1901 Leander Street

SEWAGE COLLECTION SYSTEM & WATER POLLUTION ABATEMENT PLAN

5/1/25

F-470

MAY 2025

PAPE-DAWSON ENGINEERS

Transportation | Water Resources | Land Development | Surveying | Environmental

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: Leander Street					**2. Regulated Entity No.:** N/A				
3. Customer Name: Habitat for Humanity of Williamson County, Texas					**4. Customer No.:** CN606291375				
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):**		0.14 ac	
9. Application Fee:	$2,150.00		**10. Permanent BMP(s):**					Rooftop Rainwater Harvesting, Engineered VFS, & Permeable Pavers	
11. SCS (Linear Ft.):	40		**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.)	___	___	✓
Region (1 req.)	___	___	✓
County(ies)	___	___	✓
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ✓Georgetown ___Jarrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Michael Fisher, P.E.
Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent 5/1/25 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):		

GENERAL INFORMATION

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) 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 **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: Michael Fisher, P.E.

Date: 5/1/15

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: 1901 Leander Street
2. County: Williamson
3. Stream Basin: South Fork - San Gabriel River
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☒ WPAP
   ☒ SCS
   ☐ Modification
   ☐ AST
   ☐ UST
   ☐ Exception Request

7. Customer (Applicant):

   Contact Person: Philip Golden
   Entity: Habitat for Humanity
   Mailing Address: 2109 N. Austin Ave.
   City, State: Georgetown, Texas Zip: 78626
   Telephone: (512) 863-4344 FAX: _____
   Email Address: philipg@williamsonhabitat.org

8. Agent/Representative (If any):

   Contact Person: Michael Fisher, P.E.
   Entity: Pape-Dawson Consulting Engineers, LLC
   Mailing Address: 10801 N MoPac Expressway, Bldg. 3, Suite 200
   City, State: Austin, Texas Zip: 78759
   Telephone: (512) 454-8711 FAX: _____
   Email Address: mfisher@pape-dawson.com

9. Project Location:

   ☒ The project site is located inside the city limits of Georgetown, TX.
   ☐ 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.

10. ☒ The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

    From TCEQ's Austin office, travel north on I-35 North approximately 13 miles and take Exit 260 towards Leander. Exit I-35 North and travel approximately 0.8 miles on the I-35 Frontage Rd before turning right onto Leander Road. Travel approximately 0.2 miles before turning left on Railroad Ave. and then another 0.3 miles before turning right onto W. 19th Street. After 500ft, take a right onto Leander Street and the site is located 150 ft up the road on the left.

11. ☒ **Attachment A – Road Map**. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.

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

    ☒ Project site boundaries.
    ☒ USGS Quadrangle Name(s).
    ☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
    ☒ Drainage path from the project site to the boundary of the Recharge Zone.

13. ☒ **The TCEQ must be able to inspect the project site or the application will be returned**. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

☐ Survey staking will be completed by this date: _____

14. ☒ **Attachment C – Project Description**. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

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

15. Existing project site conditions are noted below:

☐ Existing commercial site
☐ Existing industrial site
☐ Existing residential site
☐ Existing paved and/or unpaved roads
☒ Undeveloped (Cleared)
☒ Undeveloped (Undisturbed/Uncleared)
☒ Other: Existing Drainage Ditch

Prohibited Activities

16. ☒ I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:

(1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);

(2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;

(3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;

(4) The use of sewage holding tanks as parts of organized collection systems; and

(5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

(6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. ☒ I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:

(1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

(2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

(3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:

☒ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
☒ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
☐ For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
☐ A request for an exception to any substantive portion of the regulations related to the protection of water quality.
☐ A request for an extension to a previously approved plan.

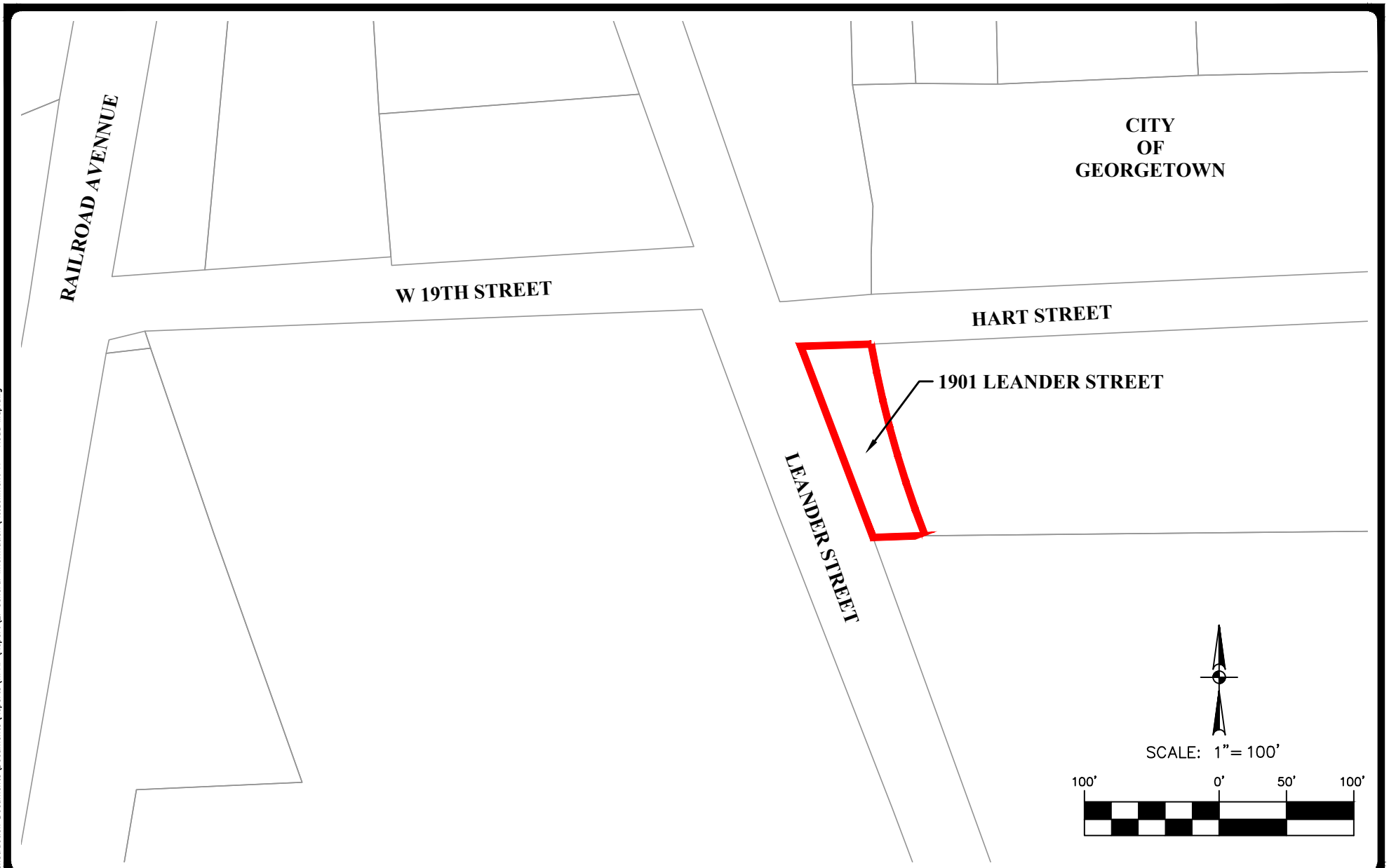
19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

☐ TCEQ cashier
☒ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. ☒ 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. The copies must be submitted to the appropriate regional office.

21. ☒ No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

ATTACHMENT A



1901 LEANDER STREET

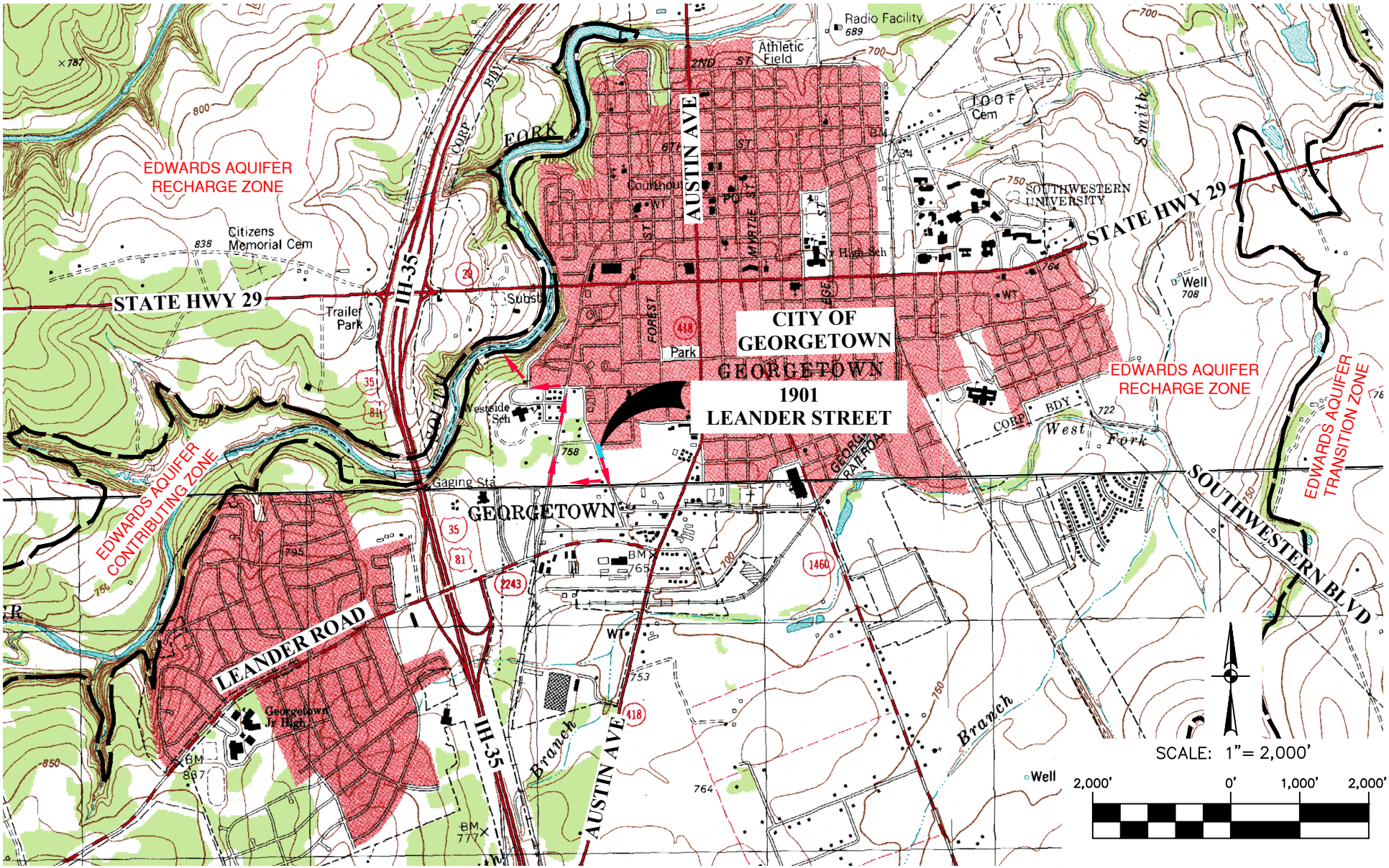
GEORGETOWN, TEXAS

ROAD MAP

JOB NO. 51466-01
DATE APRIL 2025
DESIGNER JS
CHECKED AC DRAWN JS
SHEET 1 of 1

PAPE-DAWSON ENGINEERS
AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

ATTACHMENT B



JOB NO. 51466-01
DATE APEIL 2025
DESIGNER JS
CHECKED AC DRAWN JS
SHEET 1 of 1

1901 LEANDER STREET

GEORGETOWN, TEXAS

USGS / EDWARDS AQUIFER RECHARGE ZONE MAP

PAPE-DAWSON ENGINEERS
AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

ATTACHMENT C
WPAP NARRATIVE

1901 LEANDER STREET
Water Pollution Abatement Plan Application

PROJECT DESCRIPTION

1901 Leander Street is located on approximately 0.14 acres of a single-phase development proposed at 1901 Leander Street in Williamson County, Texas. The project limits are located entirely over the Edwards Aquifer Recharge Zone, as shown on the Water Quality Treatment Summary included with this application.

1901 Leander Street is proposed for single-family residential development. The site is currently undeveloped. A geologic assessment exemption was previously requested and granted by TCEQ, per the attached email correspondence included in this permit application.

Construction activities proposed within the 1901 Leander Street WPAP include clearing, grading, excavation, installation of utilities and drainage improvements, streets and 1 structure with associated driveway. The Leander Street project consists of approximately 0.086 acres of proposed impervious cover. There is approximately 0.003 acres of existing impervious cover within the 1901 Leander Street boundary.

Rooftop Rainfall Harvesting Systems are proposed for each of the two proposed single-family residences. Additionally, permeable pavers will be used for the house walk-ups and an engineered vegetated filter strip (VFS) will be located adjacent to the northern driveway (Lot 6B) to treat runoff. The rooftop rainwater harvesting systems, permeable pavers, and engineered VFS will act as the Permanent Best Management Practices (PBMP) for this site. Approximately 0.026 acres of proposed impervious cover, contributed by uncaptured portions of driveways will remain uncaptured and untreated on the site. The net increase in proposed impervious cover that is uncaptured and untreated is 18.6% for the site, which is below the 20% threshold. Therefore, we are requesting an exception to not treat the stormwater discharges for this site. The Rooftop Rainfall Harvesting Systems have been designed to treat stormwater runoff at ultimate development within the 1901 Leander Street site and with sufficient capacity for 1.5” runoff as required in RG-348. The engineered VFS and permeable paver PBMPs have been designed in accordance with the TCEQ’s Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in TSS from the site. The Rainwater Harvesting System has been designed to treat stormwater runoff at ultimate development within the Leander Street site. Water quality calculations have been provided with this

application for the proposed 1901 Leander Street development. Please see the Treatment Summary Table provided with the attached construction plan sheets for more detail.

ATTACHMENT C
SCS NARRATIVE

1901 LEANDER STREET
Sewage Collection System Application

PROJECT DESCRIPTION

1901 Leander Street is located on approximately 0.14 acres of a single-phase development proposed at 1901 Leander Street in Williamson County, Texas. The project limits are located entirely over the Edwards Aquifer Recharge Zone, as shown on Attachment B. A Water Pollution Abatement Plan (WPAP) application for this development is being submitted concurrently with this Sewage Collection System application.

The 1901 Leander Street SCS application proposes the construction of approximately 40 linear feet of a 6-inch SDR-26 double wastewater service lateral for the two proposed single-family lots within the development. Regulated activities proposed include excavation, construction of sewer laterals, backfill, and compaction. Approximately 0.003 acres may be disturbed as identified on the utility plan sheet. The SCS proposed with this application will connect to an existing 8-inch wastewater line.

1901 Leander Street is proposed for single-family residential development. The site is currently undeveloped. A geologic assessment exemption was previously requested and granted by TCEQ, per the attached email correspondence included in this permit application.

This SCS application will directly serve a total of 2 LUE's defined as follows:

- 1901 Leander Street (0.14 AC) – 2 single family units = 2 LUE's

Approximately 500 gallons per day (average flow) of domestic wastewater will be generated from the 1901 Leander Street SCS. Sewage flow will be disposed of by conveyance to the existing San Gabriel Wastewater Treatment Plant. The San Gabriel Wastewater Treatment Plant has the capacity to adequately treat the proposed peak flow. Potable water will be provided by the City of Georgetown. Any future wastewater mains will be permitted with their own SCS application and submitted to the TCEQ for review and approval.

WPAP APPLICATION

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), 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.

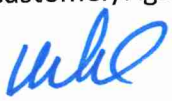
Signature

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 **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Michael Fisher, P.E.

Date: 5/1/25

Signature of Customer/Agent:



Regulated Entity Name: 1901 Leander Street

Regulated Entity Information

1. The type of project is:

   ☒ Residential: Number of Lots:2
   ☐ Residential: Number of Living Unit Equivalents:_____
   ☐ Commercial
   ☐ Industrial
   ☐ Other:_____

2. Total site acreage (size of property):0.14

3. Estimated projected population:8

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops		÷ 43,560 =	
Parking		÷ 43,560 =	
Other paved surfaces	1,128	÷ 43,560 =	0.026
Total Impervious Cover	1,128	÷ 43,560 =	0.026

Total Impervious Cover 0.026 **÷ Total Acreage** 0.14 **X 100 =** 18.6**% Impervious Cover**

5. ☒ **Attachment A - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.

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

For Road Projects Only

Complete questions 7 - 12 if this application is exclusively for a road project.

7. 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.

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

   ☐ Concrete
   ☐ Asphaltic concrete pavement
   ☐ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet.

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

10. 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.

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

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

12. ☐ 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

13. ☒ **Attachment B - 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 the 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

14. The character and volume of wastewater is shown below:

100 % Domestic	500 Gallons/day
_____ % Industrial	_____ Gallons/day
_____ % Commingled	_____ Gallons/day
TOTAL gallons/day 500	

15. Wastewater will be disposed of by:

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

- ☐ **Attachment C - 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):

- ☒ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.
- ☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

- ☐ The SCS was previously submitted on_____.
- ☒ The SCS was submitted with this application.
- ☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

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

☒ Existing.
☐ Proposed.

16. ☒ All private service laterals will be inspected as required in 30 TAC §213.5.

Site Plan Requirements

Items 17 – 28 must be included on the Site Plan.

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

Site Plan Scale: 1" = 20'.

18. 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): Federal Emergency Management Administration Flood Hazard Boundary Map, Community Panel No. 48491C0293F, effective date December 20, 2019.

19. ☒ 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, open space, etc. are shown on the plan.

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

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

☐ There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

☐ The wells are not in use and have been properly abandoned.
☐ The wells are not in use and will be properly abandoned.
☐ The wells are in use and comply with 16 TAC §76.

☒ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

☐ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
☐ No sensitive geologic or manmade features were identified in the Geologic Assessment.

☒ **Attachment D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.
23. ☒ Areas of soil disturbance and areas which will not be disturbed.
24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
25. ☒ Locations where soil stabilization practices are expected to occur.
26. ☐ Surface waters (including wetlands).

    ☒ N/A
27. ☐ Locations where stormwater discharges to surface water or sensitive features are to occur.

    ☒ There will be no discharges to surface water or sensitive features.
28. ☒ Legal boundaries of the site are shown.

Administrative Information

29. ☒ 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. The copies must be submitted to the appropriate regional office.
30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

ATTACHMENT A

1901 LEANDER STREET
Water Pollution Abatement Plan Application

FACTORS AFFECTING WATER QUALITY

Potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the site during construction include:

- Soil erosion due to the clearing of the site;
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings;
- Hydrocarbons from asphalt paving operations;
- Miscellaneous trash and litter from construction workers and material wrappings;
- Concrete truck washout; and
- Potential overflow/spills from portable toilets.

Potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the site after development include:

- Oil, grease, fuel and hydraulic fluid contamination from vehicle drippings;
- Dirt and dust which may fall off vehicles; and
- Miscellaneous trash and litter.

ATTACHMENT B

VOLUME AND CHARACTER OF STORMWATER

1901 Leander Street contributes runoff to an existing roadside ditch on the western side of the property. This runoff is ultimately conveyed through the South Fork San Gabriel River downstream of the development. The specific routing points are shown on sheets 8 and 9 of the construction plans. The 100-year pre-developed runoff coefficient for contributing watershed to drainage analysis point 1 is 0.60 as determined based on the Rational Method runoff coefficients per the City of Georgetown Drainage Criteria Manual. The 100-year pre-developed peak flow at drainage analysis point 1 is approximately 32.57 cubic feet per second (cfs). The 100-year post-developed runoff coefficients for contributing watershed to drainage analysis point 1 is 0.60 as determined based on the Rational Method runoff coefficients per the City of Georgetown Drainage Criteria Manual. The 100-year post-developed peak flow at drainage analysis point 1 is approximately 32.83 cubic feet per second (cfs). Peak flowrates for pre-development and post-development conditions were determined using the Rational Method in accordance with the City of Georgetown Drainage Criteria Manual. Stormwater runoff from the proposed single-family residential development can be characterized as overland, shallow-concentrated, and channelized flow.

ATTACHMENT D

1901 LEANDER STREET
Water Pollution Abatement Plan Application

Exception to the Required Geologic Assessment

1901 Leander Street is located within the downtown area of Georgetown, TX. During discussions with TCEQ preempting the submittal of this application we were told that an exception to a geologic assessment could be requested based on the location of the site being within a highly developed area that has previously been studied. Email correspondence demonstrating this request and it being granted are included in this permit application.

Jake Styslinger

From: James Slone <james.slone@tceq.texas.gov>
Sent: Monday, February 10, 2025 2:21 PM
To: Jake Styslinger
Cc: Hank Longino (h.b.longino@gmail.com); danedixon@aol.com; philipg@williamsonhabitat.org; Aimee Chavez; Mike Fisher
Subject: RE: 1901 Leander Street WPAP - GA Exemption & VFS Placement

Jake,
You can submit the plan without the Geologic Assessment (GA). A GA is not required. Please note, if we find any features on site during our site assessment, you may be required to provide a GA.

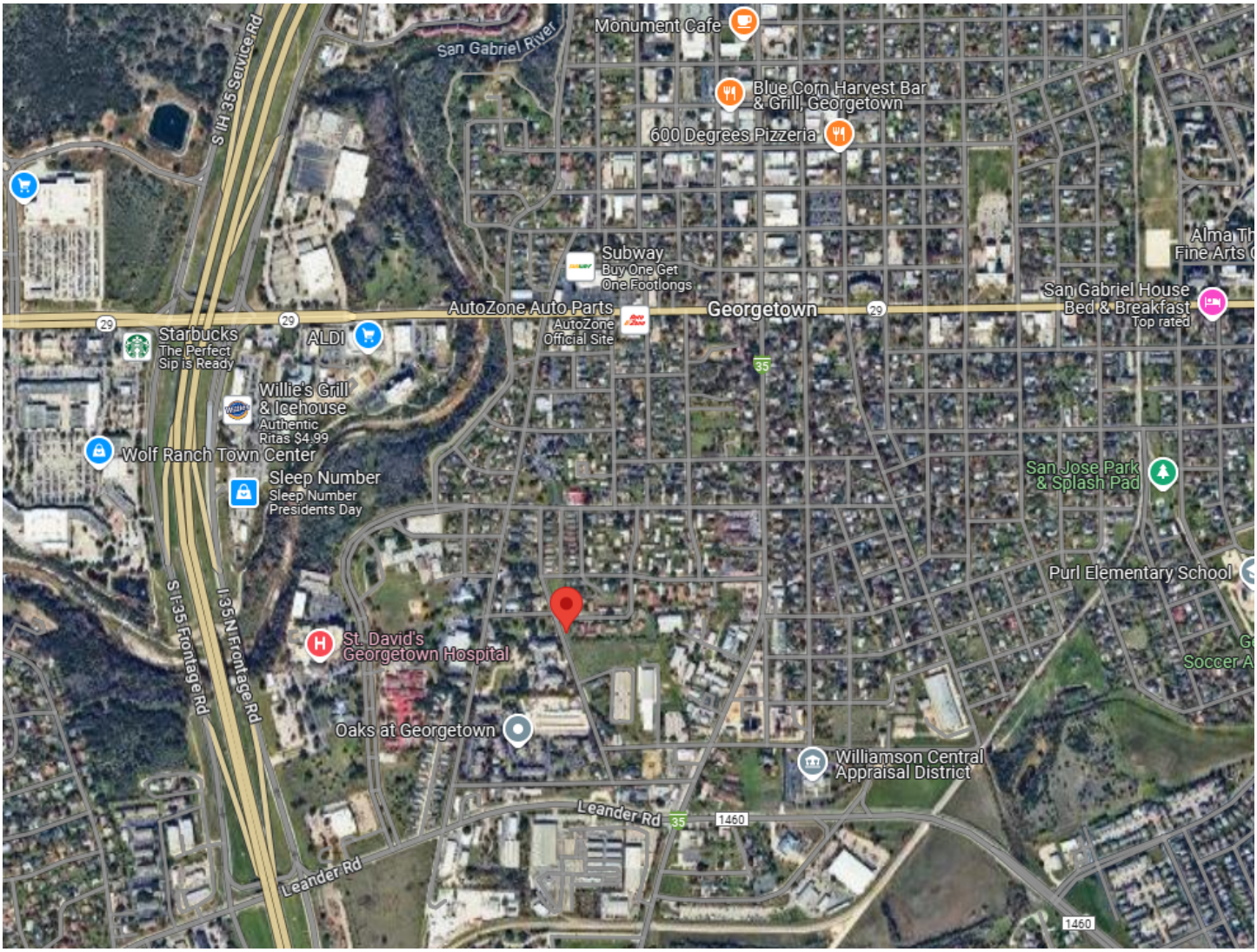
Please retain this email and provide it with the application submittal.
Bo

James "Bo" Slone, P.G.
Team Leader
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
(512) 239-6994

From: Jake Styslinger <JStyslinger@pape-dawson.com>
Sent: Monday, February 10, 2025 1:33 PM
To: James Slone <james.slone@tceq.texas.gov>
Cc: Hank Longino (h.b.longino@gmail.com) <h.b.longino@gmail.com>; danedixon@aol.com; philipg@williamsonhabitat.org; Aimee Chavez <AChavez@pape-dawson.com>; Mike Fisher <MFisher@pape-dawson.com>
Subject: 1901 Leander Street WPAP - GA Exemption & VFS Placement

Good afternoon Bo,

I appreciate you meeting with us last Friday to discuss our Leander Street project for Habitat for Humanity and discuss some of the WQ treatment solutions. I wanted to follow up on getting the exemption for the Geologic Assessment since the project is located at 1901 Leander Street Georgetown, TX 78626, which is an infill lot within downtown Georgetown. Please reference the pinned location in the image below for the project's location.



Additionally, I took a look at placing engineered VFS adjacent to the driveways as a potential WQ BMP and the 15' minimum length for the VFS extends into the City of Georgetown's PUE on the project's property. Per RG-348 it seems like an easement will be needed for the VFS so I wanted to confirm that is the case and if TCEQ has any objections to the VFS being within the PUE, where periodic disturbances may occur for the installations of non-COG utilities that occupy the PUE. If you could please confirm on those two so that would be great.

Let me know if you have any questions or comments.

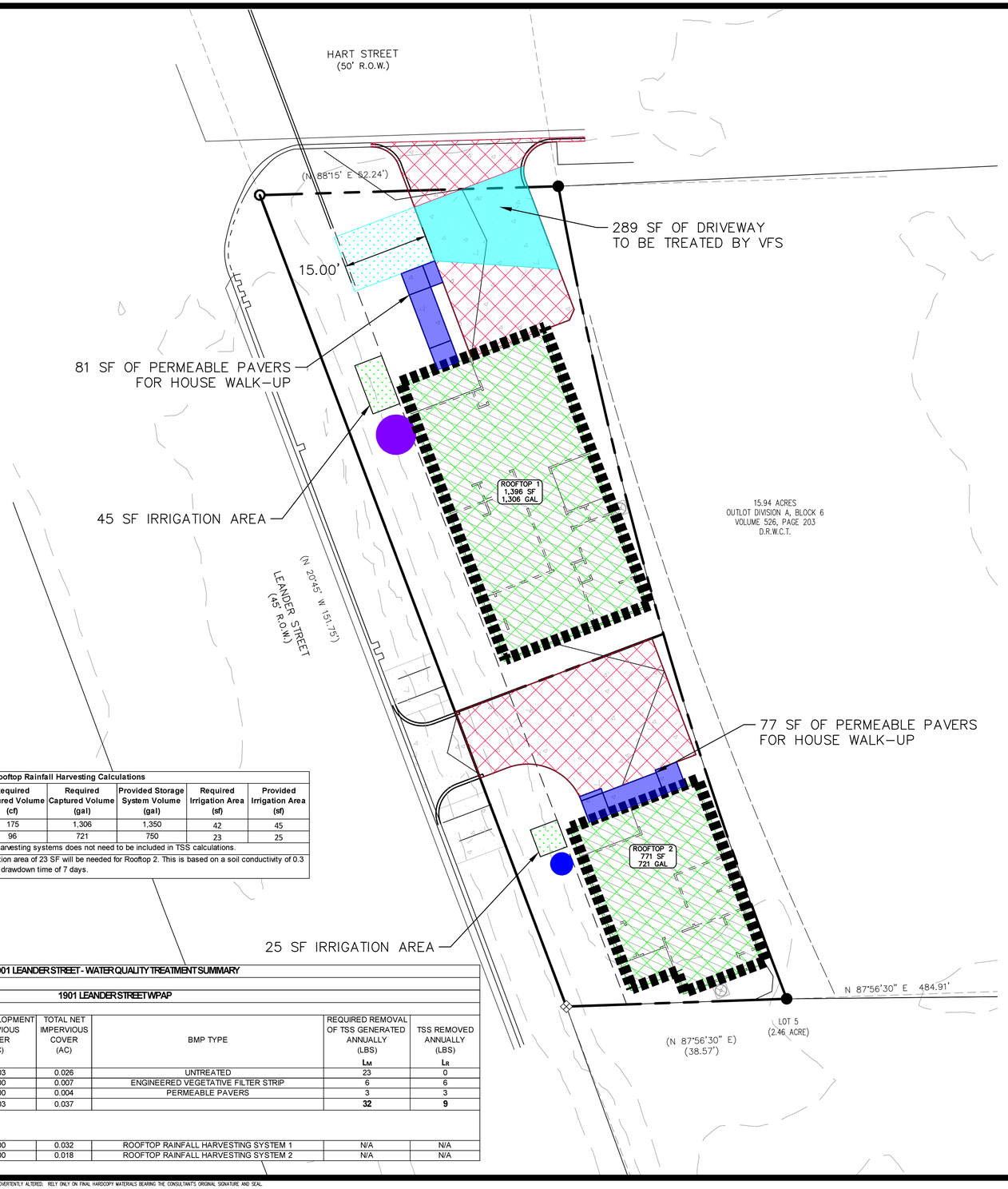
Thanks,

Jake Styslinger, P.E. | **Project Manager**

PAPE-DAWSON ENGINEERS

O: 512.454.8711 | **D:** 512.640.1246 | **E:** JStyslinger@pape-dawson.com

SITE PLAN



SCALE: 1"= 20'

0' 20' 40' 60'

LEGEND

- (735) PROPOSED CONTOURS
- 735 EXISTING CONTOURS
- PROPERTY LINE
- PROPOSED WATERSHED
- OFFSITE 3A 3.92 AC — WATERSHED ACREAGE
- FLOW DIRECTION
- 1,350 GAL STORAGE TANK
- 750 GAL STORAGE TANK
- PROPOSED IRRIGATION AREA
- AREA TREATED BY VFS
- AREA TREATED BY PERMEABLE PAVERS
- UNCAPTURED AREA

1901 Leander Street - Rooftop Rainfall Harvesting Calculations

Drainage Area	Area (sf)	Area (ac)	Required Captured Rainfall Runoff (in)	Required Captured Volume (cf)	Required Captured Volume (gal)	Provided Storage System Volume (gal)	Required Irrigation Area (sf)	Provided Irrigation Area (sf)
ROOFTOP 1	1,396	0.03	1.5	175	1,306	1,350	42	45
ROOFTOP 2	771	0.02	1.5	96	721	750	23	25

Note: Impervious cover associated with roof areas connected to a rainfall harvesting systems does not need to be included in TSS calculations.

Note: An irrigation area of 42 SF will be needed for Rooftop 1 and an irrigation area of 23 SF will be needed for Rooftop 2. This is based on a soil conductivity of 0.3 in/hr, based on results for project area from NRCS Web Soil Survey and a drawdown time of 7 days.

1901 LEANDER STREET - WATER QUALITY TREATMENT SUMMARY

1901 LEANDER STREET WPAP

WATERSHED	WATERSHED AREA (AC)	DEVELOPED IMPERVIOUS COVER (AC)	PRE-DEVELOPMENT IMPERVIOUS COVER (AC)	TOTAL NET IMPERVIOUS COVER (AC)	BMP TYPE	REQUIRED REMOVAL OF TSS GENERATED ANNUALLY (LBS) L_M	TSS REMOVED ANNUALLY (LBS) L_R
UNCAPTURED	0.082	0.029	0.003	0.026	UNTREATED	23	0
VFS	0.007	0.007	0.000	0.007	ENGINEERED VEGETATIVE FILTER STRIP	6	6
PERMEABLE PAVERS	0.004	0.004	0.000	0.004	PERMEABLE PAVERS	3	3
TOTAL	0.092	0.039	0.003	0.037		**32**	**9**
Total untreated impervious cover percentage for lot: 18.6%							
ROOFTOP RAINFALL HARVESTING - NOT TREATED BY BMP							
ROOFTOP 1	0.032	0.032	0.000	0.032	ROOFTOP RAINFALL HARVESTING SYSTEM 1	N/A	N/A
ROOFTOP 2	0.018	0.018	0.000	0.018	ROOFTOP RAINFALL HARVESTING SYSTEM 2	N/A	N/A

NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chavez 6/6/25

PAPE-DAWSON ENGINEERS
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

WATER QUALITY TREATMENT SUMMARY

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA
SHEET 10 OF 15

Date: Jun 06, 2025, 2:12pm User ID: jstplinger
File: K:\Projects\51466\01\301 Construction Documents\Civil\WQ51466-01.dwg

ORGANIZED SEWAGE COLLECTION SYSTEM PLAN

Organized Sewage Collection System Application

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(c), 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.

Regulated Entity Name: 1901 Leander Street

1. ☒ **Attachment A – SCS Engineering Design Report**. This Engineering Design Report is provided to fulfill the requirements of 30 TAC Chapter 217, including 217.10 of Subchapter A, §§217.51 – 217.70 of Subchapter C, and Subchapter D as applicable, and is required to be submitted with this SCS Application Form.

Customer Information

2. The entity and contact person responsible for providing the required engineering certification of testing for this sewage collection system upon completion (including private service connections) and every five years thereafter to the appropriate TCEQ region office pursuant to 30 TAC §213.5(c) is:

   Contact Person: Philip Golden
   Entity: Habitat for Humanity of Williamson County, Texas
   Mailing Address: 2108 N. Austin Aven
   City, State: Georgetown, Texas Zip: 78626
   Telephone: (512) 863-4344 Fax: _____
   Email Address: philipg@williamsonhabitat.org
   The appropriate regional office must be informed of any changes in this information within 30 days of the change.

3. The engineer responsible for the design of this sewage collection system is:

   Contact Person: Michael Fisher, P.E.
   Texas Licensed Professional Engineer's Number: 87704
   Entity: Pape-Dawson Consulting Engineers, LLC.
   Mailing Address: 10801 N MoPac Expressway, Bldg. 3, Suite 200
   City, State:Austin, TX Zip: 78759
   Telephone:(512) 454-8711 Fax:_____
   Email Address:mfisher@pape-dawson.com

Project Information

4. Anticipated type of development to be served (estimated future population to be served, plus adequate allowance for institutional and commercial flows):

   ☒ Residential: Number of single-family lots: 2
   ☐ Multi-family: Number of residential units: _____
   ☐ Commercial
   ☐ Industrial
   ☐ Off-site system (not associated with any development)
   ☐ Other: _____

5. The character and volume of wastewater is shown below:

100% Domestic	500 gallons/day
_____% Industrial	_____ gallons/day
_____% Commingled	_____ gallons/day

   Total gallons/day: 500

6. Existing and anticipated infiltration/inflow is 98 gallons/day. This will be addressed by: adequate sizing of sewer service.

7. A Water Pollution Abatement Plan (WPAP) is required for construction of any associated commercial, industrial or residential project located on the Recharge Zone.

   ☐ The WPAP application for this development was approved by letter dated _____. A copy of the approval letter is attached.
   ☒ The WPAP application for this development was submitted to the TCEQ on 4/17/2025, but has not been approved.
   ☐ A WPAP application is required for an associated project, but it has not been submitted.
   ☐ There is no associated project requiring a WPAP application.

8. Pipe description:

Table 1 - Pipe Description

Pipe Diameter(Inches)	***Linear Feet (1)***	***Pipe Material (2)***	***Specifications (3)***
6" Wastewater Service (Double)	40	PVC, SDR 26	ASTM D3034, ASTM D3212

Total Linear Feet: 40

(1) Linear feet - Include stub-outs and double service connections. Do not include private service laterals.
(2) Pipe Material - If PVC, state SDR value.

(3) Specifications - ASTM / ANSI / AWWA specification and class numbers should be included.

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

☒ Existing
☐ Proposed

10. All components of this sewage collection system will comply with:

☒ The City of Kyle standard specifications.
☐ Other. Specifications are attached.

11. ☒ No force main(s) and/or lift station(s) are associated with this sewage collection system.

☐ A force main(s) and/or lift station(s) is associated with this sewage collection system and the **Lift Station/Force Main System Application** form (TCEQ-0624) is included with this application.

Alignment

12. ☒ There are no deviations from uniform grade in this sewage collection system without manholes and with open cut construction.

13. ☒ There are no deviations from straight alignment in this sewage collection system without manholes.

☐ **Attachment B - Justification and Calculations for Deviation in Straight Alignment without Manholes**. A justification for deviations from straight alignment in this sewage collection system without manholes with documentation from pipe manufacturer allowing pipe curvature is attached.

☐ For curved sewer lines, all curved sewer line notes (TCEQ-0596) are included on the construction plans for the wastewater collection system.

Manholes and Cleanouts

14. ☒ Manholes or clean-outs exist at the end of each sewer line(s). These locations are listed below: (Please attach additional sheet if necessary)

Table 2 - Manholes and Cleanouts

Line	*Shown on Sheet*	*Station*	*Manhole or Clean-out?*
WW-SERVICE	7 Of 15	N/A	Cleanout
	Of		
	Of		
	Of		
	Of		
	Of		

Line	*Shown on Sheet*	*Station*	*Manhole or Clean-out?*
	Of		
	Of		
	Of		
	Of		

15. ☐ Manholes are installed at all Points of Curvature and Points of Termination of a sewer line.

16. ☒ The maximum spacing between manholes on this project for each pipe diameter is no greater than:

Pipe Diameter (inches)	**Max. Manhole Spacing (feet)**
6 - 15	500
16 - 30	800
36 - 48	1000
≥54	2000

☐ **Attachment C – Justification for Variance from Maximum Manhole Spacing**. The maximum spacing between manholes on this project (for each pipe diameter used) is greater than listed in the table above. A justification for any variance from the maximum spacing is attached, and must include a letter from the entity which will operate and maintain the system stating that it has the capability to maintain lines with manhole spacing greater than the allowed spacing.

17. ☐ All manholes will be monolithic, cast-in-place concrete.

☐ The use of pre-cast manholes is requested for this project. The manufacturer's specifications and construction drawings, showing the method of sealing the joints, are attached.

Site Plan Requirements

Items 18 - 25 must be included on the Site Plan.

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

Site Plan Scale: 1" = 10'.

19. ☒ The Site Plan must include the sewage collection system general layout, including manholes with station numbers, and sewer pipe stub outs (if any). Site plan must be overlain by topographic contour lines, using a contour interval of not greater than ten feet and showing the area within both the five-year floodplain and the 100-year floodplain of any drainage way.

20. Lateral stub-outs:

☒ The location of all lateral stub-outs are shown and labeled.

☐ No lateral stub-outs will be installed during the construction of this sewer collection system.

21. Location of existing and proposed water lines:

☒ The entire water distribution system for this project is shown and labeled.
☐ If not shown on the Site Plan, a Utility Plan is provided showing the entire water and sewer systems.
☐ There will be no water lines associated with this project.

22. 100-year floodplain:

☒ After construction is complete, no part of this project will be in or cross a 100-year floodplain, either naturally occurring or manmade. (Do not include streets or concrete-lined channels constructed above of sewer lines.)
☐ After construction is complete, all sections located within the 100-year floodplain will have water-tight manholes. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 3 - 100-Year Floodplain

Line	***Sheet***	***Station***
	of	to
	of	to
	of	to
	of	to

23. 5-year floodplain:

☒ After construction is complete, no part of this project will be in or cross a 5-year floodplain, either naturally occurring or man-made. (Do not include streets or concrete-lined channels constructed above sewer lines.)
☐ After construction is complete, all sections located within the 5-year floodplain will be encased in concrete or capped with concrete. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 4 - 5-Year Floodplain

Line	***Sheet***	***Station***
	of	to
	of	to
	of	to
	of	to

24. ☒ Legal boundaries of the site are shown.

25. ☒ The ***final plans and technical specifications*** are submitted for the TCEQ's review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.

Items 26 - 33 must be included on the Plan and Profile sheets.

26. ☒ All existing or proposed water line crossings and any parallel water lines within 9 feet of sewer lines are listed in the table below. These lines must have the type of pressure rated pipe to be installed shown on the plan and profile sheets. Any request for a variance from the required pressure rated piping at crossings must include a variance approval from 30 TAC Chapter 290.

☐ There will be no water line crossings.
☐ There will be no water lines within 9 feet of proposed sewer lines.

Table 5 - Water Line Crossings

Line	*Station or Closest Point*	*Crossing or Parallel*	*Horizontal Separation Distance*	*Vertical Separation Distance*
WW-SERVICE	0+2.20	Crossing	N/A	Minimum 1.0'

27. Vented Manholes:

☒ **No part** of this sewer line is within the 100-year floodplain and vented manholes are not required by 30 TAC Chapter 217.
☐ **A portion** of this sewer line is within the 100-year floodplain and vented manholes will be provided at less than 1500 foot intervals. These water-tight manholes are listed in the table below and labeled on the appropriate profile sheets.
☐ **A portion** of this sewer line is within the 100-year floodplain and an alternative means of venting shall be provided at less than 1500 feet intervals. A description of the alternative means is described on the following page.
☐ **A portion** of this sewer line is within the 100-year floodplain; however, there is no interval longer than 1500 feet located within. No vented manholes will be used.

Table 6 - Vented Manholes

Line	*Manhole*	*Station*	*Sheet*

Line	*Manhole*	*Station*	*Sheet*

28. Drop manholes:

☒ There are no drop manholes associated with this project.
☐ Sewer lines which enter new or existing manholes or "manhole structures" higher than 24 inches above the manhole invert are listed in the table below and labeled on the appropriate profile sheets. These lines meet the requirements of 30 TAC §217.55(l)(2)(H).

Table 7 - Drop Manholes

Line	*Manhole*	*Station*	*Sheet*

29. Sewer line stub-outs (For proposed extensions):

☐ The placement and markings of all sewer line stub-outs are shown and labeled.
☐ No sewer line stub-outs are to be installed during the construction of this sewage collection system.

30. Lateral stub-outs (For proposed private service connections):

☒ The placement and markings of all lateral stub-outs are shown and labeled.
☐ No lateral stub-outs are to be installed during the construction of this sewage collection system.

31. Minimum flow velocity (From Appendix A)

☒ Assuming pipes are flowing full; all slopes are designed to produce flows equal to or greater than 2.0 feet per second for this system/line.

32. Maximum flow velocity/slopes (From Appendix A)

☒ Assuming pipes are flowing full, all slopes are designed to produce maximum flows of less than or equal to 10 feet per second for this system/line.
☐ **Attachment D – Calculations for Slopes for Flows Greater Than 10.0 Feet per Second.** Assuming pipes are flowing full, some slopes produce flows which are greater than 10 feet per second. These locations are listed in the table below. Calculations are attached.

Table 8 - Flows Greater Than 10 Feet per Second

Line	*Profile Sheet*	*Station to Station*	*FPS*	*% Slope*	*Erosion/Shock Protection*

33. Assuming pipes are flowing full, where flows are ≥ 10 feet per second, the provisions noted below have been made to protect against pipe displacement by erosion and/or shock under 30 TAC §217.53(l)(2)(B).

☐ Concrete encasement shown on appropriate Plan and Profile sheets for the locations listed in the table above.
☐ Steel-reinforced, anchored concrete baffles/retards placed every 50 feet shown on appropriate Plan and Profile sheets for the locations listed in the table above.
☒ N/A

Administrative Information

34. ☒ The final plans and technical specifications are submitted for TCEQ review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.

35. ☒ Standard details are shown on the detail sheets, which are dated, signed, and sealed by the Texas Licensed Professional Engineer, as listed in the table below:

Table 9 - Standard Details

Standard Details	*Shown on Sheet*
Lateral stub-out marking **[Required]**	N/A of N/A
Manhole, showing inverts comply with 30 TAC §217.55(l)(2) **[Required]**	N/A of N/A
Alternate method of joining lateral to existing SCS line for potential future connections **[Required]**	N/A of N/A
Typical trench cross-sections **[Required]**	15 of 15
Bolted manholes **[Required]**	N/A of N/A
Sewer Service lateral standard details **[Required]**	15 of 15
Clean-out at end of line **[Required, if used]**	15 of 15
Baffles or concrete encasement for shock/erosion protection **[Required, if flow velocity of any section of pipe >10 fps]**	N/A of N/A
Detail showing Wastewater Line/Water Line Crossing **[Required, if crossings are proposed]**	15 of 15
Mandrel detail or specifications showing compliance with 30 TAC §217.57(b) and (c) **[Required, if Flexible Pipe is used]**	N/A of N/A

Standard Details	*Shown on Sheet*
Drop manholes **[Required, if a pipe entering a manhole is more than 24 inches above manhole invert]**	N/A of N/A

36. ☒ All organized sewage collection system general construction notes (TCEQ-0596) are included on the construction plans for this sewage collection system.

37. ☒ All proposed sewer lines will be sufficiently surveyed/staked to allow an assessment prior to TCEQ executive director approval. If the alignments of the proposed sewer lines are not walkable on that date, the application will be deemed incomplete and returned.

    ☐ Survey staking was completed on this date: _____

38. ☒ 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. The copies must be submitted to the appropriate regional office.

39. ☒ Any modification of this SCS application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

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 **Organized Sewage Collection System Application** is hereby submitted for TCEQ review and executive director approval. The system was designed in accordance with the requirements of 30 TAC §213.5(c) and 30 TAC §217 and prepared by:

Print Name of Licensed Professional Engineer: Michael Fisher P.E.

Date: 5/1/25

Place engineer's seal here:

Signature of Licensed Professional Engineer: 5/1/25

Appendix A-Flow Velocity Table

Flow Velocity (Flowing Full) All gravity sewer lines on the Edwards Aquifer Recharge Zone shall be designed and constructed with hydraulic slopes sufficient to give a velocity when flowing full of not less than 2.0 feet per second, and not greater than 10 feet per second. The grades shown in the following table are based on Manning's formula and an n factor of 0.013 and shall be the minimum and maximum acceptable slopes unless provisions are made otherwise.

Table 10 - Slope Velocity

Pipe Diameter(Inches)	*% Slope required for minimum flow velocity of 2.0 fps*	*% Slope which produces flow velocity of 10.0 fps*
6	0.50	12.35
8	0.33	8.40
10	0.25	6.23
12	0.20	4.88
15	0.15	3.62
18	0.11	2.83
21	0.09	2.30
24	0.08	1.93
27	0.06	1.65
30	0.055	1.43
33	0.05	1.26
36	0.045	1.12
39	0.04	1.01
>39	*	*

**For lines larger than 39 inches in diameter, the slope may be determined by Manning's formula (as shown below) to maintain a minimum velocity greater than 2.0 feet per second when flowing full and a maximum velocity less than 10 feet per second when flowing full.*

$$v = \frac{1.49}{n} \times R_h^{0.67} \times \sqrt{S}$$

Figure 1 - Manning's Formula

Where:

v = velocity (ft/sec)
n = Manning's roughness coefficient (0.013)
Rh = hydraulic radius (ft)
S = slope (ft/ft)

ATTACHMENT A

TABLE OF CONTENTS

APPENDICES

INTRODUCTION

This Engineering Design Report has been prepared to comply with the Texas Commission on Environmental Quality's Design Criteria for Domestic Wastewater Systems (30 TAC 217), and regulations over the Edwards Aquifer Recharge Zone (30 TAC 213). Please note that throughout this application, in the case of multiple regulations, the more stringent shall apply.

The 1901 Leander Street project is located at 1901 Leander Street in Georgetown, Texas. The project limits are located entirely over the Edwards Aquifer Recharge Zone as shown Attachment B. A Water Pollution Abatement Plan (WPAP) application for this development is being submitted concurrently with this Sewage Collegection System (SCS) Modification Application.

The 1901 Leander Street SCS application proposed the construction of approximately 40 linear feet of 6-inch double wastewater service laterals that will be PVC, SDR-26 pipe. Regulated activities include excavation, construction of sewer laterals, backfill, compaction, and repaving of existing street. The SCS proposed with this application will connect to an existing 8-inch wastewater line.

NO geologic assessment (GA) is included with this SCS application, as an exmpetion for a GA was requested from TCEQ and granted based on the location of the project being within proximity of previous development near downtown Georgetown, Texas. A copy of the email correspondence confirming this exception is provided with this application.

This SCS application will directly serve a total of 2 LUE's defined as follows:

- 1901 Leander Street (0.14 acres) – 2 single family units = 2 LUE's

Approxiamtely, 500 gallons per day (average flow) of domestic wastewater will be generated from the 1901 Leander Street SCS. Sewage flow will be disposed of by conveyance to the existing San Gabriel Wastewater Treatment Plant. The San Gabriel Wastewater Treatment Plant has the capacity to adequately treat the proposed peak flow. Potable water will be provided by the City of Georgetown. Any future wastewater mains or double service laterals will be permitted with their own SCS Application and submitted to TCEQ for review and approval.

GRAVITY SANITARY SEWER PIPING: FLOW & CAPACITY ANALYSIS

Basis for average flow used for design of collection system (**check one or more**):

Per Capita Contributions: _____

Service Connections: ✓

Land Area and Use: _____

Fixture Analysis: _____

Odor Control

Odor Control is not necessary on this project as it is a gravity line and there will be no conditions where sewage is standing and will become septic.

Flow Calculation

Peaking Factor used for design: **Reference Equations A & B below.**

Peaking Factor is based on: **Design Requirements for peak flow (from City of Georgetown, Texas CDM Memorandum on Water & Wastewater System Recommended Design Criteria)**

***1901 Leander Street**:*

*Total LUEs = 2**

- *2 LUE – Residential Single Family (BWF = 250 gpd)*
  - *Base Wastewater flowrates (BWF) from the City of Georgetown, Texas CDM on Water & Wastewater System Recommended Design Criteria*

1 Living Unit Equivalent (LUE) = 250 gallons per day (average wastewater flow)
Population = 5 persons (Based on an assumed 2.5 persons per unit)

Residential – Single Family

Base Wastewater Flow (BWF) = $\# \, of \; LUEs \; x \; \frac{250 \, \frac{gal}{day}}{1 \; LUE}$ *= 500 gpd or **0.0005 mgd***

2 LUEs x 500 gpd/LUE = 19,250 gpd

*Groundwater Inflow (GWI) = 25% x BWF = 125 gpd or **0.000125 mgd***

*Average Dry Weather Flowrate (AvgDWF) = BWF + GWI = 625 gpd or **0.000625 mgd***

Peaking Factor = 2.8 x AvgDWF$^{-0.0732}$ =4.81 *Equation A*

Peak Dry Weather Flow = 4.81 x 625 gpd x $\frac{1\ day}{24\ hr}$ *x* $\frac{1\ hr}{60\ min}$ *= **2.09 gpm***

Peak Wet Weather Flow = Q_{PW} *= Peak Dry Weather Flow + Infiltration* *Equation B*

Infiltration = 1,000 gallons per day per acre served

$$= \frac{[(1{,}000\ gpd/acre)x\ \ 0.14\ acres]}{1{,}440} = \mathbf{0.10\ gpm}$$

Q_{PW} *= 2.09 gpm + 0.10 gpm = **2.19 gpm***

Capacity Calculation

<u>Characteristics of 6" ASTM D3034, SDR 26, PVC Sewer Pipe:</u>

Nominal Size = 6"

Outer Diameter (D_o) = 6.275"

Minimum Wall Thickness (t) = 0.241"

Inner Diameter (D_i) = 6"

Manning's Equation:

$Q = (k/n)(A)(R^{2/3})(S^{1/2})$

$v = Q/A$

Where:

Q = Discharge (cfs)

k = Constant [(1.49 $ft^{1/3}$)/sec.]

n = Manning's roughness coefficient (unitless) = 0.013 [as required by 30 TAC 213.53 A(i)]

A = Flow area (ft^2)

R = Hydraulic Radius (ft)= A/P = Cross sectional area of flow (ft^2)/Wetted perimeter (ft.)

S = Slope (ft/ft)

v = Velocity of flow (ft/s)

<u>Calculations for 6" ASTM D3034, SDR 26, PVC Sewer Pipe:</u>

$A = \pi(D_i^2)/4 = \pi(6\ in)^2/4 = 28.27\ in^2 = 0.20\ ft^2$

P = π(D$_i$)=π(6 in)=18.85 in=1.57 ft

R = A/P = 0.20 ft^2/1.57 ft.=0.13 ft

S = 0.01

Q = [(1.49 ft$^{1/3}$/sec)/0.013)](0.20 ft^2)(0.13 ft)$^{2/3}$(0.01)$^{1/2}$

Q = 0.56 cfs = 253 gpm =Q$_{full}$

*v = 0.56 cfs/0.20 ft^2= **2.87 ft/s***

*Qmax =0.56 cfs (0.80)(7.48 gallons/1 cf)(60 sec/1 min.)=**202.4 gpm***

Nominal Main Size (in)	Outer Diameter (in)	Minimum Slope	Area (ft^2)	Hydraulic Radius (A/P)	R$^{2/3}$	S$^{1/2}$	Q-Full (cfs)	Max Pipe (%)	Velocity (ft/s)	Q-Max (gpm)
6	*6.275*	*0.01*	*0.20*	*0.13*	*0.25*	*0.10*	*0.56*	*80*	*2.87*	*202.4*

Conclusion

The proposed 6" pipe with a minimum slope of 1.00% has sufficient capacity to convey the projected average and peak flows.

GENERAL STRUCTURAL COMPONENTS

Project Materials (Pipe and Joints):

Nominal Pipe Diameter (in)	Linear Feet	Pipe Material	National Standard Specification for Pipe Material	National Standard for Pipe Joints
6	*40*	*PVD SDR 26*	*ASTM D3034*	*ASTM D3212*

Note: Section 217.53 (j)(4) requires a minimum pipe diameter of 6 inches for all gravity sanitary sewer collection system piping.

Watertight, size on size resilient connectors conforming to ASTM C-923 have been specified for connecting pipe to manholes.

Where a collection system parallels a water supply pipe and a nine-foot separation distance cannot be achieved, Section 217.53 (d)(3)(A)(i) requires a collection system pipe be constructed of cast iron, ductile iron, or PVC meeting ASTM specifications with at least a 150 pounds per square inch (psi) rating for both the pipe and joints. The proposed project will comply with these requirements.

Where a collection system pipe crosses a water supply line and a nine-foot separation distance cannot be achieved, Section 217.53(d)(3)(B)(i) requires the collection system pipe be constructed of cast iron, ductile iron, or PVC with a minimum pressure rating of 150 psi. The proposed project will comply with this requirement and that of 30 TAC 217.53(d)(3)(B)(iii).

Project Materials (Bedding):

The specified bedding will comply with ASTM D2321-11 Class I, II or III for materials and densification. A minimum of 6 inches of bedding is required for all pipe.

Pipe Diameter (in)	Pipe Material	Bedding Class
6	***PVC***	***Class I & Class III***

Initial backfill for the pipe sizes shown above will be Class I. Secondary backfill will be Class III. See Table 2 of ASTM D2321-11 “Soil Classes” in Appendix A of this subsection.

Minimum and Maximum Slopes

Note: All pipes are designed with a slope that will provide a velocity of at least 2 ft/s flowing full, as calculated using Manning's equation with an "n" value of 0.013. Additionally, the collection system is designed to ensure that, with pipes flowing full, the velocities will be less than 10 feet per second.

The following are the minimum and maximum slopes for each pipe diameter:

Pipe Diameter: : ***6"(NR)*** Min. Slope: ***1.00%*** Max. Slope: **8.30*%***

Backfill

Note: The backfill will be free of stones greater than 6 inches in diameter and free of organic or any other unstable material.

Trenching

Note: The trench width will be minimized while still allowing adequate width for proper compaction of backfill, and while still ensuring that at least 6 inches of backfill exists below and on each side of the pipe. The trench walls will be vertical to at least one foot above the pipe.

Minimum and Maximum Trench Width

Based on 30 TAC 217.54:

Pipe Diameter: ***6" (NR)*** Min. Trench Width: ***23***" Max. Trench Width: ***35"***

These trench widths account for the bell diameter.

Corrosion Prevention

Proposed collection system components (pipes) will not be susceptible to deterioration through the corrosive effects of an anaerobic sewage environment.

FLEXIBLE PIPE COMPUTATIONS

Please note, all flexible pipe computations are based on engineering principles and practices for the design of buried PVC pipe systems. Equations used can be found in "The Uni-Bell PVC Pipe Association Handbook of PVC Pipe: Design and Construction" and Buried Pipe Design, 3rd Edition by Moser and Folkman. Please note, the equations used may be in a different format than shown in the Uni-Bell Handbook or Buried Pipe Design, 3rd Edition.

Live Load Calculations

No influence of live loads on the performance of the SCS is anticipated. The average burial depth for this line is such that the influence of live loads is negligible.

Buckling Pressure Calculations

This area of the Edwards Aquifer is unsaturated; consequently, there are no anticipated areas where sewer pipe will be placed below the water table. The value of $h_w = 0$ as there will be no height or time period of perched water or groundwater above the pipe crowns of the proposed sewer line. No geotechnical borings were done for this line.

The value of H for use in these calculations is 23' as it exceeds the maximum burial depth for this line. The value of γ_s equals 143 pcf is a conservative value based on a dry unit weight of 135 pcf and a moisture content of 6%. This value is conservative as it corresponds to saturated unit weights of commonly used backfill materials.

Allowable Buckling Pressure:

$$q_a = 0.4 * \sqrt{32 * R_w * B' * E_b * (E * I/D^3)} \qquad \textit{Equation 1}$$

$$q_a = 0.4 * \sqrt{32 * 1 * 0.53 * 400 * (400{,}000 * 0.001/6.03^3)} = 44.374 \textit{ psi (6" PVC SDR 26)}$$

$$R_W = 1 - 0.33 * (h_w/h) \qquad \textit{Equation 2}$$

$$R_W = 1 - 0.33 * (0/360) = 1$$

$$B' = \frac{1}{1 + 4 * e^{-0.065H}} \qquad Equation\ 3$$

$$B' = \frac{1}{1 + 4 * e^{-0.065(23)}} = 0.53$$

$$I = (t^3/12) * (inches^4/linear\ inch) \qquad \textit{Equation 4}$$

$$I = (0.241^3/12) = 0.001 in^3\ (6"\ PVC, SDR\ 26)$$

$$D = D_o - t \qquad \textit{Equation 5}$$

$$D = 6.275 inches - 0.241 inches = 6.03 inches \ (6"PVC, SDR\ 26)$$

Where:

- q_a = Allowable buckling pressure, pounds per square inch (psi)
- h = Height of soil surface above top of pipe in inches (in)
- h_w = Height of water surface above top of pipe in inches (in) (groundwater elevation)
- R_w = Water buoyancy factor. If hw = 0, Rw = 1. If $0 \leq hw \leq h$ (groundwater elevation is between the top of the pipe and the ground surface), calculate Rw with Equation 2
- H = Depth of burial in feet (ft) from ground surface to crown of pipe.
- B' = Empirical coefficient of elastic support
- E_b = Modulus of soil reaction for the bedding material (psi)
- E = Modulus of elasticity of the pipe material (psi)
- I = Moment of inertia of the pipe wall cross section per linear inch of pipe, $inch^4$/lineal inch = $inch^3$. For solid wall pipe, "I" can be calculated with Equation 4
- t = Pipe structural wall thickness (in)
- D = Mean pipe diameter (in)
- D_o = Pipe outer diameter (in)

Pressure Under Installed Conditions

$$q_p = \gamma_w * h_w + R_w * (W_c/D) + L_I \qquad \textit{Equation 6}$$

$$q_p = 0.0361 * 0 + 1 * \left(\frac{143.23}{6.03}\right) + 0 = 23.75 \text{ psi } (6"\text{PVC, SDR } 26)$$

Where:

- q_p = Pressure applied to pipe under installed conditions (psi)
- γ_w = 0.0361 pounds per cubic inch (pci), specific weight of water
- W_c = Vertical soil load on the pipe per unit length in pounds per linear inch (lb/in)
- L_l = Live load (lbs)

$$W_c = \gamma_s * H * (D + t)/144 \qquad \textit{Equation 7}$$

$$W_c = 143 * 23 * (6.03 + 0.241)/144 = 143.23\ lb/in (6\text{" PVC, SDR 26})$$

Where:

γ_s = Specific weight of soil in pounds per cubic foot (pcf)

D = Mean pipe diameter (in)

Pipe Diameter: ***6" (NR)*** Pipe Material: ***PVC, SDR 26*** q_a: ***44.37*** q_p: ***23.75***

Pipe Diameter: ***8" (NR)*** Pipe Material: ***PVC, SDR 26*** q_a: ***49.55*** q_p: ***23.75***

Pipe Diameter: ***8" (160 psi)*** Pipe Material: ***PVC, SDR 26*** q_a: ***47.68*** q_p: ***23.76***

Pipe Diameter: ***12" (NR)*** Pipe Material: ***PVC, SDR 26*** q_a: ***47.30*** q_p: ***23.75***

Since $q_a \geq q_p$, the specified pipe is acceptable for the proposed installation.

Installation Temperature Effects

Flexible pipe will be installed under favorable ambient conditions, per pipe manufacturer's specifications.

Wall Crushing

No portion of the proposed sewerline is located within the 5-year floodplain.

Tensile Strength

The information below is from "The Uni-Bell Handbook of PVC Pipe: Design and Construction" Table 2.1 pages 14-15. This applies to all PVC SDR-26 pipe.

Pipe Material: ***PVC SDR 26*** Tensile Strength: ***7,000*** Cell Class (PVC only) ***12454***

Strain

The conditions of this installation are such that strain-related failure will not be a problem. Strain is generally not a performance-limiting factor for buried PVC pipe or a design-limiting criterion for PVC pipes according to the Uni-Bell Handbook of PVC Pipe (Chapter VII, Pages 255 and 257). As pipe deflection will be below 5%, strain-related failure is not anticipated.

Modulus of Soil Reaction

The modulus of soil reaction for the bedding material, $E_{b,}$ is **400 psi**.

This value was determined using the "Table 1: Soil Classification Chart" and "Table 2: Soil Classes" from ASTM D2321-11 and Table 7.3 "Average Values of Modulus of Soil Reaction, E" from "The Uni-Bell Handbook of PVC Pipe: Design and Construction" attached in Appendix A of this subsection. Class III material was chosen. As the secondary backfill (Class III) has a lower Modulus of Soil Reaction than initial backfill (Class I), its value was used in the calculations that follow. Class III on Table 2 corresponds to coarse-grained soils with fines (GM, GC, SM or SC) and sandy or gravelly fine-grained soils (CL or ML). On Table 7.3, coarse-grained soils with fines at a slight compaction have an E' equal to 400 psi.

The modulus of soil reaction for the in-situ soil, $E'_{n,}$ is **3,000 psi**

This value was determined using the "Table 1: Soil Classification Chart" and "Table 2: Soil Classes" from ASTM D 2321-11 and Table 7.3 "Average Values of Modulus of Soil Reaction, E" from "The Uni-Bell Handbook of PVC Pipe: Design and Construction" attached in Appendix A of this subsection. Class I material was chosen, which includes crushed rock as shown on Table 2. Compacted crushed rock on Table 7.3 has an E' equal to 3,000 psi. Values in Table 7.3 are based on empirical data and derived from laboratory and field tests for buried pipe.

Bedding to in-situ soil modulus of soil reaction ratio = E_b/E'_n = **400 psi/3,000 psi = 0.13**

Zeta Calculation

Where native soil is significantly weaker than bedding material, or where predicted deflection approaches 5%, the effect of native soil must be quantified using Leonhardt's Zeta factor. If the ration of bedding modulus to soil modulus is not equal to 1.0, a zeta factor must be calculated by using the equations below, where zeta is a factor, which corrects for the effect of in-situ soil on pipe stability (Uni-Bell Handbook of

Pipe, page 267). To calculate zeta, directly use the formulas below. The calculations that are done to determine the zeta factors for the different pipe diameters must be included with this submittal.

$$zeta = \frac{1.44}{f + (1.44 - f) * (E_b/E_m)} \qquad Equation\ 9$$

$$\text{zeta} = \frac{1.44}{1.44 + (1.44 - 1.44) * (0.13)} = 1.00\ (6"\ \text{PVC, SDR 26})$$

$$\text{f} = \frac{b/d_a - 1}{1.154 + 0.444 * (b/d_a - 1)} \qquad Equation\ 10$$

$$\text{f} = \frac{35/6.275 - 1}{1.154 + 0.444 * (35/6.275 - 1)} = 1.44\ (6"\ \text{PVC, SDR 26})$$

Where:

- f = Pipe/trench width coefficient
- b = Trench width (in)
- d_a = Pipe diameter (in)
- E_b = Modulus of soil reaction for the bedding material (psi)
- E'_n = Modulus of soil reaction for the in-situ soil (psi)

Pipe Diameter: 6" ***(NR)*** Trench Width: ***35"*** Zeta: ***1.00***

Pipe Stiffness

Pipe stiffness is based on National Reference Standards and manufacturer's data. Please see Table 7.1 of the "The Uni-Bell Handbook of PVC Pipe: Design and Construction" listing the pipe stiffness of 8" PVC SDR 26 as 115 psi for E = 400,000 psi.

Pipe Diameter: ***6"*** Pipe Material: ***PVC SDR 26*** Ps: ***115 psi***

Deflection

Maximum allowable deflection in installed lines is 5% (per 30 TAC 217), as determined by the deflection analysis and verified by a mandrel test. It is recommended that the percent of vertical deflection is below this range.

Note: Per Table 7.2 attached in Appendix A of the SCS Application, K = 0.096 when the bedding angle is 90 degrees.

$$\Delta Y/D(\%) = \frac{K * (L_P + L_l) * 100}{(0.149 * P_s) + (0.061 * \text{zeta} * E_b)} \qquad Equation\ 11$$

$$\Delta Y/D(\%) = \frac{(0.096)(18.87) * 100}{(0.149 * 115) + (0.061 * 1.00 * 400)} = 4.36\% \text{ for 6" NR psi pipe}$$

$$L_P = \frac{\gamma_S * H}{144} \qquad Equation\ 12$$

$$L_P = \frac{143*19}{144} = 18.87 \text{ psi for 6"}$$

Where:

ΔY/D (%) = Predicted % vertical deflection under load

ΔY = Change in vertical pipe diameter under load

D = Undeflected mean pipe diameter (in)

K = Bedding angle constant

γ_s = Unit weight of soil (pcf)

H = Depth of burial (ft) from ground surface to crown of pipe

L_p = Prism load (psi)

	Type of Pipe Material	P_s (psi)	Zeta Factor Assumed or Calculated	E_b (psi)	% Deflection
Pipe Diameter 1	***6" PVC SDR 26 (NR)***	***115***	***1.00***	***400***	***4.36***

APPENDIX A
REFERENCE TABLES

Appendix A-Flow Velocity Table

Flow Velocity (Flowing Full) All gravity sewer lines on the Edwards Aquifer Recharge Zone shall be designed and constructed with hydraulic slopes sufficient to give a velocity when flowing full of not less than 2.0 feet per second, and not greater than 10 feet per second. The grades shown in the following table are based on Manning's formula and an n factor of 0.013 and shall be the minimum and maximum acceptable slopes unless provisions are made otherwise.

Table 10 - Slope Velocity

Pipe Diameter(Inches)	*% Slope required for minimum flow velocity of 2.0 fps*	*% Slope which produces flow velocity of 10.0 fps*
6	0.50	12.35
8	0.33	8.40
10	0.25	6.23
12	0.20	4.88
15	0.15	3.62
18	0.11	2.83
21	0.09	2.30
24	0.08	1.93
27	0.06	1.65
30	0.055	1.43
33	0.05	1.26
36	0.045	1.12
39	0.04	1.01
>39	*	*

**For lines larger than 39 inches in diameter, the slope may be determined by Manning's formula (as shown below) to maintain a minimum velocity greater than 2.0 feet per second when flowing full and a maximum velocity less than 10 feet per second when flowing full.*

$$v = \frac{1.49}{n} \times R_h^{0.67} \times \sqrt{S}$$

Figure 1 - Manning's Formula

Where:

v = velocity (ft/sec)
n = Manning's roughness coefficient (0.013)
Rh = hydraulic radius (ft)
S = slope (ft/ft)

Raba Kistner

January 14, 2009

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Charles P. "Frosty" Forster, P.E., P.G.
Pape Dawson Engineers
555 East Ramsey
San Antonio, Texas 78216

RE: Soil Unit Weight Values for Backfill Materials
Various Projects
San Antonio, Texas

Dear Mr. Forster:

Raba-Kistner Consultants Inc. (R-K) is pleased to submit this letter providing general guidance for selecting design soil unit weights for use in utility trench design.

In general, the following table contains a list of the frequently used trench backfill materials in the San Antonio area. The table also contains approximate values for the soil dry unit weight, moist unit weight and saturated unit weight for these materials assuming 90 to 95 percent compaction utilizing a standard Proctor (ASTM D 698.)

MATERIAL DESCRIPTION	DRY UNIT WEIGHT, PCF	MOIST UNIT WEIGHT, PCF	SATURATED UNIT WEIGHT, PCF
TxDOT TEX-113E Type A, Gr. 1 or 2	130	137	143
TxDOT TEX-113E Type A, Gr. 3 thru 5	128	135	143
Limestone Millings	115	124	134
Gravelly Clay	110	120	132
Clay	100	120	127
Clayey Sand	95	106	123
Gravel (Clean)	115	120	134
Sand (Clean)	92	98	120
Pit Run Gravel	127	137	142

We appreciate the opportunity to be of service to you. If you have any questions or need additional assistance, please call.

Very truly yours,

RABA-KISTNER CONSULTANTS, INC.

STATE OF TEXAS
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LICENSED
PROFESSIONAL ENGINEER

1/14/09

Chris L. Schultz, P.E.
Senior Vice President

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SOIL CLASSIFICATION CHART

From ASTM D2321-11: Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

TABLE 1 Soil Classification Chart (see Classification D2487)

	Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A]				Soil Classification	
					Group Symbol	Group Name[B]
Coarse-Grained Soils	Gravels	Clean gravels	$C \geq 4$ and $1 \leq Cc \leq 3$[C]		GW	Well-graded gravel[D]
More than 50% retained on No. 200 sieve	More than 50% of coarse fraction retained on No. 4 sieve	Less than 5% of fines[E]	$Cu < 4$ and/or $1 > Cc > 3$[C]		GP	Poorly graded gravel[D]
		Gravels with more than 12% fines[E]	Fines classify as ML or MH		GM	Silty gravel[DFG]
			Fines classify as CL or CH		GC	Clayey gravel[DFG]
	Sands	Clean sands	$Cu \geq 6$ and $1 \leq Cc \leq 3$[C]		SW	Well-graded sand[H]
	50% or more of coarse fraction passes on No. 4 sieve	Less than 5% fines[I]	$Cu < 6$ and/or $1 > Cc > 3$[C]		SP	Poorly graded sand[H]
		Sand with fines	Fines classify as ML or MH		SM	Silty sand[FGH]
		More than 12% fines[I]	Fines classify as CL or CH		SC	Clayey sand[FGH]
Fine-Grained Soils	Silts and clays	Inorganic	PI > 7 and plots on or above "A" line[J]		CL	Lean clay[KLM]
50% or more passes the No. 200 Sieve	Liquid limit less than 50		PI < 4 and plots below "A" line[J]		ML	silt[KLM]
		Organic	Liquid Limit-Oven dried	<0.75	OL	Organic clay[KLMN]
			Liquid Limit-Not dried			Organic silt[KLMO]
	Silts and clays	Inorganic	PI plots on or above "A" line		CH	Fat clay[KLM]
	Liquid limit 50 or more		Plots below "A" line		MH	Elastic silt[KLM]
		Organic	Liquid Limit-Oven Dried	<0.75	OH	Organic clay[KLMP]
			Liquid Limit-Not Dried			Organic silt[KLMQ]
Highly organic soils	Primarily organic matter, dark in color, and organic odor				PT	peat

[A] Based on the material passing the 3-in. (75-mm) sieve.
[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
[C] $Cu = D_{60} / D_{10}$

$$Cc = \frac{(D_{30})^2}{D_{10} x D_{60}}$$

[D] If soil contains ≥15 % sand, add "with sand" to group name.
[E] Gravels with 5 to 12 % fines require dual symbols:
GW-GM well-graded gravel with silt:
GW-GC well-graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
[F] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.
[G] If fines are organic, add "with organic fines" to group name.
[H] If soil contains ≥ 15 % gravel, add "with gravel" to group name.
[I] Sands with 5 to 12 % fines require dual symbols:
SW-SM well graded sand with silt
SW-SC well-graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay
[J] If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay (see Test Method D4318).
[K] If soil contains 15 to 29 % plus No. 200, add "with sand" or "with gravel", whichever is predominant.
[L] If soil contains ≥ 30 % plus No. 200, predominantly sand, add "sandy" to group name.
[M] If soil contains ≥ 30 % plus No. 200, predominantly gravel, add "gravelly" to group name.
[N] PI ≥ 4 and plots on or above "A" line.
[O] PI < 4 or plots below "A" line.
[P] PI plots on or above "A" line.
[Q] PI plots below "A" line.

SOIL CLASSIFICATION CHART

From ASTM D2321-11: Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

TABLE 2 Soil Classes

Soil Group [A,B]	Soil Class	American Association of State Highway and Transportation Officials (AASHTO) Soil Groups [C]
Crushed rock, angular [D], 100% passing 1-1/2 in. sieve, </=15 % passing #4 sieve, </= 25 % passing 3/8 in. sieve and </= 12 % passing #200 sieve	Class I	--
Clean, coarse grained soils: SW, SP, GW, GP or any soil beginning with one of these symbols with </= 12 % passing #200 sieve[E,F]	Class II	A1, A3
Coarse grained soils with fines: GM, GC, SM, SC or any soil beginning with one of these symbols, containing > 12 % passing #200 sieve; Sandy or gravelly fine-grained soils: CL, ML, or any soil beginning with one of these symbols, with >/= 30 % retained on #200 sieve	Class III	A-2-4, A-2-5, A-2-6, or A-4 or A-6 soils with more than 30% retained on #200 sieve
Fine-grained soils: CL, ML, or any soil beginning with one of these symbols, with <30 % retained on #200 sieve	Class IV	A-2-7, or A-4, or A-6 soils with 30% or less retained on #200 sieve
MH, CH, OL, OH, PT	Class V Not for use as embedment	A5, A7

[A] See Classification D2487, Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).
[B] Limits may be imposed on the soil group to meet project or local requirements if the specified soil remains within the group. For example, some project applications require a Class I material with minimal fines to address specific structural or hydraulic conditions and the specification may read "Use Class I soil with a maximum of 5% passing the #200 sieve."
[C] AASHTO M145, Classification of Soils and Soil Aggregate Mixtures.
[D] All particle face shall be fractured.
[E] Materials such as broken coral, shells, and recycled concrete, with $\leq$ = 12% passing a No. 200 sieve, are considered to be Class II materials. These materials should only be used when evaluated and approved by the Engineer.
[F] Uniform fine sands (SP) with more than 50% passing a No. 100 sieve (0.006 in., 0.15 mm) are very sensitive to moisture and should not be used as backfill unless specifically allowed in the contract documents. If use of these materials is allowed, compaction and handling procedures should follow the guidelines for Class III materials.

SOIL CLASSIFICATION CHART

From ASTM D2321-11: Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

TABLE 3 Recommendations for Installation and Use of Soils and Aggregates for Foundation and Pipe-Zone Embedment

Soil Class[A]	Class I[B]	Class II	Class III	Class IV
General Recommendations and Restrictions	Acceptable and common where no migration is probable or when combined with a geotextile filter media. Suitable for use as a drainage blanket and under drain where adjacent material is suitably graded or when used with a geotextile filter fabric (see X1.8).	Where hydraulic gradient exists check gradation to minimize migration. Clean groups are suitable for use as a drainage blanket and underdrain (see Table 2). Uniform fine sands (SP) with more than 50 % passing a #100 sieve (0.006 in., 0.15 mm) behave like silts and should be treated as Class IV soils.	Do not use where water conditions in trench prevent proper placement and compaction. Not recommended for use with pipes with stiffness of 9 psi or less.	Difficult to achieve high-soil stiffness. Do not use where water conditions in trench prevent proper placement and compaction. Not recommended for use with pipes with stiffness of 9 psi or less.
Foundation	Suitable as foundation and for replacing over-excavated and unstable trench bottom as restricted above.	Suitable as foundation and for replacing over-excavated and unstable trench bottom as restricted above. Install and compact in 12 in. (300 mm) maximum layers.	Suitable for replacing over-excavated trench bottom as restricted above. Install and compact in 6 in. (150 mm) maximum layers.	Suitable for replacing over-excavated trench bottom as restricted above. Install and compact in 6-in (150 mm) maximum layers.
Pipe Embedment	Suitable as restricted above. Work material under pipe to provide uniform haunch support.	Suitable as restricted above. Work material under pipe to provide uniform haunch support.	Suitable as restricted above. Difficult to place and compact in the haunch zone.	Suitable as restricted above. Difficult to place and compact in the haunch zone.
Embedment Compaction: Min Recommended Percent Compaction, SPD[D]	See Note[C]	85 % (SW and SP soils) For GW and GP soils See Note[E]	90 %	95 %
Relative Compactive Effort Required to Achieve Minimum Percent Compaction	Low	Moderate	High	Very high
Compaction Methods	Vibration or impact	Vibration or impact	Impact	Impact
Required Moisture Control	None	None	Maintain near optimum to minimize compactive effort	Maintain near optimum to minimize compactive effort

[A] Class V materials are unsuitable as embedment. They may be used as final backfill as permitted by the engineer.
[B] Class I materials have higher stiffness than Class II materials, but data on specific soil stiffness of placed, uncompacted Class I materials can be taken equivalent to Class II materials compacted to 95% of maximum standard Proctor density (SPD95), and the soil stiffness of compacted Class I materials can be taken equivalent to Class II materials compacted to 100% of maximum standard Proctor density (SPD100). Even if placed uncompacted (that is, dumped), Class I materials should always be worked into the haunch zone to assure completed placement.
[C] Suitable compaction typically achieved by dumped placement (that is, uncompacted but worked into haunch zone to ensure complete placement).
[D] SPD is standard Proctor density as determined by Test Method D698.
[E] Place and compact GW and GP soils with at least two passes of compaction equipment.

TABLE 6.6
LIVE LOADS ON PVC PIPE
From Uni-Bell Handbook of PVC Pipe: Design and Construction, Fourth Edition (2001)

Height of Cover (ft)	Live Load Transferred to Pipe, lb/in^2			Height of Cover (ft)	Live Load Transferred to Pipe, lb/in^2		
	Highway H20[1]	Railway E80[2]	Airport [3]		Highway H20[1]	Railway E80[2]	Airport [3]
1	12.50			14	*	4.17	3.06
2	5.56	26.39	13.14	16	*	3.47	2.29
3	4.17	23.61	12.28	18	*	2.78	1.91
4	2.78	18.40	11.27	20	*	2.08	1.53
5	1.74	16.67	10.09	22	*	1.91	1.14
6	1.39	15.63	8.79	24	*	1.74	1.05
7	1.22	12.15	7.85	26	*	1.39	*
8	0.69	11.11	6.93	28	*	1.04	*
10	*	7.64	6.09	30	*	0.69	*
12	*	5.56	4.76	35	*	*	*
				40	*	*	*

[1] *Simulates 20 ton truck traffic + impact (Source: ASTM A 796)*
[2] *Simulates 80,000 lb/ft railway load + impact (Source: ASTM A 796)*
[3] *180,000 lbs. dual tandem gear assembly. 26 inch spacing between tires and 66 inch center-to-center spacing between fore and aft tires under a rigid pavement 12 inches thick + impact.*
** Negligible live load influence.*

FIGURE 7.4
BEDDING ANGLE
From Uni-Bell Handbook of PVC Pipe: Design and Construction, Fourth Edition (2001)

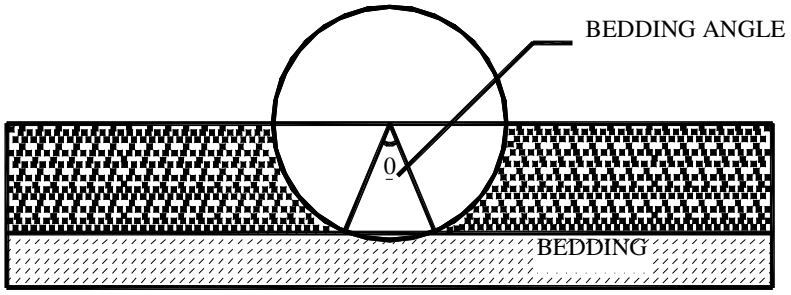


TABLE 7.2
VALUES OF BEDDING CONSTANT, K

BEDDING ANGLE (DEGREES)	K
0	0.110
30	0.108
45	0.105
60	0.102
90	0.096
120	0.090
180	0.083

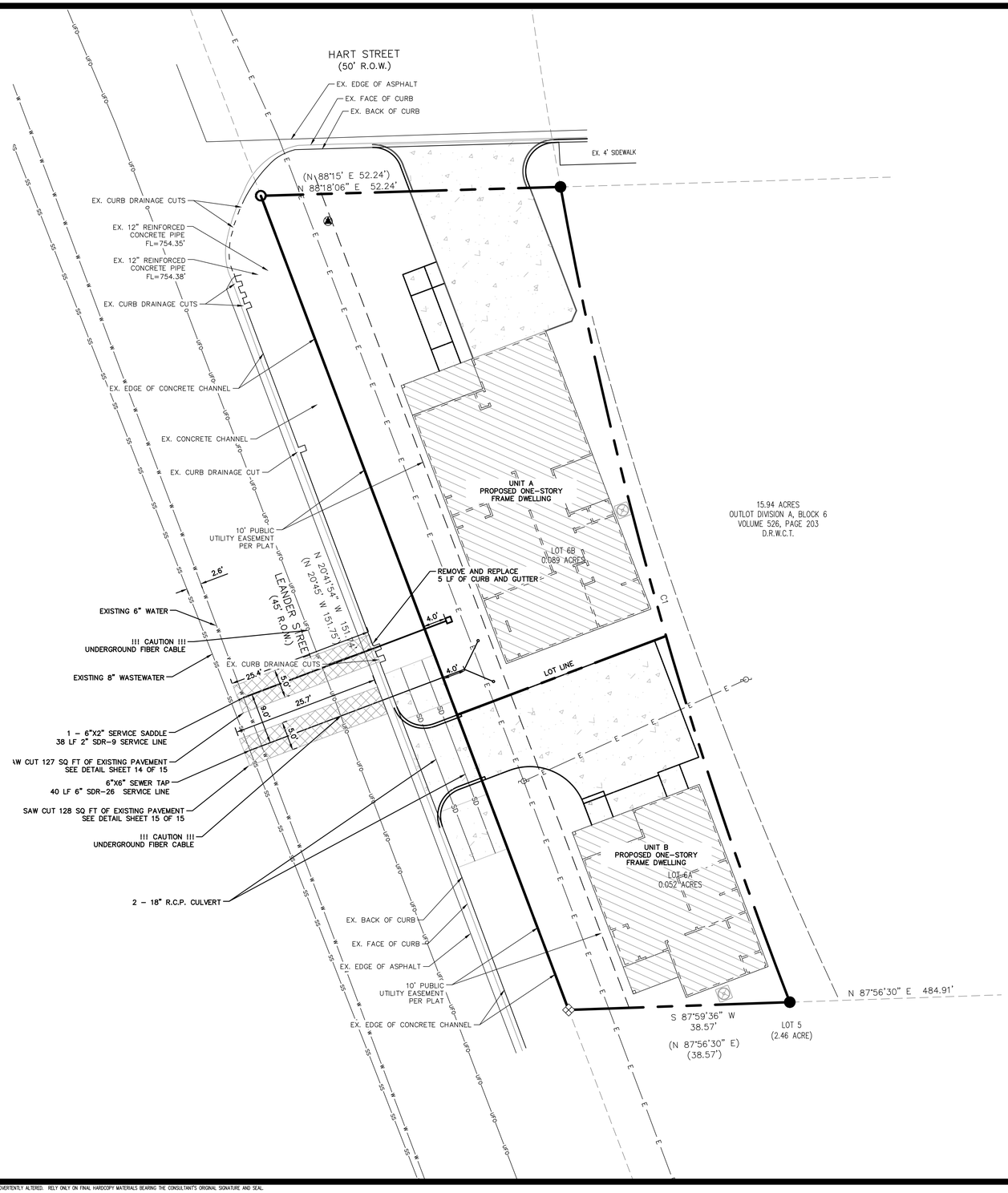
TABLE 7.3
AVERAGE VALUES OF MODULUS OF SOIL REACTION, E'
(For Initial Flexible Pipe Deflection)
From Uni-Bell Handbook of PVC Pipe: Design and Construction, Fourth Edition (2001)

Soil type-pipe bedding material (Unified Classification System[a]) (1)	E' for Degree of Compaction of Bedding, in pounds per square inch			
	Dumped (2)	Slight, < 85% Proctor, <40% relative density (3)	Moderate, 85%-95% Proctor, 40%-70% relative density (4)	High, >95% Proctor, >70% relative density (5)
Fine-grained Soils (LL>50)[b] Soils with medium to high plasticity, CH, MH, CH-MH	No data available; consult a competent soils engineer; Otherwise use E' = 0			
Fine-grained Soils (LL<50) Soils with medium to no plasticity, CL, ML, ML-CL, with less than 25% coarse-grained particles	50	200	400	1,000
Fine-grained Soils (LL<50) Soils with medium to no plasticity, CL, ML, ML-CL, with more than 25% coarse-grained particles	100	400	1,000	2,000
Coarse-grained Soils with Fines GM, GC, SM, SC[c] contains more than 12% fines				
Coarse-grained Soils with Little or no Fines GW, GP, SW, SP[c] contains less than 12% fines	200	1,000	2,000	3,000
Crushed Rock	1,000	3,000	3,000	3,000
Accuracy in Terms of Percentage Deflection[d]	± 2	± 2	± 1	± 0.5

[a]ASTM Designation D 2487, USBR Designation E-3.
[b]LL = Liquid limit.
[c]Or any borderline soil beginning with one of these symbols (i.e. GM-GC, GC-SC).
[d]For ± 1% accuracy and predicted deflection of 3%, actual deflection would be between 2% and 4%
Note: Values applicable only for fills less than 50 ft (15 m). Table does not include any safety factor. For use in predicting initial deflections only, appropriate Deflection Lag Factor must be applied for long-term deflections. If bedding falls on the borderline between two compaction categories, select lower E' value or average the two values. Percentage Proctor based on laboratory maximum dry density from test standards using about 12,500 ft-lb/cu ft (598,000 J/m^3) (ASTM D 698, AASHTO T-99, USBR Designation E-11). 1 psi = 6.9 kPa.

SOURCE: "Soil Reaction for Buried Flexible Pipe" by Amster K. Howard, U.S. Bureau of Reclamation, Denver, Colorado. Reprinted with permission from American Society of Civil Engineers.

APPENDIX B
SITE PLAN



SCALE: 1"= 10'

0' 10' 20' 30'

LEGEND

- DOUBLE WATER SERVICE
- DOUBLE WW SERVICE
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. EXISTING FIRE HYDRANT 75' NORTH OF SITE AT THE INTERSECTION 19TH AND LENDER STREET.

NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chy 6/6/25

PAPE-DAWSON ENGINEERS
AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

UTILITY PLAN

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA

SHEET 7 OF 15

Date: Jan 06, 2025, 1:28pm User ID: jstylinger
File: H:\Projects\51466\01\301 Construction Documents\Civil\UT51466-01.dwg

TEMPORARY STORMWATER

Temporary Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Michael Fisher, P.E.

Date: 5/1/25

Signature of Customer/Agent:

Regulated Entity Name: 1901 Leander Street

Project Information

Potential Sources of Contamination

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

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

   ☒ The following fuels and/or hazardous substances will be stored on the site: Diesel Fuel, Gasoline, etc.

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

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

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

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

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

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

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

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

Sequence of Construction

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

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

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

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: South Fork - San Gabriel River

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☒ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

ATTACHMENT A

Spill Response Actions

In the event of an accidental leak or spill:

- Spill must be contained and cleaned up immediately.
- Spills will not be merely buried or washed with water.
- Contractor shall take action to contain spill. Contractor may use sand or other absorbent material stockpiled on site to absorb spill. Absorbent material should be spread over the spill area to absorb the spilled product.
- In the event of an uncontained discharge the contractor shall utilize onsite equipment to construct berms downgradient of the spill with sand or other absorbent material to contain and absorb the spilled product.
- Spill containment/absorbent materials along with impacted media must be collected and stored in such a way so as not to continue to affect additional media (soil/water). Once the spill has been contained, collected material should be placed on poly or plastic sheeting until removed from the site. The impacted media and cleanup materials should be covered with plastic sheeting and the edges weighed down with paving bricks or other similarly dense objects as the material is being accumulated. This will prevent the impacted media and cleanup materials from becoming airborne in windy conditions or impacting runoff during a rain event. The stockpiled materials should not be located within an area of concentrated runoff such as along a curb line or within a swale.
- Contaminated soils and cleanup materials will be sampled for waste characterization. When the analysis results are known the contaminated soils and cleanup materials will be removed from the site and disposed in a permitted landfill in accordance with applicable regulations.
- The contractor will be required to notify the owner, who will in turn contact TCEQ to notify them in the event of a significant hazardous/reportable quantity spill. Additional notifications as required by the type and amount of spill will be conducted by owner or owner's representative.

In the event of an accidental significant or hazardous spill:

- Visit TCEQ's Reportable Quantities site: https://www.tceq.texas.gov/response/spills/spill_rq.html
- The contractor will be required to report significant or hazardous spills in reportable quantities as soon as possible and within 24 hours to:
  - the National Response Center at (800) 424-8802
  - the TCEQ Regional Office (512) 339-2929 (if during business hours: 8 AM to 5 PM) or
  - the State Emergency Response Center (800) 832-8224 (if after hours)

- Contaminated soils will be sampled for waste characterization. When the analysis results are known the contaminated soils will be removed from the site and disposed in a permitted landfill in accordance with applicable regulations.

Additional guidance can be obtained from TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) Section 1.4.16. Contractor shall review this section.

ATTACHMENT B

POTENTIAL SOURCES OF CONTAMINATION

Potential Source
- Asphalt products used on this project.

Preventative Measure
- After placement of asphalt, emulsion or coatings, the contractor will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt product curing time, the contractor will maintain standby personnel and equipment to contain any asphalt wash-off should an unexpected rain occur. The contractor will be instructed not to place asphalt products on the ground within 48 hours of a forecasted rain.

Potential Source
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle dripping.

Preventative Measure
- Vehicle maintenance, when possible, will be performed within the construction staging area.
- Construction vehicles and equipment shall be checked regularly for leaks and repaired immediately.

Potential Source
- Accidental leaks or spills of oil, petroleum products and substances listed under 40 CFR parts 110, 117, and 302 used or stored temporarily on site.

Preventative Measure
- Contractor to incorporate into regular safety meetings, a discussion of spill prevention and appropriate disposal procedures.

- Contractor's superintendent or representative overseer shall enforce proper spill prevention and control measures.
- Hazardous materials and wastes shall be stored in covered containers and protected from vandalism.
- A stockpile of spill cleanup materials shall be stored on site where it will be readily accessible.

Potential Source
- Miscellaneous trash and litter from construction workers and material wrappings.

Preventive Measure
- Trash containers will be placed throughout the site to encourage proper trash disposal.

Potential Source
- Construction debris.

Preventive Measure
- Construction debris will be monitored daily by contractor. Debris will be collected weekly and placed in disposal bins. Situations requiring immediate attention will be addressed on a case by case basis.

Potential Source
- Spills/Overflow of waste from portable toilets

Preventative Measure
- Portable toilets will be placed away from high traffic vehicular areas and storm drain inlets.
- Portable toilets will be placed on a level ground surface.
- Portable toilets will be inspected regularly for leaks and will be serviced and sanitized at time intervals that will maintain sanitary conditions.

ATTACHMENT C

1901 LEANDER STREET
Water Pollution Abatement Plan Application

SEQUENCE OF MAJOR ACTIVITIES

The sequence of major activities which disturb soil during construction on this site are listed below.

1) Set erosion controls – approximately 189 LF of silt fence, 9 LF of rock berm and 9 LF of Mulch Log
2) Clear and grub – approximately 0.14 acres
3) Trench utilities – approximately 78 LF
4) Install water and wastewater – approximately 78 LF
5) Install sub-base/base for road/parking areas – approximately 0.03 acres
6) Pave roadway/parking areas – approximately 0.03 acres
7) Site cleanup – approximately 0.14 acres
8) Remove erosion controls – approximately 189 LF of silt fence, 9 LF of rock berm, and 9 LF of Mulch Log

ATTACHMENT D

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

Please see the Erosion Control sheets included in the Construction Plans Section for TBMP layout and the responses below for more details.

Due to existing topography, upgradient stormwater from adjacent property along the eastern edges of the site enters the property and flows from northeast to southwest by sheet flow within the project limits. All TBMPs utilized are adequate for the drainage areas served.

Site preparation, which is the initiation of all activity on the project, will disturb the largest amount of soil. Therefore, before any of this work can begin, the clearing and grading contractor will be responsible for the installation of all on-site control measures. The methodology for pollution prevention of on-site stormwater will include: (1) erection of silt fences along the downgradient boundary of construction activities for temporary erosion and sedimentation controls, (2) installation of rock berms downgradient from proposed driveway culvert over existing concrete drainage channel for temporary erosion control, (3) installation of temporary mulch logs along the existing curb cuts on the eastern side of Leander Street where drainage flows into existing concrete drainage channel, (4) installation of stabilized construction entrance/exit(s) to reduce the dispersion of sediment from the site, and (5) installation of construction staging area(s).

Prior to the initiation of construction, all previously installed control measures will be repaired or reestablished for their designed or intended purpose. This work, which is the remainder of all activities on the project, may also disturb additional soil. The construction contractor will be responsible for the installation of all remaining on-site control measures that includes installation of the concrete truck washout pit(s), as construction phasing warrants.

Temporary measures are intended to provide a method of slowing the flow of runoff from the construction site in order to allow sediment and suspended solids to settle out of the runoff. By containing the sediment and solids within the site, they will not enter the aquifer, surface streams and/or sensitive features that may exist downstream of the site.

Temporary measures are intended to provide a method of slowing the flow of runoff from the construction site in order to allow sediment and suspended solids to settle out of the runoff. By containing

the sediment and solids within the site, they will not enter the aquifer, surface streams and/or sensitive features that may exist downstream of the site.

BMP measures utilized in this plan are intended to allow stormwater to continue downstream after passing through the BMPs. This will allow stormwater runoff to continue downgradient to streams or features that may exist downstream of the site. Features discovered during construction will be reported and assessed in accordance with applicable regulations.

ATTACHMENT F

STRUCTURAL PRACTICES

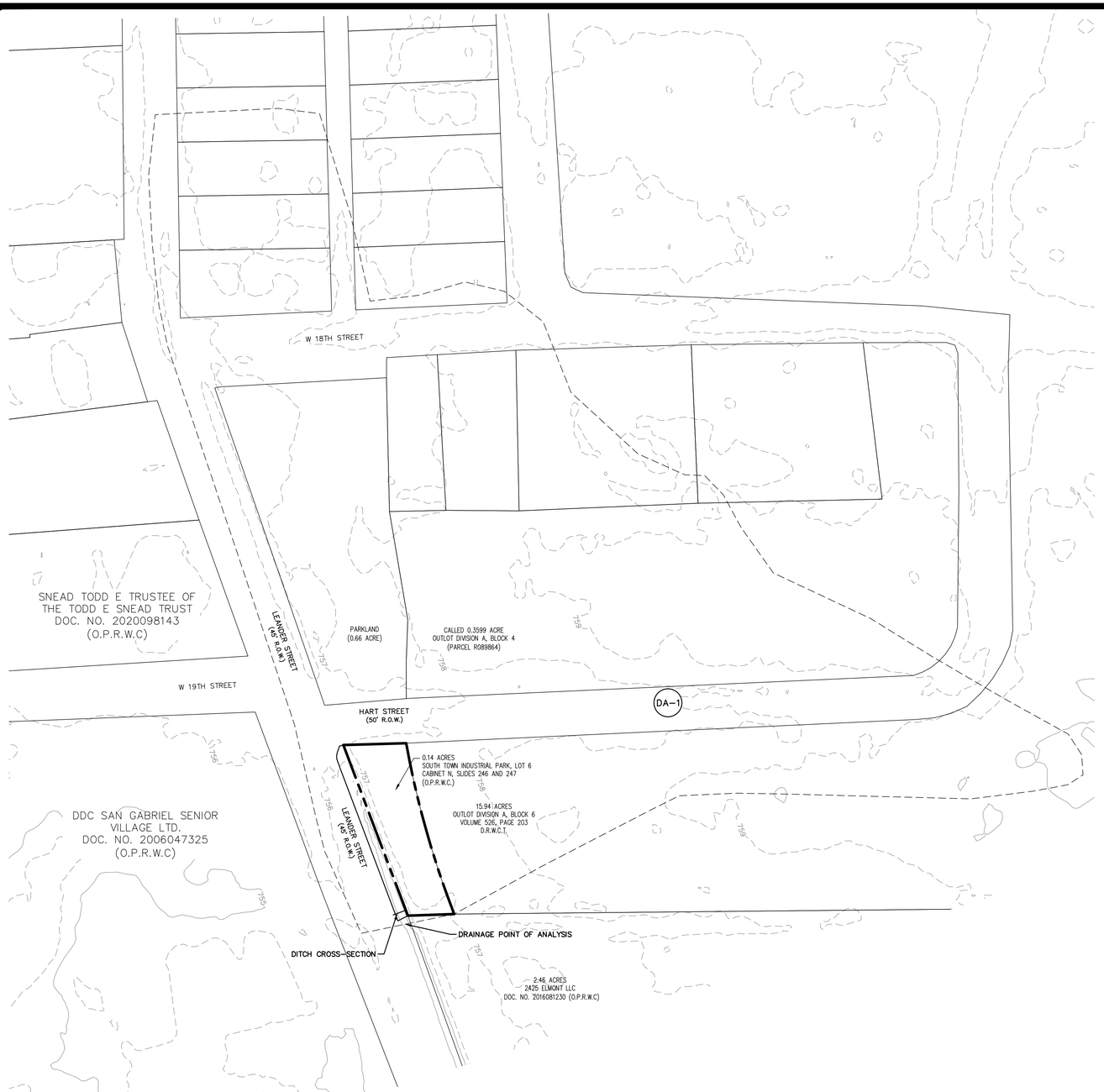
The following structural measures will be installed prior to the initiation of site preparation activities:

- Erection of silt fences along the downgradient boundary of construction activities and rock berms and mulch logs for secondary protection, as located on the Erosion Control sheets and illustrated on the Construction Details - Erosion Controls sheet.
- Installation of stabilized construction entrance/exit(s) and construction staging area(s), as located on the Erosion Control sheets and illustrated on the Construction Details - Erosion Controls sheet.

The following structural measures will be installed at the initiation of construction activities or as appropriate based on the construction sequencing:

- Installation of mulch logs, as required and located on the Erosion Control sheets and illustrated on the Construction Details - Erosion Controls sheet.
- Installation of concrete truck washout pit(s), as required and located on the Erosion Control sheets and illustrated on the Construction Details - Erosion Controls sheet.
- Installation of rock berm, as required and located on the Erosion Control sheets and illustrated on the Construction Details – Erosion Controls sheet.

ATTACHMENT G



Channel Report

Hydraflow Express by Intelisolve — Thursday, Apr 17 2025

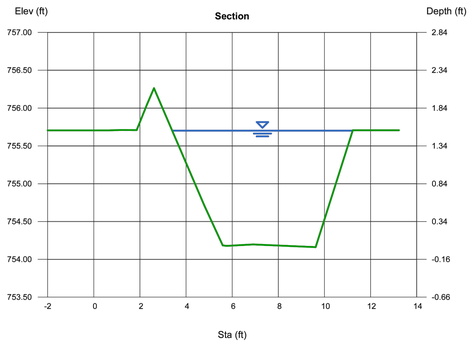
1901 Leander Street Ditch - 100YR Existing Maximum

User-defined
Invert Elev (ft) = 754.16
Slope (%) = 0.30
N-Value = 0.015

Calculations
Compute by: Known Q
Known Q (cfs) = 49.68

Highlighted
Depth (ft) = 1.54
Q (cfs) = 49.68
Area (sqft) = 9.05
Velocity (ft/s) = 5.49
Wetted Perim (ft) = 8.92
Crit Depth, Yc (ft) = 1.46
Top Width (ft) = 7.83
EGL (ft) = 2.01

(Sta, El, n)-(Sta, El, n)...
(0.00, 755.71)-(0.66, 755.71, 0.015)-(1.17, 755.71, 0.015)-(1.86, 755.71, 0.015)-(2.31, 756.05, 0.015)-(2.61, 756.26, 0.015)-(4.80, 754.71, 0.015)
-(5.59, 754.19, 0.015)-(5.76, 754.18, 0.015)-(8.90, 754.20, 0.015)-(9.62, 754.16, 0.015)-(11.23, 755.71, 0.015)



Channel Report

Hydraflow Express by Intelisolve — Sunday, Apr 14 2024

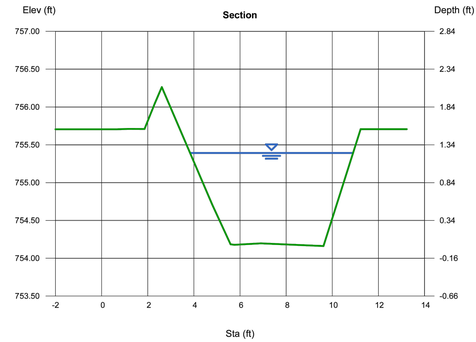
1901 Leander Street Ditch - 100YR Existing

User-defined
Invert Elev (ft) = 754.16
Slope (%) = 0.30
N-Value = 0.015

Calculations
Compute by: Known Q
Known Q (cfs) = 32.57

Highlighted
Depth (ft) = 1.23
Q (cfs) = 32.57
Area (sqft) = 6.74
Velocity (ft/s) = 4.83
Wetted Perim (ft) = 7.94
Crit Depth, Yc (ft) = 1.14
Top Width (ft) = 7.07
EGL (ft) = 1.59

(Sta, El, n)-(Sta, El, n)...
(0.00, 755.71)-(0.66, 755.71, 0.015)-(1.17, 755.71, 0.015)-(1.86, 755.71, 0.015)-(2.31, 756.05, 0.015)-(2.61, 756.26, 0.015)-(4.80, 754.71, 0.015)
-(5.59, 754.19, 0.015)-(5.76, 754.18, 0.015)-(8.90, 754.20, 0.015)-(9.62, 754.16, 0.015)-(11.23, 755.71, 0.015)



DRAINAGE AREA	INLET NUMBER	AREA (acres)	COMPOSITE C C_{25}	COMPOSITE C C_{100}	$A \cdot C_{25}$	$A \cdot C_{100}$	SHEET FLOW Length (ft)	SHEET FLOW Manning's (n)	SHEET FLOW Slope ft/ft	SHEET FLOW Tc (min)	SHALLOW CONCENTRATED FLOW Length (ft)	SHALLOW CONCENTRATED FLOW Paved/ Unpaved	SHALLOW CONCENTRATED FLOW Slope ft/ft	SHALLOW CONCENTRATED FLOW Tc (min)	CHANNELIZED FLOW Length (ft)	CHANNELIZED FLOW Manning's (n)	CHANNELIZED FLOW Slope ft/ft	CHANNELIZED FLOW Velocity ft/s	CHANNELIZED FLOW Tc (min)	Cumulative Tc (min)	INTENSITY I 25yr (in/hr)	INTENSITY I 100yr (in/hr)	DISCHARGE Q 25 (cfs)	DISCHARGE Q 100 (cfs)
EXISTING CONDITION DRAINAGE AREAS																								
DA-1	DITCH	5.40	0.57	0.60	3.08	3.24	100.00	0.24	0.66%	7.03	61.65	U	2.77%	1.48	259.98	0.02	0.30%	2.11	2.06	10.57	8.26	10.06	25.42	32.57

NOTE:
1) DRAINAGE CALCULATIONS FOR THE EXISTING CONDITION WERE PERFORMED IN ACCORDANCE WITH THE CALCULATIONS PRESENTED AND APPROVED IN THE WEST 22ND & LEANDER STREETS TRUNK LINE & OUTFALL STRUCTURE CONSTRUCTION PLANS (PROJECT NO. 0033) AND MAINTAINED THE ASSUMED 40% IMPERVIOUS COVER.

SCALE: 1"= 50'

0' 50' 100' 150'

LEGEND

- SD — STORM DRAIN LINE
- SD — SD MANHOLE
- SD INLET
- DRAINAGE FLOW ARROW
- DRAINAGE AREA BOUNDARY
- EXISTING DRAINAGE AREA
- PROPERTY BOUNDARY
- 01 DRAINAGE AREA
- HEADWALL
- 760 PROPOSED CONTOUR LINE
- 785 EXISTING CONTOUR LINE

NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chy 6/6/25

PAPE-DAWSON ENGINEERS
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

EXISTING CONDITIONS DRAINAGE MAP

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA

SHEET 8 OF 15

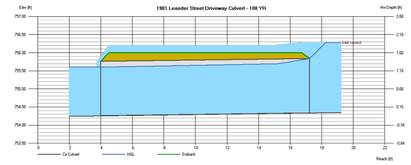
Date: Jan 06, 2025, 1:50pm User ID: jstyslinger
File: H:\Projects\51466\01\301 Construction Documents\Civil\00051466-01.dwg

Culvert Report

Hydraflow Express by Intelisolve — Thursday, Apr 17 2025

1901 Leander Street Driveway Culvert - 100 YR

Invert Elev Dn (ft)	= 754.26	**Calculations**	
Pipe Length (ft)	= 13.25	Qmin (cfs)	= 32.83
Slope (%)	= 0.60	Qmax (cfs)	= 32.83
Invert Elev Up (ft)	= 754.34	Tailwater Elev (ft)	= (dc+D)/2
Rise (in)	= 18.0		
Shape	= Cir	**Highlighted**	
Span (in)	= 18.0	Qtotal (cfs)	= 32.83
No. Barrels	= 3	Qpipe (cfs)	= 28.40
n-Value	= 0.013	Qovertop (cfs)	= 4.43
Inlet Edge	= Projecting	Veloc Dn (ft/s)	= 5.66
Coeff. K,M,c,Y,k	= 0.0045, 2, 0.0317, 0.69, 0.5	Veloc Up (ft/s)	= 5.58
		HGL Dn (ft)	= 755.61
Embankment		HGL Up (ft)	= 755.71
Top Elevation (ft)	= 756.00	Hw Elev (ft)	= 756.28
Top Width (ft)	= 12.25	Hw/D (ft)	= 1.29
Crest Width (ft)	= 10.00	Flow Regime	= Inlet Control



SCALE: 1"= 50'

0' 50' 100' 150'

LEGEND

- SD — STORM DRAIN LINE
- SD — SD MANHOLE
- SD INLET
- DRAINAGE FLOW ARROW
- DRAINAGE AREA BOUNDARY
- EXISTING DRAINAGE AREA
- PROPERTY BOUNDARY
- 01 — DRAINAGE AREA
- HEADWALL
- 760 — PROPOSED CONTOUR LINE
- 760 — EXISTING CONTOUR LINE
- FP — FLOODPLAIN

NOTE:

1) DRAINAGE CALCULATIONS FOR THE EXISTING CONDITION WERE PERFORMED IN ACCORDANCE WITH THE CALCULATIONS PRESENTED AND APPROVED IN THE WEST 22ND & LEANDER STREETS TRUNK LINE & OUTFALL STRUCTURE CONSTRUCTION PLANS (PROJECT NO. 0033).

2) POST-DEVELOPMENT DRAINAGE CALCULATIONS PERFORMED BY ANALYZING FLOWS CALCULATED WITH WEST 22ND & LEANDER STREETS TRUNK LINE & OUTFALL STRUCTURE CONSTRUCTION PLANS (PROJECT NO. 0033) FOR DA-1 AND ADDING ADDITIONAL IMPERVIOUS COVER PROPOSED WITH THIS PLAN.

3) ROOFTOP RUNOFF FOR THE DEVELOPMENT SHALL BE CAPTURED THROUGH ROOFTOP RAINWATER HARVESTING TO REDUCE THE IMPACTS OF THE INCREASE IN IMPERVIOUS COVER. THE ROOFTOP RAINWATER HARVESTING SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH TCEQ RG-348 GUIDELINES.

4) THERE IS A PROPOSED 1,530 SQ. FT. OF IMPERVIOUS COVER ON LOT 6A. THE IMPERVIOUS COVER PERCENTAGE IS 67.1%. THERE IS A PROPOSED 2,220 SQ. FT OF IMPERVIOUS COVER ON LOT 6B. THE IMPERVIOUS COVER PERCENTAGE IS 57.1%. AN IMPERVIOUS COVER OF 70% WAS ASSUMED FOR BOTH LOTS WAS USED FOR THE DRAINAGE ANALYSIS SINCE THAT IS THE MAXIMUM ALLOWABLE PER THE APPROVED PUD (ORD-2024-58).

Channel Report

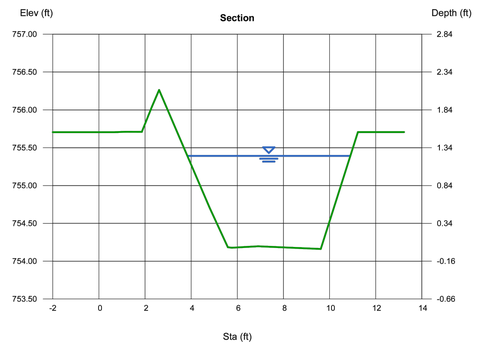
Hydraflow Express by Intelisolve — Sunday, Apr 14 2024

1901 Leander Street Ditch - 100YR Proposed

User-defined		**Highlighted**	
Invert Elev (ft)	= 754.16	Depth (ft)	= 1.23
Slope (%)	= 0.30	Q (cfs)	= 32.83
N-Value	= 0.015	Area (sqft)	= 6.74
		Velocity (ft/s)	= 4.87
Calculations		Wetted Perim (ft)	= 7.94
Compute by:	Known Q	Crit Depth, Yc (ft)	= 1.15
Known Q (cfs)	= 32.83	Top Width (ft)	= 7.07
		EGL (ft)	= 1.60

(Sta, El, n)-(Sta, El, n)...

(0.00, 755.71)-(0.66, 755.71, 0.015)-(1.17, 755.71, 0.015)-(1.86, 755.71, 0.015)-(2.31, 756.05, 0.015)-(2.61, 756.26, 0.015)-(4.80, 754.71, 0.015)-(5.59, 754.19, 0.015)-(5.76, 754.18, 0.015)-(6.90, 754.20, 0.015)-(9.62, 754.16, 0.015)-(11.23, 755.71, 0.015)



DRAINAGE AREA	INLET NUMBER	AREA (acres)	COMPOSITE C C_{25}	COMPOSITE C C_{100}	$A \cdot C_{25}$	$A \cdot C_{100}$	SHEET FLOW Length (ft)	SHEET FLOW Manning's (n)	SHEET FLOW Slope ft/ft	SHEET FLOW Tc (min)	SHALLOW CONCENTRATED FLOW Length (ft)	SHALLOW CONCENTRATED FLOW Paved/ Unpaved	SHALLOW CONCENTRATED FLOW Slope ft/ft	SHALLOW CONCENTRATED FLOW Tc (min)	CHANNELIZED FLOW Length (ft)	CHANNELIZED FLOW Manning's (n)	CHANNELIZED FLOW Slope ft/ft	CHANNELIZED FLOW Velocity ft/s	CHANNELIZED FLOW Tc (min)	Cumulative Tc (min)	INTENSITY I 25yr (in/hr)	INTENSITY I 100yr (in/hr)	DISCHARGE Q 25 (cfs)	DISCHARGE Q 100 (cfs)
PROPOSED CONDITION DRAINAGE AREAS																								
DA-1	DITCH	5.40	0.58	0.60	3.10	3.26	100.00	0.24	0.66%	7.03	61.65	U	2.77%	1.48	259.98	0.015	0.30%	2.11	2.06	10.57	8.26	10.06	25.64	32.83

DATE

NO. REVISION

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chy 6/6/25

PAPE-DAWSON ENGINEERS

AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

PROPOSED CONDITIONS DRAINAGE MAP

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA

SHEET 9 OF 15

Date: Jun 06, 2025, 2:04pm User ID: jstpierre
File: H:\Projects\51466\01\301 Construction Documents\Civil\00051466-01.dwg

ATTACHMENT I

INSPECTIONS & MAINTENANCE

Designated and qualified person(s) shall inspect Pollution Control Measures weekly and within 24 hours after a storm event. An inspection report that summarizes the scope of the inspection, names and qualifications of personnel conducting the inspection, date of the inspection, major observations, and actions taken as a result of the inspection will be recorded and maintained as part of Storm Water TPDES data for a period of three years after the Notice of Termination (NOT) has been filed. A copy of the Inspection Report Form is provided in this Storm Water Pollution Prevention Plan.

As a minimum, the inspector shall observe: (1) significant disturbed areas for evidence of erosion, (2) storage areas for evidence of leakage from the exposed stored materials, (3) structural controls (rock berm outlets, silt fences, drainage swales, etc.) for evidence of failure or excess siltation (over 6 inches deep), (4) vehicle exit point for evidence of off-site sediment tracking, (5) vehicle storage areas for signs of leaking equipment or spills, (6) concrete truck rinse-out pit for signs of potential failure, (7) embankment, spillways, and outlet of sediment basin (where applicable) for erosion damage, and (8) sediment basins (where applicable) for evidence that basin has accumulated 50% of its volume in silt. Deficiencies noted during the inspection will be corrected and documented within seven calendar days following the inspection or before the next anticipated storm event if practicable. Temporary sediment basins and permanent basins will be inspected until final stabilization of 70% within the basin watershed is achieved.

BMP inspection and maintenance requirements from sections 1.3 and 1.4 of TCEQ's Technical Guidance Manual are detailed below.

Temporary Construction Entrance/Exit

- The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.

- All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
- When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.
- When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
- All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Silt Fence

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

Rock Berms

- Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.
- Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause any additional siltation.
- Repair any loose wire sheathing.
- The berm should be reshaped as needed during inspection.

- The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
- The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

Inlet Protection

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

Pollution Prevention Measure	Inspected in Compliance	Corrective Action Required	
		Description (use additional sheet if necessary)	Date Completed
Best Management Practices			
Natural vegetation buffer strips			
Temporary vegetation			
Permanent vegetation			
Sediment control basin			
Silt fences			
Rock berms			
Gravel filter bags			
Drain inlet protection			
Other structural controls			
Vehicle exits (off-site tracking)			
Material storage areas (leakage)			
Equipment areas (leaks, spills)			
Concrete washout pit (leaks, failure)			
General site cleanliness			
Trash receptacles			
Evidence of Erosion			
Site preparation			
Roadway or parking lot construction			
Utility construction			
Drainage construction			
Building construction			
Major Observations			
Sediment discharges from site			
BMPs requiring maintenance			
BMPs requiring modification			
Additional BMPs required			

_____ A brief statement describing the qualifications of the inspector is included in this SWP3.

"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 gather and evaluate 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

"I further certify I am an authorized signatory in accordance with the provisions of 30 TAC §305.128."

Inspector's Name _____ Inspector's Signature _____ Date _____

PROJECT MILESTONE DATES

Date when major site grading activities begin:

Construction Activity	*Date*
Installation of BMPs	

Dates when construction activities temporarily or permanently cease on all or a portion of the project:

Construction Activity	Date

Dates when stabilization measures are initiated:

Stabilization Activity	Date
Removal of BMPs	

ATTACHMENT J

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Interim on-site stabilization measures, which are continuous, will include minimizing soil disturbances by exposing the smallest practical area of land required for the shortest period of time and maximizing use of natural vegetation. As soon as practical, all disturbed soil will be stabilized via permanent revegetation. Details, such as installation, irrigation, and maintenance are provided below.

Installation:

- Final grading must be completed prior to seeding, minimizing all steep slopes. In addition, all necessary erosion structures such as dikes, swales, diversions, should also be installed.
- Seedbed should be well pulverized, loose, and uniform.
- Fertilizer should be applied at the rate of 40 pounds of nitrogen and 40 pounds of phosphorus per acre, which is equivalent to about 1.0 pounds of nitrogen and phosphorus per 1000 square feet. Compost can be used instead of fertilizer and applied at the same time as the seed.

Irrigation:

- Temporary irrigation should be provided according to the schedule described below, or to replace moisture loss to evapotranspiration (ET), whichever is greater. Significant rainfall (on-site rainfall of ½" or greater) may allow watering to be postponed until the next scheduled irrigation.

Time Period	Irrigation Amount and Frequency
Within 2 hours of installation	Irrigate entire root depth, or to germinate seed
During the next 10 business days	Irrigate entire root depth every Monday, Wednesday, and Friday
During the next 30 business days or until Substantial Completion	Irrigate entire root depth a minimum of once per week, or as necessary to ensure vigorous growth
During the next 4 months or until Final Acceptance of the Project	Irrigate entire root depth once every two weeks, or as necessary to ensure vigorous growth

Inspection and Maintenance Guidelines:

- Permanent vegetation should be inspected weekly and after each rain event to locate and

repair any erosion.

- Erosion from storms or other damage should be repaired as soon as practical by regrading the area and applying new seed.
- If the vegetated cover is less than 80%, the area should be reseeded.

Stabilization measures will be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and except as provided below, will be initiated no more than fourteen (14) days after the construction activity in that portion of the site has temporarily or permanently ceased. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonably arid conditions, stabilization measures must be initiated as soon as practicable.

PERMANENT STORMWATER

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(Ii), (E), and (5), 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 **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Michael Fisher, P.E.

Date: 5/1/25

Signature of Customer/Agent

Regulated Entity Name: 1901 Leander Street

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

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

   ☒ N/A

2. ☐ 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

3. ☐ 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

4. 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.

5. 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 A - 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.

6. ☒ **Attachment B - 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.

7. ☒ **Attachment C - 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.

8. ☐ **Attachment D - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.

☒ N/A

9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

☒ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.

☐ **Attachment E - Request to Seal Features**. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

10. ☒ **Attachment F - Construction Plans**. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:

☒ Design calculations (TSS removal calculations)

☒ TCEQ construction notes

☐ All geologic features

☐ All proposed structural BMP(s) plans and specifications

☐ N/A

11. ☐ **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan**. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:

    ☐ Prepared and certified by the engineer designing the permanent BMPs and measures
    ☐ Signed by the owner or responsible party
    ☐ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    ☐ A discussion of record keeping procedures

    ☒ N/A

12. ☐ **Attachment H - 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

13. ☐ **Attachment I -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 results in water quality degradation.

    ☒ N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. ☐ 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.

    ☒ N/A

15. ☐ 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.

    ☒ N/A

ATTACHMENT A

1901 LEANDER STREET
Water Pollution Abatement Plan Application

20% or Less Impervious Cover Waiver

The 1901 Leander Street project proposes the construction of two (2) single family homes on two lots for residential use for Habitat of Humanity – Williamson County. Both of the single family residence will have a water storage tank sized appropriately to store at least 1.5" of runoff for the rooftop square footage of the building. The total square footage for the two residences that will be connected to rainfall harvesting systems is approximately 2,167 square feet. There is approximately an additional 1,592 square feet of proposed impervious cover attributed to the driveways and walkups for each residence. 158 square feet of impervious cover attributed to the walkups will be constructed with permeable pavers and 289 square feet of the driveway for the northern unit that will be treated with an engineered vegetated filter strip (VFS), which leaves 1,145 square feet of proposed impervious that will remain uncaptured and untreated. Without the use of the rooftop rainfall harvesting systems, permeable pavers, and VFS, the proposed impervious cover percentage of the site is 61.6%. However, since the impervious cover associated with rooftops connected to rainfall harvesting systems is not included in impervious cover calculations per RG-348, and an additional 358 square feet of impervious cover will be treated with the permeable pavers and VFS, the resulting proposed impervious cover percentage left untreated for the site is 18.6%. Therefore, since the proposed use of the site is single-family residential and the site has less than 20% impervious cover untreated, we are requesting to waive the requirements for other permanent BMPs and measures.

ATTACHMENT B

BMPs for Upgradient Stormwater

This project has requested to waive the requirement for permanent BMPs on the basis of the percent impervious cover of the site left untreated being less than 20% and will be used for single-family residential development. Therefore, no permanent BMPs are provided to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site.

ATTACHMENT C

BMPs for Onsite Stormwater

This project has requested to waive the requirement for permanent BMPs on the basis of the percent impervious cover of the site left untreated being less than 20% and will be used for single-family residential development. Therefore, no permanent BMPs are provided to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff.

Rooftop rainwater harvesting systems will be implemented on each of the 2 single-family residences proposed on the property. Collected rainwater will be used to irrigate areas on the property as designated on Sheet 10 of the construction plans. The irrigation system has not been fully designed but the tanks will be designed to be emptied weekly as required by RG-348 for rooftop rainwater harvesting systems. A percolation rate for the property's soil of 0.1 gal/sf/hour is assumed, which will not be exceeded when irrigating. Preliminary irrigation design calls for a Rainbird LXME2 controller with a moisture sensor and flow sensor or equivalent and Rainbird 1800 Series 4" Popup Fixed Head sprinklers or equivalent.

ATTACHMENT F

Attachment F – Construction Plans

See attached drawing set for relevant construction plans and design drawings for 1901 Leander Street.

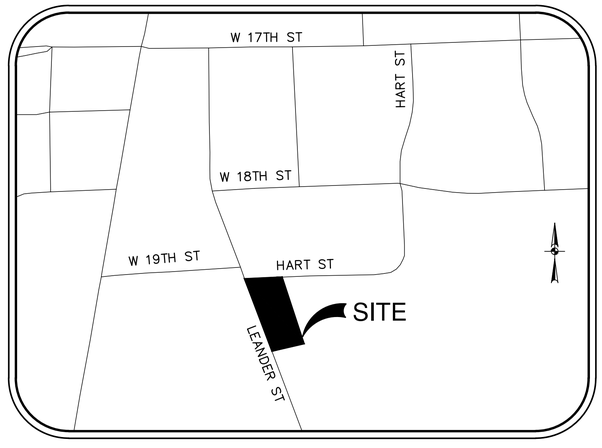
REVISIONS			
No.	Revision Description	Sheet(s) Effected:	Prepared by: (Date)

HABITAT FOR HUMANITY

CONSTRUCTION PLANS
1901 LEANDER ST
GEORGETOWN, TX 78626
2024-XX-CON

GENERAL NOTES

1. THESE PLANS WERE PREPARED, SEALED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE, BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE 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 SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
3. ALL ELECTRIC DISTRIBUTION LINES AND INDIVIDUAL SERVICE LINES SHALL BE INSTALLED UNDERGROUND. IF OVERHEAD LINES EXISTED PRIOR TO UNDERGROUND INSTALLATION, SUCH POLES, GUY WIRES, AND RELATED STRUCTURES SHALL BE REMOVED FOLLOWING CONSTRUCTION OF THE UNDERGROUND INFRASTRUCTURE.
4. ALL ELECTRIC AND COMMUNICATION INFRASTRUCTURE SHALL COMPLY WITH UDC SECTION 13.06.
5. THE PROPERTY SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN.



Sheet List Table	
Sheet Number	Sheet Title
1	COVER
2	CONSTRUCTION NOTES
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4	EROSION AND SEDIMENTATION CONTROL PLAN
5	DIMENSIONAL CONTRAL & SITE PLAN
6	GRADING PLAN
7	UTILITY PLAN
8	EXISTING CONDITIONS DRAINAGE MAP
9	PROPOSED CONDITIONS DRAINAGE MAP
10	WATER QUALITY TREATMENT SUMMARY
11	EROSION AND SEDIMENTATION CONTROL DETAILS
12	PAVING AND DRAINAGE DETAILS
13	TRAFFIC CONTROL DETAILS
14	WATER DETAILS
15	WASTEWATER DETAILS

SUBMITTED BY:

I, AIMEE CHAVEZ, P.E. #123240, DO HEREBY CERTIFY THAT THE ENGINEERING WORK BEING SUBMITTED HEREIN COMPLIES WITH ALL THE PROVISION OF THE TEXAS ENGINEERING PRACTICE ACT, INCLUDING 131.152 (e). I HEREBY ACKNOWLEDGE THAT ANY MISREPRESENTATION REGARDING THIS CERTIFICATION CONSTITUTES A VIOLATION OF THE ACT, AND MAY RESULT IN CRIMINAL, CIVIL AND/OR ADMINISTRATIVE PENALTIES AGAINST ME, AS AUTHORIZED BY THE ACT.

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

6/6/25

PAPE-DAWSON CONSULTING ENGINEERS, LLC — DATE
AIMEE CHAVEZ P.E. #123240
ASSOCIATE VICE PRESIDENT
TBPE FIRM REGISTRATION #470

ARCHITECT
BRYANT BOYD
902 FOREST STREET
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(512) 454-8711

ENGINEER:
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SURVEY:
ATS ENGINEERS INSPECTORS & SURVEYORS
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PAPE-DAWSON ENGINEERS

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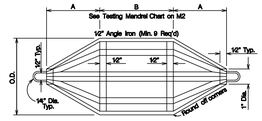
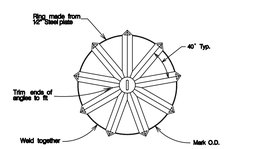
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY

PD JOB NO. 51466-01





GENERAL NOTES

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 AND UDC REGULATIONS 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 IN 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 FIRE LINES SHALL BE 150 PSI C900 PVC AND TESTED BY THE CONTRACTOR AT 150 PSI FOR 4 HOURS.

13. ALL BENDS AND CHANGES IN DIRECTIONS 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 AND PUBLIC AREA SIDEWALKS (I.E., NOT ADJACENT TO INDIVIDUAL LOTS) 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 PUBLIC IMPROVEMENTS. THIS BOND SHALL BE ESTABLISHED FOR 2 YEAR IN THE AMOUNT OF 10% OF THE COST OF THE PUBLIC IMPROVEMENTS AND SHALL FOLLOW THE CITY FORMAT.

21. RECORD DRAWINGS OF THE PUBLIC IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER PRIOR TO ACCEPTANCE OF THE PROJECT. THESE DRAWINGS SHALL BE A PDF EMAILED TO THE CITY DEVELOPMENT ENGINEER.

22. THE CITY OF GEORGETOWN SHALL BE CONTACTED 48 HOURS IN ADVANCE FOR CONNECTIONS AND TESTING.

GENERAL NOTES - SIDEWALKS

1. SIDEWALKS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE T.A.S. AS ADMINISTERED BY THE TDLR ("TDLR COMPLAINT").

2. SIDEWALKS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE UDC, SECTION 12.02.020.

GEOMETRIC AND DESIGN STANDARDS FOR SIDEWALKS

DESIGN AND CONSTRUCTION OF SIDEWALKS SHALL OCCUR IN COMPLIANCE WITH THE FOLLOWING STANDARDS:

A. IN ORDER TO PROVIDE SAFE AND ADEQUATE ACCESS ON CITY SIDEWALKS, ALL SIDEWALKS SHALL MEET MINIMUM CLEAR WIDTH REQUIREMENTS AROUND ALL OBSTRUCTIONS, NATURAL OR MANMADE, AS DESCRIBED HEREIN. CLEAR WIDTH SHALL MEAN THE DISTANCE AS MEASURED FROM THE OUTSIDE EDGE OF THE OBSTRUCTION TO THE OUTSIDE EDGE OF THE SIDEWALK OR FROM THE INSIDE EDGE OF THE OBSTRUCTION TO THE INSIDE EDGE OF THE SIDEWALK. IF THE CLEAR WIDTH IS TO BE OBTAINED BETWEEN THE INSIDE EDGE OF THE SIDEWALK AND OBSTRUCTION, GIVEN THAT THE SIDEWALK IS PLACED AGAINST THE BACK OF CURB, THE CLEAR WIDTH SHALL BE A MINIMUM OF FIVE FEET. IN ALL OTHER CASES, THE MINIMUM CLEAR WIDTH SHALL BE FOUR FEET.

B. ALL SIDEWALKS SHALL MEET CITY STANDARDS AND SPECIFICATIONS. SIDEWALKS MAY BE PLACED SO THAT THEY VARY THE DISTANCE FROM BACK OF CURB, PROVIDED THAT THE MINIMUM WIDTH AND DISTANCE FROM BACK OF CURB IS NOT REDUCED.

C. GIVEN THAT A COMBINATION OR VARIATION FROM THE TWO PLACEMENT METHODS IS NECESSARY OR DESIRED OR THAT AN OBSTRUCTION IS LOCATED WITHIN THE PAVED AREA, THE FOLLOWING CRITERIA SHALL BE SATISFIED:
    1. ALL RADII IN THE TRANSITION SECTION SHALL BE A MINIMUM OF TEN FEET.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES

1. WRITTEN CONSTRUCTION NOTIFICATION MUST BE GIVEN TO THE APPROPRIATE TCEQ REGIONAL OFFICE NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF THE REGULATED ACTIVITY. INFORMATION MUST INCLUDE THE DATE ON WHICH THE REGULATED ACTIVITY WILL COMMENCE, THE NAME OF THE APPROVED PLAN FOR THE REGULATED ACTIVITY, AND THE NAME OF THE PRIME CONTRACTOR AND THE NAME AND TELEPHONE NUMBER OF THE CONTACT PERSON.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.

3. IF ANY SENSITIVE FEATURE IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.

4. NO TEMPORARY ABOVEGROUND HYDROCARBON AND HAZARDOUS SUBSTANCE STORAGE TANK SYSTEM MAY BE INSTALLED WITHIN 150 FEET OF A DOMESTIC, INDUSTRIAL, IRRIGATION, OR PUBLIC WATER SUPPLY WELL, OR OTHER SENSITIVE FEATURE.

5. PRIOR TO COMMENCEMENT OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. CONTROLS SPECIFIED IN THE TEMPORARY STORM WATER SECTION OF THE APPROVED EDWARDS AQUIFER PROTECTION PLAN ARE REQUIRED DURING CONSTRUCTION. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THE CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED.

6. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS TO WATER QUALITY (E.G., FUGITIVE SEDIMENT IN STREET BEING WASHED INTO SURFACE STREAMS OR SENSITIVE FEATURES BY THE NEXT RAIN).

7. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS NOT LATER THAN WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%. A PERMANENT STAKE MUST BE PROVIDED THAT CAN INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME.

8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES (E.G., SCREENING OUTFALLS, PICKED UP DAILY).

9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.

10. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARY OR PERMANENTLY CEASE IS PRECLUDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE. IN AREAS EXPERIENCING DROUGHTS WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SEASONAL ARID CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.

11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

12. THE HOLDER OF ANY APPROVED EDWARDS AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:

A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;

B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;

C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
12100 PARK 35 CIRCLE, BLDG. A, AUSTIN, TX 78753
PHONE: (512) 339-2929
FAX: (512) 339-3795

TCEQ ORGANIZED SEWAGE
COLLECTION SYSTEM (SCS)
GENERAL CONSTRUCTION NOTES

1. THIS ORGANIZED SEWAGE COLLECTION SYSTEM MUST BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES 30 TEXAS ADMINISTRATIVE CODE (TAC) §§213.5(C) AND 217.51–217.70 AND 30 TAC CHAPTER 217, SUBCHAPTER D, AND THE CITY OF GEORGETOWN STANDARD SPECIFICATIONS.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROPOSED REGULATED PROJECT MUST BE PROVIDED WITH COPIES OF THE SEWAGE COLLECTION SYSTEM PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS MUST BE REQUIRED TO KEEP ON-SITE COPIES OF THE PLAN AND THE APPROVAL LETTER.

3. NO LATER THAN 48 HOURS PRIOR TO COMMENCING ANY REGULATED ACTIVITY, THE APPLICANT OR HIS AGENT MUST NOTIFY THE AUSTIN REGIONAL OFFICE, IN WRITING, OF THE DATE ON WHICH THE REGULATED ACTIVITY WILL BEGIN.

4. ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED SCS APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF AN SCS APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL INFORMATION NECESSARY FOR ITS REVIEW AND APPROVAL.

5. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION, MUST BE MAINTAINED DURING CONSTRUCTION, AND MUST BE REMOVED WHEN SUFFICIENT VEGETATION IS ESTABLISHED TO CONTROL THE EROSION AND SEDIMENTATION AND THE CONSTRUCTION AREA IS STABILIZED.

6. THE SEWER LINE TRENCH DETAILS SHOWING THE CROSS SECTION WITH THE DIMENSIONS, PIPE PLACEMENT, AND BACKFILL INSTRUCTIONS ARE INCLUDED ON PLAN SHEET XX of XX OF THESE PLANS. ALL SEWER PIPES JOINTS MUST MEET THE REQUIREMENTS IN 30 TAC §§217.53(C) AND 217.65.

GRAVITY LINES MUST HAVE A SDR 26 OR LESS. PRESSURIZED SEWER SYSTEMS MUST HAVE PIPE WITH A MINIMUM WORKING PRESSURE RATING OF 150 PSI.

THE ASTM, ANSI, OR AWWA SPECIFICATION NUMBERS FOR THE PIPE(S) AND JOINTS ARE: ASTM D3034, ASTM 3212, ASTM D2241 CLASS 160 AND ASTM D3139

THE PIPE MATERIAL, THE PRESSURE CLASSES, AND THE SDR AND/OR DR DESIGNATIONS ARE: PVC, SDR 26; PVC, 160 PSI, SDR 26.

7. IF ANY SENSITIVE FEATURES ARE DISCOVERED DURING THE WASTEWATER LINE TRENCHING ACTIVITIES, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPLICANT MUST IMMEDIATELY NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY OF THE FEATURE DISCOVERED. A GEOLOGIST'S ASSESSMENT OF THE LOCATION AND EXTENT OF THE FEATURE DISCOVERED MUST BE REPORTED TO THAT REGIONAL OFFICE IN WRITING WITHIN TWO WORKING DAYS. THE APPLICANT MUST SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR FOR MODIFYING THE PROPOSED COLLECTION SYSTEM ALIGNMENT AROUND THE FEATURE. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.

8. SEWER LINES LOCATED WITHIN OR CROSSING THE 5-YEAR FLOODPLAIN OF A DRAINAGE WAY WILL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL, OR THE SEWER LINES MUST BE ENCASED IN CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF SIX (6) INCHES.

9. BLASTING PROCEDURES FOR PROTECTION OF EXISTING SEWER LINES AND OTHER UTILITIES WILL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION CRITERIA. SAND IS NOT ALLOWED AS BEDDING OR BACKFILL IN TRENCHES THAT HAVE BEEN BLASTED. IF ANY EXISTING SEWER LINES ARE DAMAGED, THE LINES MUST BE REPAIRED AND RETESTED.

10. ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE.

THE DIAMETER OF THE MANHOLES MUST BE A MINIMUM OF FOUR FEET AND THE MANHOLE FOR ENTRY MUST HAVE A MINIMUM CLEAR OPENING DIAMETER OF 30 INCHES. THESE DIMENSIONS AND OTHER DETAILS SHOWING COMPLIANCE WITH THE COMMISSION'S RULES CONCERNING MANHOLES AND SEWER LINE/MANHOLE INVERTS DESCRIBED IN 30 TAC §217.55 ARE INCLUDED IN THESE PLANS.

IT IS SUGGESTED THAT ENTRANCE INTO MANHOLES IN EXCESS OF FOUR FEET DEEP BE ACCOMPLISHED BY MEANS OF A PORTABLE LADDER. THE INCLUSION OF STEPS IN A MANHOLE IS PROHIBITED.

11. WHERE WATER LINES AND NEW SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).

12. WHERE SEWERS LINES DEVIATE FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE ALL CURVATURE OF SEWER PIPE MUST BE ACHIEVED BY THE FOLLOWING PROCEDURE WHICH IS RECOMMENDED BY THE PIPE MANUFACTURER.

IF PIPE FLEXURE IS PROPOSED, THE FOLLOWING METHOD OF PREVENTING DEFLECTION OF THE JOINT MUST BE USED.

SPECIFIC CARE MUST BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC §217.54.

13. NEW SEWAGE COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH STUB OUTS FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. THE LOCATION OF SUCH STUB OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH STUB OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB-OUTS MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE END OF THE STREET PAVEMENT. ALL STUB-OUTS MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING SEWER LINE NOT FURNISHED WITH STUB OUTS MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING TECHNIQUES.

IF NO STUB-OUT IS PRESENT AN ALTERNATE METHOD OF JOINING LATERALS IS SHOWN IN THE DETAIL ON PLAN SHEET XX of XX (FOR POTENTIAL FUTURE LATERALS).

THE PRIVATE SERVICE LATERAL STUB-OUTS MUST BE INSTALLED AS SHOWN ON THE PLAN AND PROFILE SHEETS ON PLAN SHEET N/A AND MARKED AFTER BACKFILLING AS SHOWN IN THE DETAIL ON PLAN SHEET N/A.

14. TRENCHING, BEDDING AND BACKFILL MUST CONFORM WITH 30 TAC §217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES IA, IB, II OR III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 (ANSI A 106.2) CLASSES A, B OR C.

15. SEWER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN-OUT, IT MUST BE TESTED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEAN-OUT IS USED AT THE END OF THE PROPOSED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT UNLESS IT CAN BE CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(C)(3)(E).

16. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC §217.57. THE ENGINEER MUST RETAIN COPIES OF ALL TEST RESULTS WHICH MUST BE MADE AVAILABLE TO THE EXECUTIVE DIRECTOR UPON REQUEST. THE ENGINEER MUST CERTIFY IN WRITING THAT ALL WASTEWATER LINES HAVE PASSED ALL REQUIRED TESTING TO THE APPROPRIATE REGIONAL OFFICE WITHIN 30 DAYS OF TEST COMPLETION AND PRIOR TO USE OF THE NEW COLLECTION SYSTEM. TESTING METHOD WILL BE:

(a) FOR A COLLECTION SYSTEM PIPE THAT WILL TRANSPORT WASTEWATER BY GRAVITY FLOW, THE DESIGN MUST SPECIFY AN INFILTRATION AND EXFILTRATION TEST OR A LOW-PRESSURE AIR TEST. A TEST MUST CONFORM TO THE FOLLOWING REQUIREMENTS:

(1) LOW PRESSURE AIR TEST.

(A) A LOW PRESSURE AIR TEST MUST FOLLOW THE PROCEDURES DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) C-828, ASTM C-924, OR ASTM F-1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS REQUIRED IN TABLE C.3 IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH.

(B) FOR SECTIONS OF COLLECTION SYSTEM PIPE LESS THAN 36 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY, UNLESS A PIPE IS TO BE TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION.

(I) A PIPE MUST BE PRESSURIZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE.

(II) ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS COMPUTED FROM THE FOLLOWING EQUATION:

$$T = \frac{0.085 \times D \times K}{Q} \qquad \text{(EQ. C.3)}$$

WHERE:

T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS
K = 0.000419 X D X L, BUT NOT LESS THAN 1.0
D = AVERAGE INSIDE PIPE DIAMETER IN INCHES
L = LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET
Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE

(C) SINCE A K VALUE OF LESS THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING TABLE C.3:

(D) AN OWNER MAY STOP A TEST IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME.

(E) IF ANY PRESSURE LOSS OR LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF A TESTING PERIOD, THEN THE TEST MUST CONTINUE FOR THE ENTIRE TEST DURATION AS OUTLINED ABOVE OR UNTIL FAILURE.

(F) WASTEWATER COLLECTION SYSTEM PIPES WITH A 27 INCH OR LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT INSTEAD OF FOLLOWING THE PROCEDURE OUTLINED IN THIS SECTION.

(G) A TESTING PROCEDURE FOR PIPE WITH AN INSIDE DIAMETER GREATER THAN 33 INCHES MUST BE APPROVED BY THE EXECUTIVE DIRECTOR.

(2) INFILTRATION/EXFILTRATION TEST.

(A) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF 2.0 FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE.

(B) AN OWNER SHALL USE AN INFILTRATION TEST IN LIEU OF AN EXFILTRATION TEST WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER LEVEL.

(C) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST TWO FEET ABOVE EXISTING GROUNDWATER LEVEL, WHICHEVER IS GREATER.

(D) FOR CONSTRUCTION WITHIN A 25-YEAR FLOOD PLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD AS IN SUBPARAGRAPH (C) OF THIS PARAGRAPH.

(E) IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, AN OWNER SHALL UNDERTAKE REMEDIAL ACTION IN ORDER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED. AN OWNER SHALL RETEST A PIPE FOLLOWING A REMEDIATION ACTION.

(b) IF A GRAVITY COLLECTION PIPE IS COMPOSED OF FLEXIBLE PIPE, DEFLECTION TESTING IS ALSO REQUIRED. THE FOLLOWING PROCEDURES MUST BE FOLLOWED:

(1) FOR A COLLECTION PIPE WITH INSIDE DIAMETER LESS THAN 27 INCHES, DEFLECTION MEASUREMENT REQUIRES A RIGID MANDREL.

(A) MANDREL SIZING.

(I) A RIGID MANDREL MUST HAVE AN OUTSIDE DIAMETER (OD) NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A PIPE, AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTM, AMERICAN WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN NATIONAL STANDARDS INSTITUTE, OR ANY RELATED APPENDIX.

(II) IF A MANDREL SIZING DIAMETER IS NOT SPECIFIED IN THE APPROPRIATE STANDARD, THE MANDREL MUST HAVE AN OD EQUAL TO 95% OF THE ID OF A PIPE. IN THIS CASE, THE ID OF THE PIPE, FOR THE PURPOSE OF DETERMINING THE OD OF THE MANDREL, MUST EQUAL BE THE AVERAGE OUTSIDE DIAMETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD CONTROLLED PIPE AND THE AVERAGE INSIDE DIAMETER FOR ID CONTROLLED PIPE.

(III) ALL DIMENSIONS MUST MEET THE APPROPRIATE STANDARD.

(B) MANDREL DESIGN.

(I) A RIGID MANDREL MUST BE CONSTRUCTED OF A METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200 PSI WITHOUT BEING DEFORMED.

(II) A MANDREL MUST HAVE NINE OR MORE ODD NUMBER OF RUNNERS OR LEGS.

(III) A BARREL SECTION LENGTH MUST EQUAL AT LEAST 75% OF THE INSIDE DIAMETER OF A PIPE.

(IV) EACH SIZE MANDREL MUST USE A SEPARATE PROVING RING.

(C) METHOD OPTIONS.

(I) AN ADJUSTABLE OR FLEXIBLE MANDREL IS PROHIBITED.

(II) A TEST MAY NOT USE TELEVISION INSPECTION AS A SUBSTITUTE FOR A DEFLECTION TEST.

(III) IF REQUESTED, THE EXECUTIVE DIRECTOR MAY APPROVE THE USE OF A DEFLECTOMETER OR A MANDREL WITH REMOVABLE LEGS OR RUNNERS ON A CASE-BY-CASE BASIS.

(2) FOR A GRAVITY COLLECTION SYSTEM PIPE WITH AN INSIDE DIAMETER 27 INCHES AND GREATER, OTHER TEST METHODS MAY BE USED TO DETERMINE VERTICAL DEFLECTION.

(3) A DEFLECTION TEST METHOD MUST BE ACCURATE TO WITHIN PLUS OR MINUS 0.2% DEFLECTION.

(4) AN OWNER SHALL NOT CONDUCT A DEFLECTION TEST UNTIL AT LEAST 30 DAYS AFTER THE FINAL BACKFILL.

(5) GRAVITY COLLECTION SYSTEM PIPE DEFLECTION MUST NOT EXCEED FIVE PERCENT (5%).

(6) IF A PIPE SECTION FAILS A DEFLECTION TEST, AN OWNER SHALL CORRECT THE PROBLEM AND CONDUCT A SECOND TEST AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

17. ALL MANHOLES MUST BE TESTED TO MEET OR EXCEED THE REQUIREMENTS OF 30 TAC §217.58.

(a) ALL MANHOLES MUST PASS A LEAKAGE TEST.

(b) AN OWNER SHALL TEST EACH MANHOLE (AFTER ASSEMBLY AND BACKFILLING) FOR LEAKAGE, SEPARATE AND INDEPENDENT OF THE COLLECTION SYSTEM PIPES, BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING, OR OTHER METHOD APPROVED BY THE EXECUTIVE DIRECTOR.

(1) HYDROSTATIC TESTING.

(A) THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING OR ANY ALTERNATIVE TEST METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH PER HOUR.

(B) TO PERFORM A HYDROSTATIC EXFILTRATION TEST, AN OWNER SHALL SEAL ALL WASTEWATER PIPES COMING INTO A MANHOLE WITH AN INTERNAL PIPE PLUG, FILL THE MANHOLE WITH WATER, AND MAINTAIN THE TEST FOR AT LEAST ONE HOUR.

(C) A TEST FOR CONCRETE MANHOLES MAY USE A 24-HOUR WETTING PERIOD BEFORE TESTING TO ALLOW SATURATION OF THE CONCRETE.

(2) VACUUM TESTING.

(A) TO PERFORM A VACUUM TEST, AN OWNER SHALL PLUG ALL LIFT HOLES AND EXTERIOR JOINTS WITH A NON-SHRINK GROUT AND PLUG ALL PIPES ENTERING A MANHOLE.

(B) NO GROUT MUST BE PLACED IN HORIZONTAL JOINTS BEFORE TESTING.

(C) STUB-OUTS, MANHOLE BOOTS, AND PIPE PLUGS MUST BE SECURED TO PREVENT MOVEMENT WHILE A VACUUM IS DRAWN.

(D) AN OWNER SHALL USE A MINIMUM 60 INCH/LB TORQUE WRENCH TO TIGHTEN THE EXTERNAL CLAMPS THAT SECURE A TEST COVER TO THE TOP OF A MANHOLE.

(E) A TEST HEAD MUST BE PLACED AT THE INSIDE OF THE TOP OF A CONE SECTION, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

(F) THERE MUST BE A VACUUM OF 10 INCHES OF MERCURY INSIDE A MANHOLE TO PERFORM A VALID TEST.

(G) A TEST DOES NOT BEGIN UNTIL AFTER THE VACUUM PUMP IS OFF.

(H) A MANHOLE PASSES THE TEST IF AFTER 2.0 MINUTES AND WITH ALL VALVES CLOSED, THE VACUUM IS AT LEAST 9.0 INCHES OF MERCURY.

18. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.

Note:
All mandrels must be approved by City of Georgetown Construction Inspections and stamped before use.

GO, NO GO DEFLECTION TESTING MANDREL — M-1

			MANDREL O.D.	RING O.D.
SIZE	A	B*	PVC (SDR-26)	PVC (SDR-26)
6"	4.0"	4.5"	5.50	4.79
8"	5.5"	6"	7.37	6.66
10"	7.0"	7.5"	9.21	8.50
12"	8.0"	9"	10.96	10.25
15"	10.0"	11"	13.42	12.71
18"	12.0"	13.5"	——	——
21"	14.0"	16"	——	——
24"	16.0"	18"	——	——
27"	18.0"	20"	——	——

* Minimum Length

CHART

Notes:
PVC pipes and fittings 6" to 15" in diameter shall conform to ASTM D-3034.
PVC pipes and2fittings 18" to 27" in diameter shall conform to ASTM F-679.

This information is provided as a reference. All deflection testing shall be done in accordance with TCEQ Chapter 217.

GO, NO GO DEFLECTION TESTING MANDREL CHART — M-2

NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED PROFESSIONAL ENGINEER
Aimee Chavez 6/6/25

PAPE-DAWSON ENGINEERS
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY
1901 LEANDER ST
GEORGETOWN, TX 78626
CONSTRUCTION NOTES

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA
SHEET 2 OF 15

Date: Jun 06, 2025, 11:48am User ID: jstyslinger
File: H:\Projects\514\66\01\301 Construction Documents\Civil\CN51466-01.dwg

REPLAT OF LOT 6, SOUTH TOWN INDUSTRIAL PARK

ATS Job #230330008s

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

I, Habitat for Humanity of Williamson County, Texas, a Texas non-profit corporation, sole owner of the certain 0.14 acre tract of land shown hereon and described in a deed recorded in Document No. 2022141942 of the Official Public Records of Williamson County, Texas, being Lot 6, South Town Industrial Park as recorded in Cabinet N, Slides 246 and 247, Plat Records, Williamson County, Texas, do hereby replat said tract as shown hereon; do hereby covenant to all restrictions listed herein, which shall run with the land; and do hereby dedicate to the public the streets, alleys, rights-of-way, easements, and public places shown hereon for such public purposes as the City of Georgetown may deem appropriate. I hereby bind my heirs, successors, and assigns to warrant and forever defend such dedications, all and singular, to the public against every person whomsoever claiming or to claim the same or any part thereof. This subdivision is to be known as "Replat of Lot 6, South Town Industrial Park".

TO CERTIFY WHICH, WITNESS by my hand this ___day of _____, 20__ .

_____
Habitat for Humanity of Williamson County, Texas
By: Phillip Golden, Executive Director
502 West 21st Street
Georgetown, Texas 78626

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

Before me, the undersigned authority, on this day personally appeared, known to me to be the persons whose names are subscribed to the foregoing instrument. it has been acknowledged to me that they executed the foregoing instrument as owner of the property described hereon.

GIVEN UNDER MY HAND AND SEAL of office this ___ day of _____, 20__.

_____
Notary Public in and for the State of Texas

printed name:_____

My Notary Commission expires:_____

I, MICHAEL FISHER, Registered Professional Engineer in the State of Texas, do hereby certify that this LOT 6, SOUTH TOWN INDUSTRIAL PARK is in the Edwards Aquifer Recharge Zone and is not encroached by a Zone A flood area, as denoted herein, and as defined by Federal Emergency Management Administration Flood Hazard Boundary Map, Community Panel Number, 48491C 0293F effective date December 20, 2019, and that each lot conforms to the City of Georgetown regulations. The fully developed, concentrated storm water runoff resulting from the one hundred (100) year frequency storm is contained within the drainage easements shown and/or public rights-of-way dedicated by this plat.

TO CERTIFY WHICH, WITNESS my hand and seal, this
__day of _____, 20__.

_____
Michael Fisher
Registered Professional Engineer No. 87704
State of Texas

I, Colin Bromley, Registered Professional Land Surveyor in the State of Texas,do hereby certify that this plat is true and correctly made from an actual survey made on the ground of the property legally described hereon, and that there are no apparent discrepancies, conflicts, overlapping of improvements, visible utility lines or roads in place, except as shown on the accompanying plat, and that the corner monuments shown there on were properly placed under my supervision in accordance with the subdivision regulations of the City of Georgetown, Texas.

TO CERTIFY WHICH, WITNESS my hand and seal, this 25th day of April 2025.

Colin Bromley
Registered Professional Surveyor
No. 6955 - State of Texas

STATE OF TEXAS REGISTERED COLIN BROMLEY 6955 PROFESSIONAL LAND SURVEYOR

PLAT NOTES:

1. Utility providers for this development are Water, Wastewater and Electric: City of Georgetown, Texas.
2. All structures/ obstructions are prohibited in drainage easements.
3. There are no areas within the boundaries of this subdivision in the 100-year floodplain as defined by FIRM Map Number 48491C 0293F, effective date of December 20, 2019.
4. In order to promote drainage away from a structure, the slab elevation should be built at least one-foot above the surrounding ground, and the ground should be graded away from the structure at a slope of 1/2" per foot for a distance of at least 10 feet.
5. All sedimentation, filtration, detention, and/or retention basins and related appurtenances shown shall be situated within a drainage easement or drainage lot. The owners, Home Owner's Association, or assignees of the tracts upon which are located such easements, appurtenances, and detention facilities shall maintain same and be responsible for their maintenance, routine inspection, and upkeep.
6. A 10-foot Public Utility Easement is dedicated along all street frontages within this plat.
7. The monuments of this plat have been located using Texas Central Zone NAD83/NAVD 88.
8. The impervious cover percentage that was accounted for with the water quality design was 67.1% for Lot 6A and 57.1% for Lot 6B. Any increase in impervious cover in the future must be accounted for with an approved WPAP modification, with the maximum allowable impervious cover per lot being 70%.
9. This subdivision is subject to all general notes and restrictions appearing on the plat of South Town Industrial, Lot 6, recorded in Cabinet N, Slides 246 and 247 of the Plat Records of Williamson County, Texas.
10. 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 Georgetown, 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.
11. 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 Georgetown and/or Williamson County, Texas. Neither the City of Georgetown 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 Georgetown 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.
12. Neither the City of Georgetown 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.
13. Right-of-way easements for widening roadways or improving drainage shall be maintained by the landowner until road or drainage improvements are actually constructed on the property. The City and/or County have the right at any time to take possession of any road widening easement for construction, improvement, or maintenance of the adjacent road.
14. Unless otherwise noted herein, all easements dedicated to the City of Georgetown by this plat shall be EXCLUSIVE to the City of Georgetown, 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.
15. All easements dedicated to the City of Georgetown 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.
16. This plat is subject to the provisions of the City of Georgetown Water Conservation Ordinance.
17. The development shown hereon is subject to Planned Unit Development Zoning Ordinance 2024-58. Unless otherwise required, amendment, revision, or repeal of that Ordinance shall not require modification of this plat.
18. The subdivision subject to this application is subject to the Water Quality Regulations of the City of Georgetown.

Owners: Phillip Golden
Habitat for Humanity of Williamson County, Texas
502 West 21st Street
Georgetown, Texas 78626

Acreage: 0.141 Acre Total Site
0.052 Acre Lot 6A (Residential)
0.089 Acre Lot 6B (Residential)

No. of Blocks: 1
No. of Lots: 2
New Streets: None
Submission Date: _____, 2024
2nd Submittal: _____, 2025

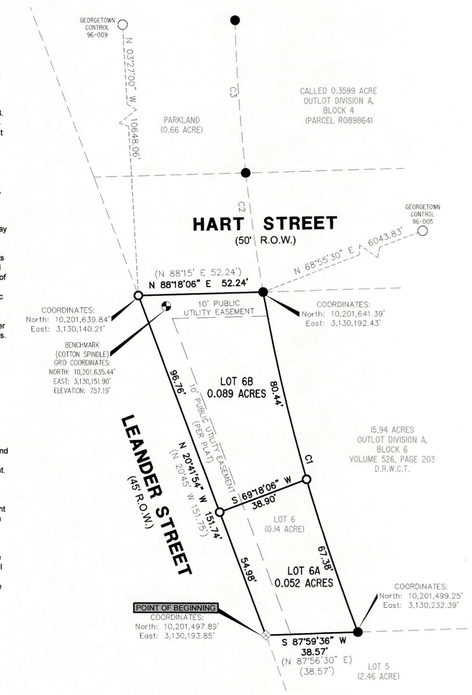
Surveyor: Andrew Jimenez
ATS Engineers, Inspectors & Surveyors
4910 West Highway 290
Austin, Texas 78735
512 328-6995 (Phone)

Engineer: Pape-Dawson Consulting Engineers, LLC 2024-XX-FF
10801 North Mopac Expressway
Building 3, Suite 200
Austin, Texas 78759
512 454-8711 (Phone)

Client: Habitat for Humanity—Williamson County
Date of Field Work: 04/01/2023, 04/13/2023, 07/19/2023 & 12/13/2024
Field: RBonds & ECarlson
Tech: MLeonardo
Date Drawn: 04/11/2023 updated 05/18/2023 added improvements 07/20/2023; REPLAT 11/08, 11/09/2023, 12/17/2024, 01/06/2025, 03/10/2025 & 04/25/2025
Path: SERVER6\Surveying\Projects____ BULK_GHIJKL\LeanderSt1901\Production\Dwgs\LeanderSt1901-230330008s-Replat-REV4.dwg

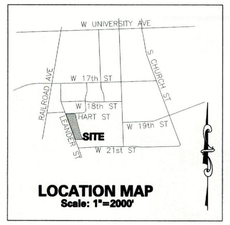
0' 30' 60'
Graphic Scale: 1" = 30'

LEGEND	
●	1/2" IRON ROD FOUND
⊗	"X" CHISELED IN CONCRETE
○	½" IRON ROD SET "ATS ENGINEERS"
———	JOINER LINE
- - - -	EASEMENT
R.O.W.	RIGHT OF WAY
D.R.W.C.T.	DEED RECORDS WILLIAMSON COUNTY, TEXAS
( )	RECORD INFORMATION



CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	147.88'	772.44'	10°58'07"	S 15°42'04" E	147.65'
(C1)	(147.89')	(772.44')		(S 15°45'10" E)	(147.66')
C2	50.40'	772.44'	3°44'18"	N 08°28'16" W	50.39'
(C2)	(50.35')	(772.44')		(S 08°24' E)	(50.34')
C3	63.92'	772.44'	4°44'28"	N 04°04'20" W	63.90'
(C3)	(64.02')	(772.44')		(S 04°09'40" E)	(64.00')

STREET TABLE						
NAME	CLASS	ROW	PAVEMENT	CURB TYPE	PED CLEAR ZONE	DESIGN SPEED
LEANDER STREET	LOCAL STREET	45'	28'	CURB AND GUTTER	N/A	30 MPH
HART STREET	LOCAL STREET	50'	30'	CURB AND GUTTER	N/A	30 MPH



LOCATION MAP
Scale: 1"=2000'

A DESCRIPTION OF A 0.141 OF AN ACRE (6,166 Sq. Ft.) TRACT OF LAND, LOCATED IN SOUTH TOWN INDUSTRIAL PARK, A SUBDIVISON OF RECORD AS CONVEYED TO HABITAT FOR HUMANITY OF WILLIAMSON COUNTY IN DOCUMENT No. 2022141942, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS. SAID 0.141 OF AN ACRE (6,166 Sq. Ft.) TRACT, BEING ALL OF LOT 6, OF SAID SOUTH TOWN INDUSTRIAL PARK, A SUBDIVISON AS RECORDED IN CABINET N, SLIDES 246 AND 247, PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS. SAID 0.141 OF AN ACRE (6,166 Sq. Ft.) TRACT, AS SHOWN ON THE ACCOMPANYING SURVEY, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at an "X" chisled in concrete (GRID Coordinates: North: 10,201,497.89 feet, East: 3,130,193.85 feet) found to monument the southwest corner of said Lot 6, the northwest corner of Lot 5 of said South Town Industrial Park plat and a point in the northeast right of way of Leander Street, having a right of way of 45 feet per said South Town Industrial Park plat;

THENCE, N 20°41'54" W, with the northeast line of said Leander Street, and a west line of said Lot 6, a distance of 151.74 feet to a ½ inch iron rod set, capped "ATS Engineers", for the northwest corner of said Lot 6, being in the northeast right of way of said Leander Street at the south right of way of Hart Street, having a right of way of 50 feet per said South Town Industrial Park plat;

THENCE, N 88°18'06" E, with the south right of way of said Hart Street and the north line of said Lot 6, a distance of 52.24 feet to a ½ inch iron rod found, for the northeast corner of said Lot 6, being in the south right of way of said Hart Street at the northwest corner of a 15.94 acre tract, conveyed to Outlot Division A, Block 6, as recorded in Volume 526, Page 203, Deed Records, Williamson County, Texas;

THENCE, with the east line of said Lot 6 and the west line of said 15.94 acre tract, along a curve to the left, the radius of which is 772.44 feet, the arc distance of which is 147.88 feet, and the chord of which bears S 15°42'04" E a distance of 147.65 feet to a ½ inch iron rod found, for the southeast corner of said Lot 6, the southwest corner of said 15.94 acre tract and being a point in the north line of said Lot 5;

THENCE, S 87°59'36" W, with the north line of said Lot 5, and south line of said Lot 6, a distance of 38.57 feet to the **POINT OF BEGINNING** of the herein described tract, containing 0.141 acre or 6,166 square feet of land, more or less.

Bearings cited hereon are based on the Texas State Plane Coordinate System, Central Zone (4203)

Based upon the above representations of the Engineer or Surveyor whose seal is affixed hereto, and after a review of the plat as represented by the said Engineer or Surveyor, I find that this plat complies with the requirements of Chapter 15.44, Flood Damage Prevention, of the Georgetown Municipal Code. This certification is made solely upon such representations and should not be relied upon for verifications of the facts alleged. The City of Georgetown disclaims any responsibility to any member of the public or independent verifications of the representation, factual or otherwise, contained in this plat and the documents associated with it.

_____ _____
Glen Holcomb, Building Official Date
City of Georgetown

I, Sofia Nelson, Planning Director ofthe City of Georgetown, Texas, do hereby certify this plat is approved for filing of record with the County Clerk of Williamson County, Texas.

_____ _____
Sofia Nelson, Planning Director Date

STATE OF TEXAS
COUNTY OF WILLIAMSON

I, Nancy Rister, Clerk of the 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 duly recorded this the ___ day of _____, 20__, A.D., at _ o'clock, _M., in the Official Public Records of said County in Document No. _____.

TO CERTIFY WHICH, WITNESS my hand and seal at the County Court of said County, at my office in Georgetown, Texas, the date last shown above written.

Nancy Rister, Clerk County Court of Williamson County,Texas

_____
Deputy

ATS Engineers Inspectors & Surveyors
www.ats-engineers.com
TBPLS FIRM REG. #10126000
4910 West Hwy 290, AUSTIN, TEXAS 78735
(512) 328-6995 FAX: (512) 328-6996

City Project No. 2024-15-PFP

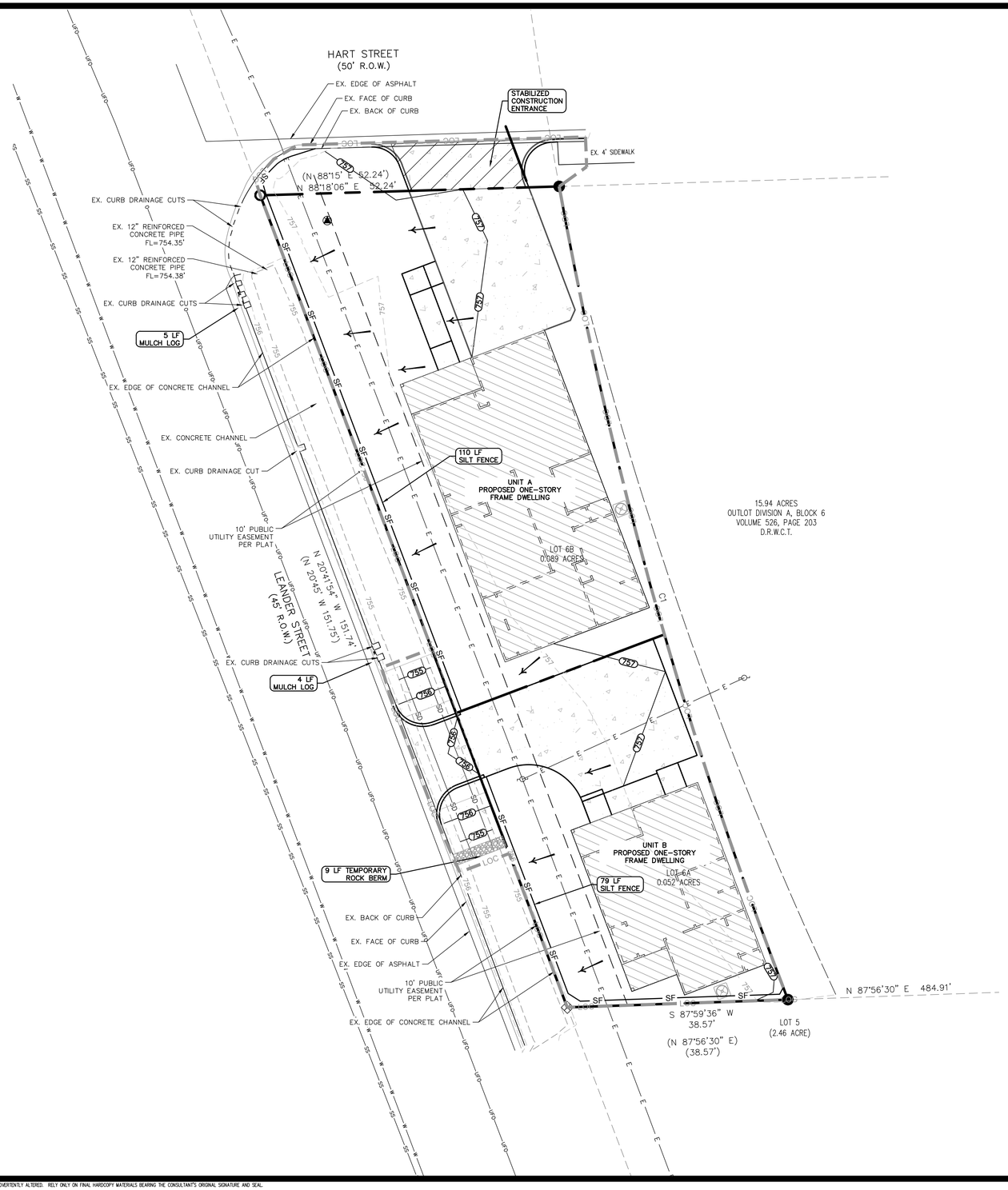
NO. REVISION DATE

PAPE-DAWSON ENGINEERS
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY
1901 LEANDER ST
GEORGETOWN, TX 78626
PLAT

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA
SHEET 3 OF 15

Date: Jun 06, 2025, 11:50am User ID: jshellinger
File: H:\Projects\51466\01\301 Construction Documents\Civil\FP51466-01.dwg



SCALE: 1"= 10'

0' 10' 20' 30'

LEGEND

- PROPOSED CONTOURS
- EXISTING CONTOURS
- BOUNDARY LINE
- LIMITS OF CONSTRUCTION
- SILT FENCE
- MULCH LOG
- STABILIZED CONSTRUCTION ENTRANCE
- ROCK BERM
- FLOW ARROW

NOTES:

1. ANY DIRT, MUD, ROCK, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.
2. ALL DISTURBED AREAS SHALL BE REVEGETATED.

NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chy 6/6/25

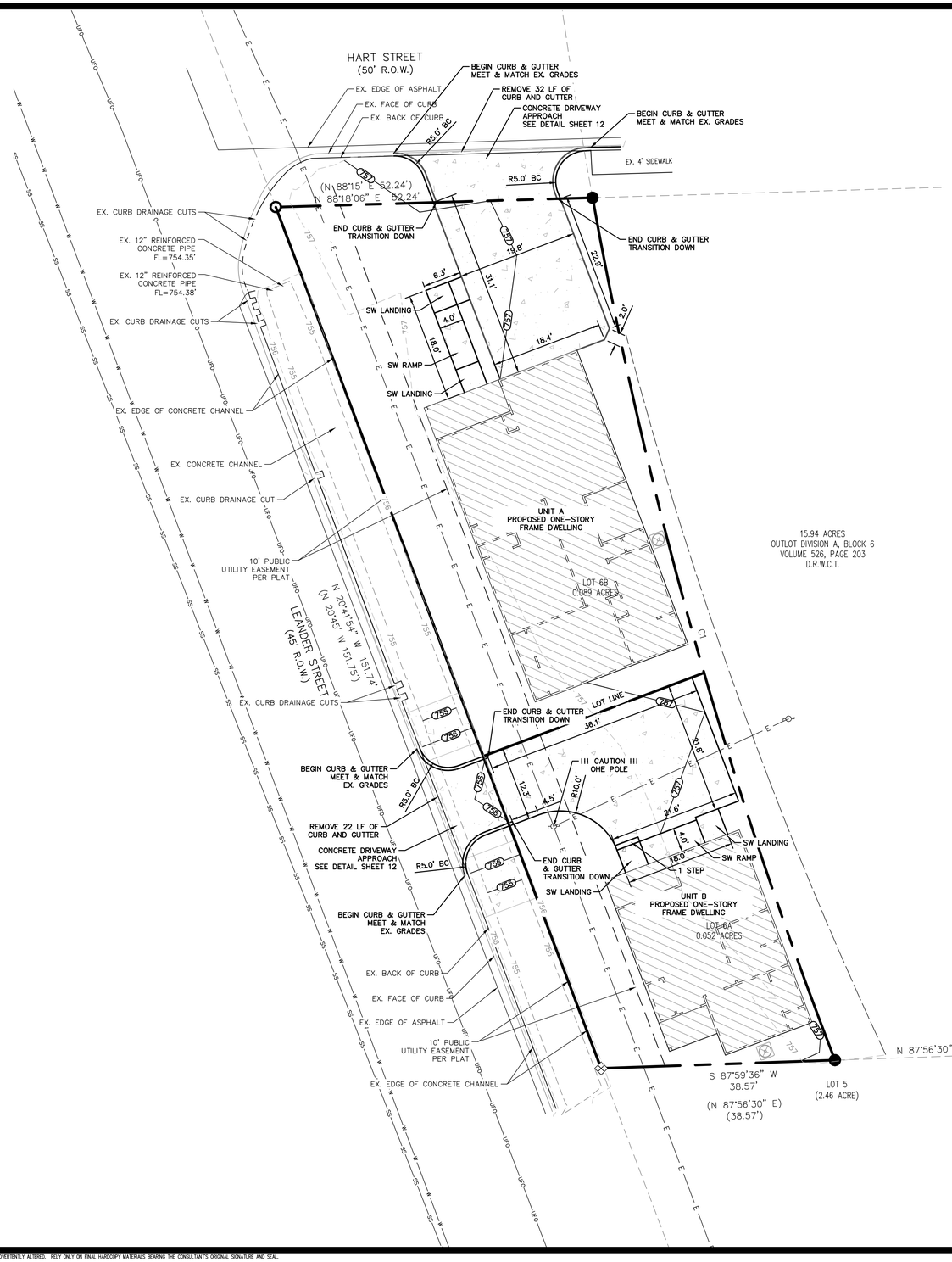
PAPE-DAWSON ENGINEERS
AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

EROSION AND SEDIMENTATION CONTROL PLAN

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA
SHEET 6 OF 15



SCALE: 1"= 10'

0' 10' 20' 30'

LEGEND

- PROPOSED CONTOURS
- EXISTING CONTOURS
- PROPERTY LINE
- 6" CONCRETE PAVEMENT

LEGEND	
●	3/4" IRON ROD FOUND
⊗	"X" CHISELED IN CONCRETE
○	½" IRON ROD SET "ATS ENGINEERS"
	JOINER LINE
	EASEMENT
	CHAIN LINK FENCE
	OVERHEAD ELECTRIC LINE
100'	CONTOUR LINE
	POWER POLE
R.O.W.	RIGHT OF WAY
D.R.W.C.T.	DEED RECORDS WILLIAMSON COUNTY, TEXAS
( )	RECORD INFORMATION

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	147.88'	772.44'	10°58'07"	S 15°42'04" E	147.65'
(C1)	(147.89')	(772.44')		(S 15°45'10" E)	(147.66')

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. THERE ARE NO TREES ONSITE.
3. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chy 6/6/25

PAPE-DAWSON ENGINEERS
AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

DIMENSIONAL CONTRAL & SITE PLAN

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA

SHEET 5 OF 15

Date: Jun 06, 2025, 1:23pm User ID: jstoffinger
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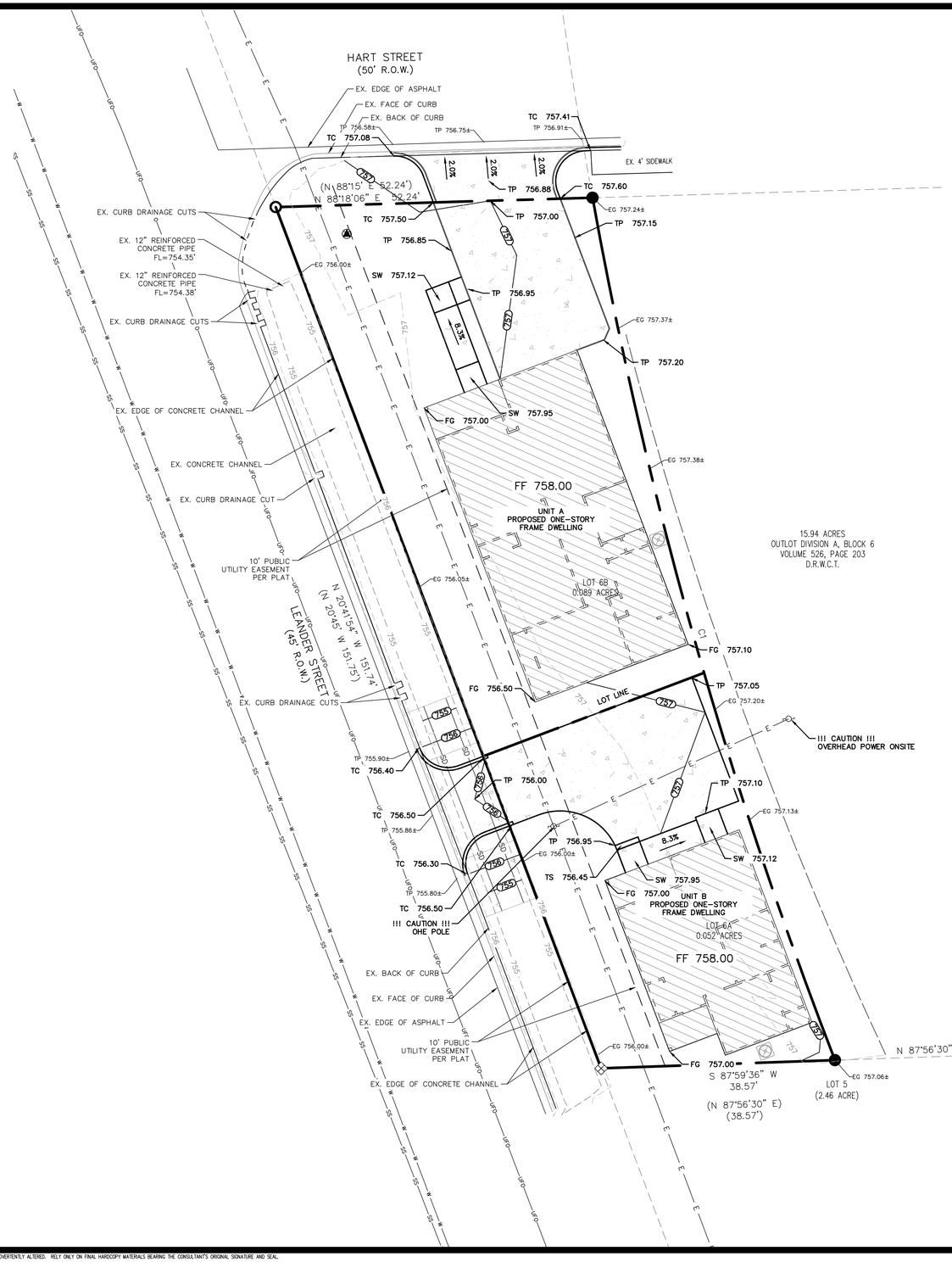

SCALE: 1"= 10'

0' 10' 20' 30'

LEGEND

735	PROPOSED CONTOURS
735	EXISTING CONTOURS
	PROPERTY LINE
TP 845.50'	TOP OF PAVEMENT
SW 845.50'	TOP OF SIDEWALK
TC 845.50'	TOP OF CURB
FG 845.50'	FINISH GRADE
EG 845.50'	EXISTING GRADE
TS 845.50'	TOP OF STEP

NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chy 6/6/25

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10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
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HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

GRADING PLAN

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA

SHEET 6 OF 15

Date: Jun 06, 2025, 1:26pm User ID: jstrohfinger
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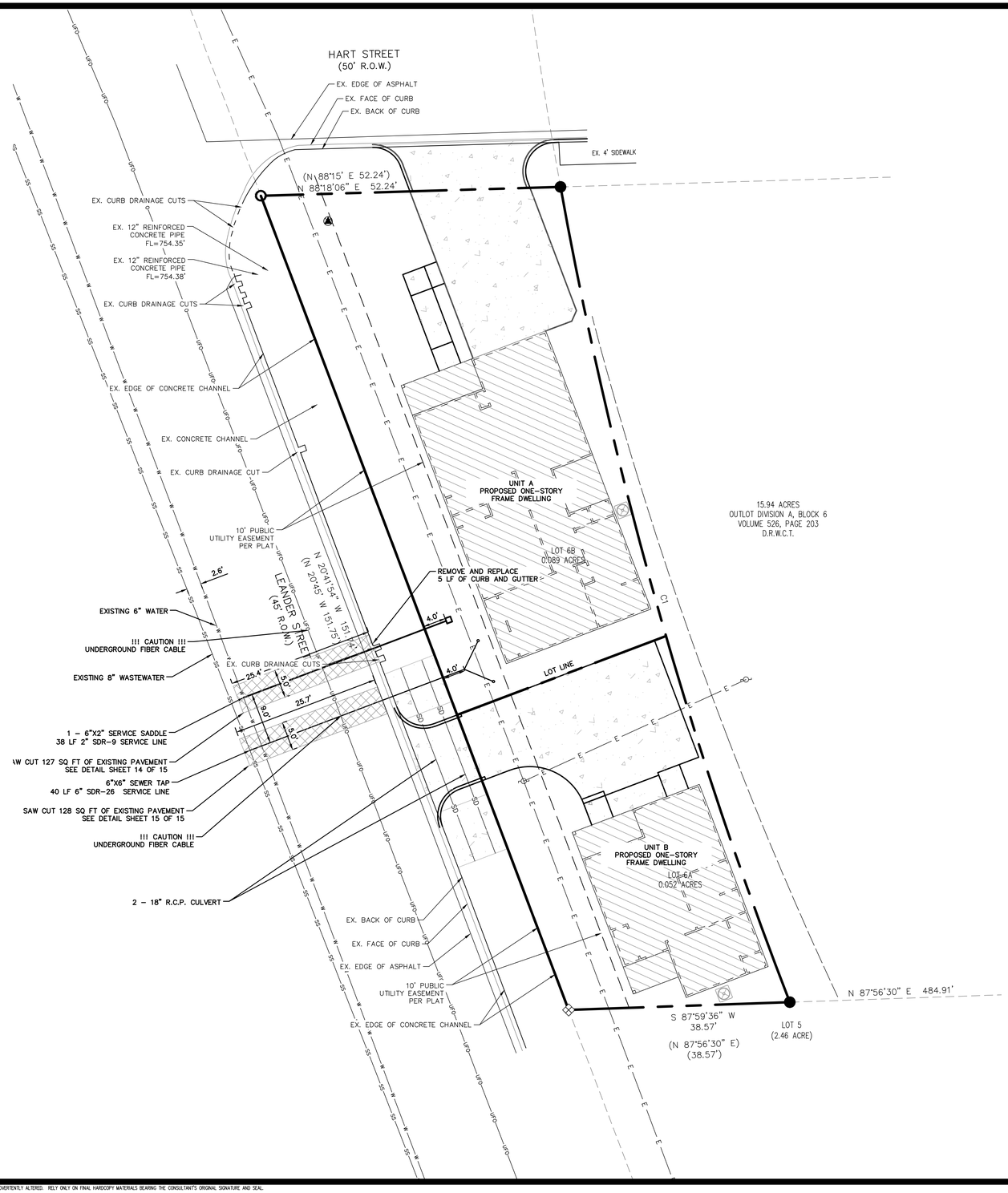

SCALE: 1"= 10'

0' 10' 20' 30'

LEGEND

- DOUBLE WATER SERVICE
- DOUBLE WW SERVICE
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. EXISTING FIRE HYDRANT 75' NORTH OF SITE AT THE INTERSECTION 19TH AND LENDER STREET.

NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chy 6/6/25

PAPE-DAWSON ENGINEERS
AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

UTILITY PLAN

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA

SHEET 7 OF 15

Date: Jan 06, 2025, 1:28pm User ID: jstylinger
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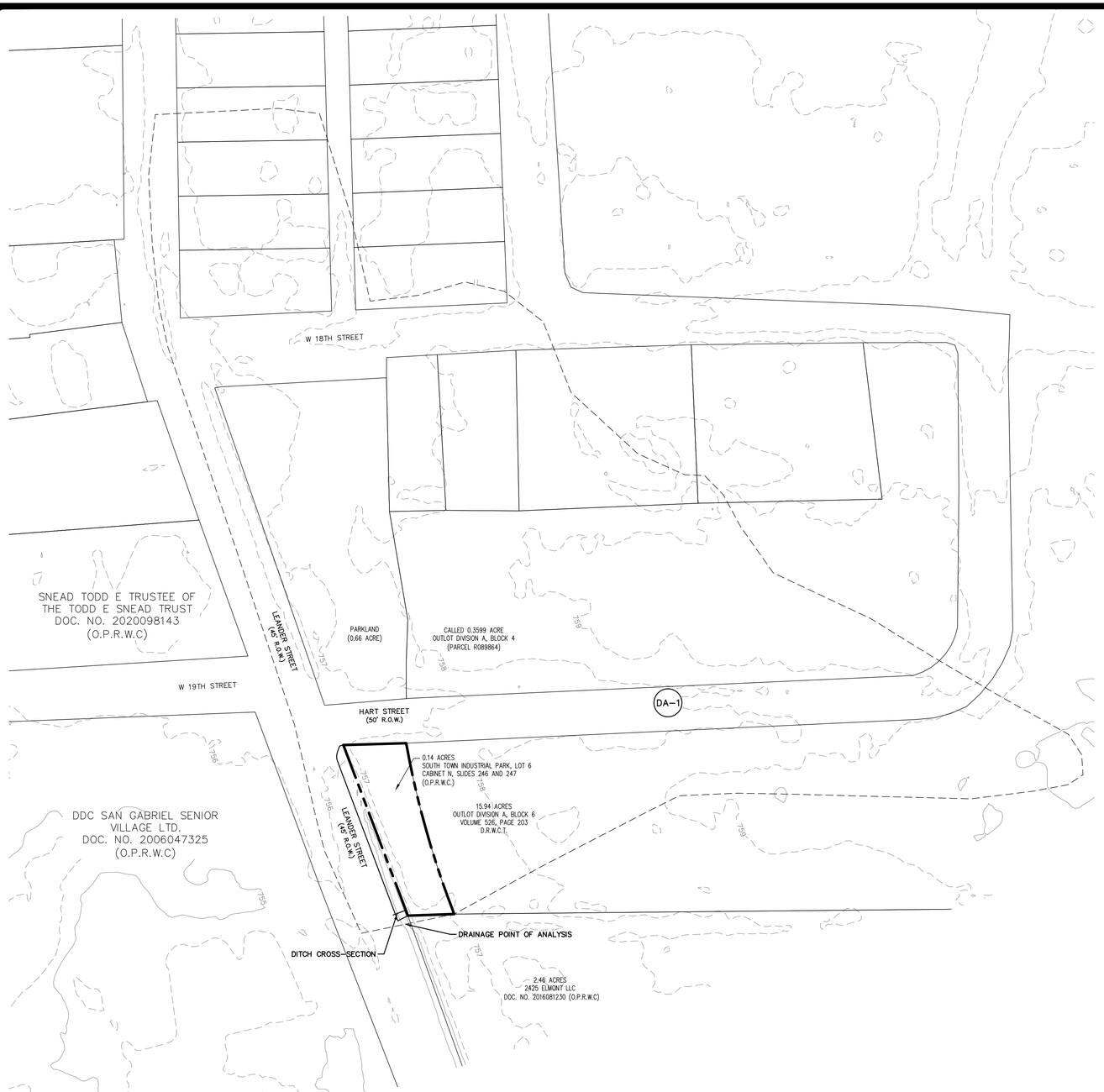


Channel Report

Hydraflow Express by Intelisolve — Thursday, Apr 17 2025

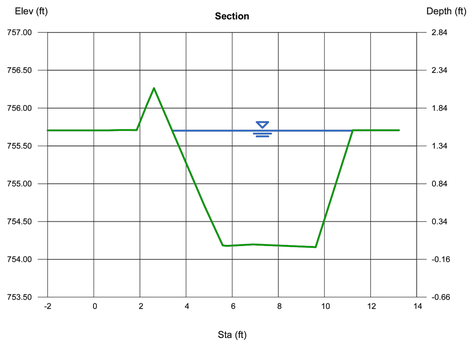
1901 Leander Street Ditch - 100YR Existing Maximum

User-defined
Invert Elev (ft) = 754.16
Slope (%) = 0.30
N-Value = 0.015

Calculations
Compute by: Known Q
Known Q (cfs) = 49.68

Highlighted
Depth (ft) = 1.54
Q (cfs) = 49.68
Area (sqft) = 9.05
Velocity (ft/s) = 5.49
Wetted Perim (ft) = 8.92
Crit Depth, Yc (ft) = 1.46
Top Width (ft) = 7.83
EGL (ft) = 2.01

(Sta, El, n)-(Sta, El, n)...
(0.00, 755.71)-(0.66, 755.71, 0.015)-(1.17, 755.71, 0.015)-(1.86, 755.71, 0.015)-(2.31, 756.05, 0.015)-(2.61, 756.26, 0.015)-(4.80, 754.71, 0.015)
-(5.59, 754.19, 0.015)-(5.76, 754.18, 0.015)-(8.90, 754.20, 0.015)-(9.62, 754.16, 0.015)-(11.23, 755.71, 0.015)



Channel Report

Hydraflow Express by Intelisolve — Sunday, Apr 14 2024

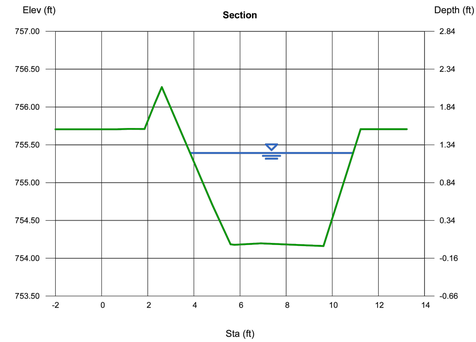
1901 Leander Street Ditch - 100YR Existing

User-defined
Invert Elev (ft) = 754.16
Slope (%) = 0.30
N-Value = 0.015

Calculations
Compute by: Known Q
Known Q (cfs) = 32.57

Highlighted
Depth (ft) = 1.23
Q (cfs) = 32.57
Area (sqft) = 6.74
Velocity (ft/s) = 4.83
Wetted Perim (ft) = 7.94
Crit Depth, Yc (ft) = 1.14
Top Width (ft) = 7.07
EGL (ft) = 1.59

(Sta, El, n)-(Sta, El, n)...
(0.00, 755.71)-(0.66, 755.71, 0.015)-(1.17, 755.71, 0.015)-(1.86, 755.71, 0.015)-(2.31, 756.05, 0.015)-(2.61, 756.26, 0.015)-(4.80, 754.71, 0.015)
-(5.59, 754.19, 0.015)-(5.76, 754.18, 0.015)-(8.90, 754.20, 0.015)-(9.62, 754.16, 0.015)-(11.23, 755.71, 0.015)



DRAINAGE AREA	INLET NUMBER	AREA (acres)	COMPOSITE C C_{25}	COMPOSITE C C_{100}	$A \cdot C_{25}$	$A \cdot C_{100}$	SHEET FLOW Length (ft)	SHEET FLOW Manning's (n)	SHEET FLOW Slope ft/ft	SHEET FLOW Tc (min)	SHALLOW CONCENTRATED FLOW Length (ft)	SHALLOW CONCENTRATED FLOW Paved/ Unpaved	SHALLOW CONCENTRATED FLOW Slope ft/ft	SHALLOW CONCENTRATED FLOW Tc (min)	CHANNELIZED FLOW Length (ft)	CHANNELIZED FLOW Manning's (n)	CHANNELIZED FLOW Slope ft/ft	CHANNELIZED FLOW Velocity ft/s	CHANNELIZED FLOW Tc (min)	Cumulative Tc (min)	INTENSITY I 25yr (in/hr)	INTENSITY I 100yr (in/hr)	DISCHARGE Q 25 (cfs)	DISCHARGE Q 100 (cfs)
EXISTING CONDITION DRAINAGE AREAS																								
DA-1	DITCH	5.40	0.57	0.60	3.08	3.24	100.00	0.24	0.66%	7.03	61.65	U	2.77%	1.48	259.98	0.02	0.30%	2.11	2.06	10.57	8.26	10.06	25.42	32.57

NOTE:
1) DRAINAGE CALCULATIONS FOR THE EXISTING CONDITION WERE PERFORMED IN ACCORDANCE WITH THE CALCULATIONS PRESENTED AND APPROVED IN THE WEST 22ND & LEANDER STREETS TRUNK LINE & OUTFALL STRUCTURE CONSTRUCTION PLANS (PROJECT NO. 0033) AND MAINTAINED THE ASSUMED 40% IMPERVIOUS COVER.

SCALE: 1"= 50'

0' 50' 100' 150'

LEGEND

- SD — STORM DRAIN LINE
- SD — SD MANHOLE
- SD INLET
- DRAINAGE FLOW ARROW
- DRAINAGE AREA BOUNDARY
- EXISTING DRAINAGE AREA
- PROPERTY BOUNDARY
- 01 DRAINAGE AREA
- HEADWALL
- 760 PROPOSED CONTOUR LINE
- 785 EXISTING CONTOUR LINE

NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chy 6/6/25

PAPE-DAWSON ENGINEERS
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

EXISTING CONDITIONS DRAINAGE MAP

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA

SHEET 8 OF 15

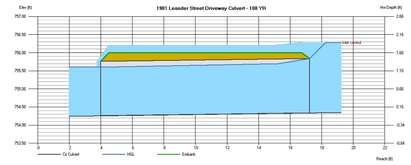
Date: Jan 06, 2025, 1:50pm User ID: jstyslinger
File: H:\Projects\51466\01\301 Construction Documents\Civil\00051466-01.dwg

Culvert Report

Hydraflow Express by Intelisolve — Thursday, Apr 17 2025

1901 Leander Street Driveway Culvert - 100 YR

Invert Elev Dn (ft)	= 754.26	**Calculations**	
Pipe Length (ft)	= 13.25	Qmin (cfs)	= 32.83
Slope (%)	= 0.60	Qmax (cfs)	= 32.83
Invert Elev Up (ft)	= 754.34	Tailwater Elev (ft)	= (dc+D)/2
Rise (in)	= 18.0		
Shape	= Cir	**Highlighted**	
Span (in)	= 18.0	Qtotal (cfs)	= 32.83
No. Barrels	= 3	Qpipe (cfs)	= 28.40
n-Value	= 0.013	Qovertop (cfs)	= 4.43
Inlet Edge	= Projecting	Veloc Dn (ft/s)	= 5.66
Coeff. K,M,c,Y,k	= 0.0045, 2, 0.0317, 0.69, 0.5	Veloc Up (ft/s)	= 5.58
		HGL Dn (ft)	= 755.61
Embankment		HGL Up (ft)	= 755.71
Top Elevation (ft)	= 756.00	Hw Elev (ft)	= 756.28
Top Width (ft)	= 12.25	Hw/D (ft)	= 1.29
Crest Width (ft)	= 10.00	Flow Regime	= Inlet Control



SCALE: 1"= 50'

0' 50' 100' 150'

LEGEND

- SD — STORM DRAIN LINE
- SD — SD MANHOLE
- SD INLET
- DRAINAGE FLOW ARROW
- DRAINAGE AREA BOUNDARY
- EXISTING DRAINAGE AREA
- PROPERTY BOUNDARY
- 01 — DRAINAGE AREA
- HEADWALL
- 760 — PROPOSED CONTOUR LINE
- 760 — EXISTING CONTOUR LINE
- FP — FLOODPLAIN

NOTE:

1) DRAINAGE CALCULATIONS FOR THE EXISTING CONDITION WERE PERFORMED IN ACCORDANCE WITH THE CALCULATIONS PRESENTED AND APPROVED IN THE WEST 22ND & LEANDER STREETS TRUNK LINE & OUTFALL STRUCTURE CONSTRUCTION PLANS (PROJECT NO. 0033).

2) POST-DEVELOPMENT DRAINAGE CALCULATIONS PERFORMED BY ANALYZING FLOWS CALCULATED WITH WEST 22ND & LEANDER STREETS TRUNK LINE & OUTFALL STRUCTURE CONSTRUCTION PLANS (PROJECT NO. 0033) FOR DA-1 AND ADDING ADDITIONAL IMPERVIOUS COVER PROPOSED WITH THIS PLAN.

3) ROOFTOP RUNOFF FOR THE DEVELOPMENT SHALL BE CAPTURED THROUGH ROOFTOP RAINWATER HARVESTING TO REDUCE THE IMPACTS OF THE INCREASE IN IMPERVIOUS COVER. THE ROOFTOP RAINWATER HARVESTING SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH TCEQ RG-348 GUIDELINES.

4) THERE IS A PROPOSED 1,530 SQ. FT. OF IMPERVIOUS COVER ON LOT 6A. THE IMPERVIOUS COVER PERCENTAGE IS 67.1%. THERE IS A PROPOSED 2,220 SQ. FT OF IMPERVIOUS COVER ON LOT 6B. THE IMPERVIOUS COVER PERCENTAGE IS 57.1%. AN IMPERVIOUS COVER OF 70% WAS ASSUMED FOR BOTH LOTS WAS USED FOR THE DRAINAGE ANALYSIS SINCE THAT IS THE MAXIMUM ALLOWABLE PER THE APPROVED PUD (ORD-2024-58).

Channel Report

Hydraflow Express by Intelisolve — Sunday, Apr 14 2024

1901 Leander Street Ditch - 100YR Proposed

User-defined		**Highlighted**	
Invert Elev (ft)	= 754.16	Depth (ft)	= 1.23
Slope (%)	= 0.30	Q (cfs)	= 32.83
N-Value	= 0.015	Area (sqft)	= 6.74
		Velocity (ft/s)	= 4.87
Calculations		Wetted Perim (ft)	= 7.94
Compute by:	Known Q	Crit Depth, Yc (ft)	= 1.15
Known Q (cfs)	= 32.83	Top Width (ft)	= 7.07
		EGL (ft)	= 1.60

(Sta, El, n)-(Sta, El, n)...

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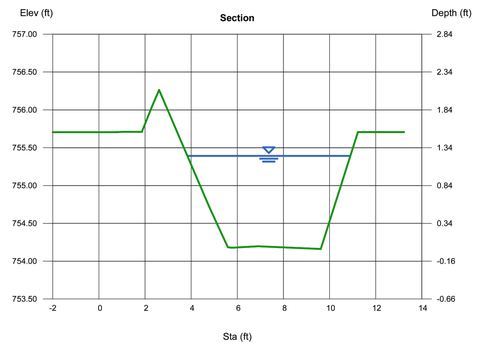

DRAINAGE AREA	INLET NUMBER	AREA (acres)	COMPOSITE C C_{25}	COMPOSITE C C_{100}	$A \cdot C_{25}$	$A \cdot C_{100}$	SHEET FLOW Length (ft)	SHEET FLOW Manning's (n)	SHEET FLOW Slope ft/ft	SHEET FLOW Tc (min)	SHALLOW CONCENTRATED FLOW Length (ft)	SHALLOW CONCENTRATED FLOW Paved/ Unpaved	SHALLOW CONCENTRATED FLOW Slope ft/ft	SHALLOW CONCENTRATED FLOW Tc (min)	CHANNELIZED FLOW Length (ft)	CHANNELIZED FLOW Manning's (n)	CHANNELIZED FLOW Slope ft/ft	CHANNELIZED FLOW Velocity ft/s	CHANNELIZED FLOW Tc (min)	Cumulative Tc (min)	INTENSITY I 25yr (in/hr)	INTENSITY I 100yr (in/hr)	DISCHARGE Q 25 (cfs)	DISCHARGE Q 100 (cfs)
PROPOSED CONDITION DRAINAGE AREAS																								
DA-1	DITCH	5.40	0.58	0.60	3.10	3.26	100.00	0.24	0.66%	7.03	61.65	U	2.77%	1.48	259.98	0.015	0.30%	2.11	2.06	10.57	8.26	10.06	25.64	32.83

DATE

NO. REVISION

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chy 6/6/25

PAPE-DAWSON ENGINEERS

AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
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TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

PROPOSED CONDITIONS DRAINAGE MAP

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA

SHEET 9 OF 15

Date: Jun 06, 2025, 2:04pm User ID: jstpierre
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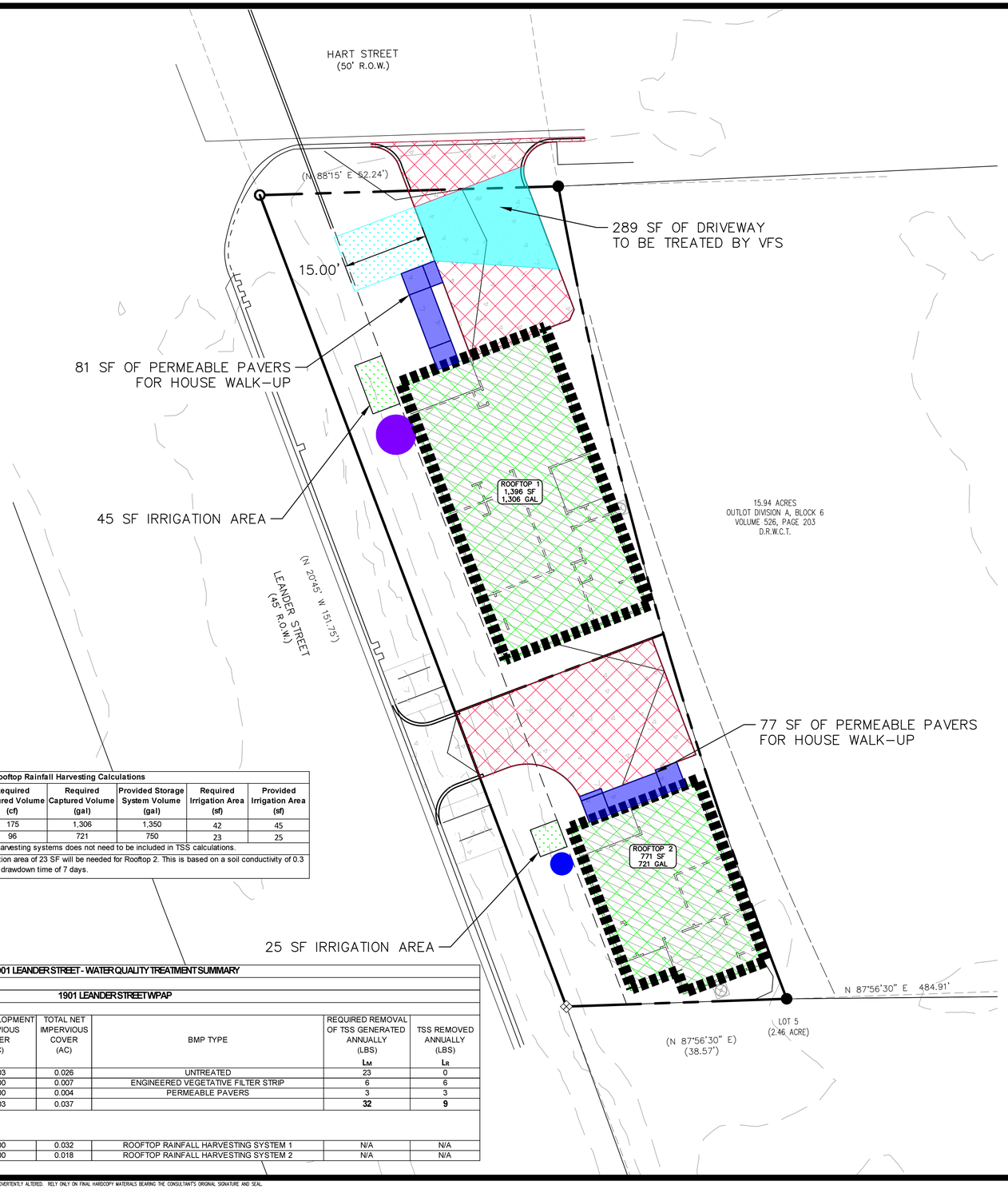

SCALE: 1"= 20'

0' 20' 40' 60'

LEGEND

- (735) PROPOSED CONTOURS
- 735 EXISTING CONTOURS
- PROPERTY LINE
- PROPOSED WATERSHED
- OFFSITE 3A 3.92 AC — WATERSHED ACREAGE
- FLOW DIRECTION
- 1,350 GAL STORAGE TANK
- 750 GAL STORAGE TANK
- PROPOSED IRRIGATION AREA
- AREA TREATED BY VFS
- AREA TREATED BY PERMEABLE PAVERS
- UNCAPTURED AREA

1901 Leander Street - Rooftop Rainfall Harvesting Calculations

Drainage Area	Area (sf)	Area (ac)	Required Captured Rainfall Runoff (in)	Required Captured Volume (cf)	Required Captured Volume (gal)	Provided Storage System Volume (gal)	Required Irrigation Area (sf)	Provided Irrigation Area (sf)
ROOFTOP 1	1,396	0.03	1.5	175	1,306	1,350	42	45
ROOFTOP 2	771	0.02	1.5	96	721	750	23	25

Note: Impervious cover associated with roof areas connected to a rainfall harvesting systems does not need to be included in TSS calculations.

Note: An irrigation area of 42 SF will be needed for Rooftop 1 and an irrigation area of 23 SF will be needed for Rooftop 2. This is based on a soil conductivity of 0.3 in/hr, based on results for project area from NRCS Web Soil Survey and a drawdown time of 7 days.

1901 LEANDER STREET - WATER QUALITY TREATMENT SUMMARY

1901 LEANDER STREET WPAP

WATERSHED	WATERSHED AREA (AC)	DEVELOPED IMPERVIOUS COVER (AC)	PRE-DEVELOPMENT IMPERVIOUS COVER (AC)	TOTAL NET IMPERVIOUS COVER (AC)	BMP TYPE	REQUIRED REMOVAL OF TSS GENERATED ANNUALLY (LBS) L_M	TSS REMOVED ANNUALLY (LBS) L_R
UNCAPTURED	0.082	0.029	0.003	0.026	UNTREATED	23	0
VFS	0.007	0.007	0.000	0.007	ENGINEERED VEGETATIVE FILTER STRIP	6	6
PERMEABLE PAVERS	0.004	0.004	0.000	0.004	PERMEABLE PAVERS	3	3
TOTAL	0.092	0.039	0.003	0.037		**32**	**9**
Total untreated impervious cover percentage for lot: 18.6%							
ROOFTOP RAINFALL HARVESTING - NOT TREATED BY BMP							
ROOFTOP 1	0.032	0.032	0.000	0.032	ROOFTOP RAINFALL HARVESTING SYSTEM 1	N/A	N/A
ROOFTOP 2	0.018	0.018	0.000	0.018	ROOFTOP RAINFALL HARVESTING SYSTEM 2	N/A	N/A

NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chavez 6/6/25

PAPE-DAWSON ENGINEERS
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HABITAT FOR HUMANITY

1901 LEANDER ST
GEORGETOWN, TX 78626

WATER QUALITY TREATMENT SUMMARY

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA
SHEET 10 OF 15

Date: Jun 06, 2025, 2:12pm User ID: jstplinger
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GUIDELINES FOR DESIGN AND INSTALLATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS

TYPE OF STRUCTURE	REACH LENGTH	MAXIMUM DRAINAGE AREA	SLOPE
SILT FENCE	N/A	2 ACRES	0 – 10%
	200 FEET	2 ACRES	10 – 20%
	100 FEET	1 ACRE	20 – 30%
	50 FEET	1/2 ACRE	> 30%
TRIANGLE FILTER DIKE	100 FEET	1/2 ACRE	< 30% SLOPE
	50 FEET	1/4 ACRE	> 30% SLOPE
ROCK BERM *, **	500 FEET	< 5 ACRES	0 – 10%

* FOR ROCK BERM DESIGN WHERE PARAMETERS ARE OTHER THAN STATED, DRAINAGE AREA CALCULATIONS AND ROCK BERM DESIGN MUST BE SUBMITTED FOR REVIEW.

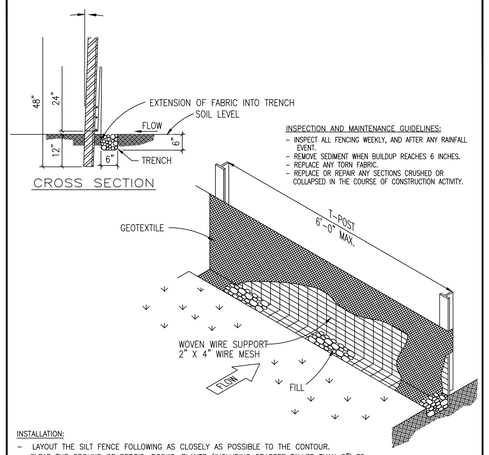
** HIGH SERVICE ROCK BERMS MAY BE REQUIRED IN AREAS OF ENVIRONMENTAL SIGNIFICANCE AS DETERMINED BY THE CITY OF GEORGETOWN.

NOTE: THIS SECTION IS INTENDED TO ASSIST THOSE PERSONS PREPARING WATER POLLUTION ABATEMENT PLANS (WPAP) OR STORM WATER POLLUTION PREVENTION PLANS (SW3P) THAT COMPLY WITH FEDERAL, STATE AND/OR LOCAL STORM WATER REGULATIONS.

1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. ALL PROJECTS WITHIN THE RECHARGE ZONE OF THE EDWARD'S AQUIFER SHALL SUBMIT A BEST MANAGEMENT PRACTICES AND WATER POLLUTION AND ABATEMENT PLAN TO THE TNRCC FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.

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

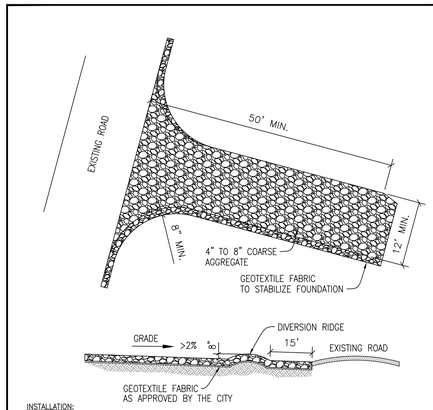
	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS Georgetown Utility Systems	TEMPORARY EROSION AND SEDIMENTATION CONTROL GUIDELINES	DRAWING NAME: EC01
	SCALE: NTS DATE: 1/2003	
	DRAWN BY: MRS APPROVED BY: TRB	



INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
- REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
- REPLACE ANY TORN FABRIC.
- REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY.

INSTALLATION:
- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS, PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY T-POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW.
- ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE T-POST WITH 11 1/2 GAUGE GALVANIZED T-POST CLIPS. THE TOP OF THE WIRE TO BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND TIED AT LEAST 6 TIMES WITH HOG RINGS.
- THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1".
- ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").
- GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
- SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS Georgetown Utility Systems	SILT FENCE DETAIL	DRAWING NAME: EC02
	SCALE: NTS DATE: 1/2003	
	DRAWN BY: MRS APPROVED BY: TRB	

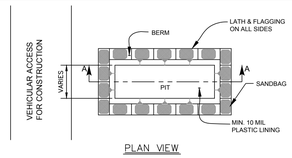


INSTALLATION:
- CLEAR THE AREA OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- GRADE THE AREA FOR THE ENTRANCE TO FLOW BACK ON TO THE CONSTRUCTION SITE. RUNOFF FROM THE STABILIZED CONSTRUCTION
- PLACE GEOTEXTILE FABRIC AS APPROVED BY THE CITY.
- PLACE ROCK AS APPROVED BY THE CITY.

INSPECTIONS AND MAINTENANCE GUIDELINES:
- THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
- WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

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

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS Georgetown Utility Systems	STABILIZED CONSTRUCTION ENTRANCE	DRAWING NAME: EC06
	SCALE: NTS DATE: 1/2003	
	DRAWN BY: MRS APPROVED BY: TRB	



PLAN VIEW

GENERAL NOTES:

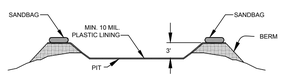
1) Detail above illustrates minimum dimensions. Pit can be increased in size depending on expected frequency of use.

2) Washout pit shall be located in an area easily accessible to construction traffic.

3) Washout pit shall not be located in areas subject to inundation from storm water runoff.

4) Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies.

5) Temporary concrete washout facility should be constructed with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations.



SECTION A–A

MATERIALS:

1) 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.

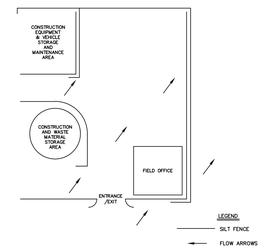
INSPECTION AND MAINTENANCE GUIDELINES:

1) When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of.

2) Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of.

3) Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

CONCRETE TRUCK WASHOUT PIT



TYP. CONSTRUCTION STAGING AREA

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NO. REVISION | DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED PROFESSIONAL ENGINEER
Aimee Chy 6/6/25

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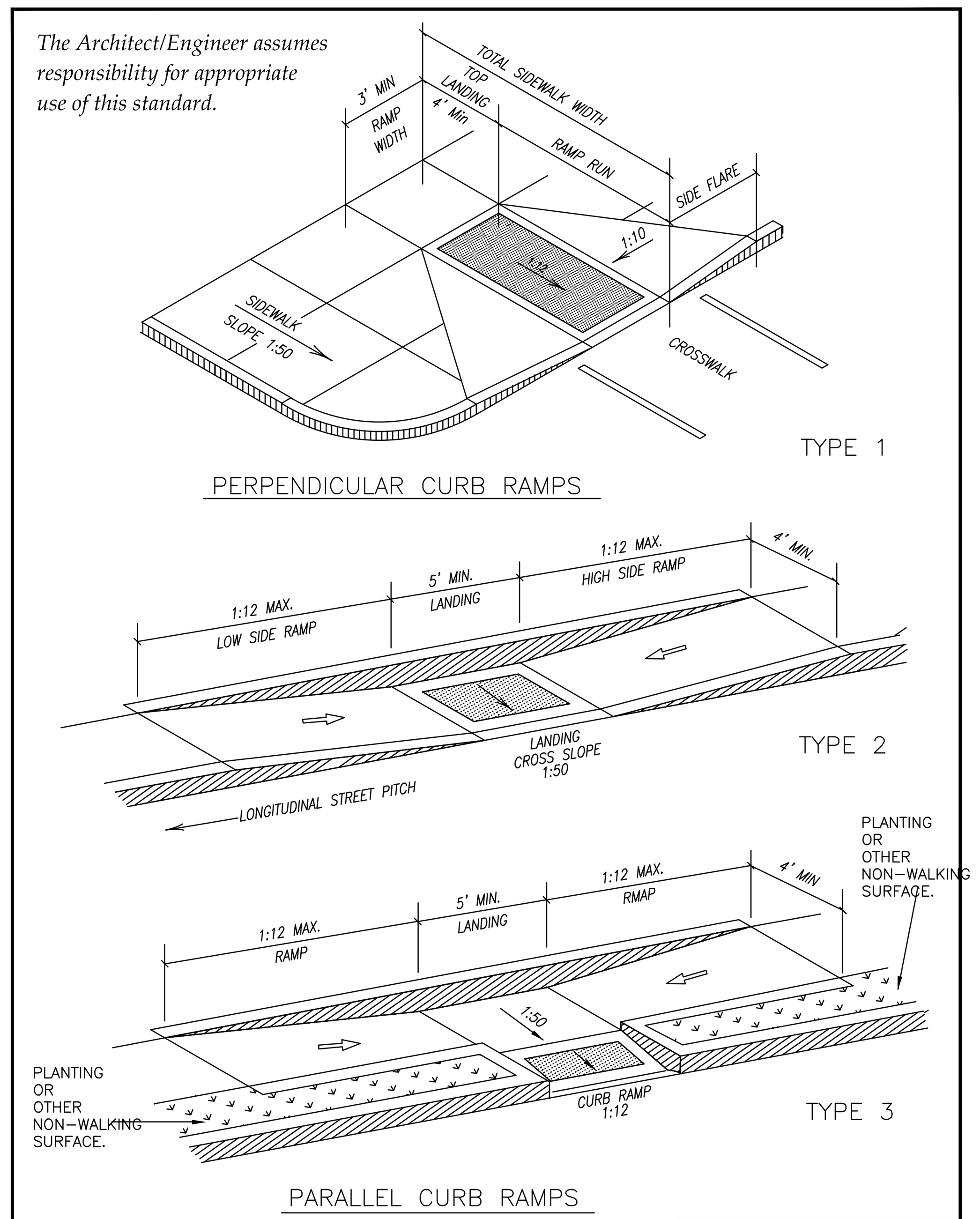
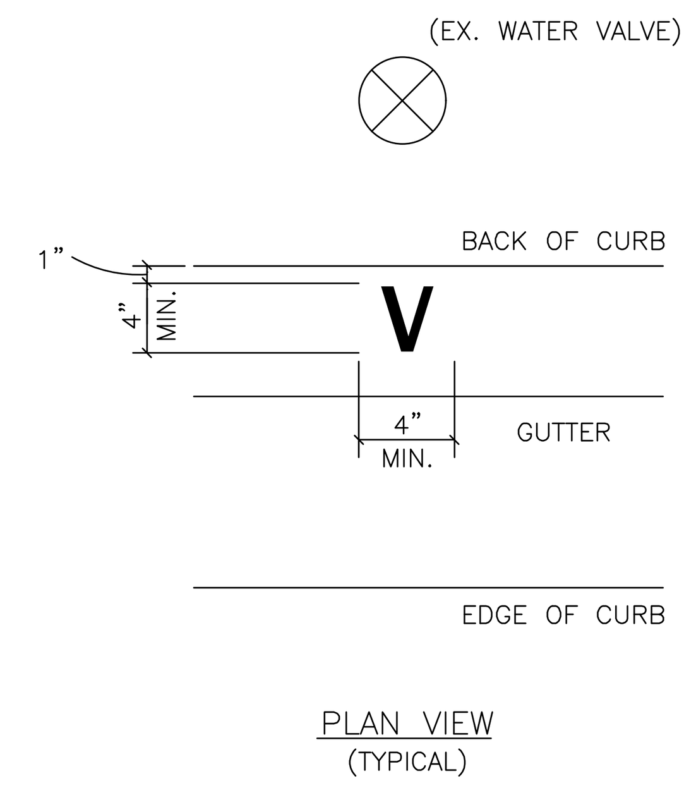
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY
1901 LEANDER ST
GEORGETOWN, TX 78626
EROSION AND SEDIMENTATION CONTROL DETAILS

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA



REVISION NOTE:	ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	SD31
SIDEWALK RAMP DETAILS TYPE 1–3	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



NOTES:

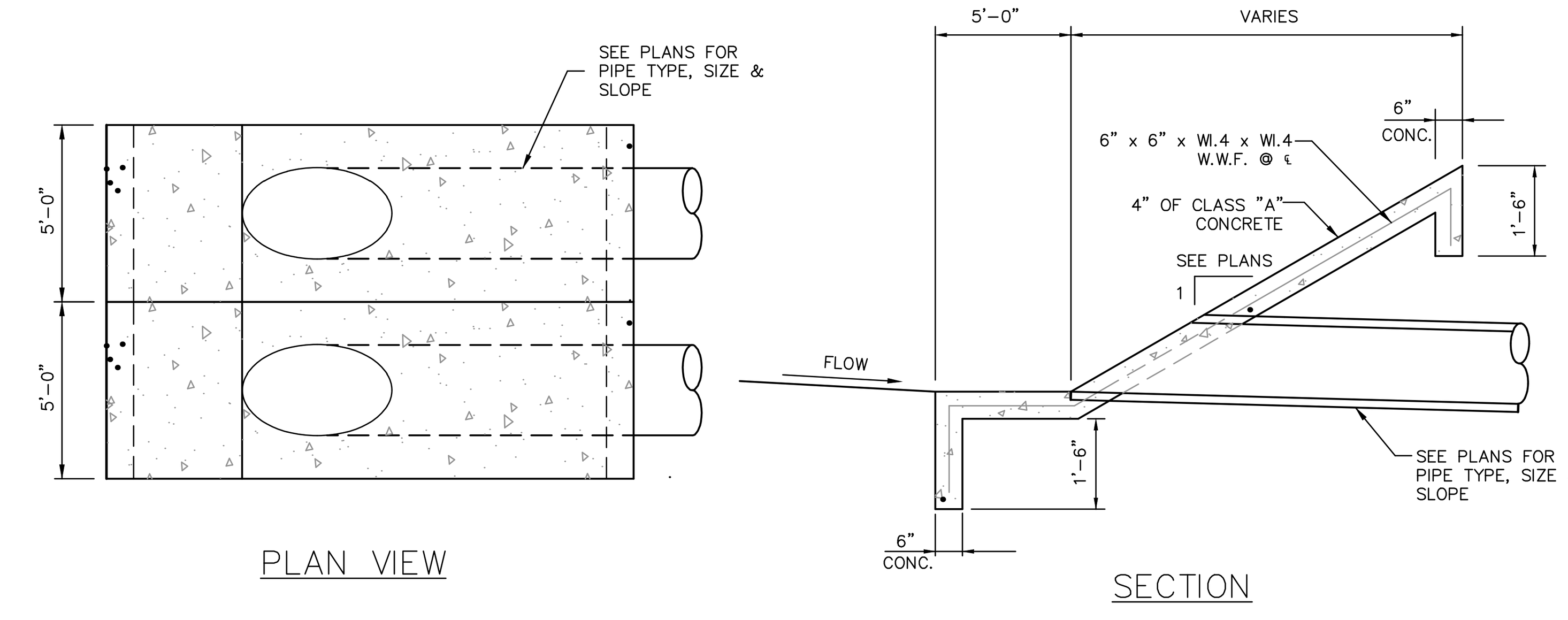
1. ALL WATER SERVICE, WASTE WATER SERVICE AND VALVE LOCATIONS SHALL BE APPROXIMATLEY MARKED AS FOLLOWS:

WATER SERVICE	"W"	TOP OF CURB
WASTE WATER SERVICE	"S"	TOP OF CURB
VALVE	"V"	TOP OF CURB

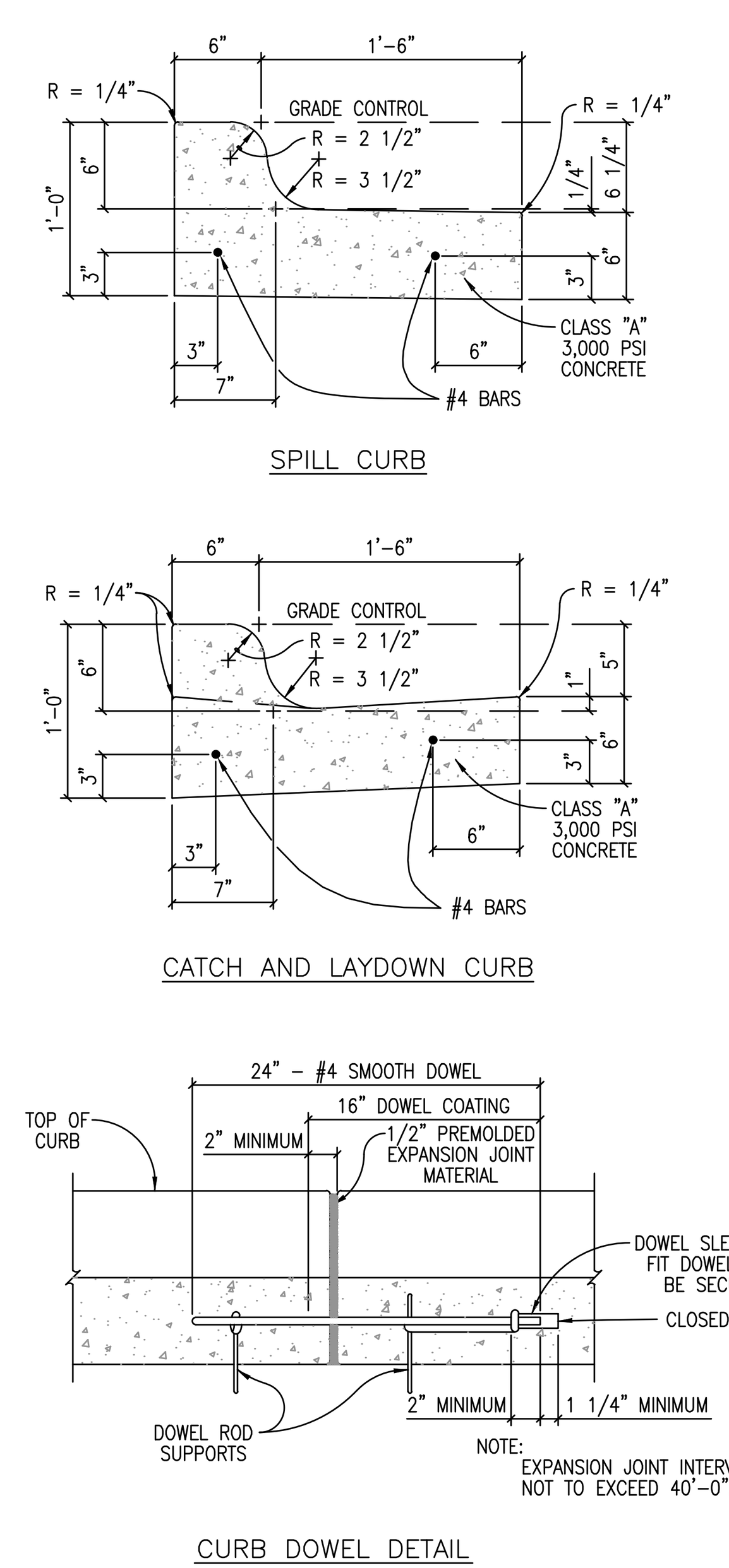
2. LETTERS SHALL HAVE A 1/2" MAX. WIDTH.

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

REVISION NOTE:	ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	SD05
CURB STAMP DETAIL	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



SLOPED CONCRETE HEADWALL
NTS

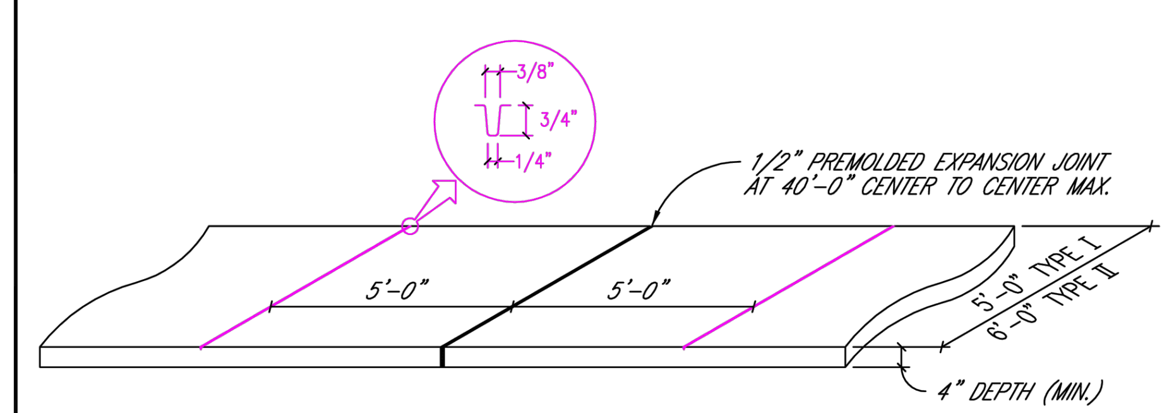


NOTES:

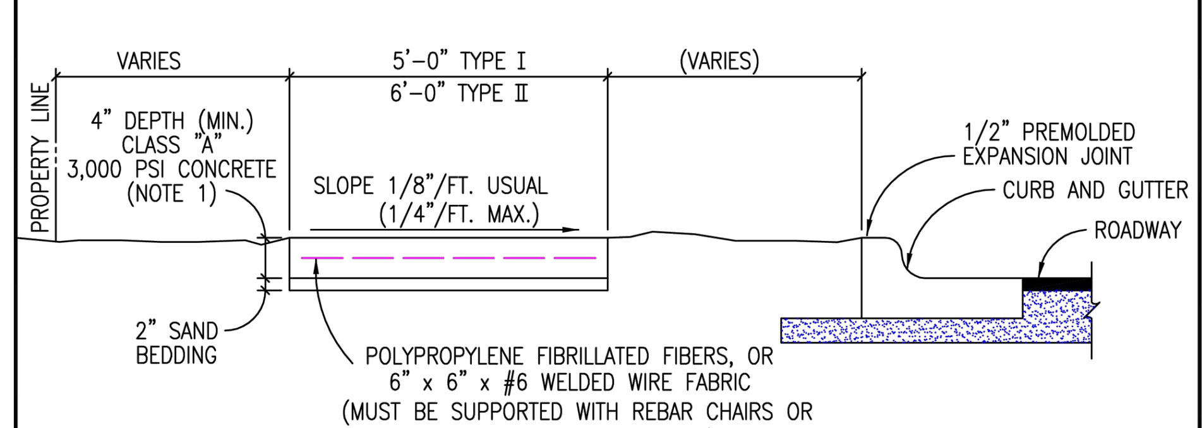
1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP-RAP.
5. TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL OCCUR OVER A 20 FOOT LENGTH AS APPROVED BY THE ENGINEER OR THE CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. THE FOLLOWING SCHEME OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF PLACEMENT AND LOCATION SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
   A. ALL CURB AND CURB AND GUTTER (REINFORCED) SHALL HAVE TWO #4 LONGITUDINAL REINFORCING BARS.
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED METHODS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THAT REBAR IS PROPERLY GUIDED INTO THE CURB SECTION.

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

REVISION NOTE:	ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	SD06
CURB AND GUTTER DETAILS	SCALE: NTS; DRAWN BY: MRS; APPROVED BY: TRB



TYPE I – AS REQUIRED FOR SINGLE FAMILY, DUPLEXES AND TOWNHOUSES.
TYPE II – AS REQUIRED FOR APARTMENTS, OFFICE AND PARKING LOTS, COMMERCIAL AND INDUSTRIAL.

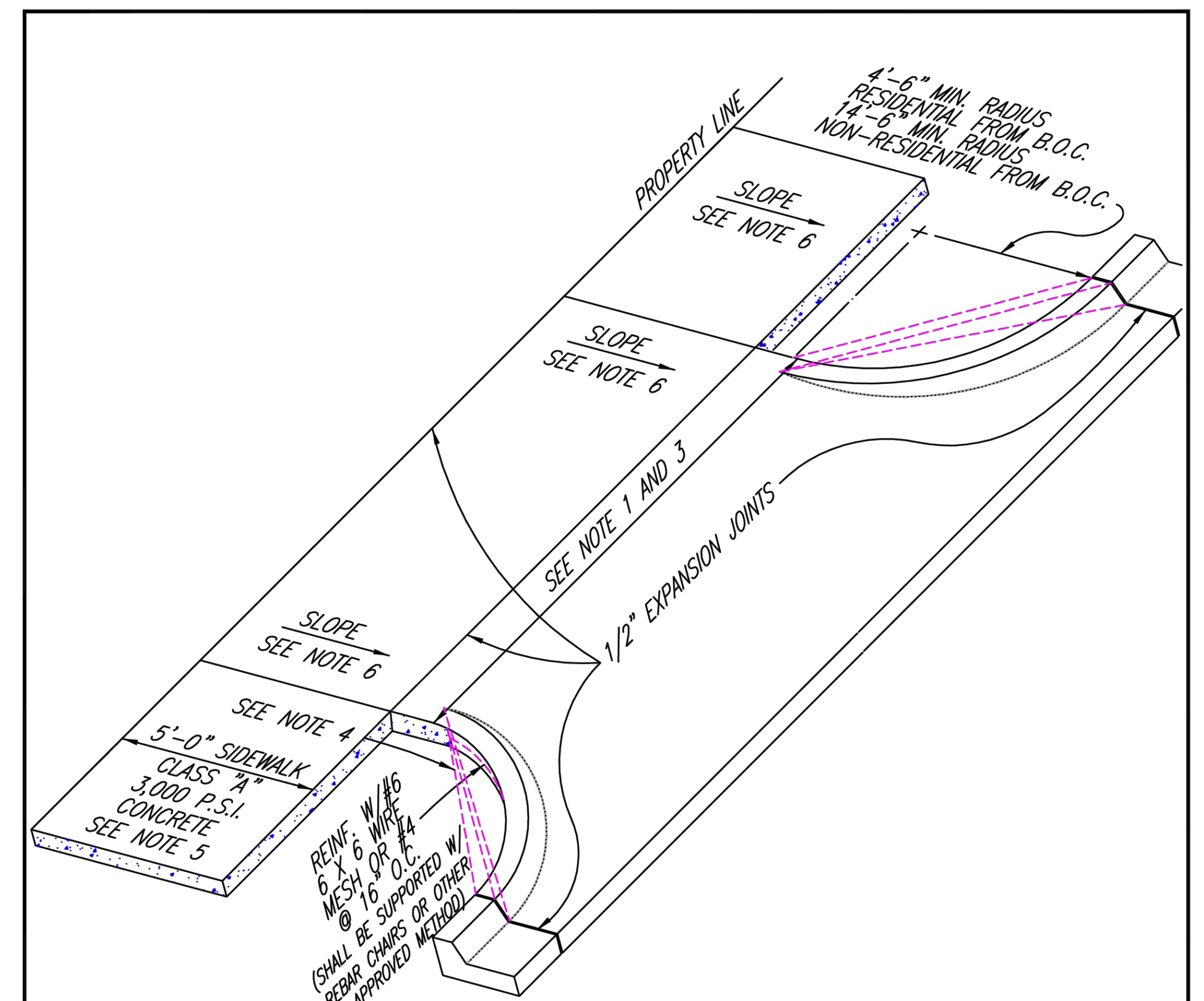


NOTES:

1. STANDARD LOCATION OF SIDEWALK IS OFF BACK OF CURB. SPECIAL DESIGNS MAY BE APPROVED BY THE CITY ENGINEER, PRIOR TO FINAL DESIGN AS APPROVED BY ENGINEER DURING PLAN REVIEW IN IN CONFORMANCE WITH CURRENT AASHTO STANDARDS.
2. SIDEWALK SHALL CONFORM TO CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS.
3. ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND ENGINEER OF RECORD.
4. ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT SHALL BE APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND ENGINEER OF RECORD.
5. SLIP DOWEL SHALL BE INSTALLED AT EVERY LONGITUDINAL EXPANSION JOINT (UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER DURING ENGINEERING PLAN REVIEW PRIOR TO FINAL DESIGN).

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

REVISION NOTE:	REVISED 6/25/2015 WBD
REVISION NOTE:	ADOPTED 6/21/2006 TRB
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	SD14
SIDEWALK SECTION AND JOINT DETAIL	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



NOTES:

1. MAXIMUM WIDTH OF APPROACH SHALL BE 24'-0" FOR RESIDENTIAL, 30'-0" FOR NON-RESIDENTIAL UNDIVIDED AND 45'-0" FOR NON-RESIDENTIAL DIVIDED.
2. DRIVEWAY PERMITS SHALL BE ACQUIRED FROM CITY INSPECTION OFFICE.
3. MINIMUM WIDTH OF APPROACH SHALL BE 10'-0" FOR RESIDENTIAL AND 15'-0" FOR NON-RESIDENTIAL.
4. LINEAR "RADIUS" AT CORNERS, PERMITTED FOR "SINGLE FAMILY" OR "TWO FAMILY" RESIDENTIAL DRIVEWAY APPROACH.
5. SIDEWALK LOCATION SHALL BE APPROVED BY CITY ENGINEER PRIOR TO FINAL DESIGN.
6. SLOPE 1/8" PER FOOT USUAL, SHALL NOT EXCEED 2.0%.
7. DRIVEWAY APPROACH THICKNESS SHALL BE A MIN. OF 6".

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

REVISION NOTE:	REVISED 6/25/2015 WBD
REVISION NOTE:	ADOPTED 6/21/2006 TRB
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	SD15
CONCRETE DRIVEWAY APPROACH TYPICAL	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

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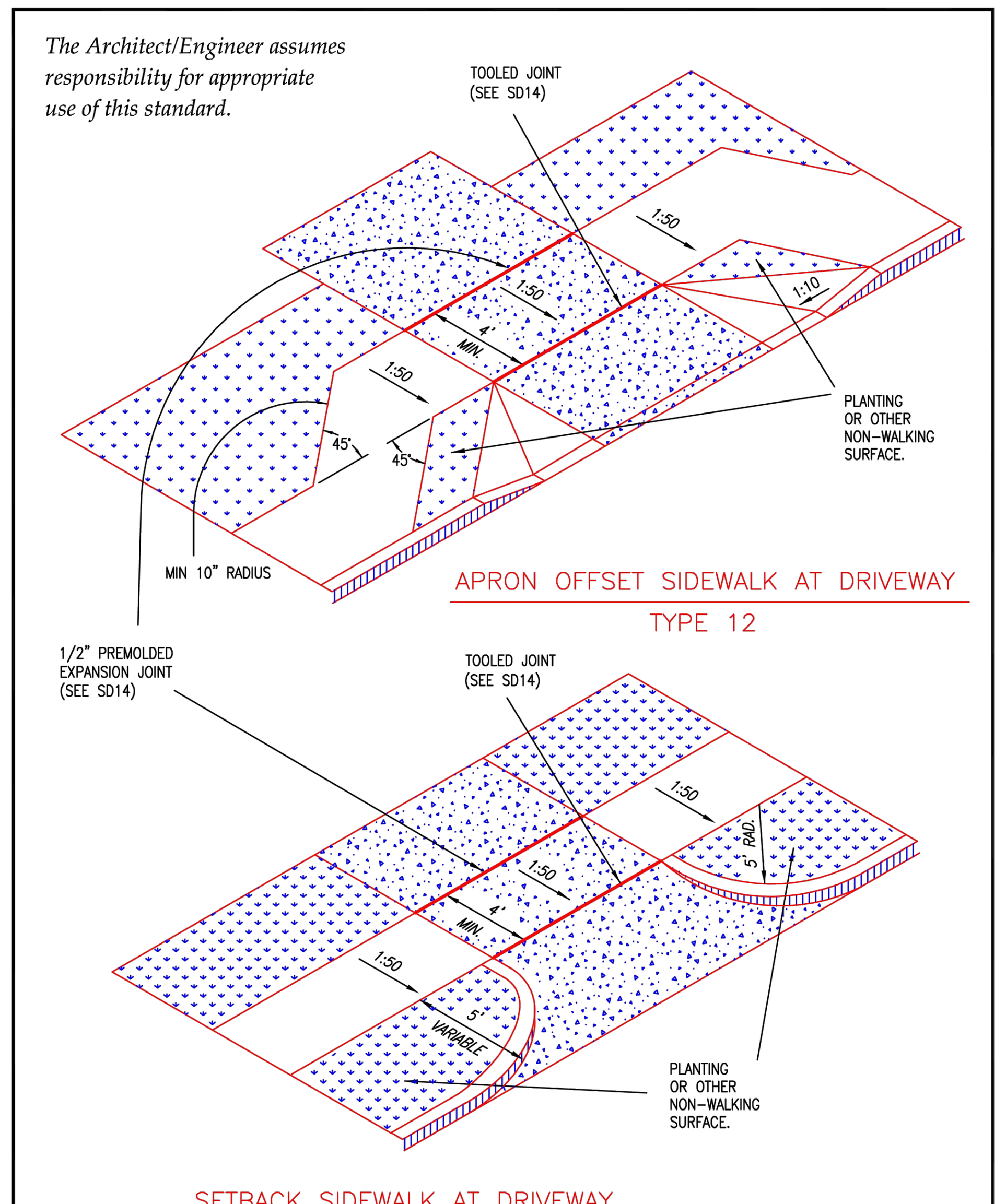
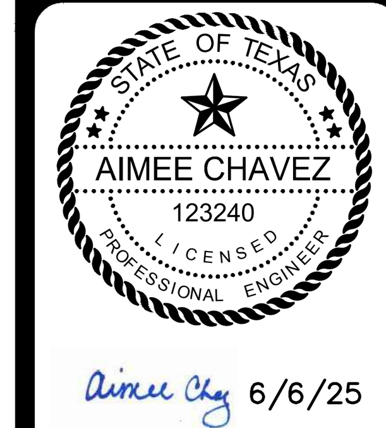


REVISION NOTE:	REVISED 7/7/2015 WBD
	ADOPTED 6/21/2006 TRB
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	SD35
DRIVEWAY APRONS TYPES 12 & 13	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

NO.	REVISION	DATE



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HABITAT FOR HUMANITY
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PAVING AND DRAINAGE DETAILS

CITY JOB No. 2024–XX–CON
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DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA
SHEET 12 OF 15

Date: Jun 06, 2025, 2:22pm User ID: jstypinger
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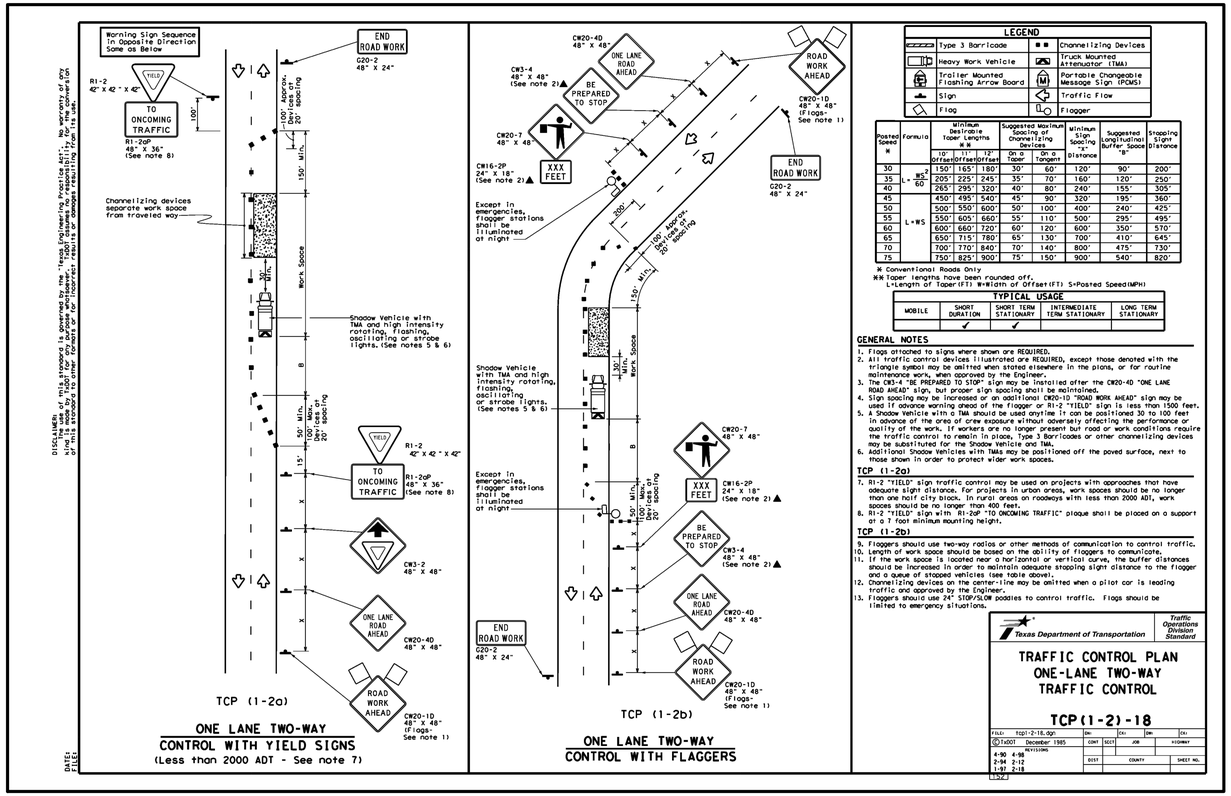

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DATE:
FILE:

LEGEND

	Type 3 Barricade	■ ■	Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	(M)	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed S	Formula	Minimum Desirable Taper Lengths* L W			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent			
30		150'	165'	180'	30'	60'	120'	90'	200'
35	$L=\frac{WS^2}{60}$	205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45		450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55	L=WS	550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* Conventional Roads Only
W=Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE

MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
4. Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or R1-2 "YIELD" sign is less than 1500 feet.
5. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
6. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-2a)

7. R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
8. R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

TCP (1-2b)

9. Flaggers should use two-way radios or other methods of communication to control traffic.
10. Length of work space should be based on the ability of flaggers to communicate.
11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
12. Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
13. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

Texas Department of Transportation | Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
ONE-LANE TWO-WAY
TRAFFIC CONTROL

TCP(1-2)-18

FILE: tcp12-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS				
4-90 4-98	DIST	COUNTY		SHEET NO.
2-94 2-12				
1-97 2-18				

(152)

NO.	REVISION	DATE

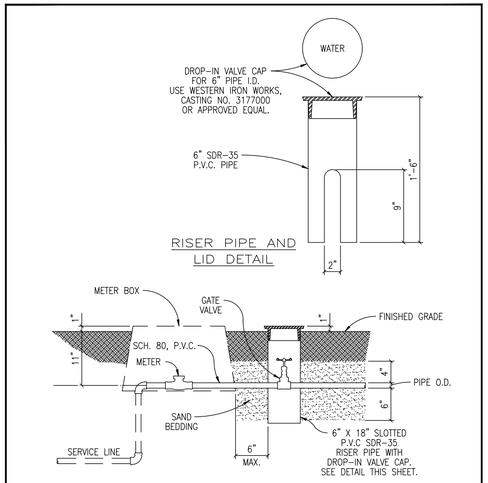
STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER

Aimee Chy 6/6/25

PAPE-DAWSON ENGINEERS
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY
1901 LEANDER ST
GEORGETOWN, TX 78626
TRAFFIC CONTROL DETAILS

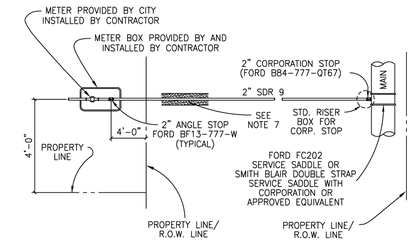
CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA
SHEET 13 OF 15



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.

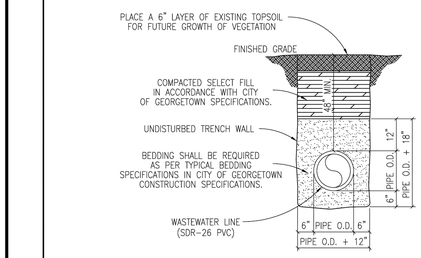
	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
	CUSTOMER'S CUT-OFF	DRAWING NAME: W20
		SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



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.

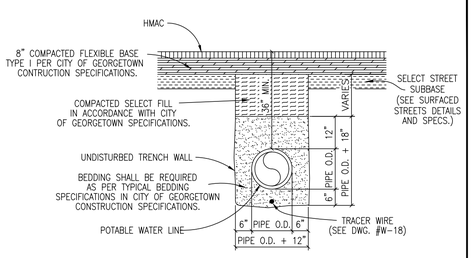
	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 01/23/2013
	SINGLE WATER SERVICE PLAN	DRAWING NAME: W04
		SCALE: NTS; DATE: 1/2013; DRAWN BY: –; APPROVED BY: MH



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.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
	TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS	DRAWING NAME: WW16
		SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

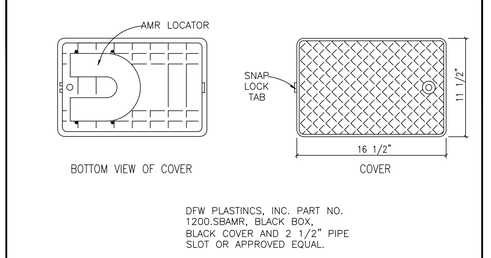


TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

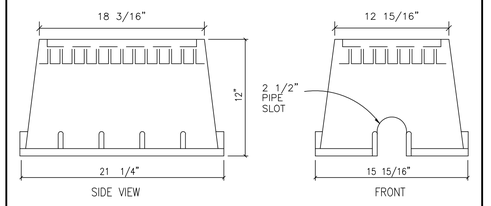
NOTES:
1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

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

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
	TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY	DRAWING NAME: W22
		SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



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.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
	METER BOX (NON-TRAFFIC AREAS)	DRAWING NAME: W23
		SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

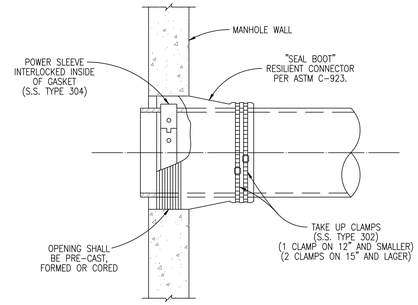
NO.	REVISION	DATE

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED PROFESSIONAL ENGINEER
Aimee Chy 6/6/25

PAPE-DAWSON ENGINEERS
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY
1901 LEANDER ST
GEORGETOWN, TX 78626
WATER DETAILS

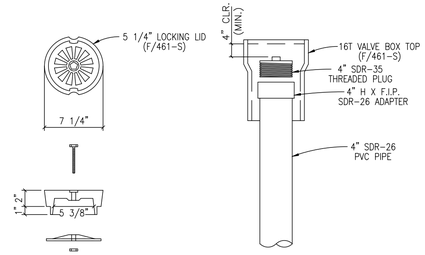
CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA
SHEET 14 OF 15



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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
FLEXIBLE "SEAL BOOT" CONNECTOR

REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: WW10
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



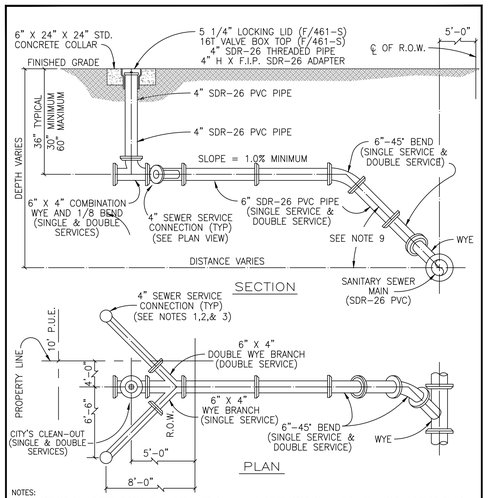
5 1/4" LOCKING LID
(F/461-S)

SEWER CLEAN-OUT
CITY OF GEORGETOWN
(RESIDENTIAL SERVICE)

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
SEWER CLEAN-OUT DETAIL

REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: WW12
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



SECTION

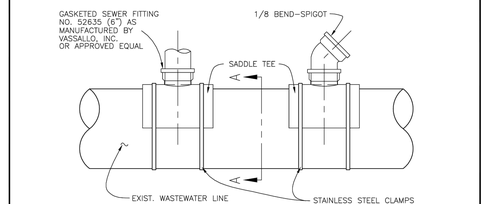
PLAN

NOTES:
1. SERVICE CONNECTION RISERS SHALL TERMINATE 8' INSIDE THE PROPETY LINE.
2. THE END OF EACH SERVICE CONNECTION RISER SHALL BE EXTENDED 12" ABOVE FINISH GRADE.
3. EACH SERVICE CONNECTION SHALL BE PLUGGED WATER-TIGHT WITH AN APPROVED CAP OR PLUG.
4. FOR P.V.C. INSTALLATIONS, CONNECT TO EXISTING "BELL END" AND CONNECT OPPSITE END WITH P.V.C. TO P.V.C. KNOCK ON SLEEVE.
5. SOLIDLY TAMP BACKFILL AT LEAST ONE FOOT (1'-0") ABOVE TOP OF PIPE. SERVICES UNDER PAVED AREAS SHALL BE BACKFILLED TO THE SAME SPECIFICATIONS AS SHOWN ON PAVEMENT REPLACEMENT DETAIL.
6. CONTRACTOR SHALL MARK ON A CLEAN SET OF PLANS THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE TO EACH SERVICE LATERAL AND GIVE TO ENGINEER FOR RECORD DRAWING PURPOSES.
7. ANY DEVIATION FROM THESE METHODS MUST BE APPROVED BY THE CITY OF GEORGETOWN ENGINEERING DEPARTMENT.
8. SERVICE LINE MATERIAL SHALL BE P.V.C., SDR-26.
9. SEWER SERVICE SLOPE TO BE 45° OFF CENTERLINE OF MAIN.

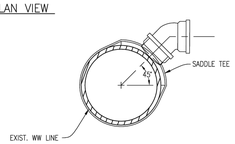
The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
SEWER SERVICE CONNECTIONS

REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: WW13
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



PLAN VIEW



SECTION A-A

SADDLE TEE					
PART NO.	SIZE	L1	H	P	
52635	8"x6"	5.625	5.659	1.448	

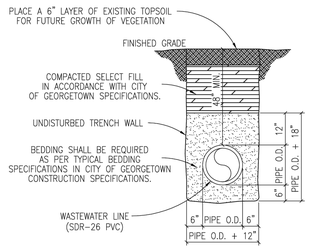
PLASTIC TRENDS INC. – 1/8 BEND – SPIGOT					
PART NO.	SIZE	A	B	C	D
G 406	6	11.270	6.146	1.870	6.090

NOTES:
1. FLEXIBLE SADDLE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
2. SADDLE TEE SHALL BE ORIENTATED 45° TO MAIN. (SEE SEWER SERVICE CONNECTIONS DETAIL – DWG # WW-13)
3. EXCAVATE AROUND EXISTING 8-INCH PIPE, EXPOSING SUFFICIENT ROOM FOR S.S. CLAMPS.
4. THOROUGHLY CLEAN AND DRY THE MATING SURFACE WITH RAG OR PAPER TOWEL. MAKE SURE THEY ARE FREE OF DUST AND MOISTURE.
5. MARK THE SIZE OF THE HOLE TO BE CUT USING THE GASKET SKIRT OR THE SADDLE ITSELF AS THE TEMPLATE.
6. SAW OUT THE SECTION OF THE PIPE WHERE THE SADDLE WILL BE LOCATED, WITH A SABER OR KEY HOLE SAW.
7. TEST TO MAKE SURE SADDLE FITS HOLE PROPERLY.
8. SERVICE PIPE SHALL NOT EXTEND MORE THAN ONE-HALF INCH INTO THE MAIN.
9. PLACE GASKET SKIRT AND SADDLE OVER OPENING AND TIGHTEN BAND CLAMPS EVENLY UNTIL SADDLE IS FIRMLY ATTACHED TO THE PIPE. APPLY PRESSURE ON THE SADDLE AGAINST THE PIPE WHILE TIGHTENING THE CLAMPS AS INDICATED ABOVE. DO NOT OVER TIGHTEN, DO NOT STRIP THREAD.
10. REPLACE THE BEDDING AND BACKFILL IN ACCORDANCE WITH THE TRENCH EMBEDMENT DETAIL.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
GASKETED SEWER FITTING FOR SEWER SERVICE CONNECTIONS TO EXISTING MAINS

REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: WW13A
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

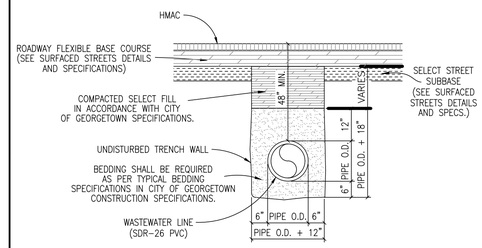


TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

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

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

REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: WW16
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



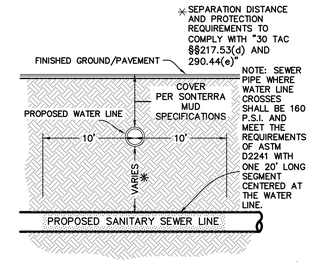
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

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.

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

REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: WW18
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

NOT-TO-SCALE

DATE
NO. REVISION

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER
Aimee Chy 6/6/25

PAPE-DAWSON ENGINEERS
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

HABITAT FOR HUMANITY
1901 LEANDER ST
GEORGETOWN, TX 78626
WASTEWATER DETAILS

CITY JOB No. 2024-XX-CON
JOB NO. 51466-01
DATE DECEMBER 2024
DESIGNER BA/JS
CHECKED AC DRAWN BA
SHEET 15 OF 15

Date: Jun 06, 2025, 2:18pm User ID: jstyslinger
File: H:\Projects\514\66\01\301 Construction Documents\Civil\D751466-01.dwg

AGENT AUTHORIZATION

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

I Philip Golden,
Print Name

Executive Director,
Title - Owner/President/Other

of Habitat for Humanity of Williamson County, Texas,
Corporation/Partnership/Entity Name

have authorized Michael Fisher, P.E.
Print Name of Agent/Engineer

of Pape-Dawson Consulting Engineers, LLC
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

3/6/25
Date

THE STATE OF Texas §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Philip Golden 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 6 day of March, 2025

Amy Jacqueline Rowan
NOTARY PUBLIC

Amy Jacqueline Rowan
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 7/26/2028

Amy Jacqueline Rowan
My Commission Expires
7/26/2028
Notary ID 12046671

APPLICATION FEE FORM

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: 1901 Leander Street
Regulated Entity Location: 1901 Leander Street, Georgetown, TX 78626
Name of Customer: Habitat for Humanity - Williamson County
Contact Person: Philip Golden Phone: 713-469-2539
Customer Reference Number (if issued):CN 606291375
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	0.14 Acres	$ 1,500.00
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	$
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: 3/26/25

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

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: 1901 Leander Street
Regulated Entity Location: 1901 Leander Street, Georgetown, TX 78626
Name of Customer: Habitat for Humanity - Williamson County
Contact Person: Philip Golden Phone: 713-469-2539
Customer Reference Number (if issued):CN 606291375
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:

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☐ Mailed to: TCEQ - Cashier
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P.O. Box 13088
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☐ 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	Acres	$
Sewage Collection System	40 L.F.	$ 650.00
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: 3/26/25

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

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)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 60291375		**RN**

SECTION II: Customer Information

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

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

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

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

Habitat for Humanity of Williamson County, Yexas

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
152300101	17429073715	74-290-7371	

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:							
	2108 N. Austin Ave.						
	City	Georgetown	**State**	TX	**ZIP**	78626	**ZIP + 4**

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	philpg@williamsonhabitat.org

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 863-4344		( ) -

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.)*

1901 Leander Street

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	1901 Leander Street							
	City	Georgetown	**State**	TX	**ZIP**	78626	**ZIP + 4**	
24. County	Williamson							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	

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:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	37	36.14	97	40	57.66

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)
8399		62422	

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

Single-family residential subdivision

34. Mailing Address:	**2109 N. Austin Ave.**							
	City	**Georgetown**	**State**	**TX**	**ZIP**	**78626**	**ZIP + 4**	
35. E-Mail Address:	**philipg@williamsonhabitat.org**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 863-4344		( ) -

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:	Jake Styslinger, P.E.	**41. Title:**	Project Engineer

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 454-8711		( ) -	JStyslinger@pape-dawson.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:	Pape-Dawson Engineers, Inc.	**Job Title:**	Senior Vice President
Name *(In Print):*	Michael Fisher, P.E.	**Phone:**	(512) 454- 8711
Signature:		**Date:**	5/1/25