARING PLANTS FOR MOVING AND IN PROPER CARE ONCE DELIVERED TO THE PROJECT SITE.
5. STORAGE OF MATERIALS AND EQUIPMENT AT THE JOB SITE WILL BE AT THE RISK OF THE LANDSCAPE CONTRACTOR.
6. SPACE PLANTINGS IN ACCORDANCE WITH THE INDICATED DIMENSIONS. MINIMALLY ADJUST SPACING AS NECESSARY TO EVENLY FILL PLANTING BEDS WITH INDICATED QUANTITY OF PLANTS. PLANT SHRUBS TO WITHIN EIGHTEEN (18) INCHES OF TREE TRUNKS, AS SHOWN AND/OR AS NECESSARY.
7. ALL NON-DIMENSIONED PLANT SYMBOLS, EDGING, AND BED LINES SHALL BE SCALED FROM DRAWINGS. CURVILINEAR BED LINES ARE TO BE SMOOTH AND CONTINUOUS PER PLAN, WITHOUT ABRUPT CHANGES IN DIRECTION.
8. PAINT OR STRING ALL EDGING AND BED LINE LOCATIONS ON FINAL GRADE AND STAKE THE LOCATION OF ALL PROPOSED TREES FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF PLANTING.
9. PLACE PLANTINGS UPRIGHT AND PLUMB IN THE CENTER OF HOLES AND ORIENT FOR BEST APPEARANCE. PLANTS TO BE PERFECTLY UPRIGHT, REGARDLESS OF SURROUNDING GRADE; SEE DETAILS FOR PLANTING ON SLOPES.
10. STAKE TREES AND LARGE SHRUBS AS SITE CONDITIONS REQUIRE. POSITION STAKES TO SECURE TREES AGAINST SEASONAL PREVAILING WINDS AND GRADE CHANGE (TWO STAKES UPWIND/UPHILL).
11. NO TREES OR SHRUBS SHALL BE PLANTED BEFORE ACCEPTANCE OF FINE GRADING. TREE SHALL BEAR SAME RELATIONSHIP TO FINAL GRADE AS THEY BORE TO PREVIOUS GRADE.
12. SEE SPECIFICATIONS AND DETAILS FOR PLANTING BED PREPARATION AND MULCHING REQUIREMENTS.
13. SEE SPECIFICATIONS AND DETAILS FOR TREE PIT DIMENSIONS AND BACKFILL REQUIREMENTS.
14. ALL PLANT VARIETIES MUST COME FROM A SINGLE SOURCE FOR MAINTAINING A CONSISTENT APPEARANCE.
15. ALL NEW PLANTS SHALL BE CONTAINER-GROWN, UNLESS OTHERWISE NOTED IN THE PLANT SCHEDULE. MATERIAL MUST HAVE A WELL-ESTABLISHED ROOT SYSTEM THAT REACHES THE SIDES OF THE CONTAINER. THE ROOT SYSTEM MUST MAINTAIN A FIRM BALL WHEN THE CONTAINER IS REMOVED BUT SHALL NOT HAVE EXCESSIVE ROOT GROWTH ENCIRCLING THE INSIDE OF THE CONTAINER.
16. ALL LAWN AREAS SHALL BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED, AND FINAL GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR LANDSCAPE ARCHITECT PRIOR TO LAWN INSTALLATION.
17. ALL SHRUB PLANTING BEDS AND LAWN AREAS ARE TO BE SEPARATED BY STEEL EDGING UNLESS OTHERWISE NOTED. NO STEEL EDGING IS TO BE INSTALLED ADJACENT TO SIDEWALKS, CURBS, FENCES, OR OTHER HARDSCAPE ELEMENTS, UNLESS SPECIFIED OTHERWISE IN THE PLANS, SPECIFICATIONS OR DETAILS.
18. ROOT BARRIER TO BE INSTALLED ADJACENT TO ALL CURBS, PAVING, UTILITIES, AND STRUCTURES WHEN PROPOSED TREES ARE WITHIN 20 FEET OF THESE ELEMENTS; SEE DETAIL. NO TREE SHALL BE PLANTED CLOSER THAN FIVE (5) FEET TO ANY UTILITY LINE. PLACE PANELS ADJACENT APPLICABLE HARDSCAPE AND UTILITIES AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS; SEE PLAN FOR EXTENTS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR USE ROOT BARRIER THAT COMPLETELY ENCIRCLES THE ROOT BALL.

SOLID SOD TURF NOTES

1. DO NOT PLACE SOD UNTIL FINE GRADING IS APPROVED.
2. DO NOT INSTALL SOD ON FROZEN GROUND OR IF FORECAST CALLS FOR FREEZING CONDITIONS.
3. PLANT SOD BY HAND TO COVER INDICATED AREAS COMPLETELY. ENSURE THAT EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
4. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.
5. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
6. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1 AND MARCH 1, ALL SOD AREAS ARE TO BE OVER-SEEDED WITH WINTER RYE GRASS.
7. SOD SHALL BE CLEAN AND REASONABLY FREE OF WEEDS AND NOXIOUS PESTS AND INSECTS.

HYDROMULCH AND SEED TURF NOTES

1. CONTRACTOR TO SCARIFY, RIP, AND LOOSEN ALL AREAS TO BE HYDROMULCHED TO A MINIMUM DEPTH OF FOUR (4) INCHES PRIOR TO INSTALLATION.
2. BERMUDA GRASS SEED SHALL BE EXTRA FANCY, HULLED AND TREATED LAWN TYPE SEED WITH PURITY OF 95% OR BETTER AND GERMINATION OF 85% OR BETTER, AND PER REQUIREMENTS OF TEXAS SEED LAW. WEED CONTENT LESS THAN 1/2% WITH NO NOXIOUS WEEDS.
3. USE A BATTER BOARD AGAINST ALL BED AREAS TO PREVENT OVERSPRAY.
4. FIBER SHALL BE ONE HUNDRED (100) PERCENT WOOD CELLULOSE FIBER, DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED CONTAINER; CONTRACTOR TO SUBMIT PRODUCT SPECIFICATIONS FOR REVIEW AND APPROVAL.
5. HYDROMULCH TO HAVE TACKIFIER MIXED IN FOR HOLDING SEEDS IN PLACE AND FOR EROSION CONTROL. TACKIFIER SHALL BE DELIVERED TO THE SITE IN ITS ORIGINAL UNOPENED CONTAINER; CONTRACTOR TO SUBMIT PRODUCT SPECIFICATIONS FOR REVIEW AND APPROVAL.
   a. SEED OR HYDROMULCH APPLICATIONS ON SLOPES STEEPER THAN 6:1, AND/OR WITHIN STORMWATER CONVEYANCE AREAS, ARE TO BE COVERED BY CURLEX 'NET FREE' BIODEGRADABLE EROSION CONTROL BLANKET; REFER TO PLANS FOR APPROXIMATE EXTENTS AND FOLLOW MANUFACTURER'S RECOMMENDATIONS.
6. HYDROMULCH BERMUDA GRASS SEED AT A RATE OF TWO (2) POINTS PER ONE THOUSAND (1,000) SQUARE FEET; REFERENCE MANUFACTURER'S SPECIFICATIONS.
7. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1 AND MARCH 1, ALL HYDROMULCH AREAS TO BE SEEDED WITH WINTER RYE GRASS. BERMUDA SEED TO BE ESTABLISHED BY THE CONTRACTOR IN THE FOLLOWING GROWING SEASON. CONTRACTOR TO SCALP EXISTING GRASS, BAG CLIPPINGS, AND SCARIFY THE SOIL TO A DEPTH OF 1" PRIOR TO THEIR INSTALLATION OF PERMANENT LAWN GRASS.
8. ALL LAWN AREAS TO BE SEEDED OR HYDROMULCHED SHALL ACHIEVE ONE HUNDRED (100) PERCENT COVERAGE PRIOR TO FINAL ACCEPTANCE.
9. CONTRACTOR TO FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR SEEDING AND IRRIGATION RATES FOR DRILL SEED APPLICATIONS.
10. HYDROMULCHED AND/OR SEEDED TURF AREAS TO BE IRRIGATED FOR A MINIMUM OF NINETY (90) DAYS AND UNTIL ACHIEVING 100% GERMINATION.

MAINTENANCE AND GUARANTEE NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK FROM THE TIME OF PLANTING UNTIL NINETY (90) DAYS AFTER FINAL ACCEPTANCE BY THE OWNER.
2. CONTRACTOR SHALL PROVIDE A SEPARATE BID PROPOSAL FOR ONE YEAR'S MAINTENANCE TO BEGIN AFTER FINAL ACCEPTANCE. CONTRACTOR SHALL GUARANTEE THAT ALL NEWLY INSTALLED, AND EXISTING PLANTS WITHIN OR NEAR THE LIMITS OF CONSTRUCTION, SHALL SURVIVE FOR ONE YEAR AFTER FINAL OWNER ACCEPTANCE OF THE INSTALLATION WORK.
3. THE OWNER, TENANT, AND THEIR AGENT, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPING AND IRRIGATION.
4. ALL REQUIRED LANDSCAPING AREAS SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. REFERENCE SPECIFICATIONS FOR MAINTENANCE REQUIREMENTS.
5. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF ACCEPTABLE TURF AREAS AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY AS NECESSARY.
6. PLANT MATERIAL THAT IS DAMAGED, DESTROYED, OR REMOVED SHALL BE REPLACED WITH PLANT MATERIAL OF SIMILAR SIZE AND VARIETY OF THE COMPARABLE MATERIAL ON SITE WITHIN TEN (10) DAYS.
7. REGULARLY INSPECT AND COORDINATE THE OPERATION OF THE IRRIGATION SYSTEM TO ENSURE THAT PLANTS ARE ADEQUATELY WATERED.
8. ALL IRRIGATION HEADS OR LINES WHICH ARE BROKEN SHALL BE REPLACED OR REPAIRED IN A TIMELY MANNER TO PREVENT THE WASTE OF WATER AND LOSS OF PLANT LIFE.
9. UPON COMPLETION OF THE WORK, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE LANDSCAPE CONTRACTOR SHALL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.
10. THE LANDSCAPE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE LANDSCAPE WORK HAS ACCEPTED BY THE OWNER. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY	REMARKS
TREES						
	QS	QUERCUS SHUMARDII	SHUMARD OAK	3" CAL.	1	CONTAINER GROWN, 12' HEIGHT, 5' SPREAD, 6' BRANCHING HEIGHT, UPRIGHT GROWTH, ROUNDED CANOPY, AND STRONG CENTRAL LEADER
	QV	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	3" CAL.	1	CONTAINER GROWN, 12' HEIGHT, 5' SPREAD, 6' BRANCHING HEIGHT, UPRIGHT GROWTH, ROUNDED CANOPY, AND STRONG CENTRAL LEADER
	UC	ULMUS CRASSIFOLIA	CEDAR ELM	3" CAL.	1	CONTAINER GROWN, 12' HEIGHT, 5' SPREAD, 6' BRANCHING HEIGHT, UPRIGHT GROWTH, ROUNDED CANOPY, AND STRONG CENTRAL LEADER

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY	REMARKS
SHRUBS							
	IN	ILEX VOMITORIA `NANA`	DWARF YAUPON HOLLY	3 GAL.	36" o.c.	25	CONTAINER FULL, 18" SPREAD, SPACED AT 36" ON CENTER (TYP)
	MC	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	3 GAL.	36" o.c.	25	CONTAINER FULL, 18" SPREAD, SPACED AT 36" ON CENTER (TYP)
GROUND COVERS							
	RR		RIVER ROCK 'COLORADO'	2 - 3" DIA		2,223 SF	4" DEPTH WITH WEED BARRIER FABRIC UNDERNEATH, FINAL COLOR SELECTION BY OWNER
	DG		DECOMPOSED GRANITE	LESS THAN 1/8" DIA		540 SF	TAN COLOR AND 4" DEPTH, COMPACTED IN 1" LIFTS WITH STABILIZER COMPOUND
	CD2	CYNODON DACTYLON 'TIF 419'	TIF 419 BERMUDAGRASS	SEED		35,364 SF	HYDROMULCH SEED, REFER TO NOTES AND SPECIFICATIONS
	CD	CYNODON DACTYLON 'TIF 419'	TIF 419 BERMUDAGRASS	SOD		21,823 SF	SOLID SOD, REFER TO NOTES AND SPECIFICATIONS
	LA	LIRIOPE MUSCARI `AZTEC`	AZTEC LILYTURF	1 GAL.	18" o.c.	231	CONTAINER FULL, 6" SPREAD, SPACED AT 18" ON CENTER (TYP)
	OD	OPHIOPOGON JAPONICUS 'DWARF'	DWARF MONDO GRASS	4"	12" o.c.	409	CONTAINER FULL, 8" SPREAD, SPACED AT 12" ON CENTER (TYP)

NOTE: 1. ALL REQUIRED LARGE TREES SHALL BE A MINIMUM CALIPER OF THREE (3) INCHES AT PLANTING.

2. NO EXISTING TREES ARE TO BE PRESERVED ON SITE; REFER TO CIVIL PLANS.

3. HARDWOOD MULCH, CONTAINED BY STEEL EDGING, TO BE INSTALLED IN ALL PLANTING BEDS AND UTILIZED FOR THE FIRST TWO GROWING SEASONS. RIVER ROCK MULCH CAN BE USED IN LIEU OF HARDWOOD MULCH AT THIS TIME AND/OR AFTER ESTABLISHMENT, AT THE OWNER'S DISCRETION.

4. BRING TOPS OF RIVER ROCKS TO, OR JUST ABOVE, FINISH (FINAL) GRADE, TYPICAL. REFER TO CIVIL PLANS FOR GRADING AND DRAINAGE DESIGN.

CITY OF LIBERTY HILL LANDSCAPE CALCULATIONS

ALL PROPOSED PLANT SPECIES, SIZES, AND QUANTITIES SHOWN ARE BELIEVED TO BE IN COMPLIANCE WITH THE LANDSCAPING REGULATIONS WITHIN THE UNIFIED DEVELOPMENT CODE

INTERIOR PARKING LOT REQUIREMENTS

REQUIREMENT: MINIMUM ONE LARGE TREE PER TEN (10) NEW PARKING SPACES, OR PORTION THEREOF	
PROPOSED PARKING SPACES:	18 PARKING SPACES
18 SPACES/10 = 1.8 (2 LARGE TREES REQUIRED)	PROVIDED: TWO (2) LARGE TREES
REQUIREMENT: LANDSCAPE ISLANDS/MEDIANS SHALL INCLUDE MAX 50% DECORATIVE LANDSCAPE COVER. REMAINDER TO CONSIST OF PLANTING GROUNDCOVER.	
PROPOSED LANDSCAPE ISLAND AREA:	± 1,074 SF
PROPOSED DECORATIVE GROUNDCOVER SF:	321 SF (± 30%)
PROPOSED PLANTED GROUNDCOVER SF:	753 SF (± 70%)
NO TURFGRASS OR SOD IS ALLOWED WITHIN LANDSCAPE ISLANDS	PROVIDED: NO TURF GRASS IS PROPOSED WITHIN LANDCSAPE ISLANDS
NOTE: EACH INDIVIDUAL LANDSCAPE ISLAND COMPLIES WITH THE PERCENTAGE (%) REQUIREMENTS FOR PLANTING AND DECORATIVE GROUNDCOVER	

NONRESIDENTIAL LANDSCAPE REQUIREMENTS

REQUIREMENT: A MINIMUM NUMBER OF LANDSCAPE POINTS (LP'S) MUST BE PROVIDED BASED ON THE SITE LAYOUT AND PERMITTED CATEGORIES (3 MINIMUM)				
PROPOSED STREET FACING FAÇADE(LF):	± 77 LINEAR FEET			
MINIMUM LP'S REQUIRED (77 X 4) = 308 LANDSCAPE POINTS:	PROVIDED LP's: **659**			
	LANDSCAPE FEATURE	**POINTS CREDITED**	**PROVIDED**	**TOTAL**
	LARGE TREE	50	1	**50**
	SMALL SHRUB	3	35	**105**
	PLANTING GROUNDCOVER	2 (PER SF)	252 SF	**504**
	TOTAL			**659**

SCREENING REQUIREMENTS

WATER QUALITY/DENTION POND: IN LIEU OF LANDSCAPING, THE EXTERIOR WALLS OF THE POND ARE PROPOSED TO BE CLAD WITH MASONRY. IN THE EVENT THAT CHAIN-LINK FENCE IS UTILIZED, A NATIVE/ADAPTED VINE, 5-GALLON CONTAINER, WILL BE PLANTED FOR EVERY EIGHT (8) FEET OF LINEAR FENCE. REFERENCE CIVIL AND ARCHITECTURAL PLANS.

DUMPSTER AND TRASH RECEPTACLES: IN ADDITION TO THE REQUIRED DECORATIVE MASONRY WALLS, SMALL SHRUBS ARE PROPOSED IN A THREE-FOOT-WIDE LANDSCAPE BED AROUND THREE (3) SIDES OF THE DUMPSTER ENCLOSURE.

TREE INVENTORY, PROTECTION, AND PRESERVATION

REQUIREMENT: MITIGATION FOR REMOVAL OF EXISTING HARDWOOD TREE WITH TRUNK OF TWENTY-SIX (26) INCHES OR MORE	
PROTECTED EXISTING MULTI-STEM LIVE OAK (REFERENCE TREE REPORT - TREE #T7143):	38.5 CALIPER INCHES (115.5 TOTAL INCHES TO BE MITIGATED)
PROPOSED REMOVAL OF EXISTING LIVE OAK WITH A COMBINATION OF TREE REPLACEMENT AND DONATION TO THE TREE FUND	
PROPOSED REPLACEMENT TREES:	3 LARGE TREES @ 3" CALIPER DIAMETER (9" OF MITIGATION CREDITS)
PROPOSED REMOVAL OF EXISTING LIVE OAK WITH ADEQUATE DONATION TO TREE FUND IN LIEU OF REPLACEMENT PLANTINGS (106.5/3 = 35.5")	
ESTIMATED TREE FUND PAYMENT (35.5 X 450):	$15,975

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

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No.	Date	REVISIONS	App.

QUIDDITY
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SCALE: AS SHOWN | DESIGNED BY: JAK
DATE: JULY 2025 | CHECKED BY: JAK
JOB NO.: 15234-0018-01 | DRAWN BY: JAK

REGISTERED LANDSCAPE ARCHITECT
JORDAN A. KAYLOR
3117
STATE OF TEXAS
07/02/2025

LIBERTY HILL CREDIT UNION
135 US-183 LIBERTY HILL, TX 78642

GENERAL NOTES & PLANT SCHEDULE

SHEET NO. 27 OF 29

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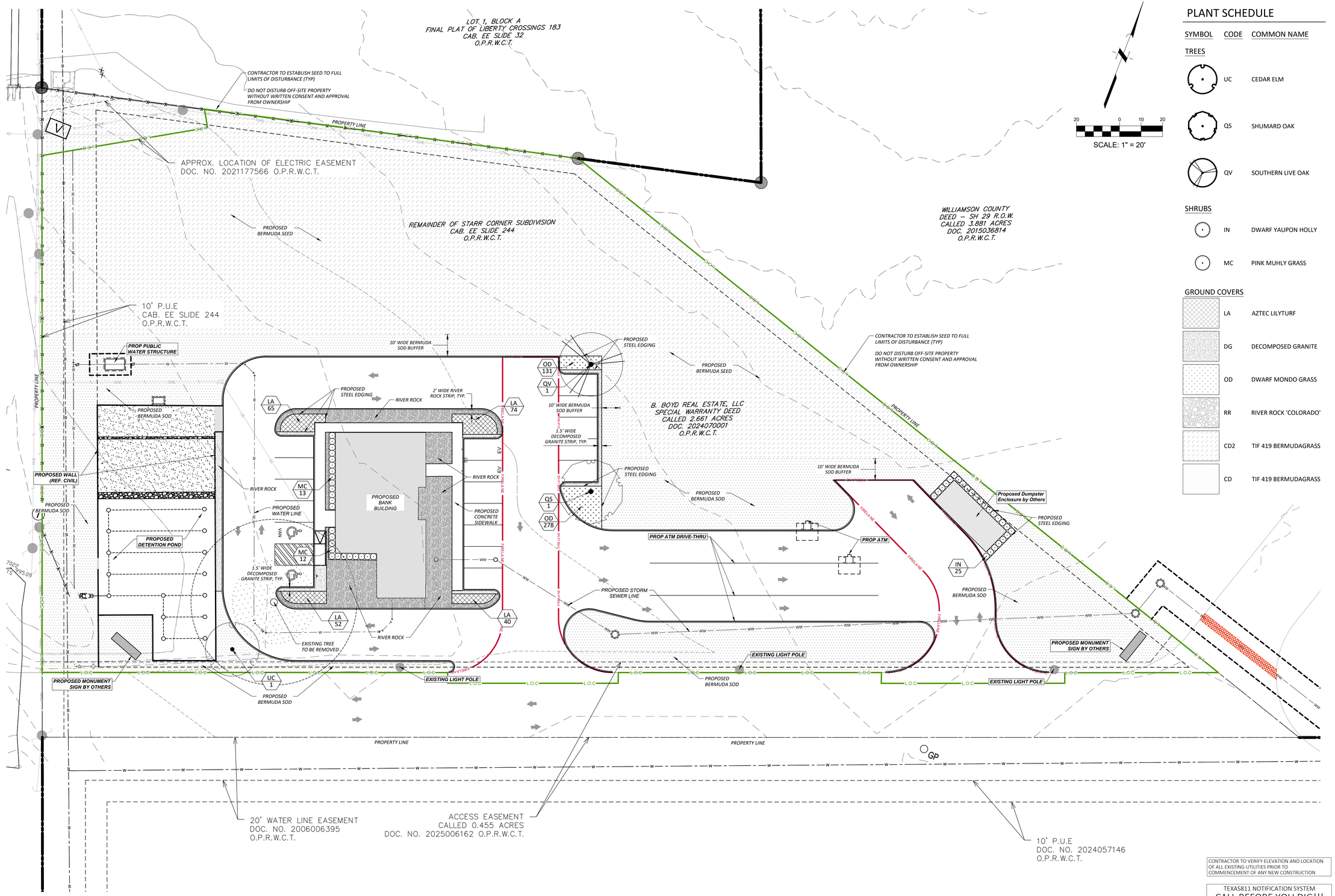
THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



PLANT SCHEDULE

SYMBOL	CODE	COMMON NAME
TREES		
	UC	CEDAR ELM
	QS	SHUMARD OAK
	QV	SOUTHERN LIVE OAK
SHRUBS		
	IN	DWARF YAUPON HOLLY
	MC	PINK MUHLY GRASS
GROUND COVERS		
	LA	AZTEC LILYTURF
	DG	DECOMPOSED GRANITE
	OD	DWARF MONDO GRASS
	RR	RIVER ROCK 'COLORADO'
	CD2	TIF 419 BERMUDAGRASS
	CD	TIF 419 BERMUDAGRASS

REVISIONS

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JORDAN A. KAYLOR
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07/02/2025

LIBERTY HILL CREDIT UNION
135 US-183 LIBERTY HILL, TX 78642

PLANTING PLAN

SHEET NO. 28 OF 29

CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

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LANDSCAPE - PLANTING SPECIFICATIONS

PART 1 - GENERAL

1.1 LANDSCAPE CONTRACTOR QUALIFICATIONS
- A. ALL WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY QUALIFIED AND CERTIFIED PROFESSIONALS SPECIALIZING IN THEIR RESPECTIVE FIELD.

1.2 REFERENCE DOCUMENTS
- A. REFER TO THE LANDSCAPE PLAN, SCHEDULE, NOTES, AND DETAILS FOR ADDITIONAL REQUIREMENTS.
- B. REFER TO THE TREE PRESERVATION PLAN, AS APPLICABLE.
- C. REFER TO THE IRRIGATION PLAN, AS APPLICABLE.

1.3 REFERENCE STANDARDS
- A. AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY AMERICAN ASSOCIATION OF NURSERYMEN; 27 OCTOBER 1980, EDITION; BY AMERICAN NATIONAL STANDARDS INSTITUTE (Z60.1) - PLANT MATERIAL.
- B. HORTUS THIRD, 1976 - CORNELL UNIVERSITY - PLANT NOMENCLATURE.
- C. TEXAS ASSOCIATION OF NURSERYMEN, GRADES AND STANDARDS.
- D. TEXAS SEED LAW & REGULATION, LATEST EDITION.

1.4 SCOPE OF WORK
- A. WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES AND ANY OTHER ITEMS NECESSARY FOR THE EXECUTION, INSTALLATION, AND COMPLETION OF ALL WORK, AS SPECIFIED HEREIN AND/OR SHOWN ON THE LANDSCAPE PLANS, NOTES, AND DETAILS.
- B. BY SUBMITTING A PROPOSAL FOR THE LANDSCAPE PLANTING SCOPE OF WORK, THE CONTRACTOR CONFIRMS THAT HE OR SHE HAS READ, AND WILL COMPLY WITH, THE ASSOCIATED NOTES, SPECIFICATIONS, AND DETAILS WITH THIS PROJECT.
- C. BEFORE SUBMITTING A BID, THE CONTRACTOR SHALL HAVE INVESTIGATED THE SOURCES OF SUPPLY AND BE SATISFIED THAT THEY CAN SUPPLY THE LISTED PLANTS IN SIZE, VARIETY, AND QUALITY AS SPECIFIED. FAILURE TO TAKE THIS PRECAUTION WILL NOT RELIEVE THE CONTRACTOR FROM THEIR RESPONSIBILITY FOR FURNISHING AND INSTALLING ALL PLANT AND LANDSCAPE MATERIALS IN STRICT ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS WITHOUT ADDITIONAL COSTS TO THE OWNER. THE LANDSCAPE ARCHITECT SHALL APPROVE ANY SUBSTITUTIONS OF PLANT MATERIAL, OR CHANGES IN PLANT MATERIAL SIZE, PRIOR TO THE LANDSCAPE CONTRACTOR SUBMITTING A BID.
- D. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES, AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE, AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION, AND INSTALLATION OF MATERIALS.
- E. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES PRIOR TO THE START OF ANY WORK. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES; ALL UTILITIES ARE TO BE PROTECTED DURING CONSTRUCTION.
- F. DRAWINGS ARE BASED ON SURVEY DATA AND DESIGN DRAWINGS BY OTHERS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXISTING CONDITIONS AND SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN DOCUMENTS AND ACTUAL SITE CONDITIONS PRIOR TO CONSTRUCTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO THE OWNER'S REPRESENTATIVE WILL RESULT IN THE CONTRACTOR'S LIABILITY TO RELOCATE MATERIALS AS DIRECTED.
- G. THE GENERAL CONTRACTOR SHALL ESTABLISH A TOPSOIL MANAGEMENT PLAN/OPERATION THROUGHOUT THE CONSTRUCTION PROCESS. ALL TOPSOIL MAY BECOME STERILE OR NON-FERTILE OVER TIME. THE CONTRACTOR SHALL AMEND AND SUPPLEMENT THE STOCKPILED TOPSOIL AS NECESSARY TO YIELD A FERTILE TOPSOIL SUPPLY. THE CONTRACTOR'S BID SHALL INCLUDE ALL NECESSARY TOPSOIL (IMPORT MAY BE REQUIRED) TO BACKFILL ALL DISTURBED AREAS. THE LACK OF AVAILABLE TOPSOIL ON SITE WILL NOT BE GROUNDS FOR A CHANGE ORDER OR ADDITIONAL PAY.
- H. LIMITS OF WORK INDICATED ON THE DRAWINGS ARE GENERAL IN NATURE AND ARE INTENDED TO DEFINE THE GENERAL VICINITY IN WHICH THE SCOPE OF WORK EXISTS. ACTUAL LIMITS OF WORK SHALL INCLUDE ALL AREAS NECESSARY TO COMPLETE SCOPE OF DESIGN INTENT AND REESTABLISH ALL DISTURBED AREAS DUE TO CONSTRUCTION, STAGING, OR ANY OTHER ACTIVITY RELATED TO THE OVERALL PROJECT SCOPE OF WORK.
- I. UNLESS OTHERWISE NOTED, ALL EXISTING TREES SHALL BE PROTECTED. DO NOT PARK, DRIVE, OPERATE MACHINERY OR STORE MATERIALS WITHIN THE DRIPLINE OF EXISTING TREES. ALL TREE PROTECTION DEVICES TO BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE AND MAINTAINED UNTIL FINAL LANDSCAPING ACCEPTANCE.
- J. CONTRACTOR SHALL PROVIDE A SEPARATE BID PROPOSAL FOR ONE YEAR'S MAINTENANCE TO BEGIN AFTER FINAL ACCEPTANCE. CONTRACTOR SHALL GUARANTEE THAT ALL NEWLY INSTALLED, AND EXISTING PLANTS WITHIN OR NEAR THE LIMITS OF CONSTRUCTION, SHALL SURVIVE FOR ONE YEAR AFTER FINAL OWNER ACCEPTANCE OF THE INSTALLATION WORK.
- K. REFERENCES TO "OWNER'S REPRESENTATIVE" ARE MADE IN THESE DOCUMENTS AND REFER TO THE PROJECT OWNER OR DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE FOR DESIGN CLARIFICATIONS OR ADDITIONAL INFORMATION RELATED TO THE SCOPE OF WORK, AS NEEDED.

1.5 SUBMITTALS
- A. THE CONTRACTOR SHALL PROVIDE SUBMITTALS AND SAMPLES TO THE LANDSCAPE ARCHITECT AND RECEIVE APPROVAL IN WRITING FOR SUCH SUBMITTALS BEFORE WORK COMMENCES.
- B. SUBMITTALS SHALL INCLUDE PHOTOS OF PLANTS WITH A RULER OR MEASURING STICK FOR SCALE, PHOTOS OR SAMPLES OF ANY REQUIRED MULCHES, ROCKS, GRAVELS, AND/OR CRUSHED STONE, AND SOIL TEST RESULTS AND PREPARATION RECOMMENDATIONS FROM THE TESTING LAB (INCLUDING COMPOST AND FERTILIZER RATES AND TYPES, AND OTHER AMENDMENTS FOR LANDSCAPING AREAS AS MAY BE APPROPRIATE).
  1. CONTRACTOR SHALL HAVE SOIL SAMPLES FROM THE PROJECT'S LANDSCAPE AREAS TESTED BY AN ESTABLISHED SOIL TESTING LABORATORY. EACH SAMPLE SHALL CONTAIN NO LESS THAN ONE QUART OF SOIL, TAKEN FROM BETWEEN THE SOIL SURFACE AND 6" DEPTH. THE CONTRACTOR SHALL TAKE A MINIMUM OF THREE SAMPLES FROM VARIOUS REPRESENTATIVE LOCATIONS FOR TESTING.
  2. THE CONTRACTOR SHALL HAVE THE SOIL TESTING LABORATORY PROVIDE RESULTS FOR THE FOLLOWING: SOIL TEXTURAL CLASS, GENERAL SOIL FERTILITY, PH, ORGANIC MATTER CONTENT, SALT (EC), LIME, SODIUM ADSORPTION RATIO (SAR) AND BORON CONTENT.
  3. THE CONTRACTOR SHALL ALSO SUBMIT THE PROJECT'S PLANT LIST TO THE LABORATORY ALONG WITH THE SOIL SAMPLES.
  4. THE SOIL REPORT PRODUCED BY THE LABORATORY SHALL CONTAIN RECOMMENDATIONS FOR THE FOLLOWING (AS APPROPRIATE):
     - i. SEPARATE SOIL PREPARATION AND BACKFILL MIX RECOMMENDATIONS FOR GENERAL ORNAMENTAL PLANTS, XERIC PLANTS, TURF, AND NATIVE SEED.
     - ii. PRE-PLANT FERTILIZER APPLICATIONS AND RECOMMENDATIONS FOR ANY OTHER SOIL RELATED ISSUES.
     - iii. FERTILIZER PROGRAM FOR THE ESTABLISHMENT PERIOD AND FOR LONG-TERM MAINTENANCE.
  5. THE CONTRACTOR SHALL INSTALL SOIL AMENDMENTS AND FERTILIZERS PER THE SOILS REPORT RECOMMENDATIONS. ANY CHANGE IN COST DUE TO THE SOIL REPORT RECOMMENDATIONS, EITHER INCREASE OR DECREASE, SHALL BE SUBMITTED TO THE OWNER WITH THE REPORT.
- C. SUBMITTALS SHALL ALSO INCLUDE MANUFACTURER CUT SHEETS FOR PLANTING ACCESSORIES SUCH AS TREE STAKES AND TIES, EDGING, LANDSCAPE FABRICS, ETC.
- D. CONTRACTOR TO CLEARLY INDICATE THE EXACT PROPOSED ITEMS WITH SPECIFICATIONS ON ALL SUBMITTALS.

1.6 JOB CONDITIONS, DELIVERY, HANDLING, AND STORAGE
- A. GENERAL CONTRACTOR TO COMPLETE WORK BEFORE LANDSCAPE CONTRACTOR TO COMMENCE.
- B. CONSTRUCTION DEBRIS SHALL BE REMOVED PRIOR TO LANDSCAPE CONTRACTOR BEGINNING WORK.
- C. GENERAL CONTRACTOR TO BRING ALL FUTURE PLANTING BED AREAS TO NINE (9) INCHES BELOW FINAL GRADE WITH GENERAL EARTH FILL. ALL AREAS TO RECEIVE TURF GRASS SHALL BE BROUGHT TO SIX (6) INCHES BELOW FINAL GRADE WITH GENERAL EARTH FILL. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO INSTALL AND/OR COORDINATE THE INSTALLATION OF REQUIRED FERTILE TOPSOIL, PER THE TOPSOIL MANAGEMENT PLAN, SOIL TEST RESULTS, SPECIFICATIONS, AND DETAILS, AND COORDINATE THE TIMING OF ROUGH GRADING, FINE GRADING, AND THE INSTALLATION OF IRRIGATION AND LANDSCAPE IMPROVEMENTS.
- D. IRRIGATION SYSTEM TO BE INSTALLED PRIOR TO PLANTING INSTALLATION. LOCATE, PROTECT AND MAINTAIN THE IRRIGATION SYSTEM DURING PLANTING OPERATIONS. COORDINATE WITH OWNER FOR ANY IRRIGATION SYSTEM REPAIRS NECESSARY DUE TO COMPONENTS BEING DAMAGED DURING PLANTING OPERATIONS, AT THE CONTRACTOR'S EXPENSE.
- E. NOTIFY OWNER'S REPRESENTATIVE OF DELIVERY 72 HOURS PRIOR TO DELIVERY OF PLANT MATERIAL AT THE JOB SITE.
- F. TAKE ALL PRECAUTIONS CUSTOMARY IN GOOD TRADE PRACTICE IN PREPARING PLANTS FOR MOVING AND IN PROPER CARE ONCE DELIVERED TO THE PROJECT SITE. PREVENT PLANTS FROM DRYING OUT, PLANT IMMEDIATELY UPON ARRIVAL AT THE PROJECT SITE. IF IMMEDIATE PLANTING IS NOT POSSIBLE, UTILIZE BEST PRACTICES FOR PROTECTING PLANTINGS UNTIL INSTALLATION.
- G. DELIVER PACKAGED MATERIALS IN SEALED CONTAINERS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. PROTECT MATERIALS FROM DETERIORATION DURING DELIVERY AND WHILE STORED ON SITE.
- H. REMOVE REJECTED PLANT MATERIAL IMMEDIATELY FROM JOB SITE.
- I. TO AVOID DAMAGE OR STRESS, DO NOT LIFT, MOVE, ADJUST TO PLUMB, OR OTHERWISE MANIPULATE PLANTS BY TRUNK OR STEMS.
- J. STORAGE OF MATERIALS AND EQUIPMENT AT THE JOB SITE WILL BE AT THE RISK OF THE LANDSCAPE CONTRACTOR. THE OWNER CANNOT BE HELD RESPONSIBLE FOR THEFT OR DAMAGE.

1.7 INSTALLATION SEQUENCING
- A. INSTALL TREES, SHRUBS, AND LINER STOCK PLANT MATERIALS PRIOR TO INSTALLATION OF LAWN/SOLID SOD.

1.8 MAINTENANCE AND GUARANTEE
- A. MAINTENANCE:
  1. THE LANDSCAPE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK FROM THE TIME OF PLANTING UNTIL 90 DAYS AFTER FINAL ACCEPTANCE BY THE OWNER.
  2. ALL WORK SHALL BE PERFORMED IN A MANNER THAT MAINTAINS THE ORIGINAL INTENT OF THE LANDSCAPE DESIGN.
  3. ALL LANDSCAPE MAINTENANCE SERVICES SHALL BE PERFORMED BY TRAINED PERSONNEL USING CURRENT, ACCEPTABLE HORTICULTURAL PRACTICES.
  4. ALL CHEMICAL APPLICATIONS SHALL BE PERFORMED USING EPA REGISTERED MATERIALS AND METHODS OF APPLICATION. THESE APPLICATIONS SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED CERTIFIED APPLICATOR.
  5. MAINTENANCE SHALL INCLUDE WATERING OF TREES AND PLANTS, CULTIVATION, WEED SPRAYING, FERTILIZING, EDGING, PRUNING OF TREES, MOWING OF GRASS, RESTAKING OF TREES, RESETTING OF SETTLED PLANTS, AERATION OF TURF AREAS, RESEEDING AND/OR RESODDING TURF AREAS THAT DID NOT ESTABLISH, TREATING FOR INSECTS AND DISEASES, MULCH REPLACEMENT, CLEANING UP, AND ALL OTHER WORK NECESSARY FOR MAINTENANCE.
  6. CONTRACTOR TO SUBMIT PROPOSED MAINTENANCE SCHEDULE TO THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL.
  7. REPLACE DEAD, UNHEALTHY, AND UNSIGHTLY PLANTS DURING WARRANTY PERIOD.
  8. REMOVE TREE GUYING AND STAKING MATERIALS AFTER ONE YEAR. REPAIR GUYING AND STAKING MATERIALS AS NEEDED UNTIL ONE YEAR AFTER INSTALLATION.
  9. REGULARLY INSPECT AND COORDINATE THE OPERATION OF THE IRRIGATION SYSTEM TO ENSURE THAT PLANTS ARE ADEQUATELY WATERED. THE IRRIGATION SYSTEM BEING TURNED OFF OR ALTERED BY OTHERS, RESULTING IN PLANT LOSS, SHALL BE AT THE CONTRACTOR'S EXPENSE FOR REPLACING DEAD PLANT MATERIAL, AS APPLICABLE.
  10. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN ACCORDANCE WITH THE MAINTENANCE SERVICE TO ENSURE THE SYSTEM IS IN PROPER WORKING ORDER WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION AND PLANT HEALTH.
  11. TO ACHIEVE FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD, ALL OF THE FOLLOWING CONDITIONS MUST OCCUR:
     - i. THE LANDSCAPE SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH EXCEPTIONS MADE FOR SEASONAL DORMANCY). ALL PLANTS NOT MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY HEALTHY PLANT MATERIAL PRIOR TO FINAL ACCEPTANCE.
     - ii. ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE.
     - iii. SODDED AREAS MUST BE ACTIVELY GROWING AND MUST REACH A MINIMUM HEIGHT OF 1-1/2 INCHES BEFORE FIRST MOWING.
     - iv. HYDROMULCHED AREAS SHALL ACHIEVE ONE HUNDRED (100) PERCENT COVERAGE.
- B. GUARANTEE:
  1. WARRANTY PLANT MATERIAL TO REMAIN ALIVE AND IN A HEALTHY, VIGOROUS CONDITION FOR A MINIMUM PERIOD OF ONE (1) YEAR AFTER COMPLETION AND FINAL ACCEPTANCE OF ENTIRE PROJECT. ANNUAL PLANTINGS TO BE GUARANTEED FOR 90 DAYS OR UNTIL THE END OF THE SEASONAL COLOR GROWING SEASON, WHICHEVER COMES SOONER. THE CONTRACTOR SHALL REPLACE ALL DEAD MATERIALS AS SOON AS WEATHER PERMITS AND UPON NOTIFICATION OF THE OWNER.
  2. NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE SEVEN DAYS PRIOR TO THE EXPIRATION OF THE WARRANTY PERIOD.
  3. PLANTS INCLUDING TREES WHICH HAVE PARTIALLY DIED SO THAT SHAPE, SIZE OR SYMMETRY HAVE BEEN DAMAGED SHALL BE CONSIDERED SUBJECT TO REPLACEMENT.
  4. PLANTS USED FOR REPLACEMENT SHALL BE OF THE SAME SIZE AND KIND AS THOSE ORIGINALLY PLANTED OR SPECIFIED.
  5. ALL WORK INCLUDING MATERIALS, LABOR AND EQUIPMENT USED IN REPLACEMENTS SHALL CARRY A 12-MONTH GUARANTEE. ANY DAMAGE INCLUDING RUTS IN LAWN OR BED AREAS INCURRED AS A RESULT OF MAKING REPLACEMENTS SHALL BE IMMEDIATELY REPAIRED.
  6. WHEN PLANT REPLACEMENTS ARE MADE, PLANTS, SOIL MIX, FERTILIZER AND MULCH ARE TO BE UTILIZED AS ORIGINALLY SPECIFIED AND RE-INSPECTED FOR FULL COMPLIANCE WITH THE CONTRACT REQUIREMENTS. ALL REPLACEMENTS ARE INCLUDED UNDER "SCOPE OF WORK" IN THIS SECTION.
  7. THE OWNER AGREES THAT FOR THE ONE-YEAR WARRANTY PERIOD TO BE EFFECTIVE, HE WILL WATER PLANTS AT LEAST TWICE A WEEK DURING DRY PERIODS.
  8. THE ABOVE GUARANTEE SHALL NOT APPLY WHERE PLANTS DIE AFTER ACCEPTANCE BECAUSE OF DAMAGE DUE TO ACTS OF GOD, VANDALISM, INSECTS, DISEASE, INJURY BY HUMANS, MACHINES, THEFT OR NEGLIGENCE BY OWNER.
  9. ANY NECESSARY REPAIRS UNDER THE GUARANTEE MUST BE MADE WITHIN TEN (10) BUSINESS DAYS AFTER RECEIVING NOTICE, WEATHER PERMITTING. IN THE EVENT THE LANDSCAPE CONTRACTOR DOES NOT MAKE REPAIRS ACCORDINGLY, THE OWNER, WITHOUT FURTHER NOTICE TO THE CONTRACTOR, MAY PROVIDE MATERIALS AND SERVICES TO MAKE SUCH REPAIRS AT THE EXPENSE OF THE LANDSCAPE CONTRACTOR.

1.9 QUALITY ASSURANCE
- A. COMPLY WITH ALL FEDERAL, STATE, COUNTY AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF ANY PORTION OF DOCUMENTS WHICH CONFLICT WITH REGULATIONS PRIOR TO CONSTRUCTION.
- B. EMPLOY PERSONNEL EXPERIENCED AND FAMILIAR WITH THE REQUIRED WORK WITH SUPERVISION BY A QUALIFIED FOREMAN.
- C. MAKE CONTACT WITH SUPPLIERS IMMEDIATELY UPON OBTAINING NOTICE OF CONTRACT ACCEPTANCE TO SELECT AND BOOK MATERIALS.
- D. MEASURE TREES WITH BRANCHES AND TRUNKS OR CANES IN THEIR NORMAL POSITION. DO NOT PRUNE TO OBTAIN REQUIRED SIZES. TAKE CALIPER MEASUREMENTS SIX (6) INCHES ABOVE THE ROOT BALL FOR TREES UP TO AND INCLUDING FOUR (4) INCH CALIPER TREES, AND TWELVE (12) INCHES ABOVE THE ROOT BALL FOR LARGER SIZES. MEASURE THE MAIN BODY OF ALL PLANT MATERIAL FOR HEIGHT AND SPREAD DIMENSIONS; DO NOT MEASURE FROM BRANCH OR ROOT TIP TO TIP. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE MINIMUM SIZE REQUIREMENTS FOR ALL PLANTING MATERIAL AND INSTALL SUFFICIENTLY SIZED MATERIAL.
- E. DO NOT MAKE PLANT MATERIAL SUBSTITUTIONS. IF THE LANDSCAPE MATERIAL SPECIFIED IS NOT READILY AVAILABLE, SUBMIT PROOF TO THE LANDSCAPE ARCHITECT ALONG WITH THE PROPOSED MATERIAL TO BE USED IN LIEU OF THE SPECIFIED PLANT FOR REVIEW AND CONSIDERATION. THE LANDSCAPE ARCHITECT AND/OR OWNER IS NOT RESPONSIBLE FOR ANY LOSSES INCURRED BY THE CONTRACTOR DUE TO PURCHASED AND/OR INSTALLED SUBSTITUTIONS WITHOUT REQUIRED APPROVALS.
- F. AT THE TIME BIDS ARE SUBMITTED, THE CONTRACTOR IS ASSUMED TO HAVE LOCATED THE MATERIALS NECESSARY TO COMPLETE THE JOB AS SPECIFIED.
- G. CONTRACTOR SHALL PROVIDE THE BID PROPOSAL WITH LISTED UNIT PRICES FOR ALL MATERIAL TO THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
- H. OWNER'S REPRESENTATIVE SHALL INSPECT ALL PLANT MATERIAL, ENSURING REQUIREMENTS OF GENUS, SPECIES, VARIETY/CULTIVAR, SIZE, AND QUALITY ARE MET, AND RETAINS THE RIGHT TO INSPECT MATERIALS UPON ARRIVAL TO THE SITE AND DURING INSTALLATION. THE OWNER'S REPRESENTATIVE MAY ALSO REJECT ANY MATERIALS HE/SHE FEELS TO BE UNSATISFACTORY OR DEFECTIVE DURING THE WORK PROCESS. ALL PLANTS DAMAGED IN TRANSIT OR AT THE JOB SITE SHALL BE REJECTED.
- I. PROVIDE MINIMUM 5% SLOPES AWAY FROM ALL STRUCTURES AND ENSURE POSITIVE DRAINAGE IS ACHIEVED WITHIN THE LIMITS OF WORK THROUGHOUT THE CONSTRUCTION PROCESS. DRAINAGE PATTERNS TO MATCH APPROVED GRADING PLANS FOR THE PROJECT.
- J. PROVIDE A MINIMUM OF TWO (2) COPIES OF RECORD DRAWINGS TO THE OWNER UPON COMPLETION OF WORK. A RECORD DRAWING IS A RECORD OF ALL DEVIATIONS FROM THE PLAN THAT OCCURRED IN THE FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS, ADDENDA, AND/OR CONTRACTOR/CONSULTANT DRAWING MARKUPS.

PART 2 - MATERIALS

2.1 SOIL PREPARATION MATERIALS
- A. TOPSOIL (SANDY LOAM):
  1. FRIABLE, FERTILE, DARK, LOAMY SOIL, FREE OF CLAY LUMPS, SUBSOIL, STONES AND OTHER EXTRANEOUS MATERIAL AND REASONABLY FREE OF WEEDS AND FOREIGN GRASSES. LOAM CONTAINING DALLAS GRASS OR NUT GRASS SHALL BE REJECTED.
  2. PHYSICAL PROPERTIES SHALL BE AS FOLLOWS:
     - i. CLAY - BETWEEN 7-27%
     - ii. SILT - BETWEEN 15-25%
     - iii. SAND - LESS THAN 52%
  3. ORGANIC MATTER SHALL BE 3-10% OF TOTAL DRY WEIGHT.
  4. LANDSCAPE CONTRACTOR SHALL PROVIDE A CERTIFIED SOIL ANALYSIS, CONDUCTED BY AN APPROVED SOIL TESTING LABORATORY, VERIFYING THAT SOIL IS A SANDY LOAM MEETING THE ABOVE REQUIREMENTS.
- B. ORGANIC MATERIAL: COMPOST WITH A MIXTURE OF 80% VEGETATIVE MATTER AND 20% ANIMAL WASTE. INGREDIENTS SHOULD BE A MIX OF COURSE AND FINE TEXTURED MATERIAL.
- C. BEDDING SOIL: PREMIXED BEDDING SOIL AS SUPPLIED BY VITAL EARTH RESOURCES; PROFESSIONAL BEDDING SOIL AS SUPPLIED BY LIVING EARTH TECHNOLOGY, OR APPROVED EQUALS.
- D. SHARP SAND: SHARP SAND MUST BE FREE OF SEEDS, SOIL PARTICLES AND WEEDS.
- E. MULCH: DOUBLE SHREDDED HARDWOOD MULCH, PARTIALLY DECOMPOSED, DARK BROWN. IF RIVER ROCK (1-3" IN SIZE) IS SPECIFIED IN LIEU OF HARDWOOD MULCH, CONTRACTOR TO EXERCISE CAUTION TO NOT DAMAGE PLANT MATERIAL DURING INSTALLATION.
- F. ORGANIC FERTILIZER: FERTILAID, SUSTANE, GREEN SENSE, OR EQUAL, AS RECOMMENDED FOR REQUIRED APPLICATIONS. FERTILIZER SHALL BE DELIVERED TO THE SITE IN ORIGINAL UNOPENED CONTAINERS, EACH BEARING THE MANUFACTURER'S GUARANTEED STATEMENT OF ANALYSIS.
- G. COMMERCIAL FERTILIZER: 10-20-10 OR SIMILAR ANALYSIS. NITROGEN SOURCE TO BE A MINIMUM 50% SLOW-RELEASE ORGANIC NITROGEN (SCU OR UF) WITH A MINIMUM 8% SULFUR AND 4% IRON, PLUS MICRONUTRIENTS.
- H. PEAT: COMMERCIAL SPHAGNUM PEAT MOSS OR PARTIALLY DECOMPOSED SHREDDED PINE BARK OR OTHER APPROVED ORGANIC MATERIAL.

2.2 PLANT MATERIALS
- A. GENERAL: WELL-FORMED NO. 1 GRADE, OR BETTER, NURSERY GROWN STOCK IS REQUIRED. LISTED PLANT HEIGHTS ARE FROM TOPS OF ROOT BALLS TO NOMINAL TOPS OF PLANTS. PLANT SPREAD REFERS TO THE NOMINAL OUTER WIDTH OF THE PLANT, NOT THE OUTER LEAF TIPS. PLANTS SHALL BE INDIVIDUALLY APPROVED BY THE OWNER'S REPRESENTATIVE AND THEIR DECISION AS TO THEIR ACCEPTABILITY SHALL BE FINAL.
- B. QUALITY AND SIZE: PLANT MATERIALS SHALL MEET OR EXCEED THE MINIMUM SIZES GIVEN ON THE PLAN AND SHALL BE HEALTHY, WELL-SHAPED, FULL-BRANCHED, SYMMETRICAL IN APPEARANCE, AND WELL-ROOTED. PLANTS SHALL BE FREE FROM INJURY, DISEASE, BROKEN BRANCHES, DISFIGUREMENTS, INSECTS AND/OR INSECT EGGS/LARVAE, AND ARE TO BE OF SPECIMEN QUALITY. ALL TREES SHALL BE OBTAINED FROM SOURCES WITHIN 200 MILES OF THE PROJECT SITE, IN LOCATIONS WITH SIMILAR CLIMATIC CONDITIONS.
  1. ANY USE OF LARGER PLANTS SHALL NOT INCREASE THE CONTRACT PRICE.
  2. RESPECTIVE TO PLANTS OF THE SAME SPECIES AND VARIETY, PLANTS ARE TO BE OF UNIFORM SIZE.
  3. ROOT SYSTEMS SHALL BE HEALTHY, DENSELY BRANCHED, FIBROUS, NON-POT-BOUND, FREE FROM ENCIRCLING AND/OR GIRDLING, AND FREE FROM ANY OTHER ROOT DEFECTS.
  4. ALL TREES SHALL BE STANDARD IN FORM UNLESS OTHERWISE SPECIFIED. TREES MUST HAVE STRONG AND UNDAMAGED CENTRAL LEADERS.
  5. ANY TREE OR SHRUB SHOWN TO HAVE EXCESS SOIL PLACED ON TOP OF THE ROOT BALL, SO THAT THE ROOT FLARE HAS BEEN COMPLETELY COVERED, SHALL BE REJECTED.
  6. ROOT BALLS ARE TO BE WELL-FORMED, INTACT, AND WITH THE TRUNK FIRMLY ATTACHED. MINIMUM ROOT BALL SIZES FOR CANOPY TREES ARE 32" DIAMETER FOR 3" CALIPER, 40" DIAMETER FOR 4" CALIPER, 55" DIAMETER FOR 5" CALIPER, AND 66" DIAMETER FOR 6" CALIPER.
- C. QUANTITIES: QUANTITIES SHOWN ON THE PLAN ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY AND ARE NOT GUARANTEED TO BE ACCURATE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLAN AND QUANTITIES SHOWN ON THE SCHEDULE/LIST, THE QUANTITIES SHOWN ON THE PLAN (INDIVIDUAL SYMBOLS) SHALL TAKE PRECEDENCE. CONTRACTOR TO VERIFY NUMBER OF PLANT SYMBOLS SHOWN AND SHALL MEASURE HATCHED BEDS FOR CHECKING LISTED PLANT QUANTITIES IN THE ALLOTTED AREAS AT THE GIVEN SPACING.
  1. SPACE SHRUBS, GRASSES, GROUNDCOVERS, ETC., IN ACCORDANCE WITH THE INDICATED DIMENSIONS. ADJUST SPACING AS NECESSARY TO EVENLY FILL PLANTING BEDS WITH INDICATED QUANTITY OF PLANTS. PLANT SHRUBS TO WITHIN EIGHTEEN (18) INCHES OF TREE TRUNKS.
- D. SOD: PROVIDE WELL-ROOTED SOD OF THE VARIETY NOTED ON THE PLANS. SOD SHALL BE CUT FROM HEALTHY, MATURE TURF WITH SOIL THICKNESS OF 3/4" TO 1". EACH PALLET OF SOD SHALL BE ACCOMPANIED BY A CERTIFICATE FROM THE SUPPLIER STATING THE COMPOSITION OF THE SOD. DO NOT STACK FOR MORE THAN FORTY-EIGHT (48) HOURS BETWEEN TIME OF CUTTING AND PLANTING; ANY SOD NOT PLANTED WITHIN TWENTY-FOUR (24) HOURS AFTER RECEIPT ON SITE SHALL BE REMOVED AND NOT PLANTED.
- E. SEED: EXTRA FANCY, HULLED AND TREATED LAWN TYPE SEED WITH PURITY OF 95% OR BETTER AND GERMINATION OF 85% OR BETTER, AND PER REQUIREMENTS OF TEXAS SEED LAW. WEED CONTENT LESS THAN 1/2% WITH NO NOXIOUS WEEDS.
- F. APPROVAL: ALL PLANTS WHICH ARE FOUND UNSUITABLE BY THE OWNER'S REPRESENTATIVE, EITHER BEFORE OR AFTER INSTALLATION, SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE LANDSCAPE CONTRACTOR.

2.3 MISCELLANEOUS MATERIALS
- A. STEEL EDGING: SHALL BE 3/16" X 4" X 16" DARK GREEN LANDSCAPE EDGING. DURAEDGE STEEL OR APPROVED EQUAL.
- B. TREE STAKING: REFER TO DETAILS.
- C. FILTER FABRIC: MIRAFI 140S BY MIRAFI INC. OR APPROVED SUBSTITUTION.
- D. SAND: UNIFORMLY GRADED, WASHED, CLEAN, BANK RUN SAND.
- E. GRAVEL: WASHED NATIVE PEA GRAVEL, GRADED 1" TO 1.5"; REFER TO DETAILS.
- F. DECOMPOSED GRANITE: BASE MATERIAL OF NATURAL MATERIAL MIX OF GRANITE AGGREGATE, NOT TO EXCEED 1/8" IN DIAMETER, COMPOSED OF VARIOUS STAGES OF DECOMPOSED EARTH BASE; REFER TO DETAILS AND SCHEDULE
- G. RIVER ROCK: LOCALLY AVAILABLE NATIVE RIVER ROCK; REFER TO DETAILS AND SCHEDULE.
- H. PRE-EMERGENT HERBICIDES: ANY GRANULAR, NON-STAINING PRE-EMERGENT HERBICIDE THAT IS LABELED FOR SPECIFIC ORNAMENTALS OR TURF ON WHICH IT WILL BE UTILIZED. PRE-EMERGENT HERBICIDES SHALL BE APPLIED PER THE MANUFACTURER'S LABELED RATES.
- I. ROOT BARRIER: CENTURY ROOT BARRIER PANEL, OR APPROVED EQUAL, FORTY-EIGHT (48) INCHES IN DEPTH.

PART 3 - EXECUTION

3.1 PREPARATION
- A. NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF COMMENCING WORK TO COORDINATE PROJECT INSPECTION SCHEDULE.
- B. CONTRACTOR TO INSPECT ALL EXISTING CONDITIONS AND REPORT ANY DEFICIENCIES TO THE OWNER.
- B. PREPARE NEW PLANTING BEDS BY SCRAPING AWAY EXISTING GRASS AND WEEDS, AND CHEMICALLY TREAT FOR MINIMIZING TURF REGROWTH IN THE FUTURE.
  1. GENERAL CONTRACTOR TO HAVE LEFT SOIL IN FUTURE PLANTING BED AREAS NINE (9) INCHES BELOW FINAL GRADE; TILL EXISTING SOIL TO AN ADDITIONAL DEPTH OF SIX (6) INCHES (FIFTEEN (15) INCHES TOTAL DEPTH BELOW FINAL GRADE) PRIOR TO PLACING COMPOST AND FERTILIZER. APPLY FERTILIZER PER THE SOIL TEST RESULTS AND PER MANUFACTURER RECOMMENDATIONS. ADD SIX (6) INCHES OF COMPOST AND TILL INTO A DEPTH OF TWELVE (12) INCHES (SETTLED THICKNESS), BRINGING THE TOP OF BED TO THREE (3) BELOW FINAL GRADE.
     - i. THE FINAL THREE (3) INCHES ARE TO BE WEED BARRIER AND MULCH AS SPECIFIED ABOVE AND AS SHOWN IN THE CONSTRUCTION DETAILS.
- A. BACKFILL FOR TREE PITS SHALL BE AS FOLLOWS: USE EXISTING QUALITY TOPSOIL ON SITE (USE IMPORTED TOPSOIL AS NEEDED) FREE FROM LARGE

CZP - ATTACHMENT N

Inspection, Maintenance, Repair, and Retrofit Plan

Project: **Liberty Hill Credit Union**
Address: **135 US-183**
City, State, Zip: **Liberty Hill, Texas, 78642**

General Site Maintenance

The following guidelines should be used as an inspection and maintenance plan that should be performed at least twice annually:

(1) Identify, replant, and restore eroded areas. Add a level spreader, energy dissipation, or other repairs as required to ensure that erosion is not repeated.

(2) Identify areas that do not have acceptable vegetated covers (80% or higher for most BMPs). Reseed, add soil, and irrigate as required to ensure that coverage requirements are met.

(3) Mow sites twice annually and as required to keep grass height under 18 inches. Additional mowing may be performed for site aesthetics. Export clippings from site to prevent release of nutrients from decaying plant matter. Remove any woody growth, especially from embankments, berms, and swales. For swales, grass should not be regularly mowed below four inches.

(4) Use non-chemical methods for maintaining health of vegetation. Pesticides, herbicides, or fertilizers should only be used as a last option, and then as minimally as possible. Fertilizer should rarely be required because runoff will typically contain sufficient nutrient loads.

(5) Irrigation will be required in order to maintain acceptable levels of vegetated coverage, especially for engineered vegetated strips and irrigation fields.

(6) Never deposit grass clippings, brush, or other debris in BMPs or buffers.

(7) Prevent over-compaction of BMP components that rely partially or wholly on infiltration (vegetation strips, bioretention bed, infiltration trenches and basins). Mowing and other maintenance should be performed with hand equipment or a light-weight lawn tractor.

(8) Remove any built-up sediment and debris, especially along uphill edges, berms, swales, and level spreaders; and around BMP inlets and outlets

(9) Identify any other problems. A detailed inspection may be required.

LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

Vegetated BMPs

The following guidelines should be used to develop the maintenance plan for the Vegetated BMP.

- Inspections. Level spreaders and irrigation systems shall be inspected semi-annually. All vegetated BMPs shall be inspected twice annually.

- Eroded Areas. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored. Construction of a level spreader device may be necessary to re-establish shallow overland flow.

- Sedimentation. Sedimentation built up in vegetated BMPs, especially along the upstream boundary in the level spreader, must be removed during semi-annual inspections.

- Level spreaders. Level spreaders shall be inspected at least semi-annually and repairs made as necessary.

All inspections conducted under this plan will be documented in an inspection report, which will include the date of inspection, the name of the inspector, a summary of findings, and any maintenance actions taken or recommended. The developer or property owner will be responsible for maintaining these records. Records will be stored either on site or at the developer's or property owner's business address. Inspection and maintenance records will be kept on file for a minimum of five years and will be made available to the TCEQ upon request.

LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

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's entity having ownership or control of the property (such as without limitation, an owner's association, new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity assumes such obligation in writing or ownership is transferred.

An amended copy of this document will be provided to the TCEQ within thirty days of any changes in the following information

Responsible Party for Maintenance:	United Heritage Credit Union
Address:	12515 Research Blvd, Bldg 5 Austin, TX 78759
Developer Contact:	Michael Ver Schuur
Telephone Number:	(512) 435-4545

Signature of Developer: MVerSchuur

Attachment O: Pilot Scale Field Testing Plan

Attachment O is not applicable to this project.

Attachment P: Measures for Minimizing Surface Stream Contamination

Attachment P is not applicable to this project.

LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

Stormwater Pollution Prevention Plan

(SWPPP)

FOR

LIBERTY HILL CREDIT UNION

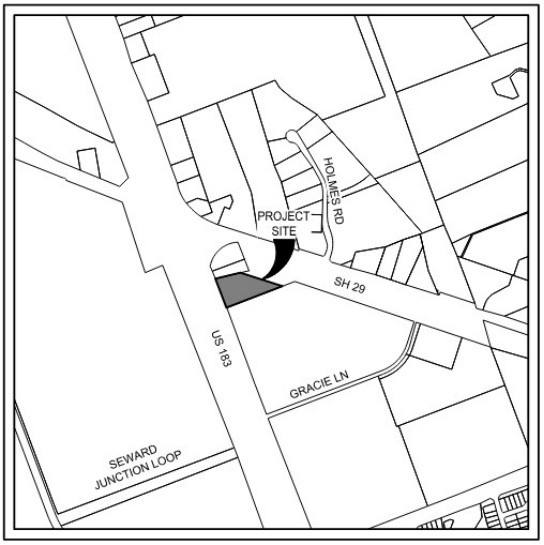
135 US-183,

IN

LIBERTY HILL, TEXAS 78642

PREPARED FOR

LEVEL 5, LLC
2326 WASHINGTON BLVD, FOURTH FLOOR
OGDEN, UTAH 84401



QUIDDITY

Texas Board of Professional Engineers Registration No. F-23290 | Texas Board of Professional Land Surveying Registration No. 10046100

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1.0 Contact Information

Project Name and Location:
Name: Liberty Hill Credit Union
Address: 135 US-183, Liberty Hill, Texas 78642

Primary Operator Name and Address (Developer):
LEVEL 5, LLC
2326 Washington Blvd, 4th floor
Ogden, Utah 84401

Texas Commission on Environmental Quality in the event of a significant spill:
https://www.tceq.texas.gov/response/spills
Phone: 1-800-832-8224

2.0 Site Description

a. Description of the Construction Activity:

The proposed Liberty Hill Credit Union Commercial project consists of 2.661 acres, to be developed. The project will include the construction of driveways, accompanying curbing, sidewalks, landscaping, drainage infrastructure, and sanitary lines. A Stacked partial sedimentation and detention pond will be built on site.

b. Potential Pollutants and Sources:

The following substances are expected to be present onsite during construction: concrete, petroleum-based products, fuels, lubricants, detergents, wood, soil stabilizing additives, pesticides, acids, and concrete additives. The following are sources of the previous substances listed: construction equipment, construction materials, disturbed soil, and vehicles onsite.

c. Sequence of Major Activities:

1. The Contractor will clear portions of the project area required for site preparation but limit vegetation and soil disturbance to essential construction sites only (2.661 acres).
2. Install perimeter controls such as sediment fences, construction entrance, and sediment basin (2.661 acres).
3. Implement phase construction. Construction shall consist of paving, grading and drainage. (2.661 acres).
4. Placement of topsoil and seeding where indicated on plans (2.661 acres).
5. When all construction activity is complete and the site soils are stabilized to a condition approved by the engineer, temporary structural controls shall be removed with any vegetation disturbed during this process to be replaced (2.661 acres).

d. Estimated Total Site and Disturbed Acreages:

The total area of the site (2.661 acres) will be disturbed during construction of utilities, pond, and paving construction.

e. Vicinity Map:

A vicinity map is attached. See Exhibit B.

f. Detailed Site Map:

See Exhibit C (Grading Plan). Detailed site maps reference the following: drainage patterns and approximate slopes anticipated after major grading activities; areas where soil disturbance will occur; locations of all major structural controls either planned or in place; locations where temporary or permanent stabilization practices are expected to be used; locations of construction support activities, including material, waste, borrow, fill, or equipment storage areas; surface waters at, adjacent to, or in close proximity to the site; locations where storm water discharges from the site directly to a surface water body or a municipal separate storm system; and vehicle wash areas.

g. Support Activities:

Expected support activities include equipment staging and materials storage areas. Equipment staging and materials storage areas will be located on-site.

h. Name of Receiving Water and Extend of Wetlands:

The project site is located in the South Fork of the San Gabriel River & contributing zone of the Edwards Aquifer.

i. Notice of Intent and Site Notice:

NOI and Construction Site Notices are included in Appendix B.

j. Endangered or Threatened Species or Critical Habitats:

Federally and State listed endangered and threatened species for Williamson County as listed by the Texas Parks and Wildlife Department are included in Appendix C.

k. Historical Places:

The storm water discharge and related activities will not affect properties listed or eligible for listing on the National Registry of Historic Places.

3.0 Best Management Practices

a. General Requirements:

Sediment will be retained on-site to the maximum extent practicable.

Control measures will be properly selected, installed, and maintained in accordance with manufacturer's specifications and good engineering practice. If damaged or rendered ineffective during site development, erosion and sediment controls will be repaired or replaced immediately.

Controls will minimize the offsite transport of litter, construction debris, and construction materials.

Major erosion and sediment controls are shown on the Storm Water Pollution Prevention Site Plan, Exhibit D.

b. Erosion Control and Stabilization Practices:

(1) Erosion Control and Stabilization Practices

(A) Filter fabric fencing or rock berms will be placed around the perimeter of the site and proposed interceptor structures upon their construction and shall remain until the owner accepts the project or as is deemed necessary to prevent discharge to the receiving water. The location of these SWPPP measures are shown on the Storm Water Pollution Prevention Site Plan (Exhibit D) or as directed by the Engineer.

(B) Sedimentation Basins and Diversion Dams may be used to direct and control site runoff where drainage areas exceed 10 acres. These measures, shown on Exhibit D, are placed in so that all site runoff during the construction phase of the project are directed towards these facilities to prevent sediment runoff.

(C) Filter fabric fencing or approved other will be maintained on either side of existing inlets where runoff from this construction site might enter the storm sewer system. The location of these fences is shown on the Storm Water Pollution Prevention Site Plan (Exhibit D) or as directed by the Engineer.

(D) Upon their construction, the lower stage of inlets will be covered with a timber grate and filter fabric.

(E) After paving is constructed, provide an approved inlet protection measure as provided in the plans.

(F) Hydro-mulch or seeding will be applied to disturbed areas after completion of construction of the facilities.

(G) Seeding may be applied, in lieu of hydro-mulch, to portions of the site after final grading.

(2) Record of Erosion Control and Stabilization Practices

The Operator will maintain record of: dates of major grading activities, dates when construction temporarily or permanently ceases on a portion of the site, and the dates when stabilization measures are initiated.

(3) If the interim period between construction of utilities and paved areas will be more than 21 days, the paved area location will be mulched or otherwise stabilized within 14 days.

(4) After paving completion, newly graded areas and all exposed soils will be completely stabilized.

(5) Final stabilization will be achieved prior to termination of permit coverage.

c. Sediment Control Practices:

(1) Silt fences, vegetative buffer strips, or equivalent sediment controls are provided where deemed appropriate as shown on the Storm Water Pollution Prevention Site Plan, Exhibit D.

(2) Where the disturbed area is larger than 10 acres a sedimentation basin is required.

(3) Filter fabric fence or rock berms will be set up prior to the commencement of excavation and temporary stockpiling operations. All surplus excavated material will be hauled off-site and disposed of in a suitable manner.

(4) All disturbed soils will be hydro-mulch or seeded. When all construction activity is complete and the site is stabilized, temporary structural controls will be removed, and soils disturbed by their removal will be re-seeded.

4.0 Other Required Controls and BMPs

a. Offsite Vehicle Tracking:

A stabilized construction entrance may be provided to help reduce vehicle tracking of sediments. The paved streets adjacent to the site entrance will be cleaned daily, if necessary, to remove any excess mud, dirt, or rock tracked from the site.

b. Dust Control and Street Cleaning:

Dust will be minimized by using water trucks to keep the ground moist, if necessary. Watering will be limited to prevent excessive runoff of water from dust control. Silt fencing will prevent water from this activity from washing dust into the storm drain. For sediment accumulations on new internal paved surfaces, as well as off-site accumulations, using sweepers or other devices to remove sediment by creating airborne dust and sediment is not acceptable. The accumulations must be cleaned up by hand, or with a vacuum truck. Sediment removed by hand can be returned to the site provided it is placed behind an adequate control device such as a filter fence. Under no circumstances will sediment be washed, shoveled, or otherwise introduced into a drainage system during clean up.

The paved streets adjacent to the site entrance will be cleaned as necessary to remove any excess mud, dirt, or rock tracked from the site.

c. Construction and Waste Materials:

Construction Materials Waste

All waste materials will be collected, stored and disposed of in a securely lidded metal dumpster. The dumpster will meet all local and state solid waste management regulations. No construction waste material will be buried onsite. All personnel will be instructed regarding the correct procedure for waste disposal.

Hazardous Waste

No hazardous waste is expected to be generated or encountered in this project. In the event that hazardous waste is encountered, the Owner will be notified immediately. All hazardous waste materials will be disposed of in the manner specified by local or state regulations or by the manufacturer.

Sanitary Waste

All sanitary waste will be regularly collected from portable units.

Spill Prevention

Texas Commission on Environmental Quality in the event of a significant spill:
https://www.tceq.texas.gov/response/spills
Phone: 1-800-832-8224

In Texas, upon determining that a reportable discharge or spill has occurred, the responsible person must notify the state. The threshold quantity that triggers the requirement to report a spill is called the reportable quantity (RQ). The reportable quantity depends on the type of substance released and where released (e.g. into water vs. on land); different kinds of spills are subject to different provisions of state and federal rules.

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**

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of the materials and substances described above to storm water runoff.

Good Housekeeping

The following good housekeeping practices will be followed onsite during the construction project.

1. An effort will be made to store only enough product required to do the job.

2. All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.

3. Products will be kept in their original containers with the original manufacturer's label.

4. Substances will not be mixed with one another unless recommended by the manufacturer.

5. Whenever possible, all of a product will be used up before disposing of the container.

6. Manufacturers' recommendations for proper use and disposal will be followed.

7. The site superintendent will inspect daily to ensure proper use and disposal of materials onsite.

8. All litter, trash, and floatable debris will be contained.

Hazardous Products

These practices will be used to reduce the risks associated with hazardous materials, if hazardous materials are used.

1. Products will be kept in original containers unless they are not resealable.

2. Original labels and material safety data will be retained.

3. If surplus product must be disposed of, manufacturers' or local and state recommended methods for proper disposal will be followed.

Product Specific Practices

The product specific practices to be followed are listed in Appendix D.

Spill Prevention Practices

The spill prevention practices to be followed are listed in Appendix D.

Concrete Truck Wash Out

Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site, unless they are using a properly designed and designated concrete washout area.

a. Concrete truck wash out must not directly discharge to surface water or storm sewers.

b. Concrete truck washout should be discharged to areas at the construction site where minimal slope allows infiltration and filtering of wash out water or structural controls have been established to prevent direct discharge to surface waters.

c. Concrete truck washout during rainfall events should be minimized. The Operator will ensure BMPs in-place are sufficient to prevent the discharge of concrete wash out in rainfall events.

d. Discharge of concrete truck wash out water should not cause or contribute to groundwater contamination.

d. Non-Construction Pollutant Sources:

There are no potential pollutant sources associated with industrial activities other than the construction activities described in sections 1.0.b and 8.0.

e. Velocity Dissipation Devices:

Velocity dissipation devices will be installed as needed as defined by local site conditions.

f. Controls for Pumping or Channeling Standing Water Onsite

When dewatering (pumping) the site, the sediment-laden discharge will be detained for a sufficient time to allow the majority of the sediment to settle out. Direct discharge into a storm sewer or off-site channel will not be allowed.

5.0 Approved State or Local Plans

This work is to be completed under TPDES General Permit TXR150000, effective March 5, 2018.

The Storm Water Pollution Prevention Plan will be updated as necessary by the Operator to remain consistent with any changes applicable to protecting surface water resources.

6.0 Maintenance

The following is a list of erosion control, sediment control, and stabilization practices implemented on this project that require maintenance:

Stabilization of construction access area.
Hydro-mulch seeding/ broadcast seeding.
Filter fabric fences/ rock berms.
Inlet protection.
Sediment Basins.

To maintain the above practices, the following will be performed:

Maintenance and repairs will be conducted within 24 hours of inspection report (see Section 8.0 below).

Erosion and sediment control measures that have been improperly installed or have been disabled, run-over, removed, or otherwise rendered ineffective must be replaced or corrected immediately.

Sediment will be removed from behind the sediment fences when it becomes about 1/3 the height of the fence.

Sediment will be removed from around inlet barriers and dikes when the storage capacity has been approximately 50% filled.

If sediment leaves the site, accumulations must be removed such that offsite impacts are minimized.

7.0 Inspections

(a) The contractor will designate a qualified person or persons to perform the following inspections:

(1) Disturbed areas, areas used for storage of materials that are exposed to precipitation, discharge locations, and structural controls will be inspected for evidence of, or the potential for, pollutants entering the drainage system.

(2) Erosion and sediment control measures identified in the plan will be observed to ensure that they are operating correctly.

(3) Where discharge locations or points are accessible, they will be inspected to ascertain if erosion control measures are effective in preventing significant impacts to receiving waters.

(4) Locations where vehicles enter or exit the site will be inspected for evidence of offsite sediment tracking.

(5) Erosion and sediment control measures that have been improperly installed or have been disabled, run-over, removed, or otherwise rendered ineffective must be replaced or corrected immediately.

The inspection will be conducted by the responsible person at least once every seven (7) calendar days and within 24 hours after a storm of 0.5 inch or greater.

After a portion of the site is finally stabilized, inspection will be conducted at least once every month.

(b) Based on the results of the inspections, the SWPPP will be modified as necessary to better control pollutants in runoff. Necessary revisions to the SWPPP are to be completed within 7 calendar days following the inspection. Revisions should include an implementation schedule for additional or modified BMPs.

(c) For each inspection, a report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations will be made and retained as part of the storm water pollution plan for at least three years from the date that the site is finally stabilized. Major observations include: implementation of the storm water pollution prevention plan, actions taken in accordance with item "(b)" above, locations of discharges of sediment or other pollutants from the site, location of BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. The personnel making the inspections will sign these reports in accordance with 30 TAC § 305.128, see the included form.

Copies of the forms to be used for the Inspection and Maintenance report are included in the following pages as a part of this "SWPPP."

8.0 Non-Storm Water Discharges

Appropriate pollution prevention measures must be implemented for eligible non-storm water components of the discharge from the site including: discharges from firefighting activities, water from routine external washing of vehicles without soaps and detergents, water used for dust control, uncontaminated air conditioning condensate, uncontaminated groundwater, irrigation.

9.0 Responsibility of Operators

Primary and Secondary Operators with Control Over Construction Plans and Specifications. Also see Appendix E.

(a) ensure the project specifications allow or provide that adequate BMPs are developed to meet the requirements of Part III of TPDES General Permit TXR150000, effective March 5, 2018.

(b) ensure that the SWPPP indicates the areas of the project where Operators have control over project specifications, including the ability to make modifications in specifications.

(c) ensure all other operators affected by modifications in project specifications are

notified in a timely manner so that those operators may modify their BMPs as necessary to remain compliant with the conditions of TPDES General Permit TXR150000, effective March 5, 2018.

(d) ensure that the SWPPP for portions of the project where they are operators indicates the name and site specific TPDES authorization numbers for permittees with the day-to-day operational control over those activities necessary to ensure compliance with the SWP3 and other permit conditions. If the Operator with day-to-day operational control has not been authorized or has abandoned the site, the Operator with control over project specifications is considered to be the responsible party until the authority is transferred to another party and the SWP3 is updated.

LIBERTY HILL CREDIT UNION
STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT

PROJECT: _____
PHASE: _____
INSPECTOR: _____ DATE: _____
DAYS SINCE LAST RAINFALL: _____AMOUNT OF LAST RAINFALL: _____INCHES

STABILIZATION MEASURES

AREA	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED?	STABILIZED WITH	CONDITION
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

STABILIZATION REQUIRED: _____

_____

_____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____
WAS PERFORMED BY: _____ ON: _____

STRUCTURAL CONTROLS
INLET PROTECTION BARRIERS:

LOCATION	IN PLACE?/ CONDITION?	DEPTH OF SEDIMENT	CONDITION OF INLET
_____	_____	_____	_____
_____	_____	_____	_____

MAINTENANCE REQUIRED FOR INLET PROTECTION BARRIER: _____

_____

_____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____
WAS PERFORMED BY: _____
ON:_____

LIBERTY HILL CREDIT UNION
STRUCTURAL CONTROLS
FILTER FABRIC FENCE:

LOCATION	BOTTOM OF FABRIC STILL BURIED?	FABRIC TORN OR SAGGING?	POSTS TIPPING OVER?	HOW DEEP IS THE SEDIMENT?
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

MAINTENANCE REQUIRED FOR SILT FENCE: _____

_____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____
WAS PERFORMED BY: _____
ON:_____

STABILIZED CONSTRUCTION ENTRANCE/STAGING AREA:

DOES MUCH SEDIMENT GET TRACKED ONTO	ENTRY SURFACE CLEAN OR SEDIMENT FILLED?	DOES ALL TRAFFIC USE ENTRANCE? ROAD?
_____	_____	_____
_____	_____	_____

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE/STAGING AREA:

_____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____
WAS PERFORMED BY: _____
ON:_____

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN: _____

_____

REASONS FOR CHANGE: _____

_____

☐ **BASED ON MY INSPECTION, THE SITE IS IN GENERAL CONFORMANCE WITH THE SWPPP AND TPDES GENERAL PERMIT TXR150000.**

☐ **UPON COMPLETION OF THE ABOVE MAINTENANCE AND MODIFICATIONS, THE SITE WILL BE IN GENERAL CONFORMANCE WITH THE SWPPP AND TPDES GENERAL PERMIT TXR150000.**

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHEMENTS WERE PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OF PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

INSPECTOR'S SIGNATURE: _____ **DATE:** _____

TITLE/QUALIFICATION: _____

LIBERTY HILL CREDIT UNION

INSPECTOR CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____

Name: _____

Inspector: _____

Company: _____

Date: _____

LIBERTY HILL CREDIT UNION

STORM WATER POLLUTION PREVENTION PLAN (SWP3) CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed:

By: _____

Name: _____

Title: _____

Date: _____

LIBERTY HILL CREDIT UNION

CONTRACTOR/SUB-CONTRACTOR CERTIFICATION

Approximate location of Site:

Williamson County, located at 135 US-183, Liberty Hill, TX 78642. Bounded by US 183 to the west and SH 29 to the north.

Latitude: **30°39'5"N**
Longitude: **97°59'26"W**

I certify under penalty of law that I understand the terms and conditions of the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature:	For:	Responsible for:
_____		General Contractor: Construction of Commercial Buildings with associated Clearing, Grading, Parking, Drives, and Utilities.
Name:_____		
Title:_____		
Date:_____		

SWPPP Attachment A: Web Soil Survey

United States Department of Agriculture

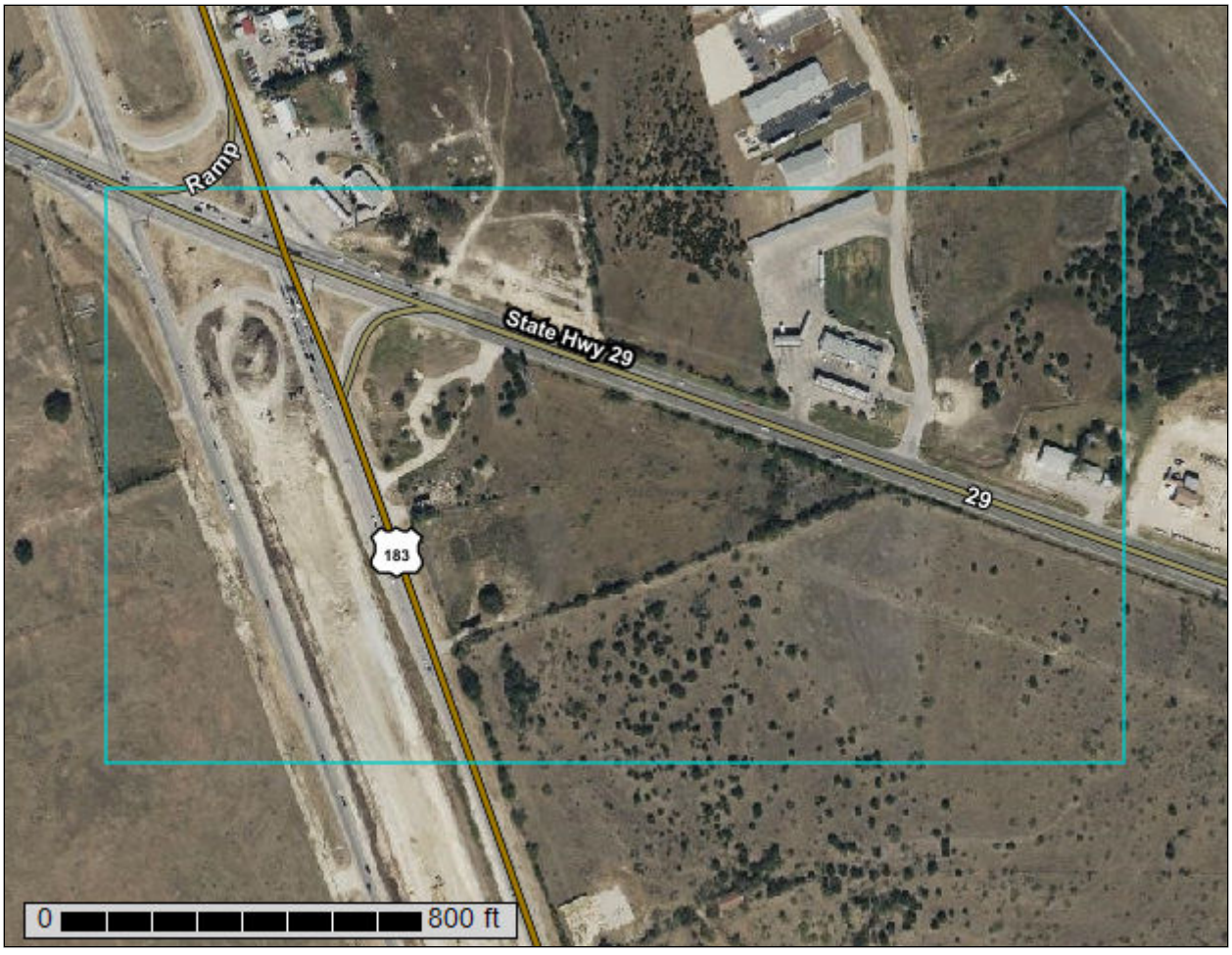
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Williamson County, Texas

Liberty Hill Credit Union



July 12, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

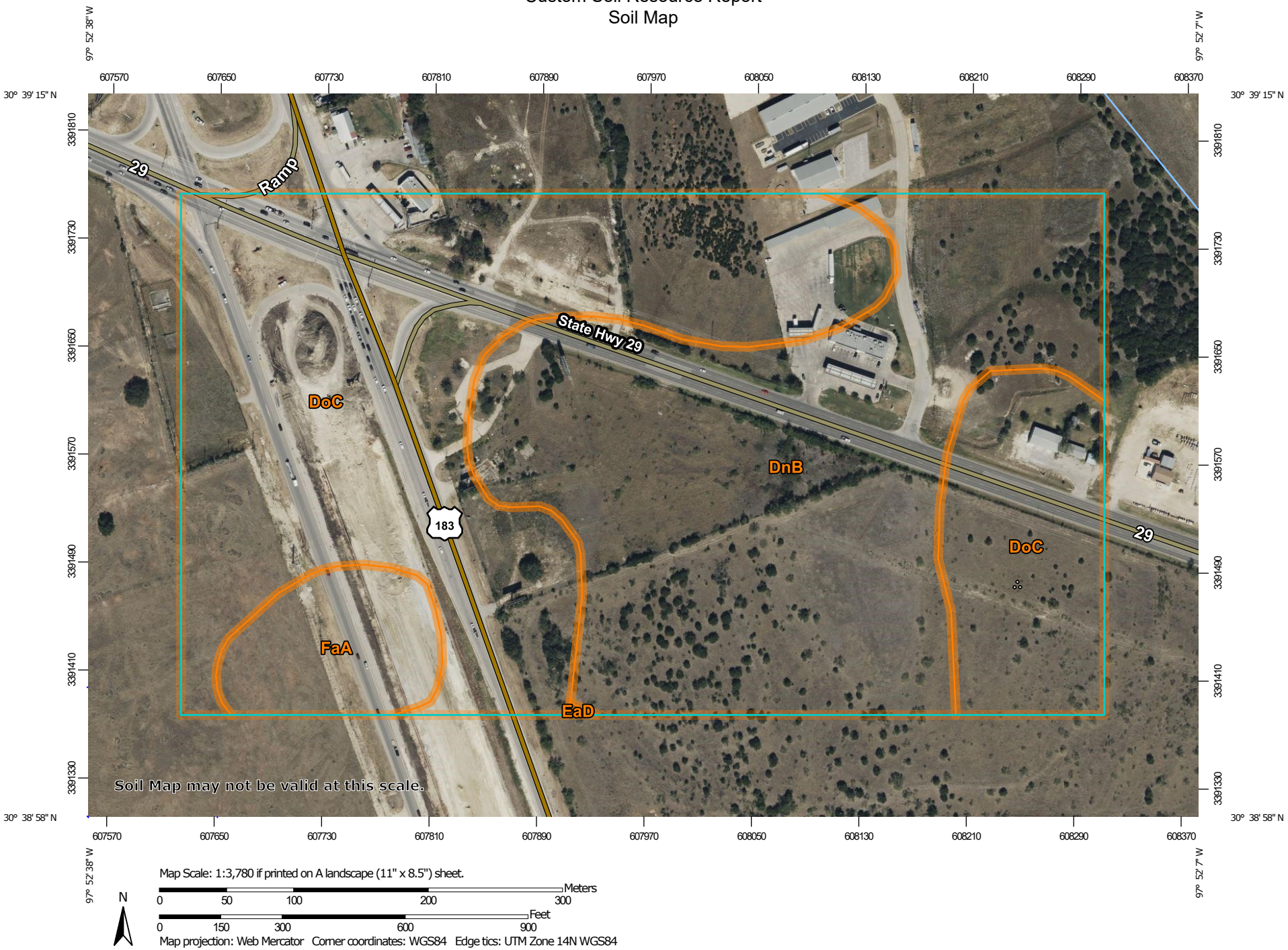
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Williamson County, Texas
Survey Area Data: Version 25, Aug 30, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DnB	Denton silty clay, 1 to 3 percent slopes	27.2	41.3%
DoC	Doss silty clay, moist, 1 to 5 percent slopes	34.8	52.9%
EaD	Eckrant cobbly clay, 1 to 8 percent slopes	0.0	0.0%
FaA	Fairlie clay, 0 to 1 percent slopes	3.8	5.8%
Totals for Area of Interest		**65.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Williamson County, Texas

DnB—Denton silty clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t26l
Elevation: 570 to 1,870 feet
Mean annual precipitation: 31 to 36 inches
Mean annual air temperature: 65 to 68 degrees F
Frost-free period: 220 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Denton and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Denton

Setting

Landform: Hillslopes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty and clayey slope alluvium over residuum weathered from limestone

Typical profile

A - 0 to 14 inches: silty clay
Bw - 14 to 25 inches: silty clay
Bk - 25 to 33 inches: silty clay
Ck - 33 to 36 inches: gravelly silty clay
R - 36 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 22 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: D
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Minor Components

Krum

Percent of map unit: 6 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Doss

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081BY343TX - Shallow 23-31 PZ
Hydric soil rating: No

Anhalt

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY358TX - Deep Redland 29-35 PZ
Hydric soil rating: No

DoC—Doss silty clay, moist, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2s0st
Elevation: 630 to 1,840 feet
Mean annual precipitation: 30 to 36 inches
Mean annual air temperature: 66 to 68 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Doss and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Doss

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A - 0 to 9 inches: silty clay
Bk - 9 to 17 inches: silty clay
Cr - 17 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: 11 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R081CY362TX - Steep Adobe 29-35 PZ
Hydric soil rating: No

Bolar

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY357TX - Clay Loam 29-35 PZ

Hydric soil rating: No

Eckrant

Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Purves

Percent of map unit: 1 percent
Landform: Plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

Denton

Percent of map unit: 1 percent
Landform: Plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

EaD—Eckrant cobbly clay, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t0sg
Elevation: 650 to 1,900 feet
Mean annual precipitation: 30 to 35 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 210 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant

Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 4 inches: cobbly clay
A2 - 4 to 11 inches: very cobbly clay
R - 11 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Surface area covered with cobbles, stones or boulders: 2.3 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Bexar

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Krum

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

FaA—Fairlie clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: djq0
Elevation: 550 to 850 feet
Mean annual precipitation: 30 to 42 inches
Mean annual air temperature: 64 to 68 degrees F
Frost-free period: 230 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Fairlie and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fairlie

Setting

Landform: Ridges
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from austin chalk formation

Typical profile

H1 - 0 to 8 inches: clay
H2 - 8 to 46 inches: clay
H3 - 46 to 54 inches: bedrock

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: D
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

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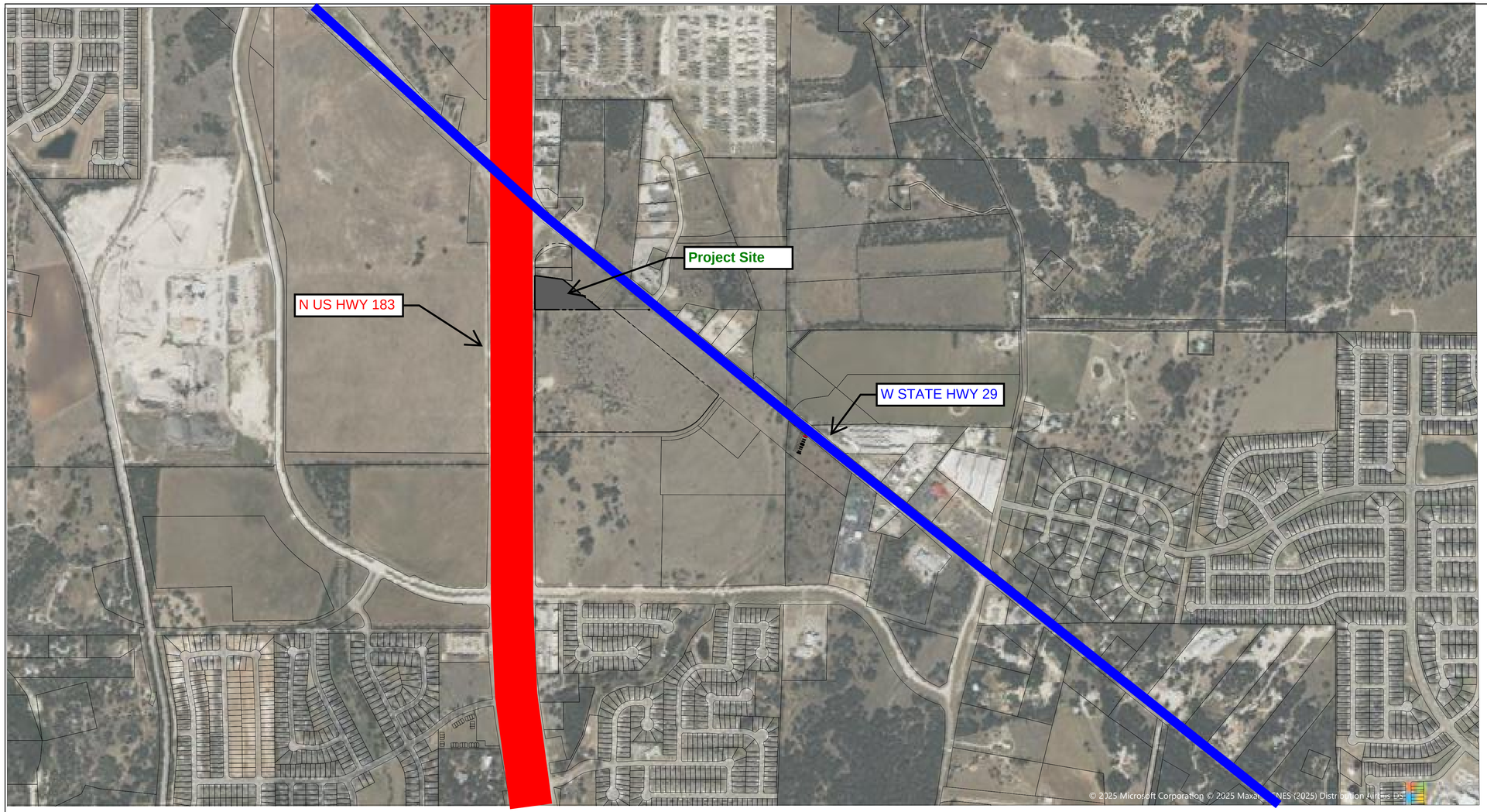
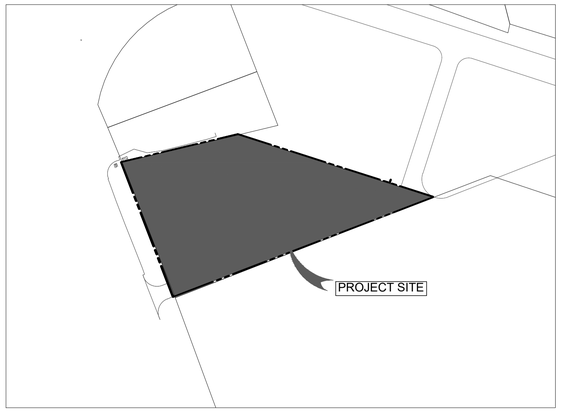
SWPPP Attachment B: Vicinity Map



500 0 250 500

SCALE: 1" = 500'



150 0 75 150

SCALE: 1" = 150'

LIBERTY HILL CREDIT UNION

ROADWAY MAP

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23296 & 10046100
3100 Alvin Devane Boulevard, Suite 150 • Austin, Texas 78741 • 512.441.9493

SCALE: 1" = 500'
DATE: 7/10/2025
JOB NO: 15234-0018-01

K:\15234\15234-0018-01 Liberty Hill Credit Union\2 Design Phase\CAD\Plans\Site\EXHIBIT\CZP ATTACHMENT A ROADWAY MAP.dwg

LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

SWPPP Attachment C: Grading Plan

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

DOC. 2007097184
O.P.R.W.C.T.

LOT 1, BLOCK A
FINAL PLAT OF LIBERTY CROSSINGS 183
CAB. EE SLIDE 32
O.P.R.W.C.T.

REMAINDER OF STARR CORNER SUBDIVISION
CAB. EE SLIDE 244
O.P.R.W.C.T.

B. BOYD REAL ESTATE, LLC
SPECIAL WARRANTY DEED
CALLED 2.661 ACRES
DOC. 2024070001
O.P.R.W.C.T.

VACATION AND RESUBDIVISION OF
HENRIETTA HIGHWAY 29
LOT 1A, BLOCK A
DOC. 2024057146
O.P.R.W.C.T.

APPROX. LOCATION OF ELECTRIC EASEMENT DOC. NO. 2021177566 O.P.R.W.C.T.

FOUND 1/2" IRON ROD "DIAMOND"

FOUND 1/2" IRON

N 76°31'54" E 251.00'

N 76°31'54" E 85.71'

S 72°13'37" E 429.28'

S 69°00'47" W 583.31'

N 21°02'18" W 301.60'

PROPERTY LINE DRAINAGE CHANNEL
N.T.S.

SCALE: 1" = 20'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

PROPOSED LEGEND

- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- 700 GROUND CONTOUR
- TC TOP OF CURB
- TP TOP OF PAVEMENT
- FG FINISHED GROUND
- TW TOP OF WALL
- TS TOP OF SIDEWALK
- ADA ROUTE
- DRAINAGE DITCH CENTERLINE

REVISIONS

No.	Date	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23294 & 10046100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: —
DATE: Oc - July 2025
JOB NO.: 152334-0018-01

DESIGNED BY: JYC
CHECKED BY: JMC
DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

GRADING PLAN

SHEET NO. **20** OF **28**

2025-XX-SDP

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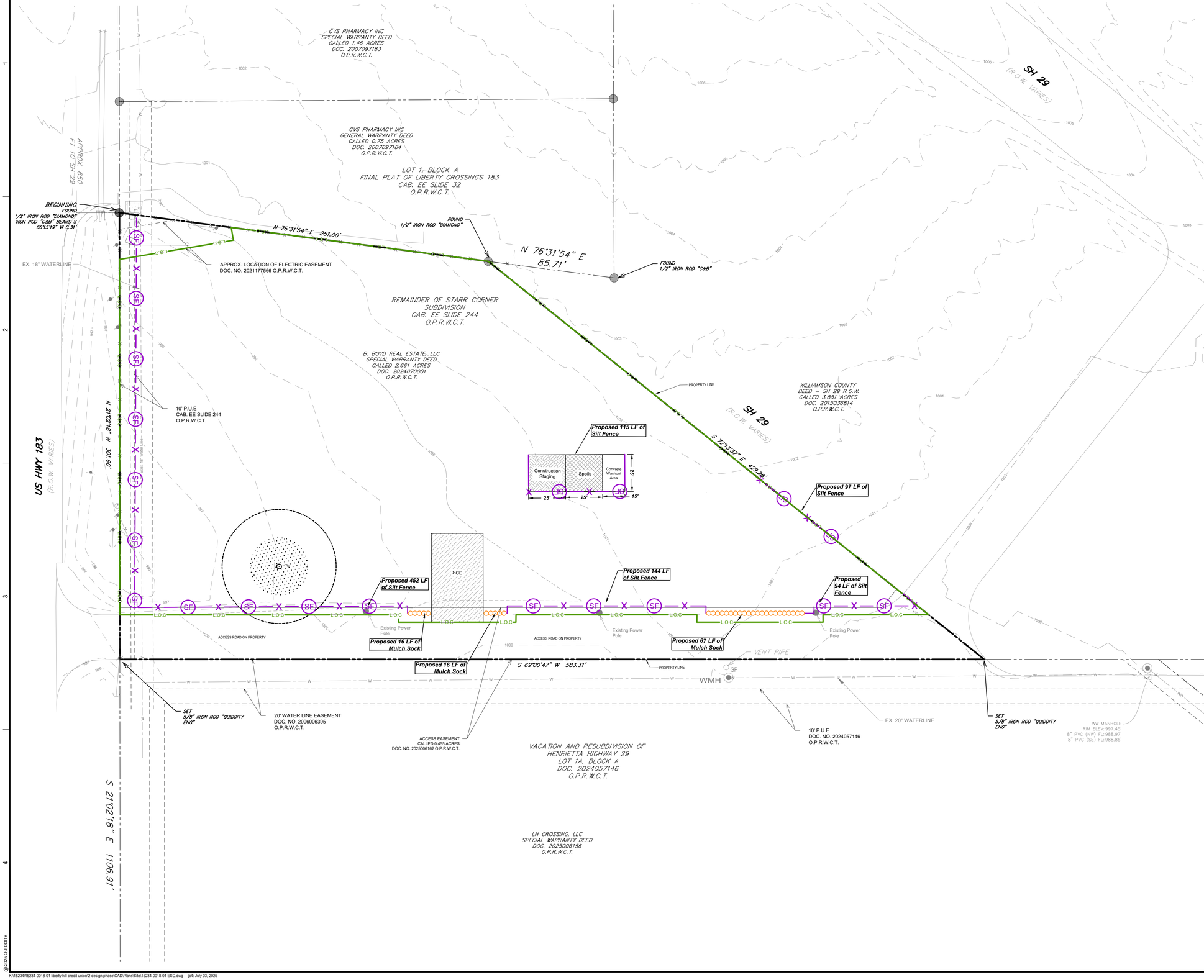
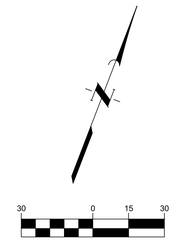
Attachment D: SWPPP & SWPPP Details

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.





EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

EROSION LEGEND

- SILT FENCE
- INLET PROTECTION
- ROCK BERM
- TREE PROTECTION
- MULCH LOG
- STABILIZED CONSTRUCTION ENTRANCE
- CONSTRUCTION STAGING AREA
- TEMPORARY SPOILS AREA

No.	Date	REVISIONS	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23294 & 10046100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: 30 SCALE
DATE: Oc - July 2025
JOB NO.: 152334-0018-01
DESIGNED BY: JYC
CHECKED BY: JMC
DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED
PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

PRE-CONSTRUCTION EROSION CONTROL PLAN

SHEET NO.
8 OF **28**

2025-XX-SDP

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THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CVS PHARMACY INC
SPECIAL WARRANTY DEED
CALLED 1.46 ACRES
DOC. 2007097183
O.P.R.W.C.T.

CVS PHARMACY INC
GENERAL WARRANTY DEED
CALLED 0.75 ACRES
DOC. 2007097184
O.P.R.W.C.T.

LOT 1, BLOCK A
FINAL PLAT OF LIBERTY CROSSINGS 183
CAB. EE SLIDE 32
O.P.R.W.C.T.

REMAINDER OF STARR CORNER
SUBDIVISION
CAB. EE SLIDE 244
O.P.R.W.C.T.

B. BOYD REAL ESTATE, LLC
SPECIAL WARRANTY DEED
CALLED 2.661 ACRES
DOC. 2024070001
O.P.R.W.C.T.

WILLIAMSON COUNTY
DEED – SH 29 R.O.W.
CALLED 3.881 ACRES
DOC. 2015036814
O.P.R.W.C.T.

VACATION AND RESUBDIVISION OF
HENRIETTA HIGHWAY 29
LOT 1A, BLOCK A
DOC. 2024057146
O.P.R.W.C.T.

LH CROSSING, LLC
SPECIAL WARRANTY DEED
DOC. 2025006156
O.P.R.W.C.T.

US HWY 183
(R.O.W. VARIES)

SH 29
(R.O.W. VARIES)

APPROX. 650 FT TO SH 29

BEGINNING
FOUND
1/2" IRON ROD "DIAMOND"
IRON ROD "CAB" BEARS S
66°15'19" W 0.31'

N 76°31'54" E 251.00'

FOUND
1/2" IRON ROD "DIAMOND"

N 76°31'54" E
85.71'

FOUND
1/2" IRON ROD "CAB"

S 27°13'37" E 429.28'

S 21°02'18" E 1106.91'

N 27°52'42" W 301.60'

S 69°00'47" W 583.31'

EX. 18" WATERLINE

25' FRONT BUILDING SETBACK

7' BUILDING SETBACK

PROPERTY LINE

APPROX. LOCATION OF ELECTRIC EASEMENT
DOC. NO. 2021177566 O.P.R.W.C.T.

PROPOSED WATERLINE EASEMENT
DOC #

10' P.U.E.
CAB. EE SLIDE 244
O.P.R.W.C.T.

Prop. Joint Use Access Easement
DOC #

FFE=1003.00

Proposed 2774 SF Building

Stacked Partial Sedimentation - Filtration & Detention Pond

Construction Staging

Spoils

Concrete Washout Area

Proposed 115 LF of Silt Fence

Proposed 97 LF of Silt Fence

Proposed 144 LF of Silt Fence

Proposed 94 LF of Silt Fence

Proposed 452 LF of Silt Fence

Proposed 26 LF of Rock Berm

Proposed 16 LF of Mulch Sock

Proposed 18 LF of Mulch Sock

Proposed 67 LF of Mulch Sock

SCE

Existing Power Pole

ACCESS ROAD ON PROPERTY

VENT PIPE

WMH

GP

SET
5/8" IRON ROD "QUIDDITY ENG"

20' WATER LINE EASEMENT
DOC. NO. 2006006395
O.P.R.W.C.T.

ACCESS EASEMENT
CALLED 0.455 ACRES
DOC. NO. 2025006162 O.P.R.W.C.T.

10' P.U.E
DOC. NO. 2024057146
O.P.R.W.C.T.

EX. 20" WATERLINE

WW MANHOLE
RIM ELEV: 997.45'
8" PVC (NW) FL: 988.97'
8" PVC (SE) FL: 988.85'

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

PROPOSED LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- LIMITS OF CONSTRUCTION

EROSION LEGEND

- SILT FENCE
- INLET PROTECTION
- ROCK BERM
- TREE PROTECTION
- MULCH LOG
- STABILIZED CONSTRUCTION ENTRANCE
- CONSTRUCTION STAGING AREA
- TEMPORARY SPOILS AREA

No.	Date	REVISIONS	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23004 & 10046100
9112 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78748 • 512.441.9493

SCALE: 30 SCALE
DATE: Oc - July 2025
JOB NO.: 152334-0018-01
DESIGNED BY: JYC
CHECKED BY: JMC
DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

MID-CONSTRUCTION EROSION CONTROL PLAN

SHEET NO.
9 OF **28**

2025-XX-SDP

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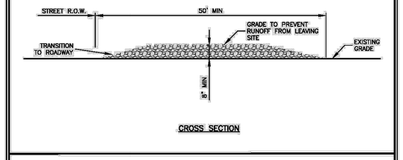


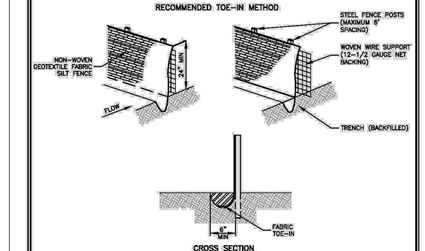
CROSS SECTION

NOTES:

1. STONE SIZE SHALL BE 3" – 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	STABILIZED CONSTRUCTION ENTRANCE DETAIL	EC–09

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)



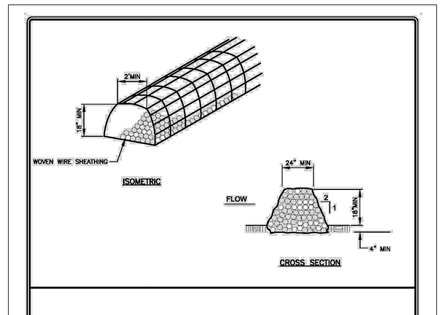
CROSS SECTION

NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1') FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	SILT FENCE DETAIL	EC–10

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)



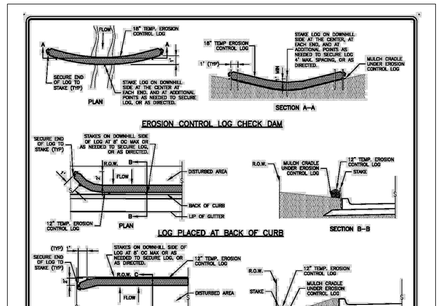
CROSS SECTION

NOTES:

1. USE ONLY OPEN GRADED ROCK (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. 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.
4. IF SEDIMENT REACHES A DEPTH OF 4", THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	ROCK BERM DETAIL	EC–12

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

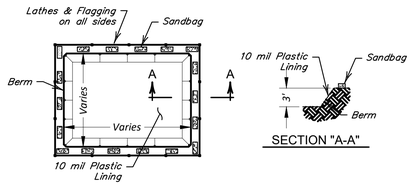


NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 6".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF LOGS DURING CONSTRUCTION TO ENSURE PROPER PERFORMANCE.
3. LOGS SHALL CONSIST OF 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE CONTAINMENT MESH, STUFFED WITH FILTER MATERIAL.
4. STUFF LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE DENSITY THAT WILL HOLD SHAPE WITHOUT EXCESSIVE DEFORMATION. FILTER MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR WOOD FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS,100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL, EXCLUDING STRAW AND HAY.
5. STAKES SHALL BE 2" X 2" WOOD, 4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED.

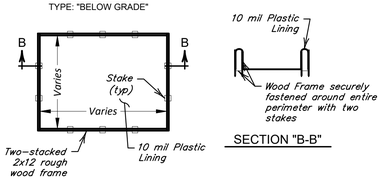
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	EROSION CONTROL LOG DETAIL	EC–17

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)



PLAN VIEW
TYPE: "BELOW GRADE"

SECTION "A-A"



PLAN VIEW
TYPE: "ABOVE GRADE"

SECTION "B-B"

CONCRETE WASHOUT AREA
(NTS)

NOTES:

1. Actual layout to be determined in the field.
2. Temporary concrete washout facility should be constructed 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.
3. The pit shall be located in an area easily accessible to construction traffic. The pit shall be located at least 50 feet from sensitive features, storm drains, open ditches, or water bodies and protected from storm water runoff.
4. When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. All materials used to construct the temporary facility should be removed from the site and disposed of. Holes, depressions or other ground disturbance caused by the removal of the temporary facilities should be backfilled and repaired.
5. Excess concrete shall not be disposed of within the pit.

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No.	Date	REVISIONS	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23004 & 10040100
9112 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78748 • 512.441.9493

SCALE: ____ DESIGNED BY: JYC
DATE: Oc – July 2025 CHECKED BY: JMC
JOB NO.: 152334-0018-01 DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

EROSION CONTROL DETAILS

SHEET NO.
22 OF **28**

2025-XX-SDP

SWPPP Appendix A

General Permit to Discharge Under the Texas Pollutant Discharge Elimination System

Stormwater Discharges Associated with Construction Activities

TXR150000

Effective March 5, 2018

printed on recycled paper

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Texas Commission on Environmental Quality

P.O. Box 13087, Austin, Texas 78711-3087

GENERAL PERMIT TO DISCHARGE UNDER THE

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

This permit supersedes and replaces
TPDES General Permit No. TXR150000, issued March 5, 2013

Construction sites that discharge stormwater associated with construction activity

located in the state of Texas

may discharge to surface water in the state

only according to monitoring requirements and other conditions set forth in this general permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ or Commission), the laws of the State of Texas, and other orders of the Commission of the TCEQ. The issuance of this general permit does not grant to the permittee the right to use private or public property for conveyance of stormwater and certain non-stormwater discharges along the discharge route. This includes property belonging to but not limited to any individual, partnership, corporation or other entity. Neither does this general permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This general permit and the authorization contained herein shall expire at midnight, five years from the permit effective date.

EFFECTIVE DATE: March 5, 2018

ISSUED DATE: 2-8-18

Bryan W. Shaw

For the Commission

SWPPP Appendix B

SMALL CONSTRUCTION SITE NOTICE

FOR THE
Texas Commission on Environmental Quality (TCEQ)
Stormwater Program

TPDES GENERAL PERMIT TXR150000

The following information is posted in compliance with **Part II.E.2.** of the TCEQ General Permit Number TXR150000 for discharges of stormwater runoff from small construction sites. Additional information regarding the TCEQ stormwater permit program may be found on the internet at:

https://www.tceq.texas.gov/permitting/stormwater/construction

Operator Name:	
Contact Name and Phone Number:	
Project Description: *Physical address or description of the site's location, estimated start date and projected end date, or date that disturbed soils will be stabilized*	
Location of Stormwater Pollution Prevention Plan:	

For Small Construction Activities Authorized Under Part II.E.2. (Obtaining Authorization to Discharge) the following certification must be completed:

I _____ (Typed or Printed Name Person Completing This Certification) certify under penalty of law that I have read and understand the eligibility requirements for claiming an authorization under Part II.E.2. of TPDES General Permit TXR150000 and agree to comply with the terms of this permit. A stormwater pollution prevention plan has been developed and will be implemented prior to construction, according to permit requirements. A copy of this signed notice is supplied to the operator of the MS4 if discharges enter an MS4. I am aware there are significant penalties for providing false information or for conducting unauthorized discharges, including the possibility of fine and imprisonment for knowing violations.

Signature and Title_____ Date _____

_____ *Date Notice Removed*

____*MS4 operator notified per Part II.F.3.*

SWPPP Appendix C

Last Update: 1/15/2025

WILLIAMSON COUNTY

AMPHIBIANS

Barton Springs salamander *Eurycea sosorum*

Aquatic; springs, streams and caves with rocky or cobble beds.

Federal Status: E	State Status: E	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

Georgetown salamander *Eurycea naufragia*

Aquatic; springs, streams and caves with rocky or cobble beds.

Federal Status: T	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

Jollyville Plateau salamander *Eurycea tonkawae*

Aquatic; springs, streams and caves with rocky or cobble beds.

Federal Status: T	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

Salado Springs salamander *Eurycea chisholmensis*

Aquatic; springs, streams and caves with rocky or cobble beds.

Federal Status: T	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

southern crawfish frog *Lithobates areolatus areolatus*

Terrestrial and aquatic: The terrestial habitat is primarily grassland and can vary from pasture to intact prairie; it can also include small prairies in the middle of large forested areas. Aquatic habitat is any body of water but preferred habitat is ephemeral wetlands.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4T4	State Rank: S3

Strecker's chorus frog *Pseudacris streckeri*

Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Woodhouse's toad *Anaxyrus woodhousii*

Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

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WILLIAMSON COUNTY

ARACHNIDS

Bone Cave harvestman *Texella reyesi*

Small, blind, cave-adapted harvestman endemic to several caves in Travis and Williamson counties; weakly differentiated from Texella reddelli

Federal Status: E	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S2

No accepted common name *Tartarocreagris infernalis*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S1

No accepted common name *Cicurina browni*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1

No accepted common name *Cicurina travisae*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2Q	State Rank: SU

No accepted common name *Cicurina vibora*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: SU

No accepted common name *Eidmannella reclusa*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S2

Reddell harvestman *Texella reddelli*

Small, blind, cave-adapted harvestman endemic to a few caves in Travis and Williamson counties

Federal Status: E	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S2

BIRDS

bald eagle *Haliaeetus leucocephalus*

Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

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WILLIAMSON COUNTY

BIRDS

Federal Status: | State Status: | SGCN: N
Endemic: N | Global Rank: G5 | State Rank: S3B,S3N

Bank Swallow *Riparia riparia*

Bank Swallows live in low areas along rivers, streams, ocean coasts, and reservoirs. Their territories usually include vertical cliffs or banks where they nest in colonies of 10 to 2,000 nests. Though in the past Bank Swallows were most commonly found around natural bluffs or eroding streamside banks, they now often nest in human-made sites, such as sand and gravel quarries or road cuts. They forage in open areas and avoid places with tree cover.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S2B,S4N

black rail *Laterallus jamaicensis*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: T | State Status: T | SGCN: Y
Endemic: N | Global Rank: G3 | State Rank: S2

black-capped vireo *Vireo atricapilla*

Oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S3B

Brewer's Blackbird *Euphagus cyanocephalus*

Shrubby and bushy areas (especially near water), riparian woodland, aspen parklands, cultivated lands, marshes, and around human habitation; in migration and winter also in pastures and fields (AOU 1983).

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S5

Brown Pelican *Pelecanus occidentalis*

Largely coastal and near shore areas, where it roosts and nests on islands and spoil banks. Feeds in lagunas and shallow seaward waters.

Federal Status: | State Status: | SGCN: N
Endemic: N | Global Rank: G4 | State Rank: S3B

Cactus Wren *Campylorhynchus brunneicapillus*

Desert (especially with cholla cactus or yucca), mesquite, arid scrub, coastal sage scrub, and in trees in towns in arid regions (Tropical to Subtropical zones) (AOU 1983). Nests in OPUNTIA cactus, or in twiggy, thorny, trees and shrubs, sometimes in buildings. Nest may be relined and used as a winter roost.

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WILLIAMSON COUNTY

BIRDS

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S4B

chestnut-collared longspur *Calcarius ornatus*

Occurs in open shortgrass settings especially in patches with some bare ground. Also occurs in grain sorghum fields and Conservation Reserve Program lands

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S3

Common Grackle *Quiscalus quiscula*

Common Grackles do well in human landscapes, using scattered trees for nesting and open ground for foraging. Typical natural habitats include open woodland, forest edge, grassland, meadows, swamps, marshes, and palmetto hammocks. They are also very common near agricultural fields and feedlots, suburbs, city parks, cemeteries, pine plantations, and hedgerows. Unbroken tracts of forest are the only places where you are unlikely to find Common Grackles.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S5B

Common Nighthawk *Chordeiles minor*

Common Nighthawks nest in both rural and urban habitats including coastal sand dunes and beaches, logged forest, recently burned forest, woodland clearings, prairies, plains, sagebrush, grasslands, open forests, and rock outcrops. They also nest on flat gravel rooftops, though less often as gravel roofs are being replaced by smooth, rubberized roofs that provide an unsuitable surface.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S4B

Franklin's gull *Leucophaeus pipixcan*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S2N

golden-cheeked warbler *Setophaga chrysoparia*

Ashe juniper in mixed stands with various oaks (Quercus spp.). Edges of cedar brakes. Dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.

Federal Status: E | State Status: E | SGCN: Y
Endemic: N | Global Rank: G2 | State Rank: S2S3B

interior least tern *Sternula antillarum athalassos*

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WILLIAMSON COUNTY

BIRDS

Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Federal Status: | State Status: E | SGCN: N
Endemic: N | Global Rank: G4T3Q | State Rank: S1B

lark bunting *Calamospiza melanocorys*

Overall, it's a generalist in most short grassland settings including ones with some brushy component plus certain agricultural lands that include grain sorghum. Short grasses include sideoats and blue gramas, sand dropseed, prairie junegrass (Koeleria), buffalograss also with patches of bluestem and other mid-grass species. This bunting will frequent smaller patches of grasses or disturbed patches of grasses including rural yards. It also uses weedy fields surrounding playas. This species avoids urban areas and cotton fields.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S4B

Least Tern *Sternula antillarum*

Sand beaches, flats, bays, inlets, lagoons, islands, river sandbars and flat gravel rooftops in urban areas.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: S2B

Loggerhead Shrike *Lanius ludovicianus*

Loggerhead Shrikes inhabit open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries. Loggerhead Shrikes are often seen along mowed roadsides with access to fence lines and utility poles.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: S4B

Mottled Duck *Anas fulvigula*

Estuaries, ponds, lakes, secondary bays.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: S4B

mountain plover *Charadrius montanus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G3 | State Rank: S2

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WILLIAMSON COUNTY

BIRDS

Northern Bobwhite *Colinus virginianus*

Inhabits a wide variety of vegetation types, particularly early successional stages. Occurs in croplands, grasslands, pastures, fallow fields, grass-brush rangelands, open pinelands, open mixed pine-hardwood forests, and habitat mosaics (Brennan 1999).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S4B

piping plover *Charadrius melodus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2N

Pyrrhuloxia *Cardinalis sinuatus*

Pyrrhuloxias live in upland deserts, mesquite savannas, riparian (streamside) woodlands, desert scrublands, farm fields with hedgerows, and residential areas with nearby mesquite. When not breeding, some Pyrrhuloxias wander into urban habitats, mesquite-hackberry habitats, and riparian habitats with Arizona sycamore and cottonwood.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

rufa red knot *Calidris canutus rufa*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore. Bolivar Flats in Galveston County, sandy beaches Mustang Island, few on outer coastal and barrier beaches, tidal mudflats and salt marshes.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4T2	State Rank: S2N

Sanderling *Calidris alba*

Nonbreeding: primarily sandy beaches, less frequently on mud flats and shores of lakes or rivers (AOU 1983) also on exposed reefs (Pratt et al. 1987). Sleeps/loafs on upper beach or on salt pond dike.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Snowy Plover *Charadrius nivosus*

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WILLIAMSON COUNTY

BIRDS

Algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. An optimal site characteristic would be large in size. The size of populations appear to be roughly proportional to the total area of suitable habitat used. Formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3B

Sprague's pipit *Anthus spragueii*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat during migration and in winter consists of pastures and weedy fields (AOU 1983), including grasslands with dense herbaceous vegetation or grassy agricultural fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3N

swallow-tailed kite *Elanoides forficatus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Lowland forested regions, especially swampy areas, ranging into open woodland; marshes, along rivers, lakes, and ponds; nests high in tall tree in clearing or on forest woodland edge, usually in pine, cypress, or various deciduous trees.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2B

western burrowing owl *Athene cunicularia hypugaea*

Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G4T4	State Rank: S2

white-faced ibis *Plegadis chihi*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: N
Endemic: N	Global Rank: G5	State Rank: S4B

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WILLIAMSON COUNTY

BIRDS

whooping crane *Grus americana*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1S2N

Willet *Tringa semipalmata*

Marshes, tidal mudflats, beaches, lake margins, mangroves, tidal channels, river mouths, coastal lagoons, sandy or rocky shores, and, less frequently, open grassland (AOU 1983, Stiles and Skutch 1989).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5B

Wilson's Warbler *Cardellina pusilla*

Wilson’s warblers key in on forests and scrubby areas along streams to fatten up during migration. During the nonbreeding season they use many types of habitats from lowland thickets near streams to high-elevation cloud forests in Mexico and Central America.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

wood stork *Mycteria americana*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers to nest in large tracts of baldcypress (Taxodium distichum) or red mangrove (Rhizophora mangle); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: SHB,S3N

Yellow Rail *Coturnicops noveboracensis*

BREEDING: Emergent wetlands, grass or sedge marshes and wet meadows in freshwater situations. Some breeding territories in these wet meadows contain firm footing and only a few remnant pools of water (Berkey 1991). These areas can range from damp to 38 cm (15 inches) of water but the average depth used for nesting is 8 to 15 cm (3 to 6 inches) (Savaloja 1981). NON-BREEDING: Grain fields in winter and when migrating. Winters in both freshwater and brackish marshes, as well as in dense, deep grass. During fall migration, will use many open habitats, from rice paddies to dry hayfields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3N

yellow-billed cuckoo *Coccyzus americanus*

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WILLIAMSON COUNTY

BIRDS

In Texas, the populations of concern are found breeding in riparian areas in the Trans Pecos (know as part of the Western Distinct Population Segment). It is the Western DPS that is on the U.S. ESA threatened list and includes the Texas counties Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, and Presidio. Riparian woodlands below 6,000' in elevation consisting of cottonwoods and willows are prime habitat. This species is a long-distant migrant that summers in Texas, but winters mainly in South America. Breeding birds of the Trans Pecos populations typically arrive on their breeding grounds possibly in late April but the peak arrival time is in May. Threats to preferred habitat include hydrologic changes that don't promote the regeneration of cottonwoods and willows, plus livestock browsing and trampling of sapling trees in sensitive riparian areas.

Federal Status: T	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4S5B

CRUSTACEANS

Bifurcated Cave Amphipod *Stygobromus bifurcatus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3

FISH

Guadalupe bass *Micropterus treculii*

Endemic to the streams of the northern and eastern Edwards Plateau including portions of the Brazos, Colorado, Guadalupe, and San Antonio basins; species also found outside of the Edwards Plateau streams in decreased abundance, primarily in the lower Colorado River; two introduced populations have been established in the Nueces River system. A pure population was re-established in a portion of the Blanco River in 2014. Species prefers lentic environments but commonly taken in flowing water; numerous smaller fish occur in rapids, many times near eddies; large individuals found mainly in riffle tail races; usually found in spring-fed streams having clear water and relatively consistent temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Texas shiner *Notropis amabilis*

In Texas, it is found primarily in Edwards Plateau streams from the San Gabriel River in the east to the Pecos River in the west. Typical habitat includes rocky or sandy runs, as well as pools.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

INSECTS

American bumblebee *Bombus pensylvanicus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G3G4	State Rank: SNR

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WILLIAMSON COUNTY

INSECTS

Coffin Cave mold beetle *Batrisodes texanus*

Resident, small, cave-adapted beetle found in small Edwards Limestone caves in Travis and Williamson counties

Federal Status: E	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1

Coffin Cave mold beetle *Batrisodes cryptotexanus*

Resident, small, cave-adapted beetle found in small Edwards Limestone caves in Travis and Williamson counties.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G2	State Rank: S1

Kretschmarr Cave mold beetle *Texamaurops reddelli*

Small, cave-adapted beetle found under rocks buried in silt; small, Edwards Limestone caves in of the Jollyville Plateau, a division of the Edwards Plateau

Federal Status: E	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1

migratory monarch butterfly *Danaus plexippus plexippus*

Habitat description is not available at this time.

Federal Status: C	State Status:	SGCN: Y
Endemic:	Global Rank: G4T3	State Rank: SNR

No accepted common name *Bombus variabilis*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1G2	State Rank: SNR

No accepted common name *Lymantes nadineae*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: GNR	State Rank: S2

No accepted common name *Procloeon distinctum*

Mayflies distinguished by aquatic larval stage; adult stage generally found in shoreline vegetation

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G3Q	State Rank: S2?

No accepted common name *Pseudocentroptiloides morihari*

Mayflies distinguished by aquatic larval stage; adult stage generally found in shoreline vegetation

Federal Status:	State Status:	SGCN: Y

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WILLIAMSON COUNTY

INSECTS

Endemic: Y | Global Rank: G2G3 | State Rank: S2?

No accepted common name *Oncopodura fenestra*

Habitat description is not available at this time.

Federal Status: | State Status: | SGCN: Y

Endemic: Y | Global Rank: G2G3 | State Rank: S2?

No accepted common name *Rhadine noctivaga*

Habitat description is not available at this time.

Federal Status: | State Status: | SGCN: Y

Endemic: Y | Global Rank: G1G2 | State Rank: S1

No accepted common name *Rhadine russelli*

Habitat description is not available at this time.

Federal Status: | State Status: | SGCN: Y

Endemic: Y | Global Rank: G1G2 | State Rank: S3

No accepted common name *Rhadine subterranea*

Habitat description is not available at this time.

Federal Status: | State Status: | SGCN: Y

Endemic: Y | Global Rank: G2 | State Rank: S2

Tooth Cave ground beetle *Rhadine persephone*

Resident, small, cave-adapted beetle found in small Edwards Limestone caves in Travis and Williamson counties

Federal Status: E | State Status: | SGCN: Y

Endemic: Y | Global Rank: G1G2 | State Rank: S1

MAMMALS

big free-tailed bat *Nyctinomops macrotis*

Habitat data sparse but records indicate that species prefers to roost in crevices and cracks in high canyon walls, but will use buildings, as well; reproduction data sparse, gives birth to single offspring late June-early July; females gather in nursery colonies; winter habits undetermined, but may hibernate in the Trans-Pecos; opportunistic insectivore

Federal Status: | State Status: | SGCN: Y

Endemic: N | Global Rank: G5 | State Rank: S3

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WILLIAMSON COUNTY

MAMMALS

cave myotis bat *Myotis velifer*

Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (Hirundo pyrrhonota) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore.

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G4G5 State Rank: S2S3

eastern spotted skunk *Spilogale putorius*

Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G4 State Rank: S1S3

hoary bat *Lasiurus cinereus*

Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G3G4 State Rank: S3

mountain lion *Puma concolor*

Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian zones.

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G5 State Rank: S2S3

plains spotted skunk *Spilogale interrupta*

Generalist; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G3 State Rank: S1S3

Seminole bat *Lasiurus seminolus*

Pine-oak and long-leaf pine in east Texas. Habitats include pine, mixed pine-hardwood, and hardwood forests of uplands and bottomlands, particularly pine-dominated forests, including mature pine and pine-hardwood corridors in managed pine forest landscapes (Menzel et al. 1998, 1999, 2000; Carter et al. 2004; Marks and Marks 2006; Perry and Thill 2007; Perry et al. 2007; Hein et al. 2008; Ammerman et al. 2012).

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G5 State Rank: S3

tricolored bat *Perimyotis subflavus*

Forest, woodland and riparian areas are important. Caves are very important to this species.

Federal Status: PE State Status: SGCN: Y

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WILLIAMSON COUNTY

MAMMALS

Endemic: N | Global Rank: G3G4 | State Rank: S2

MOLLUSKS

Balcones spike *Fusconaia iheringi*

Habitat not yet described.

Federal Status: E | State Status: E | SGCN: Y

Endemic: Y | Global Rank: G1 | State Rank: SNR

Brazos heelsplitter *Potamilus streckersoni*

Reported from streams, but not far into the headwaters, to large rivers, and some reservoirs. In riverine systems occurs most often in nearshore habitats such as banks and backwater pools but occasionally in mainchannel habitats such as riffles. Typically found in standing to slow-flowing water in soft substrates consisting of silt, mud or sand but occasionally in moderate flows with gravel and cobble substrates (Randklev et al. 2014b,c; Tsakiris and Randklev 2016b; Smith et al. 2019) [Mussels of Texas 2020]

Federal Status: | State Status: T | SGCN: Y

Endemic: Y | Global Rank: GNR | State Rank: SNR

false spike *Fusconaia mitchelli*

Occurs in small streams to medium-size rivers in habitats such as riffles and runs with flowing water. Is often found in stable substrates of sand, gravel, and cobble (Howells 2010; Randklev et al. 2012; Sowards et al. 2013; Tsakiris and Randklev 2016). [Mussels of Texas 2019]

Federal Status: E | State Status: E | SGCN: Y

Endemic: N | Global Rank: G1 | State Rank: S1

Mapleleaf *Quadrula quadrula*

Reported from streams to rivers, lakes, and reservoirs. In riverine habitats, it may be found in main-channel habitats such as riffles or runs in sand, gravel, and cobble substrates with moderate to swift currents. May also be found in nearshore habitats such as banks and backwaters to include pools in sand or mud substrates with little to no flow. (Williams et al. 2008; Howells 2016; Haag and Cicerello 2016).

Federal Status: | State Status: | SGCN: Y

Endemic: N | Global Rank: G5 | State Rank: S3

Pimpleback *Cyclonaias pustulosa*

Occurs in small streams to large rivers in habitats including riffles and runs with flowing water, also found in nearshore habitats such as banks and backwaters or pools. Can occur in reservoirs but varies based by population. Is often found in substrates comprising of sand, gravel, and cobble but also mud and silt (Howells et al. 1996; Williams et al. 2008; Watters et al. 2009).

Federal Status: | State Status: | SGCN: Y

Endemic: N | Global Rank: G5 | State Rank: SNR

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WILLIAMSON COUNTY

MOLLUSKS

Pistolgrip *Tritogonia verrucosa*

Reported from streams to rivers, lakes, and reservoirs, but considered less tolerant of impoundment (Haag and Cicerello 2016). Can occur in a variety of habitat types but most often found in main channel habitats such as riffles and runs with moderate current and sand, gravel, or cobble substrates (Howells et al. 1996; Williams et al. 2008).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3S4

Tampico Pearlymussel *Cyrtonaias tampicoensis*

Reported from streams to rivers, reservoirs, and canals. In riverine habitats often found in nearshore habitats such as banks and backwaters, to include pools and oxbows, in mud or sand or among cobble and boulders with still to moderate currents (Howells et al. 1996).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

Texas fawnsfoot *Truncilla macrodon*

Occurs in large rivers but may also be found in medium-sized streams. Is found in protected near shore areas such as banks and backwaters but also riffles and point bar habitats with low to moderate water velocities. Typically occurs in substrates of mud, sandy mud, gravel and cobble. Considered intolerant of reservoirs (Randklev et al. 2010; Howells 2010o; Randklev et al. 2014b,c; Randklev et al. 2017a,b). [Mussels of Texas 2019]

Federal Status: T	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S2

REPTILES

American alligator *Alligator mississippiensis*

Aquatic: Coastal marshes; inland natural rivers, swamps and marshes; manmade impoundments.

Federal Status: SAT	State Status:	SGCN: N
Endemic: N	Global Rank: G5	State Rank: S4

common garter snake *Thamnophis sirtalis*

Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams or marshes. Damp soils and debris for cover are thought to be critical.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2

eastern box turtle *Terrapene carolina*

Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

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WILLIAMSON COUNTY

REPTILES

slender glass lizard *Ophisaurus attenuatus*

Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

Texas map turtle *Graptemys versa*

Aquatic: Primarily a river turtle but can also be found in reservoirs. Can be found in deep and shallow water with sufficient basking sites (emergent rocks and woody debris).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G4	State Rank: SU

western box turtle *Terrapene ornata*

Terrestrial: Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

western chicken turtle *Deirochelys reticularia miaria*

Aquatic and terrestrial: This species uses aquatic habitats in the late winter, spring and early summer and then terrestrial habitats the remainder of the year. Preferred aquatic habitats seem to be highly vegetated shallow wetlands with gentle slopes. Specific terrestrial habitats are not well known.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5T5	State Rank: S2S3

PLANTS

bigflower cornsalad *Valerianella stenocarpa*

Usually along creekbeds or in vernally moist grassy open areas (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

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WILLIAMSON COUNTY

PLANTS

Elmendorf's onion *Allium elmendorfii*

Grassland openings in oak woodlands on deep, loose, well-drained sands; in Coastal Bend, on Pleistocene barrier island ridges and Holocene Sand Sheet that support live oak woodlands; to the north it occurs in post oak-black hickory-live oak woodlands over Queen City and similar Eocene formations; one anomalous specimen found on Llano Uplift in wet pockets of granitic loam; Perennial; Flowering March-April, May

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

glandular gay-feather *Liatris glandulosa*

Occurs in herbaceous vegetation on limestone outcrops (Carr 2015). Flowering: July-Oct.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

gravelbar brickellbush *Brickellia dentata*

Essentially restricted to frequently-scoured gravelly alluvial beds in creek and river bottoms; Perennial; Flowering June-Nov; Fruiting June-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Greenman's bluet *Houstonia parviflora*

Grass pastures. Feb- Apr. (Correll and Johnston 1970).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Heller's marbleseed *Onosmodium helleri*

Occurs in loamy calcareous soils in oak-juniper woodlands on rocky limestone slopes, often in more mesic portions of canyons; Perennial; Flowering March-May

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Plateau loosestrife *Lythrum ovalifolium*

Banks and gravelly beds of perennial (or strong intermittent) streams on the Edwards Plateau, Llano Uplift and Lampasas Cutplain; Perennial; Flowering/Fruiting April-Nov

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3S4

plateau milkvine *Matelea edwardsensis*

Occurs in various types of juniper-oak and oak-juniper woodlands; Perennial; Flowering March-Oct; Fruiting May-June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

scarlet leather-flower *Clematis texensis*

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WILLIAMSON COUNTY

PLANTS

Usually in oak-juniper woodlands in mesic rocky limestone canyons or along perennial streams; Perennial; Flowering March-July; Fruiting May-July

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Texas almond *Prunus minutiflora*

Wide-ranging but scarce, in a variety of grassland and shrubland situations, mostly on calcareous soils underlain by limestone but occasionally in sandier neutral soils underlain by granite; Perennial; Flowering Feb-May and Oct; Fruiting Feb-Sept

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Texas claret-cup cactus *Echinocereus coccineus var. paucispinus*

Mountains, hills, and mesas, igneous and limestone, oak-juniper-pinyon woodland or juniper woodland on limestone mesas, mostly rocky habitats but also in alluvial basins, grasslands, or among mesquite or other shrubs. Flowering March - April (Powell and Weedin 2004).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5T3	State Rank: S3

Wright's milkvetch *Astragalus wrightii*

On sandy or gravelly soils; Flowering/fruiting: April and May

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

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SWPPP Appendix D

Product Specific Practices

The following product specific practices will be followed onsite:

Petroleum Products:

All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked in the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturers' instructions or state and local regulations.

Spill Prevention Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.

- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.

- All spills will be cleaned up immediately after discovery.

- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

- Spills of toxic or hazardous material will be reported to the Owner and to the appropriate State or local government agency, regardless of the size.

- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.

- The site superintendent responsible for the day-to-day site operations will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the office trailer onsite.

SWPPP Appendix E

PROJECT RESPONSIBILITY CHART

Construction Project or Site Name: Civil Site Services for Georgetown Credit Union

Any operator conducting under the Storm Water Pollution Prevention Plan (SWPPP) is entirely responsible for meeting SWPPP requirements within the boundaries of the construction site where they perform construction activities. The purpose of this chart is to identify the Best Management Practice responsibilities of any operator conducting under the SWPPP and to define the scope of inspections. If the party with day-to-day operational control has abandoned the site, the person with control over project specifications is considered to be the responsible party until the authority is transferred to another party and the SWPPP is updated.

	Operator(s) conducting under the SWPPP	**Other Operator(s)**		
Name	**Construction Services of Texas**			
Type	**Contractor**			
Scope	**Georgetown Credit Union**			
Commencement of Construction Activity	TBD	TBD	N/A	N/A
Silt Fences	**X**			
Berms	**X**			
Sedimentation Basins	**X**			
Rock Dams				
Stabilized Construction Access	**X**			
Stage I Inlet Protection Barriers	**X**			
Stage II Inlet Protection Barriers	**X**			
Surge Dams				
Existing Vegetation	**X**			
Dust Control	**X**			
Material Storage	**X**			
Equipment Storage	**X**			
Waste Disposal	**X**			
Spills and Leaks	**X**			
Concrete Truck Washout	**X**			
Sanitation Facilities	**X**			
Petroleum Product Storage				
Dewatering Bags				
Velocity Dissipation Devices	**X**			
Establishment of Temporary Stabilization	**X**			
Establishment of Permanent Stabilization	**X**			

Appendix A: Drainage Area Maps

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

$P_2 =$ 3.94 *in.*

$$t_{ch} = \frac{0.007(n_{ch} L_{ch})^{0.8}}{P_2^{0.5} S_{ch}^{0.4}} \qquad t_{sc} = \frac{L_{sc}}{3600\, K S_{sc}^{0.5}} \qquad t_{ch} = \frac{L_{ch}}{\left(3600 \frac{1.49}{n} R^{2/3} S_{ch}^{1/2}\right)}$$

DA	IC	Area	Total Length	L_{ch} sheet flow length	S_{ch} flow slope (ft/ft)	surface description	P_2 2-yr, 24-hr rainfall depth (in.)	n_{ol} overland flow roughness coeff.	t_{ch} sheet flow travel time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 16.13 - unpaved sufr.	t_{sc} shallow conc. flow time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} conc. flow slope (ft/ft)	K 20.3282 - paved sufr.	t_{sc} conc. flow time (hr)	t_c time of conc. (hr)	t_c time of conc. (min)	t_L lag time (min)	t_L lag time with min (min)
E-1	0.0%	1.86	250	100	0.023	Short-grass Prairie	3.94	0.150	**0.14**	150	0.023	16.13	**0.02**					**0.16**	**9.4**	**5.62**	**5.6**
E-2	46.6%	0.35	198	100	0.013	Short-grass Prairie	3.94	0.150	**0.17**	58	0.023	16.13	**0.01**	40	0.023	20.3282	**0.00**	**0.18**	**11.0**	**6.58**	**6.6**
E-3	38.7%	0.33	206	100	0.014	Short-grass Prairie	3.94	0.150	**0.17**	60	0.018	16.13	**0.01**	46	0.018	20.3282	**0.00**	**0.18**	**11.1**	**6.65**	**6.6**
OP-1	85.2%	0.12	154	100	0.032	Concrete	3.94	0.015	**0.02**					54	0.568	20.3282	**0.00**	**0.02**	**1.2**	**0.73**	**3.0**
OF-1	0.0%	1.82	330	100	0.013	Short-grass Prairie	3.94	0.150	**0.17**	230	0.021	16.13	**0.03**					**0.20**	**12.1**	**7.24**	**7.2**
Reach -1			250							250	0.023	16.13	**0.03**					**0.03**	**1.7**	**1.02**	**-**

Analysis Point 1 Comparison

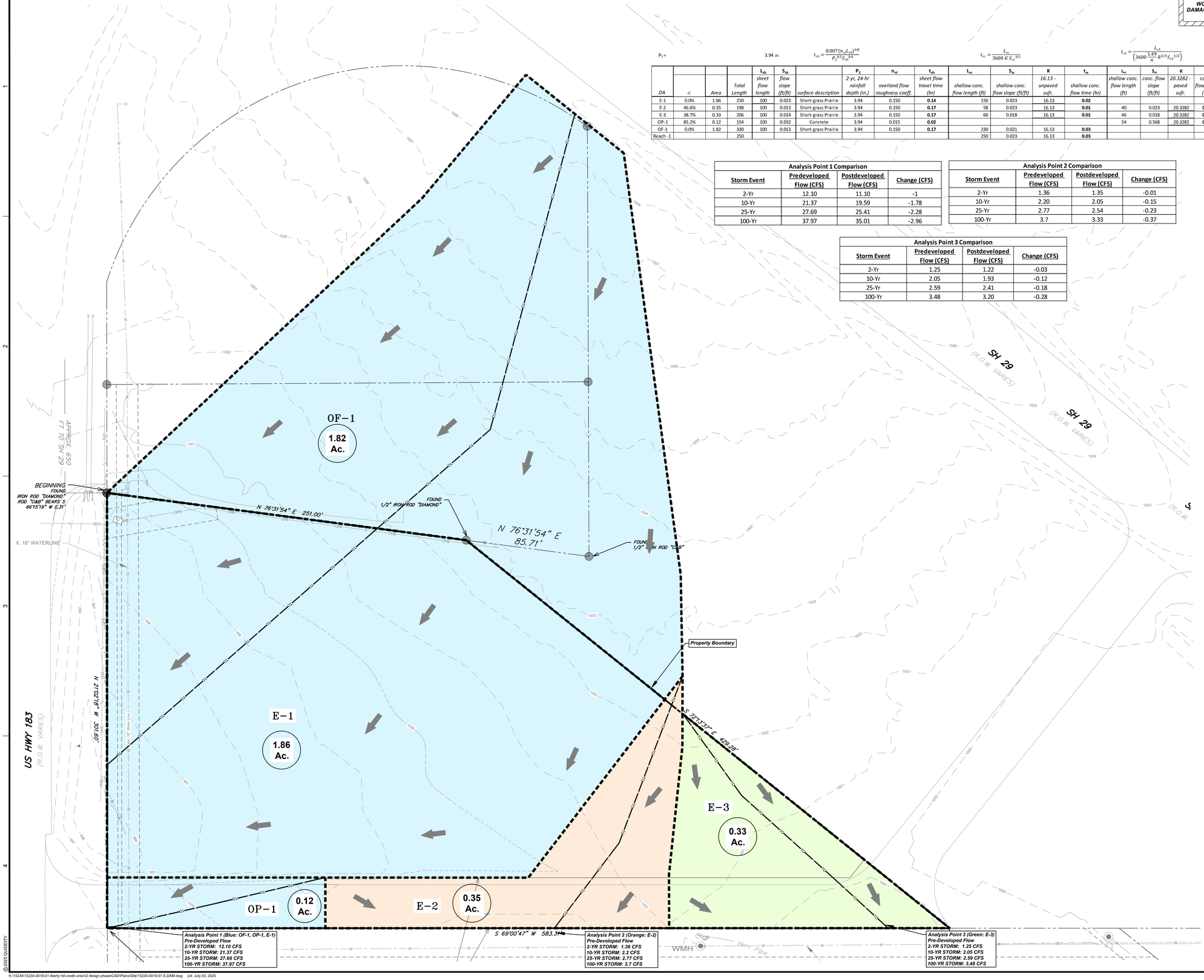
Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	12.10	11.10	-1
10-Yr	21.37	19.59	-1.78
25-Yr	27.69	25.41	-2.28
100-Yr	37.97	35.01	-2.96

Analysis Point 2 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.36	1.35	-0.01
10-Yr	2.20	2.05	-0.15
25-Yr	2.77	2.54	-0.23
100-Yr	3.7	3.33	-0.37

Analysis Point 3 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.25	1.22	-0.03
10-Yr	2.05	1.93	-0.12
25-Yr	2.59	2.41	-0.18
100-Yr	3.48	3.20	-0.28



30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE

DAMAP LEGEND

- 1.82 Ac. — DRAINAGE AREA IN ACRES
- DRAINAGE AREA LINE
- A-1 — DRAINAGE AREA NUMBER
- FLOW DIRECTION
- TC — TC — TIME OF CONCENTRATION

NOTES:
1. PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS, THE TR-55 METHOD WAS UTILIZIED TO CALCULATE THE TIME OF CONCENTRATION FOR EACH DRAINAGE AREA.
2. RAINFALL INTENSITY OBTAINED FROM NOAA ATLAS 14 FOR SITE LOCATION.
3. HEC-HMS 4.11 MODEL WAS UTILIZED TO CALCULATE PREDEVELOPMENT & POST DEVELOPMENT FLOWS

No.	Date	REVISIONS	App.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23004 & 10046100
912 S. Capital of Texas Hwy, Suite 300 • Austin, Texas 78746 • 512.441.9493

SCALE: —— DESIGNED BY: JYC
DATE: Oc - July 2025 CHECKED BY: JMC
JOB NO.: 152334-0018-01 DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED PROFESSIONAL ENGINEER
07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

EXISTING DRAINAGE AREA MAP

SHEET NO. 14 OF 28

2025-XX-SDP

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P_2 = 3.94 *in.*

$$t_{ch} = \frac{0.007(n_{ch}L_{ch})^{0.8}}{P_2^{0.5}S_{ch}^{0.4}}$$

$$t_{sc} = \frac{L_{sc}}{3600\,K\,S_{sc}^{0.5}}$$

$$t_{ch} = \frac{L_{ch}}{\left(3600\frac{1.49}{n}R^{2/3}S_{ch}^{1/2}\right)}$$ Channel

name	IC	Area	Total Length	L_{sh} sheet flow length	S_{sh} sheet flow slope (ft/ft)	surface description	P_2 2-yr, 24-hr rainfall depth (in.)	n_{sc} flow roughness coeff.	t_{sh} sheet flow travel time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 20.3282 - paved sufr.	t_{sc} shallow conc. flow time (hr)	L_{sc} shallow conc. flow length (ft)	S_{sc} shallow conc. flow slope (ft/ft)	K 16.13 - unpaved sufr.	t_{sc} shallow conc. flow time (hr)	L_{ch} channel Length (ft)	S_{ch} channel flow slope (ft/ft)	n Manning's roughness coeff.	R hydraulic radius (ft)	t TC (hr)	t_c time of conc. (hr)	t_c time of conc. (min)	t_L lag time (min)	t_L lag time with min (min)
P-1	38.2%	1.69	409	100	0.025	Grass	3.94	0.150	**0.13**					309	0.006	16.13	**0.07**						**0.20**	**12.2**	**7.33**	**7.3**
P-2	0%	0.16	157	100	0.063	Grass	3.94	0.150	**0.09**					57	0.007	16.13	**0.01**						**0.10**	**6.3**	**3.78**	**3.8**
OP-1	85.2%	0.12	154	100	0.032	Concrete	3.94	0.015	**0.02**					54	0.041	16.13	**0.00**						**0.02**	**1.4**	**0.86**	**3.0**
OP-2	83.5%	0.25	165	100	0.034	Concrete	3.94	0.015	**0.02**	65	0.067	20.3282	**0.00**	65	0.002	16.13	**0.03**						**0.05**	**2.8**	**1.70**	**3.0**
OP-3	62.4%	0.24	172	100	0.045	Concrete	3.94	0.015	**0.02**	72	0.005	20.3282	**0.01**										**0.03**	**1.9**	**1.13**	**3.0**
OF-1	0%	2.01	424	100	0.015	Grass	3.94	0.150	**0.16**					324	0.013	16.13	**0.05**						**0.21**	**12.9**	**7.73**	**7.7**
Reach-1																		127	0.011	0.04	0.467	0.02	**0.02**	**0.9**	**0.54**	**-**

Analysis Point 1 Comparison

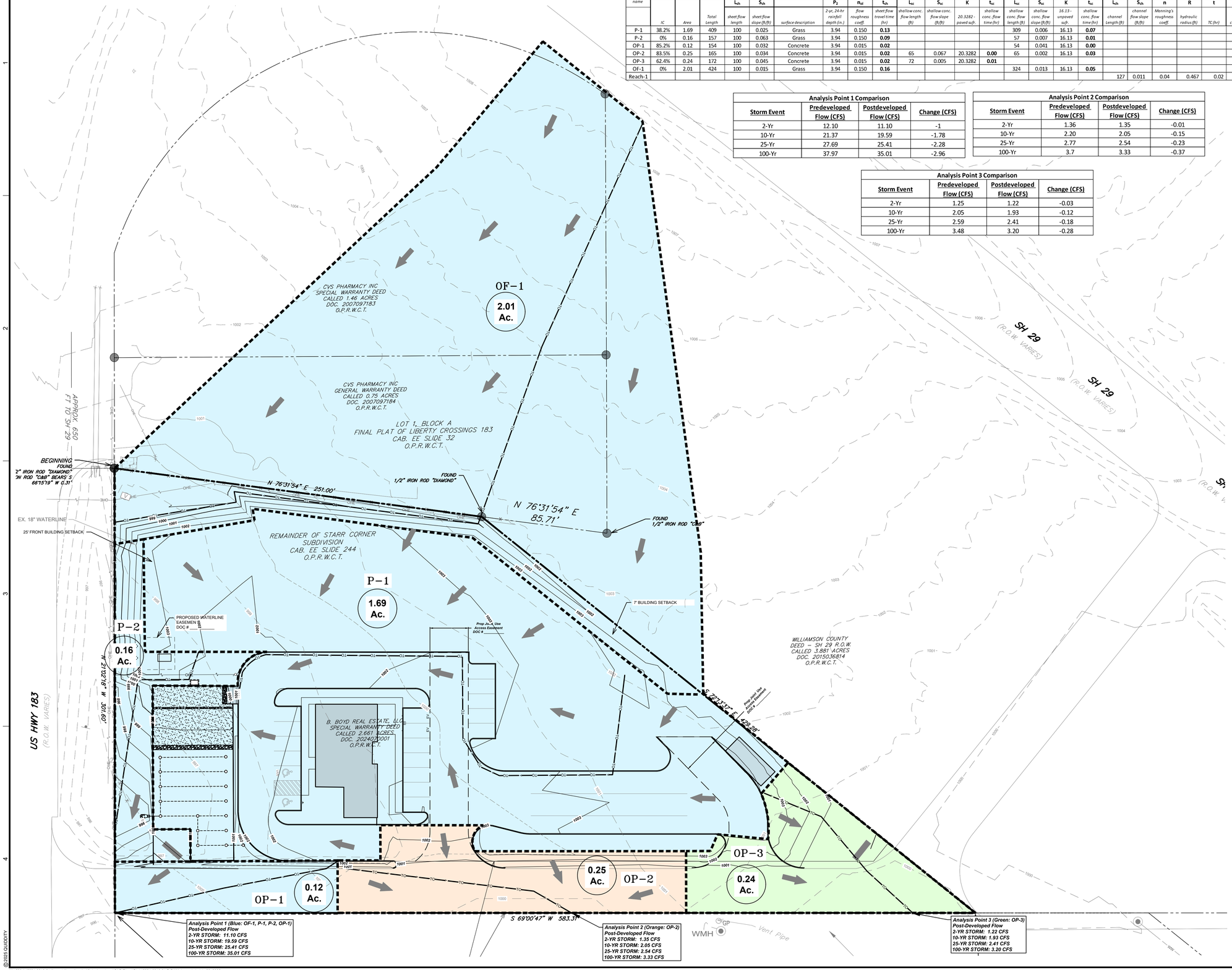
Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	12.10	11.10	-1
10-Yr	21.37	19.59	-1.78
25-Yr	27.69	25.41	-2.28
100-Yr	37.97	35.01	-2.96

Analysis Point 2 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.36	1.35	-0.01
10-Yr	2.20	2.05	-0.15
25-Yr	2.77	2.54	-0.23
100-Yr	3.7	3.33	-0.37

Analysis Point 3 Comparison

Storm Event	Predeveloped Flow (CFS)	Postdeveloped Flow (CFS)	Change (CFS)
2-Yr	1.25	1.22	-0.03
10-Yr	2.05	1.93	-0.12
25-Yr	2.59	2.41	-0.18
100-Yr	3.48	3.20	-0.28



30 0 15 30

SCALE: 1" = 30'

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WW — WASTEWATER W/ MANHOLE
- WW — WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OHE — OVERHEAD ELECTRIC W/POWER POLE
- 700 — GROUND CONTOUR

DAMAP LEGEND

- 1.82 Ac. — DRAINAGE AREA IN ACRES
- DRAINAGE AREA LINE
- A-1 — DRAINAGE AREA NUMBER
- FLOW DIRECTION
- TC — TC — TIME OF CONCENTRATION

NOTES:

1. PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS, THE TR-55 METHOD WAS UTILIZED TO CALCULATE THE TIME OF CONCENTRATION FOR EACH DRAINAGE AREA.
2. RAINFALL INTENSITY OBTAINED FROM NOAA ATLAS 14 FOR SITE LOCATION.
3. HEC-HMS 4.11 MODEL WAS UTILIZED TO CALCULATE PREDEVELOPMENT & POST DEVELOPMENT FLOWS

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JOB NO.: 152334-0018-01 DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
LICENSED
PROFESSIONAL ENGINEER
07/03/2025

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PROPOSED DRAINAGE AREA MAP

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FLOWS (Post Development - Channel)

C Values	2 yr	10 yr	25 yr	100 yr
Grass	0.33	0.38	0.42	0.49
Concrete	0.75	0.83	0.88	0.97

Note

*Grass is assumed to be Fair Condition and Average Slope

*All Impervious Cover is assumed to be Concrete (Conservative Approach)

NOTES:
1. PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS, THE TR-55 ETHOD WAS UTILZIED TO CALCULATE THE TIME OF CONCENTRATION FOR EACH DRAINAGE AREA.
2. RAINFALL INTENSITY OBTAINED FROM NOAA ATLAS 14 FOR SITE LOCATION.
3. THE RATIONAL METHOD WAS UTILIZED TO CALCULATE THE PROPOSED FLOWS FOR THE 100 YEAR STORM EVENT UTILIZING NOAA ATLAS 14 RAINFALL INTENSITES FOR THE SITE LOCATION.

DA	Area (ac.)	I.C. (%)	C2	C10	C25	C100	I2 (in/hr)	I10 (in/hr)	I25 (in/hr)	I100 (in/hr)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
OF-1	2.01	0.00%	0.33	0.38	0.42	0.49	4.11	6.11	8.56	9.71	2.73	4.67	7.23	9.56

Rational Method Calculation for Drainage Ditch

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Tuesday, Jun 17 2025

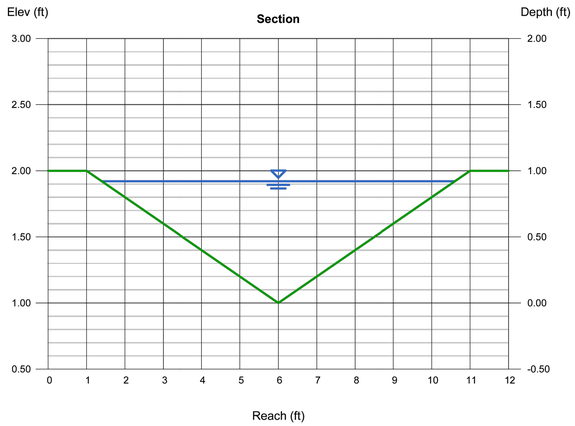
DRAINAGE DITCH

Triangular
Side Slopes (z:1) = 5.00, 5.00
Total Depth (ft) = 1.00

Invert Elev (ft) = 1.00
Slope (%) = 1.08
N-Value = 0.040

Calculations
Compute by: Known Q
Known Q (cfs) = 9.56

Highlighted
Depth (ft) = 0.92
Q (cfs) = 9.560
Area (sqft) = 4.23
Velocity (ft/s) = 2.26
Wetted Perim (ft) = 9.38
Crit Depth, Yc (ft) = 0.75
Top Width (ft) = 9.20
EGL (ft) = 1.00



Drainage Ditch A
100 - YR Storm Channel Calculation

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JOB NO.: 152334-0018-01

STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER
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DRAINAGE CALCULATIONS

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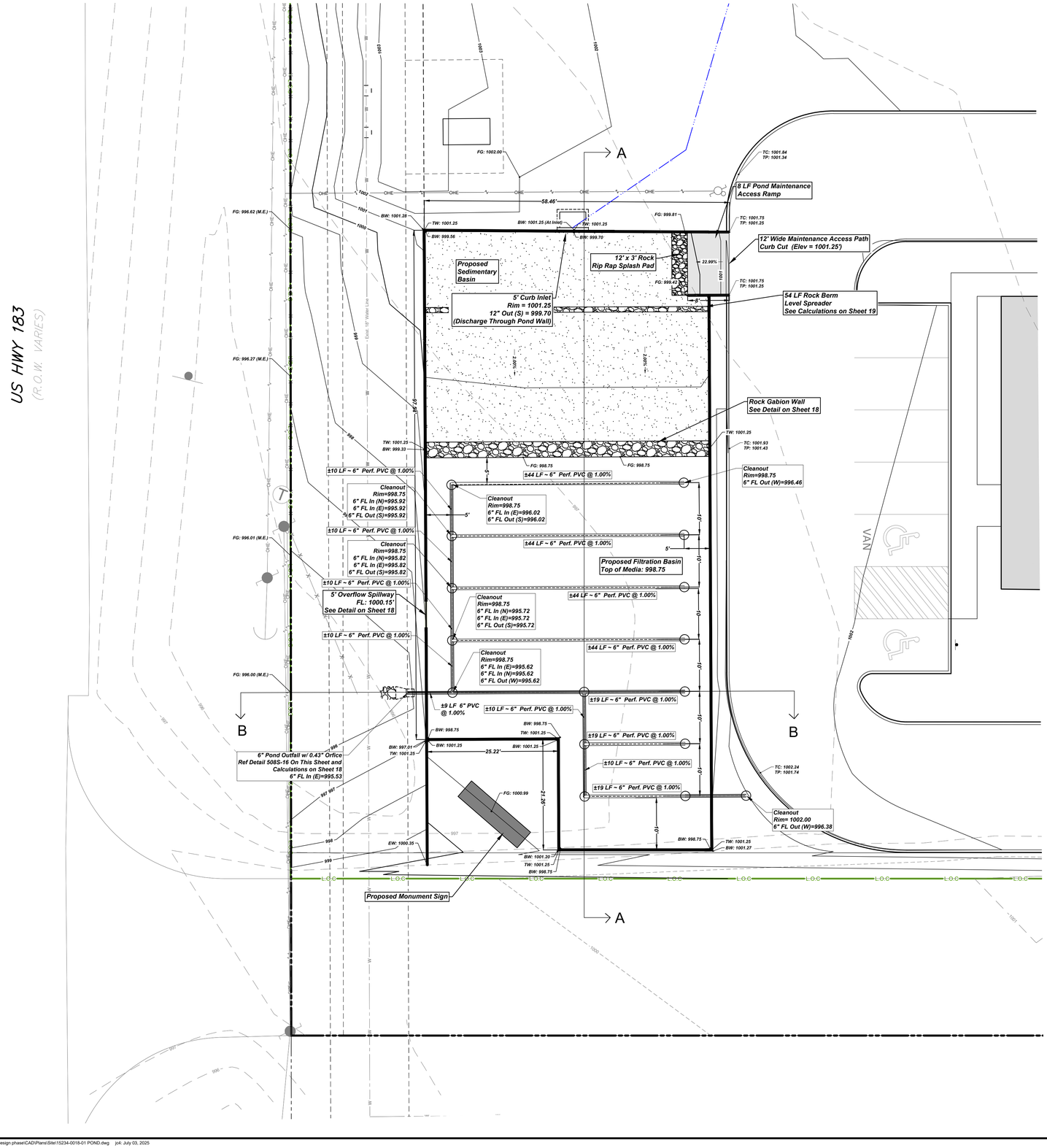
Appendix B: TSS Calculations



EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC W/POWER POLE
- GROUND CONTOUR

PROPOSED LEGEND

- STORM SEWER W/ MANHOLE
- CURB INLET
- GRATE INLET
- LANDSCAPE DRAIN
- 700 — GROUND CONTOUR
- TC — TOP OF CURB
- TP — TOP OF PAVEMENT
- FG — FINISHED GROUND
- TW — TOP OF WALL
- TS — TOP OF SIDEWALK

Pond Portion	Combined Detention & Water Quality Pond Volume Table					
	WSE (ft)	Area (SF)	Incremental Volume (cubic ft)	Incremental Volume (acre-ft)	Cumulative Total Volume (cubic ft)	Cumulative Total Volume (acre-ft)
WQ	998.75	3,511	0	0.000	0	0.000
	999	3,969	934.39	0.021	934.39	0.021
	999.25	4,305	1032.82	0.024	1967.21	0.045
	999.5	4,709	2059.7	0.047	3092.52	0.071
	999.75	5,139	2264.88	0.052	4324.58	0.099
	1000	5,494	3390.4	0.078	5655.28	0.130
	1000.15	5,670	3102.48	0.071	6492.88	0.149
Water Quality Elevation & Volume = 1000.15 ft (6,500 cu ft)						
Detention	1000.25	5,771	3962.48	0.162	7064.96	0.162
	1,000.50	5,912	8531.16	0.034	8531.16	0.196
	1,000.75	5,928	6048.64	0.196	10011.12	0.230
	1,001.00	5,944	2963.89	0.068	11495.05	0.264
	1,001.25	5,944	7310.35	0.239	13358.99	0.307
Max Water Quality & Detention Elevation/Volume = 1001.25 ft (13,359 cu ft)						

Combined Detention & Water Quality Pond Volume Table

Detention Pond Analysis & Volume Table					
Storm Event	Peak Pond Inflow (CFS)	Peak Pond Outflow (CFS)	Detention Volume (Acre-ft)	Detention Volume (ft^3)	WSE (ft)
Water Quality Elevation & Volume = 1000.15 ft (6,493 cu ft)					
2-Yr	6.09	4.74	0.0600	2614	1000.6
10-Yr	10.00	8.18	0.0900	3920	1000.8
25-Yr	12.67	10.56	0.1100	4792	1001.0
100-Yr	17.04	14.54	0.1300	5663	1001.1

Detention Analysis & Volume Table

Stacked Partial Sedimentation and Detention Pond

SCALE:1" = 10'

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DRAWN BY: KS

STATE OF TEXAS
JUSTIN M. CADIEUX
146526
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PROFESSIONAL ENGINEER
07/03/2025

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POND PLAN

SHEET NO. 17 OF 28

2025-XX-SDP

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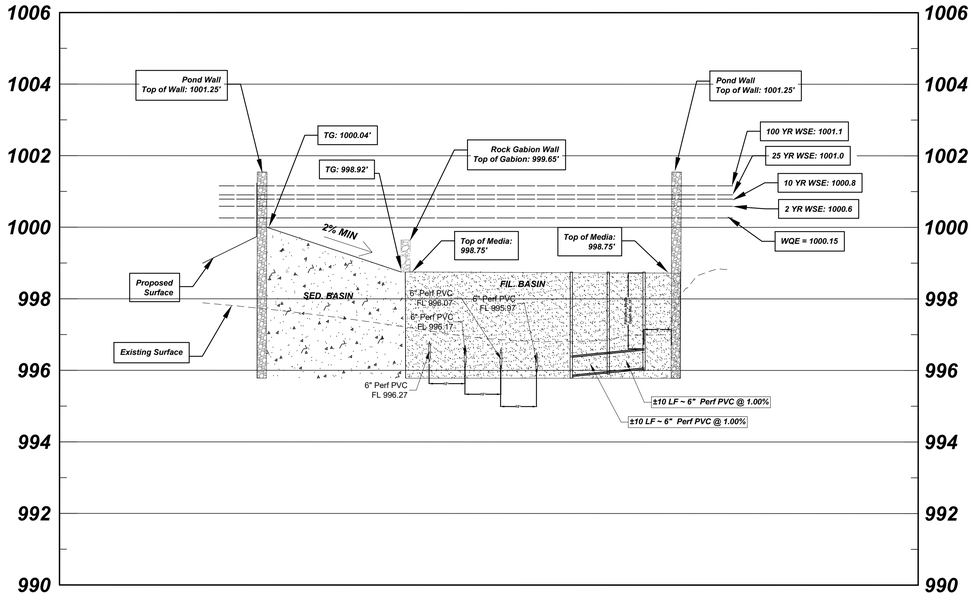
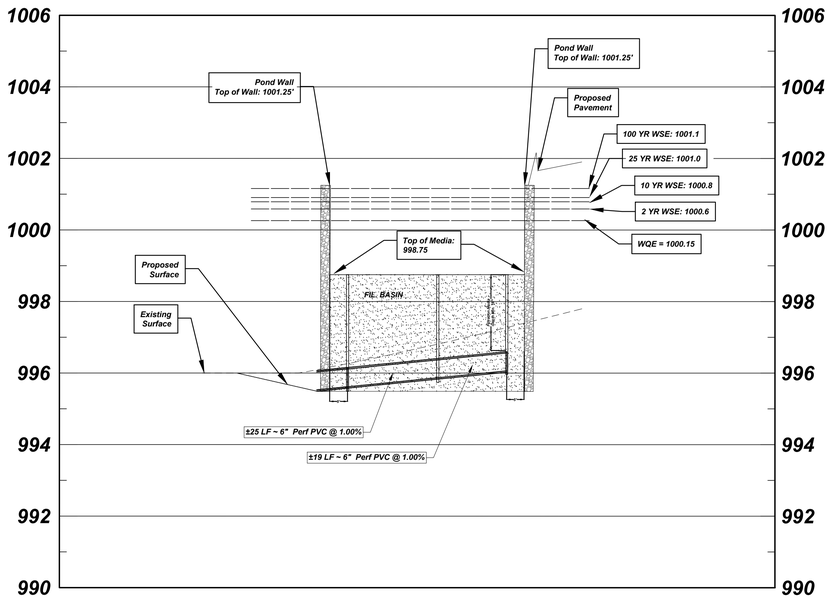
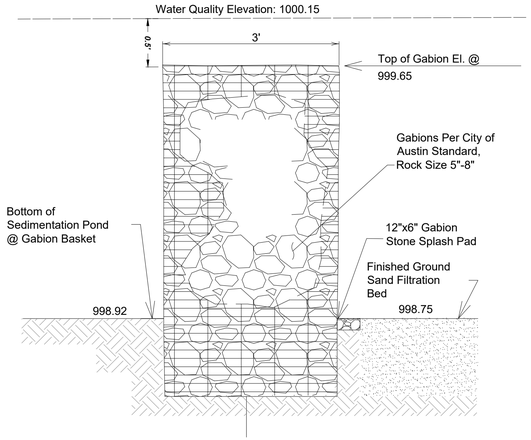
Cross Section A-A Profile

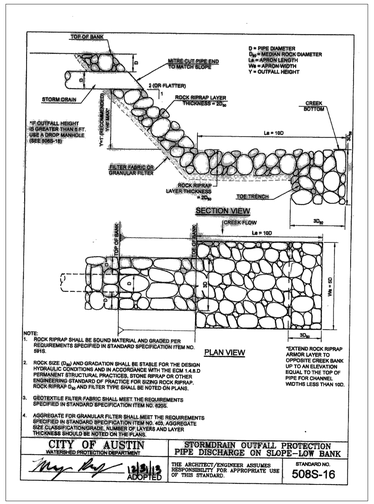


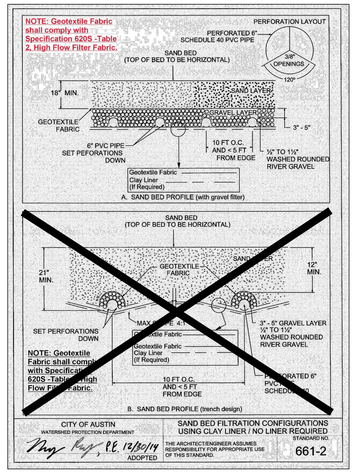
Cross Section B-B Profile

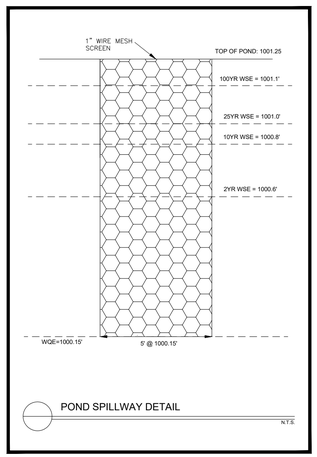




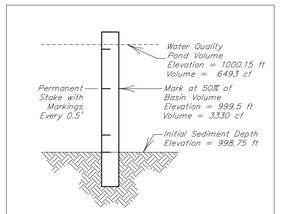
Rock Gabion
N.T.S







POND SPILLWAY DETAIL
N.T.S



	SEDIMENT DEPTH MARKER

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LICENSED PROFESSIONAL ENGINEER
07/03/2025

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LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642

POND PROFLE & DETAILS

SHEET NO.
18 OF **28**

2025-XX-SDP

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Liberty Hill Credit Union
Date Prepared: 6/1/2025

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 * =	1.75	acres	
Predevelopment impervious area within the limits of the plan * =	0.00	acres	
Total post-development impervious area within the limits of the plan* =	1.32	acres	
Total post-development impervious cover fraction * =	0.75		
P =	32	inches	
$L_{M\ TOTAL\ PROJECT}$ =	1149	lbs.	

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	1.75	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.32	acres
Post-development impervious fraction within drainage basin/outfall area =	0.75	
$L_{M\ THIS\ BASIN}$ =	1149	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Sand Filter
Removal efficiency = 89 percent

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: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

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 =	1.75	acres
A_I =	1.32	acres
A_P =	0.43	acres
L_R =	1307	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 1149 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 =	0.56	
On-site Water Quality Volume =	5383	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 =	1077	
Total Capture Volume (required water quality volume(s) x 1.20) =	6459	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin =	6459	cubic feet	
Minimum filter basin area =	299	square feet	
Maximum sedimentation basin area =	2691	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	673	square feet	For maximum water depth of 8 feet

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	6459	cubic feet	
Minimum filter basin area =	538	square feet	
Maximum sedimentation basin area =	2153	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	135	square feet	For maximum water depth of 8 feet

TSS Calculations

Pond Portion	Combined Detention & Water Quality Pond Volume Table					
	WSE (ft)	Area (SF)	Incremental Volume (cubic ft)	Incremental Volume (acre-ft)	Cumulative Total Volume (cubic ft)	Cumulative Total Volume (acre-ft)
WQ	998.75	3,511	0	0.000	0	0.000
	999	3,969	934.39	0.021	934.39	0.021
	999.25	4,305	1032.82	0.024	1967.21	0.045
	999.5	4,709	2059.7	0.047	3092.52	0.071
	999.75	5,139	2264.88	0.052	4324.58	0.099
	1000	5,494	3390.4	0.078	5655.28	0.130
	1000.15	5,670	3102.48	0.071	6492.88	0.149
Water Quality Elevation & Volume = 1000.15 ft (6,500 cu ft)						
Detention	1000.25	5,771	3962.48	0.162	7064.96	0.162
	1,000.50	5,912	8531.16	0.034	8531.16	0.196
	1,000.75	5,928	6048.64	0.196	10011.12	0.230
	1,001.00	5,944	2963.89	0.068	11495.05	0.264
	1,001.25	5,944	7310.35	0.239	13358.99	0.307
Max Water Quality & Detention Elevation/Volume = 1001.25 ft (13,359 cu ft)						

Combined Detention & Water Quality Pond Volume Table

Detention Pond Analysis & Volume Table					
Storm Event	Peak Pond Inflow (CFS)	Peak Pond Outflow (CFS)	Detention Volume (Acre-Ft)	Detention Volume (ft^3)	WSE (ft)
Water Quality Elevation & Volume = 1000.15 ft (6,493 cu ft)					
2-Yr	6.00	4.60	0.0600	2614	1000.6
10-Yr	9.80	8.00	0.0900	3920	1000.8
25-Yr	12.33	10.29	0.1100	4792	1000.9
100-Yr	16.55	14.17	0.1300	5663	1001.1

Detention Analysis & Volume Table

Rock Berm Level Spreader - Pond Inflow

100-year Design Storm Flow Rate =		16.55 cfs
WEIR EQUATION	Q = 3.0 * L* (h)^1.5	L = 54.0
h = (Q/3L)^0.6667 =	0.22 FT	
Area=	11.8 sf	
Velocity =	**1.40 fps**	

Flow into pond < 2 fps, therefore, non-erosive

Rock Berm Level Spreader Calculations

ORIFICE SIZING FOR UNDERDRAIN SYSTEM - FALLING HEAD METHOD

SURFACE AREA	5944 SF
MINIMUM DRAWDOWN TIME = 48 HR 48HRS = 172,800 SEC	= 172800 SEC
h1=	1000.15 FT
h2=	995.62 FT
A0=-2*1672*(0^0.5-7.19^0.5)/(0.6*172800*(2*32.2)^0.5)	0.0010 FT
D = (4*A/pi)0.5 =	0.04 FT
Q= Volume/Time	0.39 CFS
	0.43 inch orifice

THEREFORE, POND WILL DRAWDOWN IN 48 HOURS

Orifice Sizing Calculations

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07/03/2025

LEVEL 5
LIBERTY HILL CREDIT UNION
135 US-183, LIBERTY HILL, TEXAS 78642
DETENTION & WATER QUALITY CALCULATIONS

SHEET NO. 19 OF 28

2025-XX-SDP

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LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

Notice of Intent

TCEQ 05999: Agent Authorization Form

Owner Authorization Form

Edwards Aquifer Protection Program

Instructions

Complete the following form by adding the requested information in the fields below. The form must be notarized for it to be considered complete. Attach it to other programmatic submittals required by 30 Texas Administrative Code (30 TAC), Chapter 213, and provide it to TCEQ's Edwards Aquifer Protection Program (EAPP) as part of your application.

If you have questions on how to fill out this form or about EAPP, please contact us by phone at 512-339-2929 or by e-mail at eapp@tceq.texas.gov.

Landowner Authorization

B. Boyd Real Estate, LLC, a Texas limited liability company,

is the owner of the property located at:

135 US-183, Liberty Hill, Texas, 78642

I do hereby authorize Michael Ver Schuur of United Heritage Credit Union
To conduct a contributing zone plan application submittal
At 135 US-183, Liberty Hill, Texas 78642

Landowner Acknowledgement

I understand that B. Boyd Real Estate, LLC

Is ultimately responsible for the compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation even if the responsibility for compliance and the right to possess and control the property referenced in the application has been contractually assumed by another legal entity. I further understand that any failure to comply with any condition of the executive director's approval is a violation and subject to administrative rule or orders and penalties as provided under 30 TAC 213.10, relating to enforcement. Such violations may also be subject to civil penalties.

Landowner Signature

B. Boyd Real Estate, LLC,
a Texas limited liability company

By: _____
Benny M. Boyd, President

February 3, 2026

Date

THE STATE § OF Texas

County § of LAMPASAS

BEFORE ME, the undersigned authority, on this day personally appeared

Benny M. Boyd in his capacity as the President of B. Boyd Real Estate, LLC, a Texas limited liability company,

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 3 day of February, 2026.

NOTARY PUBLIC

TINA M KAETZEL

Typed or Printed Name of Notary

TINA M. KAETZEL
Notary Public ID#1284167
STATE OF TEXAS
My Comm. Exp. Jan. 14, 2030

MY COMMISSION EXPIRES: Date 1-14-30

Optional Attachments

Select All that apply:

☐ Lease Agreement

☐ Signed Contract

☐ Deed Restricted Easement

☐ Other legally binding documents

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

I Michael Ver Schuur,
Print Name

President/CEO,
Title - Owner/President/Other

of United Heritage Credit Union,
Corporation/Partnership/Entity Name

have authorized Justin M. Cadieux, P.E.
Print Name of Agent/Engineer

of Quiddity Engineering
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:

Applicant's Signature

01-14-26
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Michael VerSchuur 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 14th day of January, 2026

NOTARY PUBLIC

Julie Carter
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: March 28, 2028

JULIE CARTER
My Notary ID # 11920683
Expires March 28, 2028

TCEQ 0574: Fee Form

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Liberty Hill Credit Union

Regulated Entity Location: 135 US-183, Liberty Hill, Texas 78642

Name of Customer: United Heritage Credit Union

Contact Person: Michael Ver Schuur Phone: (512) 435-4545

Customer Reference Number (if issued):CN CN602752404

Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde

☐ Comal ☐ Kinney

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

☒ Austin Regional Office

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

☐ San Antonio Regional Office

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	2.661 Acres	$ 4,000
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____ Date: 01/19/2026

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

LIBERTY HILL CREDIT UNION
CONTRIBUTING ZONE PLAN

TCEQ 10400: Signed Core Data Form

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

☐ Other

2. Customer Reference Number *(if issued)*

CN 602752404

Follow this link to search for CN or RN numbers in Central Registry**

3. Regulated Entity Reference Number *(if issued)*

RN

SECTION II: Customer Information

4. General Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy) 1/8/2026

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

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

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

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

United Heritage Credit Union

If new Customer, enter previous Customer below:

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
17412886594	17412886594	741288659	

11. Type of Customer:

☒ Corporation ☐ Individual ☐ Partnership: ☐ General ☐ Limited

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

12. Number of Employees

☐ 0-20 ☐ 21-100 ☒ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?

☒ **Yes** ☐ **No**

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

☒ Owner ☐ Operator ☐ Owner & Operator

☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:

PO Box 202020

City	**State**	**ZIP**	**ZIP + 4**
Austin	TX	78720	

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

17. E-Mail Address *(if applicable)*

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 435 - 4211		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

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

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core 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.)*

Liberty Hill Credit Union

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	135 US-183, Liberty Hill, TX 78642						
	City	Liberty Hill	**State**	TX	**ZIP**	78642	**ZIP + 4**
24. County	Williamson County						

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	Located at 135 US-183, Liberty Hill, TX 78642. Bounded by US 183 to the west and SH 29 to the north.

26. Nearest City	State	Nearest ZIP Code

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.651690 °		28. Longitude (W) In Decimal:	-97.873799°	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	39	6	97	52	26

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)
6111	6141	522113	522130

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

Commercial Credit Union

34. Mailing Address:	12515 Research Blvd, Bldg. 5						
	City	Austin	**State**	TX	**ZIP**	78759	**ZIP + 4**
35. E-Mail Address:	mverschu@uhcu.org						

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(512) 435 - 4545		( ) -

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

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

SECTION IV: Preparer Information

40. Name:	Justin M. Cadieux, P.E.	**41. Title:**	Project Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 685-5152		( ) -	jcadieux@quiddity.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:	United Heritage Credit Union	**Job Title:**	President/CEO
Name *(In Print):*	Michael Ver Schuur	**Phone:**	(512) 435-4545
Signature:	MVerSchuur	**Date:**	01-15-26