# Water Pollution Abatement Plan & Organized Sewage Collection System Application

# O'REILLY AUTO PARTS

### Prepared for:

# O'REILLY AUTO ENTERPRISES, LLC 233 S. PATTERSON AVENUE SPRINGFIELD, MO 65802

Prepared by:





Bowman Consulting Group, Ltd. • 807 Las Cimas Parkway, Las Cimas II, Suite 350 •

Austin, Texas 78746 • P: 512.327.1180

TBPE Firm No. 14309

**AUGUST 4, 2025** 

#### **Water Pollution Abatement Plan Checklist**

- Edwards Aguifer Application Cover Page (TCEQ-20705)
- General Information Form (TCEQ-0587)
  - Attachment A Road Map
  - Attachment B USGS / Edwards Recharge Zone Map
  - Attachment C Project Description
- Geologic Assessment Form (TCEQ-0585)
  - Attachment A Geologic Assessment Table (TCEQ-0585-Table)
  - Attachment B Stratigraphic Column
  - Attachment C Site Geology
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- Water Pollution Abatement Plan Application Form (TCEQ-0584)
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  - Site Plan
- Temporary Stormwater Section (TCEQ-0602)
  - Attachment A Spill Response Actions
  - Attachment B Potential Sources of Contamination
  - Attachment C Sequence of Major Activities
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  - Attachment B BMPs for Upgradient Stormwater
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  - Attachment G Inspection, Maintenance, Repair and Retrofit Plan
  - Attachment H Pilot-Scale Field Testing Plan (if proposed)
  - Attachment I Measures for Minimizing Surface Stream Contamination

- Agent Authorization Form (TCEQ-0599), if application submitted by agent
- Application Fee Form (TCEQ-0574)
- Check Payable to the "Texas Commission on Environmental Quality"
- Core Data Form (TCEQ-10400)

# **Organized Sewage Collection System Plan Checklist**

- Edwards Aquifer Application Cover Page (TCEQ-20705)
- General Information Form (TCEQ-0587)

Attachment A - Road Map

Attachment B - USGS / Edwards Recharge Zone Map

Attachment C - Project Description

#### Geologic Assessment Form (TCEQ-0585)

Attachment A - Geologic Assessment Table (TCEQ-0585-Table)

Attachment B - Stratigraphic Column

Attachment C - Site Geology

Attachment D - Site Geologic Map(s)

#### Organized Sewage Collection System Plan (TCEQ-0582)

Attachment A - SCS Engineering Design Report

Attachment B - Justification and Calculations for Deviation in Straight Alignment

Without Manholes

Attachment C - Justification for Variance from Maximum Manhole Spacing

Attachment D - Calculations for Slopes for Flows Greater Than 10.0 Feet Per Second

Site Plan

Final Plan and Profile Sheets

#### Lift Station / Force Main System Application (TCEQ-0624) if applicable

Attachment A - Engineering Design Report

Site Plan

Final Plan and Profile Sheets

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

Attachment A - Spill Response Actions

Attachment B - Potential Sources of Contamination

Attachment C - Sequence of Major Activities

Attachment D - Temporary Best Management Practices and Measures

Attachment E - Request to Temporarily Seal a Feature (if requested)

Attachment F - Structural Practices

Attachment G - Drainage Area Map

Attachment H - Temporary Sediment Pond(s) Plans and Calculations

Attachment I - Inspection and Maintenance for BMPs

Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

#### Agent Authorization Form (TCEQ-0599), if application submitted by agent

#### Application Fee Form (TCEQ-0574)

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

# 1 - TCEQ - 20705 Attachments

Edwards Aquifer Application Cover Page



#### **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**

- 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: <a href="http://www.tceq.texas.gov/field/eapp">http://www.tceq.texas.gov/field/eapp</a>.
- 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: O'Reilly Auto Parts						2. Regulated Entity No.:			
3. Customer Name: Rick Hicks						4. Cı	4. Customer No.:		
5. Project Type: (Please circle/check one)	New		Modif	Modification Extension		nsion	Exception		
6. Plan Type: (Please circle/check one)			EXP	EXT	Technical Clarification	Optional Enhanced Measures			
7. Land Use: (Please circle/check one)	Resider	ntial	Non-r	Non-residential			8. Sit	e (acres):	1.41
9. Application Fee:	\$4,650		10. Permanent I			BMP(s):		Jellyfish Device	
11. SCS (Linear Ft.):	184.0		12. A	ST/US	ST (No	o. Tanks):		N/A	
13. County:	William	ison	14. W	aters	hed:			North Fork San Gabriel River	

# **Application Distribution**

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

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

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

Austin Region					
County:	Hays	Travis	Williamson		
Original (1 req.)	_	_	X		
Region (1 req.)	_	_	X		
County(ies)	_	_	X		
Groundwater Conservation District(s)	Edwards Aquifer AuthorityBarton Springs/ Edwards AquiferHays TrinityPlum Creek	Barton Springs/ Edwards Aquifer	NA		
City(ies) Jurisdiction	AustinBudaDripping SpringsKyleMountain CitySan MarcosWimberleyWoodcreek	AustinBee CavePflugervilleRollingwoodRound RockSunset ValleyWest Lake Hills	AustinCedar ParkFlorence X GeorgetownJerrellLeanderLiberty HillPflugerville 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 HillsFair Oaks RanchHelotesHill Country VillageHollywood ParkSan 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.						
Marisa Keiser						
Print Name of Customer/Authorized Agent						
Marisa Veiser	August 4, 2025					
Signature of Customer/Authorized Agent	Date					

**FOR TCEQ INTERNAL USE ONLY**						
Date(s)Reviewed:	]	Date Administratively Complete:				
Received From:	(	Correct N	Number of Copies:			
Received By:	]	Distribut	ion Date:			
EAPP File Number:	Complex:					
Admin. Review(s) (No.):	]	No. AR R	counds:			
Delinquent Fees (Y/N):	]	Review T	ime Spent:			
Lat./Long. Verified:	2	SOS Cust	tomer Verification:			
Agent Authorization Complete/Notarized (Y/N):			Payable to TCEQ (Y/N):			
Core Data Form Complete (Y/N):		Check:	Signed (Y/N):			
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):			

# 2 - TCEQ - 0587 Attachments

**General Information Form** 



# **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:

wa	vas prepared by.	
Pri	rint Name of Customer/Agent: Marisa Keiser, PE	
Da	Pate: <u>07/25/2025</u>	
Sig	ignature of Customer/Agent:	
1	Marisa Veiser	
Pi	Project Information	
1.	. Regulated Entity Name: O'Reilly Auto Parts	
2.	. County: <u>Williamson</u>	
3.	. Stream Basin: <u>Brazos River</u>	
4.	. Groundwater Conservation District (If applicable): _	<u></u>
5.	. Edwards Aquifer Zone:	
	<ul><li>Recharge Zone</li><li>Transition Zone</li></ul>	
6.	. Plan Type:	
	<ul><li>WPAP</li><li>SCS</li><li>Modification</li></ul>	AST UST Exception Request

7.	Customer (Applicant):		
	Contact Person: Rick Hicks Entity: O'Reilly Auto Enterpri Mailing Address: 233 S Patte City, State: Springfeild, MO Telephone: 417-427-8062 EX Email Address: rhicks28@ore	rson Avenue T65680	Zip: <u>65802</u> FAX:
8.	Agent/Representative (If any	·):	
	Contact Person: Marisa Keise Entity: Bowman Consulting Of Mailing Address: 807 Las Cim City, State: Austin, Texas Telephone: 512.327.1180 Email Address: mkeiser@box	Group nas Pkwy, Las Cimas II,	<u>Suite 350, Austin, TX 78746</u> Zip: <u>78746</u> FAX:
9.	Project Location:		
	<ul><li>☐ The project site is located</li><li>☐ The project site is located</li><li>☐ jurisdiction) of</li><li>☐ The project site is not located</li></ul>	d outside the city limit	s but inside the ETJ (extra-territorial
10.		the TCEQ's Regional st	ow. The description provides sufficient aff can easily locate the project and site
	The project site is located Property ID R476274.	d 5510 Williams Drive,	Georgetown, Texas 78633
11.		- ·	ng directions to and the location of the d site boundaries are clearly shown on
12.	· ——	Scale: 1" = 2000') of th	e Map. A copy of the official 7 ½ minute e Edwards Recharge Zone is attached.
		me(s). charge Zone (and Tran	sition Zone, if applicable). Doundary of the Recharge Zone.
13.	Sufficient survey staking	is provided on the pro ment of the regulated	site or the application will be returned. ject to allow TCEQ regional staff to locate activities and the geologic or manmade

$\boxtimes$	Survey staking will be completed by this date:
14.	<b>Attachment C – Project Description</b> . 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:
	<ul> <li>Area of the site</li> <li>✓ Offsite areas</li> <li>✓ Impervious cover</li> <li>✓ Permanent BMP(s)</li> <li>✓ Proposed site use</li> <li>✓ Site history</li> <li>✓ Previous development</li> <li>✓ Area(s) to be demolished</li> </ul>
15. Exis	sting 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:
Proh	nibited 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	e 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:
	<ul> <li>☐ TCEQ cashier</li> <li>☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)</li> <li>☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)</li> </ul>
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 – Road Map





LEGEND SITE LOCATION

SCALE: 1" = 20

WPAP ATTACHMENT A - ROAD MAP

# Bowman

© 2024 Bowman Consulting Group Ltd 807 Las Cimas Parkway • Suite 350 • Austin, Texas 78746 Phone: (512) 327-1180 • Fax: (512) 327-4062 • www.bowman.com TBPE Firm Registration No. F-14309

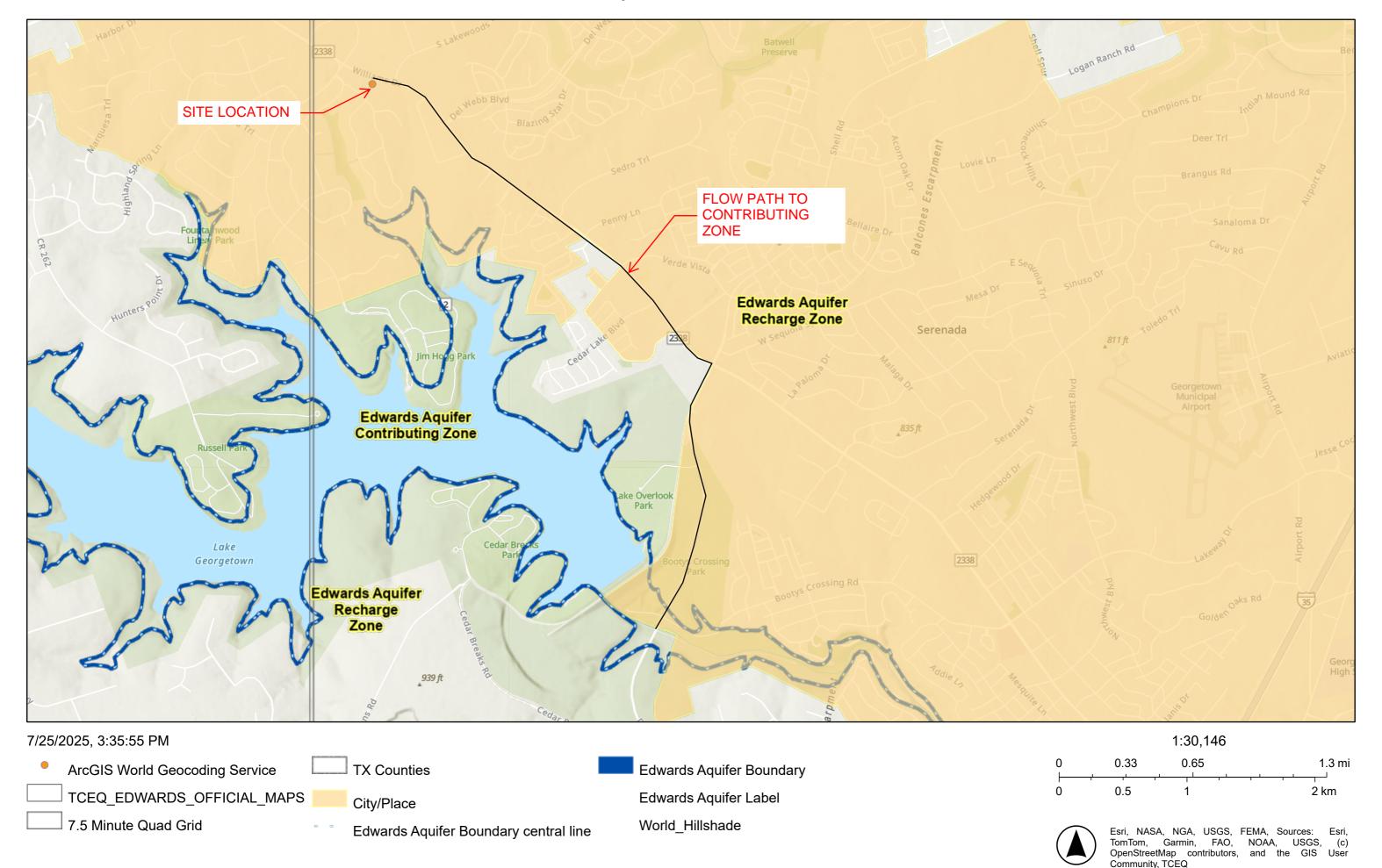
THE PURPOSE OF INTERIM REVIEW, MARK-UP, AND/OR DRAFTING
UNDER THE AUTHORITY OF
MARISA KEISER, P.E.
#141397 ON Jun. D, YY.

IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

# Attachment B – USGS/Edwards Aquifer Recharge Zone Map



# **Edwards Aquifer Viewer Custom Print**



#### **TCEQ-0587**

#### <u>Attachment C – Project Description</u>

This WPAP application covers a total area of approximately 1.41 Acres per the Fountainwood Plaza Plat boundary.

The project is an Auto Parts Sales commercial development which includes utility improvements, parking lot, detention and water quality ponds and commercial building to serve O'Reilly Auto Parts. There are no areas being demolished as the area is currently undeveloped and vacant. Approximately 35,100SF of impervious cover is being proposed for this development. There will be 1 permanent BMP(s) on site and the runoff from the proposed impervious cover is captured in the sand filter pond to achieve 89% TSS removal efficiency. The pond can be found in the construction plans included in this application.

#### **Project Information:**

Limits of Construction = 1.16 Acres

Total Project Site Area = 1.41 Acres

Total Disturbance Area = 1.16 Acres

Total Impervious cover = 0.67 Acres

= 47.51%

#### **Total water quality treatment flow for:**

JELLYFISH = 0.62 CFS

# 3 - TCEQ - 0585 Attachments

Geological Assessment Form



# **GEOLOGIC ASSESSMENT**

# O'Reilly Auto Enterprises, LLC – Georgetown GX3

Williamson County Property ID R476274 5510 Williams Drive Georgetown, Texas 78633

Prepared for:

O'Reilly Auto Enterprises, LLC 233 S Patterson Ave Springfield, Missouri 65802

Prepared by:

# **Bowman**

151 Stagecoach Trail, Suite 130 San Marcos, Texas 78666 Phone: 512.396.2600 TBPG Firm Registration #50698

Project Number: 250519-01-002

Report Issuance Date: June 3, 2025

# **Geologic Assessment**

**Texas Commission on Environmental Quality** 

For Regulated Activities on The Edwards Aquifer Recharge/transition Zones and Relating to 30 TAC §213.5(b)(3), 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. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print	t Name of Geologist: Gilberto S. Barajas	Telephone: <u>(737)</u> 315-3013
Date	e: <u>2 June 2025</u>	Fax:
Repr num	resenting: <u>Bowman (TBPG 50698)</u> (Name of Cor lber)	
Sign	ature of Geologist:	GILBERTO STEVEN BARAJAS
Regu	ulated Entity Name: Georgetown GX3	GEOLOGY 55 15461
Pro	oject Information	GEOLOGY 15461  If I CENSED CEN
1. [	Date(s) Geologic Assessment was performed: <u>5</u> ,	/8/2025 WALX GEO
2. 1	Гуре of Project:	
3. L	☑ WPAP ☑ SCS Location of Project:	☐ AST ☐ UST
	Recharge Zone Transition Zone Contributing Zone within the Transition Zon	e

			ologic Assessmen able) is attached.		Completed Geol	ogic Asses	sment Table		
— H: 55	. Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.								
	Table 1 - Soil Units, Infiltration Characteristics and Thickness				Soil Name	Group*	Thickness(feet)		
Soil N	ame	Group*	Thickness(feet)	]	* Soil Group	Dafinition	(Abbreviated)		
DnB - D silty cla 3 per	y, 1 to cent	D	< 3.0	* Soil Group Definitions (Abbrevia A. Soils having a high infiltra rate when thoroughly wet B. Soils having a moderate infiltration rate when thor					
DoC - silty o moist, percent	clay, 1 to 5	D	< 3.0		wetted. C. Soils having a slow infiltrat rate when thoroughly wett D. Soils having a very slow infiltration rate when thorowetted.				
m to th	6. Attachment B – Stratigraphic Column. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.								
in po	7. Attachment C – Site Geology. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.								
			e Geologic Map(s Plan. The minimu	-	= :	must be t	the same scale as		
Si	Applicant's Site Plan Scale: 1" = <u>33'</u> Site Geologic Map Scale: 1" = <u>33'</u> Site Soils Map Scale (if more than 1 soil type): 1" = <u>33'</u>								
9. Meth	od of co	ollecting p	ositional data:						
	Global Positioning System (GPS) technology.  Other method(s). Please describe method of data collection:								

10. $igotimes$ The project site and boundaries are clearly shown and labeled on the Site Geologic M	lap.
11. $igwidz$ Surface geologic units are shown and labeled on the Site Geologic Map.	
12. Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are describe in the attached Geologic Assessment Table.	ed
$\boxtimes$ Geologic or manmade features were not discovered on the project site during the field investigation.	ld
13. $igotimes$ The Recharge Zone boundary is shown and labeled, if appropriate.	
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section	n.
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 Chapter 76.  There are no wells or test holes of any kind known to exist on the project site.	1
Administrative Information	
15. $oxed{\boxtimes}$ 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.

# **APPENDIX A**

**Geologic Assessment Table** 

GEOL	OGIC A	SSESS	MENT	TABL	E		PRO	)JE(	CT NAN	ΛE:	Georg	jetown G	SX3							<u> </u>
L	OCATIO	ON				FE	ATUF	RE CH	IARACT	ERIS	STICS				EVA	LUAT	ION	PHY	SICAL	SETTING
1A	1B *	1C*	2A	2B	3		4		5	5A	6	7	8A	8B	9	1	0		11	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	ON DIMENSIONS (FEET)		TREND DOM DENSITY (NO/FT)		APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENS	ITIVITY		IENT AREA (RES)	TOPOGRAPHY		
						Х	Y	Z		10						<40	<u>&gt;40</u>	<1.6	<u>&gt;1.6</u>	
																			<del>                                     </del>	
No	logr	odic	foa	turc	S 01	·m	an	m	ahe	fΔ	atu	rae	WA	ro ida	anti	fio	4	nn.	the	site.
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2A TYPE	TYPE	2B POINTS
С	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
0	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

#### 8A INFILLING

- N None, exposed bedrock
- C Coarse cobbles, breakdown, sand, gravel
- D Loose or soft mud or soil, organics, leaves, sticks, dark colors
- Fines, compacted clay-rich sediment, soil profile, gray or red colors
- V Vegetation. Give details in narrative description
- FS Flowstone, cements, cave deposits
- C Other materials

#### 12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Date 2 June 2025

Sheet 1 of 1



# **APPENDIX B**

**Stratigraphic Column** 

#### **STRATIGRAPHIC COLUMN**

Period	Epoch	Stratigraphic Unit	Hydrologic Unit	Thickness (ft)
Quaternary		Alluvium (Qal)		Up to 30
		Taylor Clay (Ktl)		330
	Upper	Austin Chalk (Kau)		430
		Eagle Ford Shale (Kef)	Confining Units	30-40
		Buda Limestone (Kbu)		20-35
		Del Rio Clay (Kdr)		60-75
	Lower	Georgetown Limestone (Kgt)	Edwards	Up to 100
Cretaceous		Edwards Formation (Ked)	Aquifer	Up to 200
		Comanche Peak Formation (Kcp)	Edwards Aquifer and	80
		Walnut Formation (Kw)	Confining Unit in areas without caves	Up to 120
		Upper Glen Rose member (Kgru)	Upper Trinity Aquifer	Up to 480

Gray shaded cells highlight lithologies underlying the site. Stratigraphic column based on The University of Texas at Austin Bedrock Geology of Round Rock and Surrounding Areas, Williamson and Travis Counties, Texas by Todd B. Housh, PhD, PG, 2007.

**APPENDIX C** 

**Site Geology** 

#### **EXECUTIVE SUMMARY**

Bowman has conducted a Geologic Assessment (GA) for the site identified as Georgetown GX3 in Williamson County, Texas, per Edwards Aquifer rules. No sensitive geologic features, sensitive manmade features, nor potential pathways for contaminant movement to the Edwards Aquifer were identified on the site.

#### **INTRODUCTION**

This GA narrative has been prepared for the Georgetown GX3 site (hereafter, referred to as the "site") by Bowman (Texas Board of Professional Geoscientists [TBPG] Registration Number 50698). Bowman believes this GA, which includes Texas Commission on Environmental Quality (TCEQ) Geologic Assessment Form TCEQ-0585, satisfies the requirements of the Edwards Aquifer rules set forth in Title 30 Texas Administrative Code (TAC) Chapter 213. This GA was completed for the approximately 1.36-acre site located at 5510 Williams Drive Georgetown, Williamson County, Texas (Williamson County Property ID R476274). The site is in the Edwards Aquifer Recharge Zone. The site consists of undeveloped grassland with a sparse compilation of Plateau live oak (*Quercus fusiformis*), Ashe juniper (*Juniperus ashei*), and cedar elm (*Ulmus crassifolia*). The purpose of this GA is to determine which, if any, geologic and manmade features on the site are sensitive, to identify all potential pathways on the site for contaminant movement to the Edwards Aquifer, and to provide sufficient geologic information so that the appropriate Best Management Practices (BMPs) can be proposed in the Edwards Aquifer Protection Plan (EAPP).

#### **METHODOLOGY**

This GA was prepared by Gilberto Steven Barajas, a qualified geologist per Rules and Technical Guidance for the Edwards Aquifer Protection Program and Professional Geoscientist (License #15461), of Bowman with assistance from Nick Gladstone, a Project Manager, of Bowman. This GA was prepared using TCEQ *Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (Rev. 10-01-04).

Published reports and area geology maps were studied for information regarding caves or other karst features and to evaluate land uses on the site and in proximity to the site. A field survey was then conducted which included a general visual inspection of the site as well as a more detailed, systematic visual inspection in which transects were walked at 50-foot intervals. The purpose of walking the transects is to identify features within varying topography and vegetation. To define the type and extent of a feature, if any, various techniques were utilized where applicable including non-conductive probing, hand clearing/hand excavation, and sensory analysis to assess air flow. A return field

survey was not necessary and was not conducted. Similarly, tests such as excavation, cave mapping, infiltrometer tests, geophysical studies, or tracer studies for geologic assessment of features were not necessary and were not conducted. The GA did not include a path of proposed sewer lines as there are no proposed sewer lines for this project.

#### **RESULTS**

#### Soils

Soil information is based on data from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Conservation Engineering Division's *Urban Hydrology for Small Watersheds* Technical Release Number 55 (TR-55). The majority of the site is underlain by the Denton silty clay, 1 to 3 percent slopes (DnB), and a relatively small area in the southern portion of the site is underlain by the Doss silty clay, 1 to 5 percent slopes (DoC). A map depicting the soils underlying the site is shown in Figure 1. Both (BtE) and (Kr) soils have very slow infiltration rate when thoroughly wetted (Soil Group D). The typical profile for the DnB soil unit, from ground surface to subsurface, is approximately 0 to 33 inches of silty clay and 3 inches of gravelly silty clay. The typical profile for the DoC soil unit, from ground surface to subsurface, is approximately 17 inches of silty clay. The underlying material for DnB is silty and clayey slope alluvium over residuum weathered from limestone. The underlying material for DoC is residuum weathered from limestone.

#### **Geology and Hydrogeology**

The site is underlain by the Georgetown Formation (Kgt) in the Washita Group overlying the Cretaceous-age Edwards Limestone (Ked) Fromation in the Fredricksburg Group. The Kgt Formation is characterized by limestone and marl; mostly limestone, fine gained, argillaceous, nodular, moderately indurated, light gray; some shale, marly, soft, light gray to yellowish gray. The Kgt Formation is the uppermost unit of the Edwards Aquifer and is generally considered non-cavernous, though several caves have been mapped within this Formation where in thinly covers the Ked Formation. The Ked Formation is characterized by limestone, dolomite, and chert; limestone is characteristically aphanitic to fine grained, massive to thin bedded, hard, brittle, in part rudistid biostromes, in part miliolid biosparite; dolomite is characteristically fine to very fine grained, porous, medium gray to grayish brown. The Ked Formation is among the most extensively karstified and cavernous rock units within the Austin and San Antonio regions; karst development in the Ked is generally lateral and associated with cave, sinkhole, and solution fracture development.

Observations made during the field survey agree with the published classification of the site in the Edwards Aquifer Recharge Zone as defined by the TCEQ. Based on topography,

surface soils, and lack of geologic or manmade features, precipitation likely gathers onsite and flows south-southeast to an Unnamed Tributary of the North Fork San Gabriel River. Geologic or manmade features mapped on-site were not found in publications. Furthermore, the Texas Water Development Board (TWDB) database was searched for active and plugged water wells, and there were no wells mapped on-site. However, there was a water well report for a domestic-use well approximately 0.25 miles west of the site (State Well Number 5819402). The well was reportedly drilled to approximately 110 feet below ground surface (ft-bgs) and is not expected to increase the rate of recharge to the subsurface at the site.

#### **Feature Descriptions**

No sensitive geologic features, sensitive manmade features, nor potential pathways for contaminant movement to the Edwards Aquifer were identified on the site based on published reports and field survey data.

#### **CONCLUSION**

A GA was conducted at the site per Edwards Aquifer rules. No sensitive geologic features, sensitive manmade features, nor potential pathways for contaminant movement to the Edwards Aquifer were identified for this GA. If features are discovered during subsequent site activity, they should be investigated by a qualified geologist to determine if action is necessary. However, as of the date of this report, Bowman recommends no further assessments or testing to determine if sensitive geologic features, sensitive manmade features, or potential pathways for contaminant movement to the Edwards Aquifer exist.

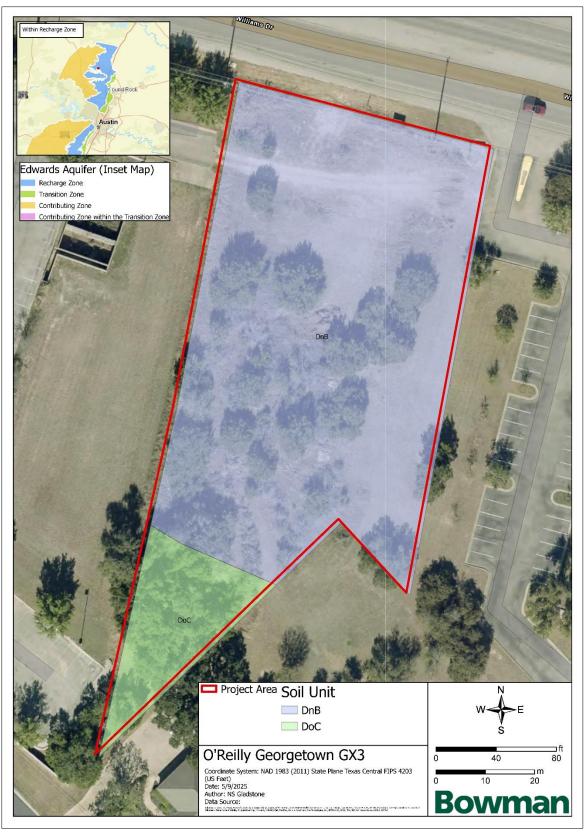
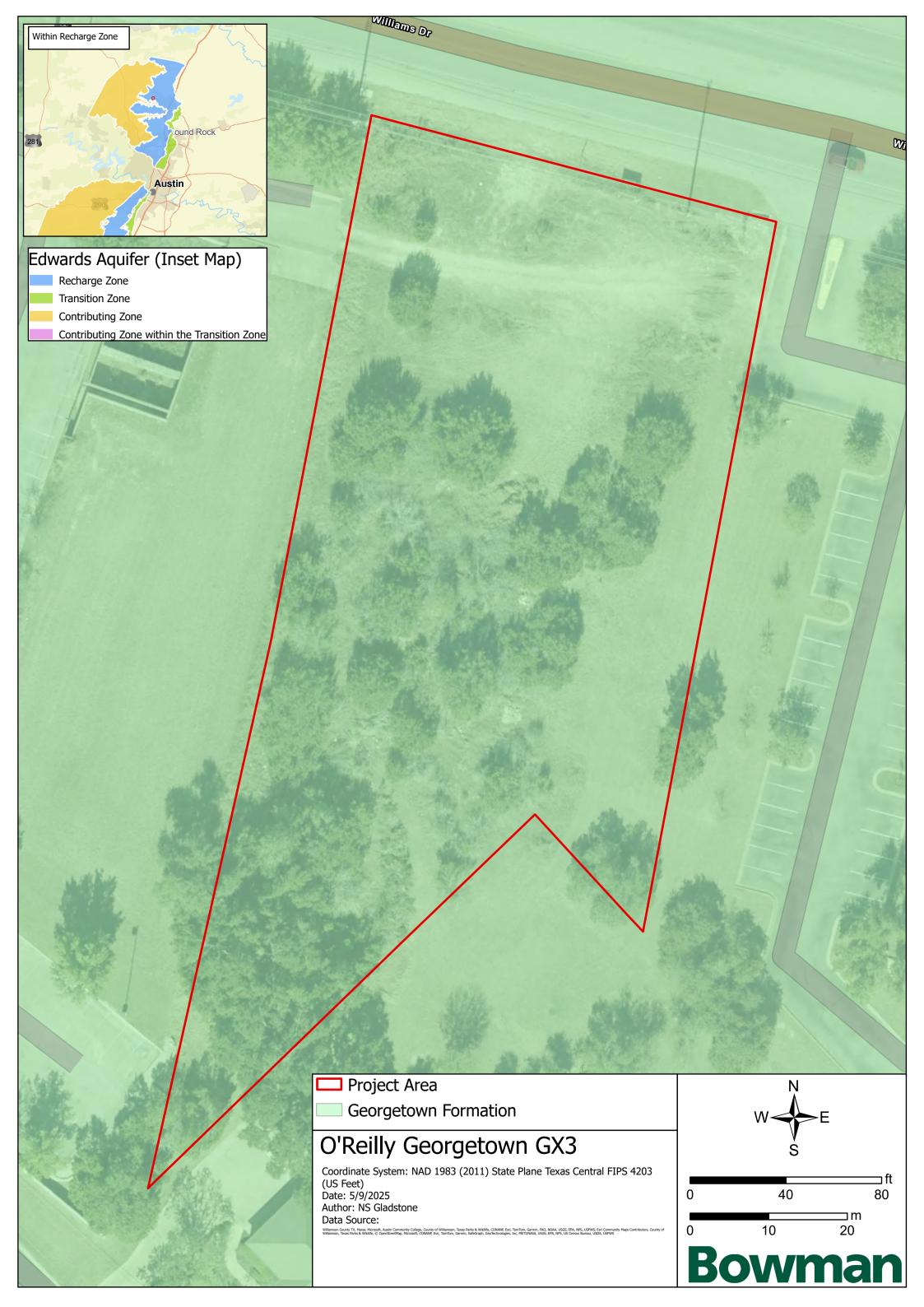


Figure 1. Map of soils underlying the site.

# APPENDIX D

Site Geologic Map



# 4- TCEQ - 0582 Attachments

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: O'Reilly Auto Parts

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: <u>Rick Hicks</u> Entity: <u>O'Reilly Auto Parts</u>

Mailing Address: 233 S Patterson Ave

 City, State: Springfield, MO
 Zip: 65802

 Telephone: (417) 427-8062 Ext: 65680
 Fax: \_\_\_\_\_

Email Address: <a href="mailto:rhicks28@oreillyauto.com">rhicks28@oreillyauto.com</a>

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: Marisa Keiser

Texas Licensed Professional Engineer's Number: 141397

**Entity: Bowman Consulting Group** 

Mailing Address: 807 Las Cimas Pkwy, Suite 350

Email Address: mkeiser@bowman.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):			ulation to be served,	
	Residential: Number of single-family lots:  Multi-family: Number of residential units:  Commercial Industrial Off-site system (not associated with any development) Other:				
5.	The character and v	olume of wastewater is s	shown below:		
	<u>100</u> % Domestic		gallons/da	у	
	% Industrial		gallons/da	у	
	% Commingle	d	125 gallons/day		
	Total gallons/da	y: <u>125</u>			
6.	Existing and anticipa	ated infiltration/inflow is	gallons/day. This	will be addressed by:	
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				
		oval letter is attached.	,	<del></del>	
	The WPAP applie	cation for this developme	ent was submitted to the	TCEQ on, but	
	has not been approved.				
	A WPAP application is required for an associated project, but it has not been submitted.			s not been submitted.	
	There is no associated project requiring a WPAP application.				
8.	Pipe description:				
Ta	Table 1 - Pipe Description				
	Pipe				
I	Diameter(Inches)	Linear Feet (1)	Pipe Material (2)	Specifications (3)	
	4	184	PVC SDR 26	ASTM D3034	

## **Total Linear Feet**: <u>184</u>

- (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.

	~	on system will convey the e treatment facility is:	e wastewater to the <u>City</u>	<u>of Georgetown</u> (name)
	Existing Proposed			
10. A	All components of t	his sewage collection sys	tem will comply with:	
		<u>seorgetown</u> standard spe ifications are attached.	cifications.	
11.	$\boxtimes$ No force main(s	and/or lift station(s) are	associated with this sev	vage collection system.
		and/or lift station(s) is ass Force Main System Appl	=	=
Ali	gnment			
12. 🏻		viations from uniform gra	_	tion system without
13. 🏻	There are no de without manhol	viations from straight alig es.	nment in this sewage co	llection system
	without Manho collection system allowing pipe cu For curved sewe	Justification and Calculat les. A justification for deven without manholes with arvature is attached. In lines, all curved sewer less for the wastewater co	viations from straight alig documentation from pi ine notes (TCEQ-0596) a	gnment in this sewage pe manufacturer
Ma	nholes and	Cleanouts	·	
_	Manholes or cle	an-outs exist at the end c	• •	ese locations are listed
Tabl	e 2 - Manholes a	nd Cleanouts		
	Line	Shown on Sheet	Station	Manhole or Clean- out?
	А	12 Of 25	N/A	Cleanout
	Α	12 Of 25	N/A	Manhole
		Of		
		Of		

Of Of Of

			Manhole or Clean-	
Line	Shown on Sheet	Station	out?	
	Of			
	Of			
	Of			
15. Manholes are in line.	stalled at all Points of Cu	rvature and Points of Te	rmination of a sewer	
16. The maximum s greater than:	pacing between manhole	es on this project for each	n pipe diameter is no	
Pipe Diar	meter (inches)	Max. Maı	nhole Spacing (feet)	
	6 - 15		500	
	.6 - 30		800	
3	36 - 48 3 - 48		1000 2000	
	≥54  Justification for Variance			
greater than list maximum spaci operate and ma	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 Requ	irements			
Items 18 - 25 must be i	ncluded on the Site Plan.			
18. The Site Plan mu	ust have a minimum scale	e of 1" = 400'.		
Site Plan Scale:				
19. The Site Plan mu manholes with s overlain by topo feet and showin	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:	20. Lateral stub-outs:			
	<ul> <li>☐ The location of all lateral stub-outs are shown and labeled.</li> <li>☐ No lateral stub-outs will be installed during the construction of this sewer collection</li> </ul>			

21. Location of existing and pro	pposed water lines:			
If not shown on the Site sewer systems.	<ul> <li>☐ The entire water distribution system for this project is shown and labeled.</li> <li>☐ If not shown on the Site Plan, a Utility Plan is provided showing the entire water and sewer systems.</li> <li>☐ There will be no water lines associated with this project.</li> </ul>			
22. 100-year floodplain:				
floodplain, either naturalined channels construction is construction is construction in the water-tight manhological labeled on the Site constructed above sewer	<ul> <li>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.)</li> <li>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.)</li> </ul>			
	able 3 - 100-Year Floodplain			
Line	Sheet	Station		
	of	to		
floodplain, either naturalined channels construction is construction is consensed in concrete or	of to			

Table 4 - 5-Year Floodplain

Line	Sheet	Station
	of	to

- 24.  $\boxtimes$  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	Items 26 - 33 must be included on the Plan and Profile sheets.					
sewer lines rated pipe variance fro	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.					
	pe no water line cros pe no water lines wit	_	posed sewer lines			
Table 5 - Water	Line Crossings					
Line	Station or Closest Point	Crossing or Parallel	Horizonta Separation Distance			
А	Manhole	Crossing	13.8'	1.14		
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						
	elow and labeled on		•			
	of this sewer line is w all be provided at les	•	•	an alternative means of		
_	means is described			TP WOTE OF WILE		
	of this sewer line is w	•	•			
	iger than 1500 feet l	ocated within. I	No vented manhol	es will be used.		
Table 6 - Vented	Manho	le	Station	Sheet		

Line	Manhole	Station	Sheet		
28. Drop manholes:					
Sewer lines which seem 24 inches above appropriate pro §217.55(I)(2)(H)	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(I)(2)(H).				
Table 7 - Drop Manh Line	oles <i>Manhole</i>	Station	Sheet		
Liiic	Widilliole	Station	Silect		
29. Sewer line stub-out	s (For proposed extensio	ns):			
	<ul> <li>☐ The placement and markings of all sewer line stub-outs are shown and labeled.</li> <li>☐ No sewer line stub-outs are to be installed during the construction of this sewage</li> </ul>				
30. Lateral stub-outs (Fe	or proposed private serv	ice connections):			
	<ul><li>☐ The placement and markings of all lateral stub-outs are shown and labeled.</li><li>☐ No lateral stub-outs are to be installed during the construction of this sewage collection</li></ul>				
31. Minimum flow velo	city (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 velo	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.					
Assuming pipes	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 $\geq$ 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(I)(2)(B).
	Concrete encasement shown on appropriate Plan and Profile sheets for the locations listed in the table above.
	<ul> <li>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.</li> <li>N/A</li> </ul>

## 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]	12 of 25
Manhole, showing inverts comply with 30 TAC §217.55(I)(2) [Required]	12 of 25
Alternate method of joining lateral to existing SCS line for potential future connections [Required]	20 of 25
Typical trench cross-sections [Required]	20 of 25
Bolted manholes [Required]	20 of 25
Sewer Service lateral standard details [Required]	20 of 25
Clean-out at end of line [Required, if used]	of
Baffles or concrete encasement for shock/erosion protection [Required, if flow velocity of any section of pipe >10 fps]	of
Detail showing Wastewater Line/Water Line Crossing [Required, if crossings are proposed]	12 of 25
Mandrel detail or specifications showing compliance with 30 TAC §217.57(b) and (c) [Required, if Flexible Pipe is used]	of

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

- 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: Marisa Keiser

Date: August 4, 2025

Place engineer's seal here:

Marsa Verse August 4, 2025

Signature of Licensed Professional Engineer:

Marisa Veiser

# 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	*	*

<sup>\*</sup>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 – SCS Engineering Design Report



# **TCEQ Engineering Design Report**

For

O'Reilly Auto Parts

## **JULY 2025**

Prepared By:
Bowman Consulting Group
807 Las Cimas Pkwy
Suite 350
Austin, TX 78746

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#### **PVC PIPE STANDARDS**

The American Society for Testing and Materials (ASTM) also known as ASTM International (Reference: www.astm.org) governs the manufacturing specifications for Polyvinyl Chloride (PVC) pipes, including the dimension ratio and water pressure allowable for use of each pipe, through its D-3034 standard. ASTM D-3034 lists its pipe dimensions and pipe classes using the "SDR" mark up, such as SDR-13.5, SDR-21, SDR-26 and SDR-41. The SDR refers to the standard dimension ratio (SDR) of the outside pipe diameter and the wall thickness. This project specifies the use of SDR-26 PVC pipe, which are to meet the ASTM pressure rating of greater than 115 psi and fall in the size category listed below. ASTM D-3034 standards must be meticulously adhered to by all PVC pipe manufacturers and is recognized as the standard during PVC pressure pipe testing and quality checks. Other in-depth information can be found published in Thermoplastic Pressure Pipe Design and Selection UNI-TR-7, by the Uni-Bell PVC Pipe Association.

SDR 26 Pipe Size Matrix (Per ASTM D-3034)							
Size (in) O.D. Calc I.D. Thickness (in) (in) (in)							
4	4.215	3.891	0.162				
6	6.275	5.793	0.241				
8	8.400	7.754	0.323				
10	10.500	9.692	0.404				
12	12.500	11.538	0.481				
15	15.300	14.124	0.588				

#### **PROPOSED TYPE OF PIPE**

Type I, Grade I, Polyvinyl Chloride (PVC) Specifications: Size of Pipe: \_\_\_4.00\_\_ in.

#### **SDR 26 Properties**

Maximum Pipe Depth (Cover) used (feet):	6.70
Minimum Pipe Depth (Cover) used (feet):	3.00
Approximate Trenching Width (feet):	1.35
Mean Pipe Diameter (in) = (Outer Diameter - Thickness)	4.053
Wall Thickness (inch):	0.162
Outer Diameter (inch):	4.215
Calculated Inner Diameter (in) = (Outer Diameter - 2t)	3.891
Minimum Modulus of Elasticity (psi):	400,000
Minimum Tensile Strength (psi):	7,000
Cell Classification:	12454
Joint Compliance:	ASTM D-3212
Pipe Compliance:	ASTM D-3034

Proposed Waste Water Usage: <u>125.00</u> GPD

 $Q_{max}$  (As determined in Attachment A) = 0.0002 CFS

$$Q_{fill} = \frac{1.486}{n} \times A \times R^{\frac{2}{3}} \times \sqrt{S}$$

A = Cross-Sectional Area, (ft2) = 0.083 S = Slope, decimal, minimum used = 0.030  $R_h = hydraulic radius = 0.081$ 

For the Specified Pipe at the Minimum Design Slope, the full flow is

$$Q_{full} = 0.306$$
 CFS

0.0002 < 0.306 Design meets TCEQ Guidelines

#### MINIMUM AND MAXIMUM GRADES FOR PIPES (30 TAC §217.53(I)(2)(A))

Minimum and Maximum Pipe Slopes							
Size of Pipe	Minimum Slope (%)	Maximum Slope (%)					
6	0.5	12.35					
8	0.33	8.4					
10	0.25	6.23					
12	0.2	4.88					
15	0.15	3.62					
18	0.11	2.83					
21	0.09	2.3					
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	*	*					

<sup>\*</sup> For pipes larger than 39 inches in diameter, the slope is determined by Manning's formula to maintain a velocity greater than 2.0 feet per second and less than 10.0 feet per second when flowing full.

## MINIMUM AND MAXIMUM VELOCITY FOR THE PROPOSED SYSTEM:

So, using	4.00	inch PVC Pipe:	V = velocity (ft/sec)	=	(solve)
			n = Manning's coefficient	=	0.013
	V = 1.49	$\stackrel{9}{\sim} \times R_h^{0.67} \times \sqrt{S}$	Calc. Inner Diameter (in)	=	3.891
	$V = \frac{1}{n}$	$-\lambda R_h - \lambda \sqrt{S}$	$A = Cross-Sectional Area, ft^2$	=	0.083
			Wp = Wetted Perimeter, ft	=	1.019
			R <sub>h</sub> = hydraulic radius, A/Wp	=	0.081
			S = slope (ft/ft)	=	0.030

Minimum Slope Used (%): 3.00 Maximum Slope Used (%): 3.09

 $V_{min} = \frac{3.72 \text{ ft/sec}}{}$ 

3.72 > 2.00 ft/sec 3.77 < 10.00 ft/sec

Design meets TCEQ Guidelines

Design meets TCEQ Guidelines

## AVERAGE VALUES OF MODULUS OF SOIL REACTION, E'

	E fo	•	mpaction of Bedo er square inch	ding,
Soil type-pipe bedding material (Unified Classification System)	Dumped	Slight <85% Proctor, <40% relative density	Moderate 85%-95% Proctor, 40%-70% relative density	High, > 95% Proctor, > 70% relative density
(1)	(2)	(3)	(4)	(5)
Fine-grained Soils (ഥ>50₀) Soils with medium to high plasticity CH, MH, CH-MH		available; consi s engineer; Othe		
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	1000
Fine-grained Soils (LL<50) Soils with medium to no plasticity, CL, ML, ML-CL,with more than 25% coarse-grained particles  Coarse-grained Soils with Fines GM, GC, SM, SC contains more than 12% fines	100	400	1000	2000
Coarse-grained Soils with Little or no Fines GW, GP, SW, SP contains less than 12% fines	200	1000	2000	3000
Crushed Rock	1000	3000	3000	3000
Accuracy in Terms of Percentage Deflection	± 2	± 2	± 1	± 0.5

Taken from: Howard, Amster K. "Soil Reaction for Buried Flexible Pipe" U.S. Bureau of Reclamation, Denver, CO and the American Society of Civil Engineers.

Modulus of Soil Reaction for the in-situ soil is determined to be = 1000 psi

#### **PIPE BEDDING CLASS**

Taken from the American Society for Testing and Material (ASTM) D 2321 and American Association of State Highway and Transportation Officials (AASHTO) M43, and as published on Table 7, in <u>Deflection: The Pipe/Soil Mechanism</u> UNI-TR-1-97, Uni-Bell PVC Pipe Association, Pg 24.

	Pipe Embedment Material						i (kPa) for D	egree of Emb	edment Compa	ection	
	STM D 2321*		ASTM D 2487	AASHTO M43	Min. Std. Proctor	Lift Placement	Dumped	Slightly < 85%	Moderate 85% - 95%	High > 95%	
Class	Description Open-graded,	Notation N/A	Description Angular crushed	Notation 5	Density (%) Dumped	Depth 18"	1000	3000	3000	3000	
	clean manu- factured aggregates		slone or rock, crushed gravel, crushed slag; large voids with little or no fines	56	Sumpos	(0.45 m)	(6,900)	(20,700)	(20,700)	(20,700)	
IB	Dense-graded, clean manu- factured, processed aggregates	N/A	Angular crushed stone or other Class IA material and stone/sand mixtures; little or no fines								
11	Clean, coarse- grained soils	GW	Well-graded gravel, gravel/sand mixtures; little or no fines	57 6 67	57 6 67	57 85% 6 67	12* (0.30 m)	N/R	1000 (6,900)	2000 (13,800)	3000 (20,700)
		GP	Poorly graded gravel, gravel/sand mixtures; little or no fines								
		SW	Well-graded sands, gravelly sands; little or no fines								
		SP	Poorly graded sands, gravelly sands; little or no fines								
Ш	Coarse-grained soils with fines	GM	Silty gravels, gravel/sand/silt mixtures	Gravel and sand with <10% fines	90%	9" (0.20 m)	N/R	N/R	1000 (6,900)	2000 (13,800)	
	GC Clayey gravels, gravel/sand/clay mixtures				1340						
		SM	Silty sands, sand/ silt mixtures								
		SC	Clayey sands, sand/clay mixtures								

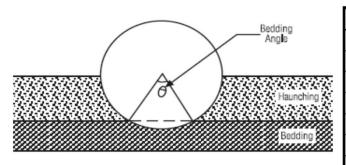
#### **NOTE:**

Per TCEQ guidelines, a contractor is allowed to use ASTM D 2321 Bedding Class 1A, 1B, II, or III at no less than 85% percent compaction. To grant the contractor its ability to make the proper judgment of which bedding class to use, the calculations provided in this Engineering Design Report reflect the use of **Bedding Class III**, at 85%-95% compaction, with an E' value of 1000 psi. This provides the "worst case" scenario for the SCS line. All other Bedding Class options will provide an improved value for the zeta factor as well as pipe deflection.

For Bedding Class III, 85%-95% Compaction,  $E_b = 1000$  psi

#### **PIPE BEDDING ANGLE**

As Published on Figure 8 and Table 5, in <u>Deflection: The Pipe/Soil Mechanism</u> UNI-TR-1-97, Uni-Bell PVC Pipe Association, Pgs 18-19.



Bedding Constant Values
-------------------------

Bedding Angle, degrees	Bedding Constant
0	0.110
30	0.108
45	0.105
60	0.102
90	0.096
120	0.090
180	0.083

### **LIVE LOAD DETERMINATION**

Source: AASHTO H20 and E80 Loads and as Published on Table 4, in <u>Deflection: The Pipe/Soil Mechanism</u> UNI-TR-1-97, Uni-Bell PVC Pipe Association, Pg 14.

Height of	Live Lead indissioned to hipe, is/iii			Height	Live Load To	ransferred to	Pipe, lb/in²
Cover (ft)	Highway H20¹	Railway E80 <sup>2</sup>	Airport	Cover (ft)	Highway H20¹	Railway E80 <sup>2</sup>	Airport
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	*	*	*

Simulates 20 ton truck + impact

<sup>&</sup>lt;sup>2</sup> Simulates 80,000 lb/ft railway load + impact

<sup>&</sup>lt;sup>3</sup> 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.

<sup>\*</sup> Negligible live load influence

#### **PRISM LOAD DETERMINATION**

Also referred to as the 'dead' load, the prism load is the pressure acting on the pipe by the weight of the soil column above a given section of the pipe. The following prism load columns are industry standards as referenced from Table 3, <u>Deflection: The Pipe/Soil Mechanism</u> UNI-TR-1-97, Uni-Bell PVC Pipe Association, Pg 13.

Note that the Prism Loads are calculated based upon the Marston Theory of Loads, developed by Professor Anson Marston, circa 1913, and is calculated using the formula:

$$P = \frac{\gamma_s * H}{144}$$

This formula determines the earth load on a flexible pipe and is regarded as a conservative approach to determining the dead load placed upon a buried flexible pipe.

At maximum burial depth of 6.70 feet, prism load = 5.00 psi

#### **BUCKLING PRESSURE (ALLOWABLE)**

Where:	$q_a$	=	Allowable buckling pressure (psi)			
	h	=	Height of soil above top of pipe (in) =		80.40 in	
	H	=	Depth of burial, feet, from ground surface to top of pi			
	B'	=	Empirical coefficient of elastic support			
	$E_b$	=	Modulus of soil reaction for the bedding material (psi)  Modulus of elasticity of the pipe material (psi)  Moment of inertia of the pipe, per linear inch of pipe (in <sup>3</sup> )			
	E	=				
	I	=				
	t	=	Pipe wall thickness (in)			
	D	=	Mean Pipe Diameter (in)	D =	4.053 in	

Solving for the Empirical coefficient of elastic support, given by Luscher in 1966, as referenced on Pg 113 of Moser, A.P., <u>Buried Pipe Design</u>. 2nd Ed., McGraw-Hill:

$$B' = \frac{4(h^2 + Dh)}{1.5(2h + D)^2}$$

$$I = \left(\frac{t^3}{12}\right) = \left(\frac{inches^3}{in_{linear}}\right) =$$

$$B' = \frac{27160.1}{40764.8} = 0.666$$

$$I = \frac{0.0042515}{12} = 0.0004$$

Using the Allowable Buckling Pressure Equation as shown in Moser, A.P., <u>Buried Pipe Design</u>. 2nd Ed., McGraw-Hill, Pg 112, and an initial factor of safety (SF) of 2.5, the Allowable Buckling Pressure is then:

$$q_{a} = \frac{1}{FS} * \sqrt{32 * R_{w} * B' * E_{b} * \left(E * \frac{I}{D^{3}}\right)} \text{ Where,}$$

$$R_{w} = 1 - 0.33 (h_{w} / h)$$

$$q_{a} = \frac{1}{2.5} \sqrt{\left[32\right] \left[1\right] \left[0.666\right] \left[1000\right] \left[400000\right] \frac{0.0004}{66.58}}$$

$$q_{a} = 85.21 \quad \text{psi}$$

#### **BUCKLING PRESSURE (INSTALLED CONDITION)**

Where: Pressure applied to pipe under installed conditions (psi) Specific Weight of Water = 0.0361 (pci)  $\gamma_{\rm W}$ Specific Weight of Soil (pcf)  $\gamma_{\rm S}$  $W_{c}$ Vertical Soil Load on the pipe per unit length (lb/in)  $L_L$ Live load as determined from chart hw Height of Groundwater above pipe, typically = 0D Mean Pipe Diameter (in) D =4.053 in t Pipe Wall Thickness (in) t =0.162 in

The Vertical Soil Load can be calculated using Equation 6.6 of Uni-Bell's Handbook of PVC Pipe , Ch VI Superimposed Loads on Buried Pipe, Pg 183

$$W_c = H \times \gamma_s \times (D+t)$$

Where:  $\gamma_S = 120$  Value taken from: Assumed Worst Case Scenario

$$W_C = \begin{bmatrix} 6.70 \end{bmatrix} \begin{bmatrix} 12 \text{ in/ft} \end{bmatrix} \begin{bmatrix} 120.00 \end{bmatrix} \frac{1 \text{ ft}^3}{1728 \text{ in}^3} \begin{bmatrix} 4.22 \end{bmatrix}$$

$$W_C = 23.53 \quad \text{lb/in}$$
At Max Pipe Depth (H) of 6.70 ft

Using the Equation on Pg 114 of Moser, A.P., <u>Buried Pipe Design</u>. 2nd Ed., McGraw-Hill, Pressure Applied to Pipe under installed conditions at its deepest installed depth (Note, since hw = 0, the Water Buoyancy Factor (Rw) = 1) is calculated to be:

$$q_{p} = \gamma_{w} h_{w} + R_{w} \left(\frac{W_{c} + L_{L}}{D}\right) \text{ and } L_{L} = 0$$

$$q_{P} = 0.0361 \times 0 + 1 \times \left(\frac{23.53}{4.053}\right)$$

$$q_{P} = 5.81 \text{ psi}$$

Note: The pressure applied to the pipe under installed conditions is less than the Allowable Buckling Pressure of the specified pipe, (i.e.,  $q_a > q_p$ ) therefore the design is acceptable for installation.

#### WALL CRUSHING CALCULATION

Where: 
$$D_o$$
 = outside pipe diameter, in. = 4.215 in

A = surface area of the pipe wall, in.
$$^2$$
/ft = 0.162 in. $^2$ /ft   
 $\gamma_S$  = specific weight of soil, pcf, = 120 pcf

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

Using the Wall Crushing and Wall Thrust equations, as referenced in <u>Plastic Pipe Design Manual</u> published by Vylon Pipe, Pg 14 the Wall Crushing due to compressive stress can be found using the following:

$$P_c = \frac{T}{A}$$
 where T, Thrust, is calculated as  $T = \frac{P_y D}{2}$ 

Substituting the Thrust equation into the Wall Crushing equation:

$$P_c = \frac{\frac{P_y D}{2}}{A} = \frac{P_y D}{2A}$$

From the Marston Equation determining the Prism Load Calculation (See previous section on Prism Load), substitute the equation for  $P_v$ :

$$P_{c} = \frac{\frac{\gamma_{s} * H}{144} P_{\text{Rearranging this equation, it becomes:}}{2AP_{c}} = \frac{\gamma_{s} * H}{144} D$$
And simplifies to: 
$$288AP_{c} = \gamma_{s} HD$$

Note that the Surface Area of the Pipe Wall, A, is per unit length in inches<sup>2</sup> per foot, a conversion factor (from feet to inches) of 12 must be applied, therefore,

$$24AP = \gamma_s HL$$

Solving for H, the equation becomes:

$$H = \frac{24 * P_c * A}{\gamma_s * D_o}$$

(Continued on next page)

Using this equation, and converting all units, solve for "height" of the soil column, or in other words, the depth of burial of the PVC pipe:

$$H = \frac{24 \left[ 4000 \right] \left[ 0.162 \times 12 \right]}{120 \times 4.215} = 368.97$$

$$H = 368.97 \text{ feet}$$

Note: The resulting Wall Crushing will occur at a greater depth than the deepest burial depth of the proposed SCS lines, therefore pipe design is acceptable.

#### **DEFLECTION ANALYSIS: LEONHARDT'S ZETA FACTOR**

The Leonhardt's Zeta Factor Equation can be calculated using Equation 7.32 of Uni-Bell's <u>Handbook of PVC Pipe</u>, Ch VII Design of Buried PVC Pipe, Pg 268

Where: Do = Pipe Outer Diameter, in = 4.215B = Trench Width, in, = 16.22 in  $E_b$  = Modulus of soil reaction, bedding material (psi) = 1000 $E_n$  = Modulus of soil reaction for the in-situ soil (psi) = 1000

$$zeta = \frac{1.44}{f + \left[1.44 - f\right] \times \left[\frac{E_b}{E'_n}\right]}$$

where,

$$f = \frac{\frac{B}{Do} - 1}{1.154 + 0.444 \left[\frac{B}{Do} - 1\right]}$$

$$f = \frac{2.846975}{2.416057} = 1.178356$$

Substituting f into the zeta equation:

$$zeta = \boxed{\begin{array}{c} 1.44 \\ \hline 1.178 \end{array}} \boxed{\begin{array}{c} 0.262 \end{array}} \boxed{\begin{array}{c} 1.000 \end{array}}$$

The Leonhardt Zeta factor is then determined as: 1.000

#### PIPE STIFFNESS (Figure: 30 TAC §217.53(k)(3))

Using Equation B.1, as directed in 30 TAC §217.53(k)(3), to Calculate the Pipe Stiffness:

$$PS = C \times RSC \times (\frac{8.337}{D})$$

Where: PS = Pipe Stiffness, for SDR-26 PVC (psi) = 115 p 115 psi
C = Conversion factor = 0.8
RSC = Ring Stiffness Constant
D = Mean Pipe Diameter (in), D = 4.053 in

The RSC can be supplied by the manufacturer or calculated by rearranging Equation B.1

$$RSC = \frac{PS}{C \times \left(\frac{8.337}{D}\right)}$$

RSC = 
$$\frac{115}{1.645596}$$

$$RSC = 69.884$$

#### PREDICTED PIPE DEFLECTION

Using the Modified Iowa Equation, referenced and published by the Uni-Bell PVC Pipe association and found at http://www.uni-bell.org/faq.html, and Equation 14 of <u>Deflection: The Pipe/Soil Mechanism</u> UNI-TR-1-97, Uni-Bell PVC Pipe Association Pgs 17, the predicted pipe deflection can be calculated.

Where:	$\%\Delta Y/D$	=	Predicted % vertical deflection under load				
	P	=	Prism Load, psi				
	K	=	Bedding angle constant,	Assum	ed to =	0.096	
	W'	=	Live Load, psi, =	0	At max depth	(ft):	6.70
	DR	=	Dimension Ratio=	26			
	E	=	Modulus of tensile elasticity of the pipe material, ps			al, psi	
	E'	=	Modulus of Soil Reaction	n (zeta	x Eb) =	1000.00	
	$\mathrm{D_{L}}$	=	Deflection Lag Factor =		1.5		

And using the Modified Iowa Equation:

$$(\%)\frac{\Delta Y}{D} = \frac{(D_L KP + KW') \times 100}{[2E/(3(DR-1)^3)] + 0.061E'}$$

Where, Prism Load, 
$$P = \frac{\gamma_s * H}{144}$$
 and/or from previous chart, prism load = 5.00 ps

The Predicted Deflection is determined as:

$$(\%) \frac{\Delta Y}{D} = \frac{\left[ \left[ 1.5 \times 0.480 \right] + 0 \right] \times 100}{\left[ \frac{800000}{46875} \right] + \left[ 0.061 \times 1000.00 \right]} = \mathbf{0.92}$$

NOTE: 0.92 < 5%, therefore pipe design is acceptable

A deflection lag factor of 1.0 is typical for new pipes. Over the life of the pipe, the pipe will tend to deflect. Therefore, 1.5 is a conservative factor for the 50 year life.

#### **PIPE STRAIN**

Pipe strain is also known as the elongation of the pipe over the original length of the pipe. Under normal loading conditions of the PVC pipe, the variable that affects the elongation or straining of the pipe stems from the either the flexure or deflection (i.e., bending) of the pipe within the bedding material (i.e. increased or excessive pipe deflection causing the pipe to elongate) or hoop stress within the pipe wall. Please note that pipe strain is not generally known to be the limiting performance factor during pipe failure. For this system, pipe deflection is limited to 5% for a SDR 26 pipe. This 5% deflection value is the industry accepted value placing the pipe within its straining limits. Therefore, as the calculated deflection above is shown to be less than 5%, the pipe and bedding class used in this system is within the acceptable straining limits for this pipe.

However, total Pipe strain is calculated as the combination of the before mentioned hoop stress and the maximum strain due to deflection. Both items are calculated below using Equations 15 and 16 found in <u>Deflection: the Pipe/Soil Mechanism</u>, UNI-TR-1-97, Published by the Uni-Bell PVC Pipe Association (Pgs 28-30):

Where:	$\in_{h}$	=	Maximum Pipe Strain due to Hoop Stress, in/in			
	P	=	Pressure on the pipe (Live + Prism	n Loads), psi		
	E	=	Modulus of Elasticity of the Pipe,	psi		
	t	=	Pipe Wall thickness (in) =	0.162		
	D	=	Pipe Diameter, Outer (in) =	4.215		
			$\epsilon_{r} = \frac{PD}{r}$			
			$\in {}_{h} = \frac{1}{2tE}$			

Using the maximum cover for both live loads and prism loads as well as the previous unit weight of the soil:

$$\frac{[0.00 + 5.00] \times 4.215}{2 \times 0.162 \times 400.000} = 1.626E-04 \frac{\text{in}}{\text{in}}$$

(Continued on following page)

Where:  $\in_f$  = Maximum Pipe Strain due to Ring Deflection, in/in  $\Delta Y$  = Change in vertical pipe diameter under load, in, (numerator in the deflection equation, but in decimal form) t = Pipe Wall thickness (in) = 0.162 D = Pipe Diameter, Outer (in) = 4.215 DR = Dimension Ratio, PVC Pipe= 26

$$\epsilon_f = \frac{t}{D} \left[ \frac{3\Delta Y / D}{1 - 2\Delta Y / D} \right] = \frac{1}{DR} \left[ \frac{3\Delta Y}{D - 2\Delta Y} \right]$$

$$\frac{0.162}{4.215} \times \frac{2.160}{4.215} = 0.0299163 \frac{\text{in}}{\text{in}}$$

$$\in$$
 total = 0.0301  $\frac{\text{in}}{\text{in}}$ 

#### TCEQ PIPE BEDDING AND TRENCHING REQUIREMENTS (30 TAC 217.54)

0 \*\*These notes are provided in the Construction Documents on Plan Sheet 3 of 25\*\*

### a. Pipe Embedment

- 1. A rigid pipe must be laid with the adequate bedding, haunching, and initial backfill to support the anticipated load. The bedding classes that are allowed are A, B, or C, as described in American Society for Testing and Materials (ASTM) C 12, American National Standards Institute (ANSI) A 106.2, Water Environment Federation Manual of Practice No. 9 or American Society of Civil Engineers (ASCE) MOP 37.
- 2. A flexible pipe must be laid with the adequate bedding, haunching, and initial backfill to support the anticipated load. The bedding classes that are allowed are IA, IB, II, or III, as described in ASTM D-2321 or ANSI K65.171.
- 3. Debris, large clods, or stones that are greater than six inches in diameter, organic matter, or other unstable materials are prohibited as bedding, haunching, or initial backfill.
- 4. Backfill must not disturb the alignment of a collection system pipe.
- 5. If trenching encounters significant fracture, fault zones, caves, or solutional modification to the rock strata, an owner must halt construction until an engineer prepares a written report detailing how construction will accommodate these site conditions.

#### b. Compaction.

- 1. Compaction of an embedment envelope must meet the manufacturer's recommendations for the collection system pipe used in a project.
- 2. Compaction of an embedment envelope must provide the modulus of soil reaction for the bedding material necessary to ensure a wastewater collection system pipe's structural integrity as required by §217.53 of this title (relating to Pipe Design).
- 3. The placement of the backfill above a pipe must not affect the structural integrity of a pipe.

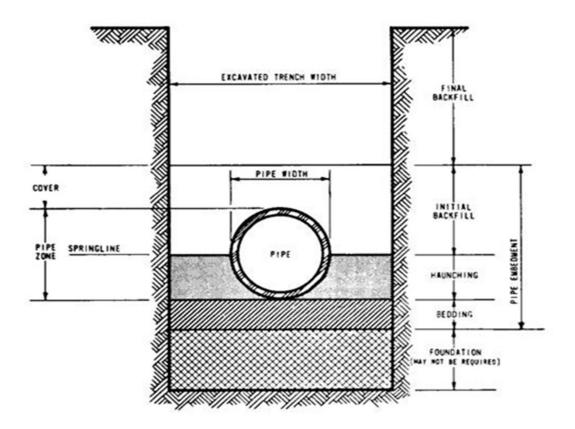
#### c. Envelope Size.

- 1. A minimum clearance of 6.0 inches below and on each side of the bell of all pipes to the trench walls and floor is required.
- 2. The embedment material used for haunching and initial backfill must be installed to a minimum depth of 12 inches above the crown of a pipe.

#### d. Trench Width.

- 1. The width of a trench must allow a pipe to be laid and jointed properly and must allow the backfill to be placed and compacted as needed.
- 2. The maximum and minimum trench width needed for safety and a pipe's structural integrity must be included in the report.
- 3. The width of a trench must be sufficient to properly and safely place and compact haunching materials.
- 4. The space between a pipe and a trench wall must be wider than the compaction equipment used in the pipe zone.

#### TRENCH CROSS-SECTION (30 TAC 217.54)



## **NOTE:**

Trenching Details along with 30 TAC 217.54 are annotated in the Construction Documents/Plan Sheets on Sheet 20 of 25

#### **MANHOLE SPECIFICATIONS**

#### 30 TAC 217.55 Requirements with design comments:

- a. An owner must include manholes in a wastewater collection system at:
  - 1. All points of change in alignment, grade, or size;
  - 2. At the intersection of all pipes; and
  - 3. At the end of all pipes that may be extended at a future date. All WW SCS Lines end with a Manhole
- b. Manholes placed at the end of a wastewater collection system pipe that may be extended in the future must include pipe stub outs with plugs. (Self explanatory, see item a above)
- c. A clean-out with watertight plugs may be installed in lieu of a manhole at the end of a wastewater collection system pipe if no extensions are anticipated. (Self explanatory)
- d. Cleanout installations must pass all applicable testing requirements outlined for gravity collection pipes in §217.57 of this title (relating to Testing Requirements for Installation of Gravity Collection System Pipes). (Self explanatory, see Item d above)
- e. A manhole must be made of monolithic, cast-in-place concrete, fiberglass, pre-cast concrete, high-density polyethylene, or equivalent material that provides adequate structural integrity. See the Pre-Cast Manhole Details following these construction notes along with CoSM MH Details in Construction Documents
- f. The use of bricks to adjust a manhole cover to grade or construct a manhole is prohibited. (Self explanatory, See Details following these notes)
- g. Manholes may be spaced no further apart than the distances specified in the following table for a wastewater collection system with straight alignment and uniform grades, unless a variance based on the availability of cleaning equipment that is capable of servicing greater distances is granted by the executive director. (Manholes are spaced no greater than 500 L.F.)

Table C.2 Maximum Manhole Spacing				
Pipe Diameter	Maximum Manhole			
6-15	500			
18-30	800			
36-48	1000			
54 or larger	2000			

- h. Tunnels are exempt from manhole spacing requirements because of construction constraints. (Self explanatory and not applicable)
- i. An intersection of three or more collection pipes must have a manhole. (Self explanatory and maintained throughout the design of the SCS)
- j. A manhole must not be located in the flow path of a watercourse, or in an area where ponding of surface water is probable. (Self explanatory and maintained throughout the design of the SCS)
- k. The inside diameter of a manhole must be no less than 48 inches. A manhole diameter must be sufficient to allow personnel and equipment to enter, exit, and work in the manhole and to allow proper joining of the collection system pipes in the manhole wall. (See Manhole Details following these notes)
- 1. Manholes must meet the following requirements for covers, inlets, and bases.
  - 1. Manhole Covers
    - A.
- A manhole where personnel entry is anticipated requires at least a 30 inch diameter clear opening. (Lid to have 30" min openings per CoG Specifications and Details within the plan sets.
- B. A manhole located within a 100-year flood plain must have a means of preventing inflow. (Self explanatory but not applicable for this project)
- C. A manhole cover construction must be constructed of impervious material. (Self explanatory, See Manhole Details)
- D. A manhole cover that is located in a roadway must meet or exceed the American Association of State Highways and Transportation Officials standard M-306 for load bearing. (Self explanatory, See Manhole Details)
- 2. Manhole Inverts
  - A. The bottom of a manhole must contain a U-shaped channel that is a smooth continuation of the inlet and outlet pipes. (Self explanatory, see CoG Details within plan sets.)
  - B. A manhole connected to a pipe less than 15 inches in diameter must have a channel depth equal to at least half the largest pipe's diameter (Self explanatory)
  - C. A manhole connected to a pipe at least 15 inches in diameter but not more than 24 inches in diameter must have a channel depth equal to at least three-fourths of the largest pipe's diameter (Self explanatory, but not applicable for this project)

D.

A manhole connected to a pipe greater than 24 inches in diameter must have a channel depth equal to at least the largest pipe's diameter (Self explanatory, but not applicable for this project).

- E. A manhole with pipes of different sizes must have the tops of the pipes at the same elevation and flow channels in the invert sloped on an even slope from pipe to pipe. (Self explanatory and maintained throughout the design of the SCS)
- F. A bench provided above a channel must slope at a minimum of 0.5 inch per foot. (Self Explanatory)

G.

An invert must be filleted to prevent solids from being deposited if a wastewater collection system pipe enters a manhole higher than 24 inches above a manhole invert. (Self Explanatory)

- H. A wastewater collection system pipe entering a manhole more than 24 inches above an invert must have a drop pipe. (Self Explanatory)
- m. The inclusion of steps in a manhole is prohibited. (Self Explanatory, steps are not included in CoG manhole Details)

n.

- Connections. A manhole-pipe connection must use watertight, size-on-size resilient connectors that allow for differential settlement and must conform to American Society for Testing and Materials C-923. (Self Explanatory, see Details within plan sets.)
- o. Venting. An owner must use an alternate means of venting if manholes are at more than 1,500 foot intervals and gasketed manhole covers are required for more than three manholes in sequence. Vents must meet the following requirements: (Self

## Explanatory, MH's are vented every third MH)

- 1. Vent design must minimize inflow;
- 2. Vents must be located above a 100-year flood event elevation; and
- 3. Tunnels must be vented in compliance with this subsection.
- p. Cleanouts. The size of a cleanout must be equal to the size of the wastewater collection system main. (Self Explanatory)

#### Precast Manhole Information is provided on the detail sheets as per COG

## 5- TCEQ - 0584 Attachments

Water Pollution Abatement Plan Application Form



# 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:

Priı	nt Name of Customer/Agent: <u>Marisa Keiser, PE</u>
Dat	te: August 4, 2025
Sig	nature of Customer/Agent:
1	Marisa Veiser
Reg	gulated Entity Name: O'Reilly Auto Parts
Re	egulated Entity Information
1.	The type of project is:
	Residential: Number of Lots: Residential: Number of Living Unit Equivalents: Commercial Industrial Other:
2.	Total site acreage (size of property): 1.41
3.	Estimated projected population:
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	7885	÷ 43,560 =	0.181
Parking	6009	÷ 43,560 =	0.137
Other paved surfaces	15,333	÷ 43,560 =	0.352
Total Impervious Cover	29,227	÷ 43,560 =	0.67

Total Impervious Cover  $0.67 \div$  Total Acreage  $1.41 \times 100 = 47.51 \%$  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:
	<ul> <li>TXDOT road project.</li> <li>County road or roads built to county specifications.</li> <li>City thoroughfare or roads to be dedicated to a municipality.</li> <li>Street or road providing access to private driveways.</li> </ul>
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. $L \times W = Ft^2 \div 43,560 Ft^2/Acre = acres.$
10.	Length of pavement area: feet.
	Width of pavement area: feet. L x W = $Ft^2 \div 43,560 Ft^2/Acre = acres$ . Pavement area acres $\div$ 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.

TCEQ Ex	nance and repair of existing roadways to exist adding shoulders totaling more than one quire prior approval from the TCEQ.	
Stormwa	ter to be generated by tl	ne Proposed Project
volume occur fr quality	rom the proposed project is attached. Tand quantity are based on the area and	e stormwater runoff which is expected to The estimates of stormwater runoff
Wastewa	ter to be generated by the	he Proposed Project
14. The charac	ter and volume of wastewater is shown	below:
% Co	estic dustrial mmingled gallons/day <u>125</u>	125 Gallons/day Gallons/day Gallons/day
15. Wastewate	er will be disposed of by:	
On-Site	Sewage Facility (OSSF/Septic Tank):	
will licer the the rela	be used to treat and dispose of the war nsing authority's (authorized agent) wri land is suitable for the use of private se requirements for on-site sewage facilit ting to On-site Sewage Facilities. h lot in this project/development is at le . The system will be designed by a licer itarian and installed by a licensed instal	horized Agent. An on-site sewage facility stewater from this site. The appropriate tten approval is attached. It states that ewage facilities and will meet or exceed ies as specified under 30 TAC Chapter 285 east one (1) acre (43,560 square feet) in used professional engineer or registered ler in compliance with 30 TAC Chapter
Sewage	Collection System (Sewer Lines):	
to a	n existing SCS.	er generating facilities will be connected er generating facilities will be connected
The	SCS was previously submitted on SCS was submitted with this applicatio SCS will be submitted at a later date. T nstalled prior to Executive Director app	n. he owner is aware that the SCS may not

The sewage collection system will convey the wastewater to the (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. $\square$ The Site Plan must have a minimum scale of 1" = 400'.	
Site Plan Scale: 1" = <u>20</u> '.	
18. 100-year floodplain boundaries:	
<ul> <li>Some part(s) of the project site is located within the 100-year floodplain. The floodplais shown and labeled.</li> <li>No part of the project site is located within the 100-year floodplain.</li> <li>The 100-year floodplain boundaries are based on the following specific (including date of</li> </ul>	in
material) sources(s):  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)	
<ul> <li>The wells are not in use and have been properly abandoned.</li> <li>The wells are not in use and will be properly abandoned.</li> <li>The wells are in use and comply with 16 TAC §76.</li> </ul>	
igstyle 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:	
<ul> <li>All sensitive geologic or manmade features identified in the Geologic Assessment a shown and labeled.</li> <li>No sensitive geologic or manmade features were identified in the Geologic Assessment.</li> </ul>	ire
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.
Adn	ninistrative 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.

#### TCEQ-0584

### **Attachment A - Factors Affecting Water Quality**

Potential sources of pollution that may be expected to affect the quality of the stormwater discharges from the construction site include the following:

- Soil erosion due to the clearing of the site for pavement, buildings, utilities and pond structures.
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings.
- Hydrocarbons from concrete paving operations.
- Miscellaneous trash and litter from construction.
- Concrete truck washout.

### **TCEQ-0584**

### **Attachment B - Volume and Character of Storm Water**

The site generally drains northeast conveying the flows to a drainage system discharging in a Detention Pond. It is expected that the character of surface water and ground water runoff would be consistent with a development used for commercial purposes. The point of discharges was analyzed. Please refer to the attached exhibits for drainage area maps. Please see the summary table below for peak volumes of storm water.

Existing Development Conditions - HEC-HMS					
DACIN	Q (CFS)				
BASIN	2-yr	10-yr	25-yr	100-yr	
EA1	0.30	0.50	0.60	0.70	
EB1	1.10	1.90	2.50	2.90	
EC1	4.00	6.50	8.20	9.60	
Propo	sed Devel	opment Cond	litions - HEC	-HMS	
DACIN	Q (CFS)				
BASIN	2-yr	10-yr	25-yr	100-yr	
PA1	0.30	0.50	0.60	0.70	
PB1	1.00	1.70	2.20	2.60	
PC1	3.30	5.00	6.10	7.00	
PC2	1.90	2.70	3.20	3.60	
PC3	0.50	0.90	1.20	1.40	
Pond A	0.20	0.30	0.30	0.40	
Existing X Proposed Development Conditions - HEC-HMS					
1				(	

Existing X Propose	d Developm	ent Con	ditions -	HEC-HM	IS
BASIN	ADEA ()	FLOW (CFS)			
DASIN	AREA (ac)	2 YR	10 YR	25 YR	100 YR
Existing POA A	0.15	0.30	0.50	0.60	0.70
Proposed POA A	0.15	0.30	0.50	0.60	0.70
	Δ CFS	0.00	0.00	0.00	0.00
Existing POA B	0.58	1.10	1.90	2.50	2.90
Proposed POA B	0.51	1.00	1.70	2.20	2.60
	Δ CFS	-0.10	-0.20	-0.30	-0.30
Existing POA C	2.13	4.00	6.50	8.20	9.60
Proposed POA C	2.18	4.00	6.20	7.50	8.70
	Δ CFS	0.00	-0.30	-0.70	-0.90

## Attachment C – Suitability Letter from Authorized Agent

### N/A

## Attachment D - Exception to the required Geological Assessment

### N/A

## 6- TCEQ - 0602 Attachments

Temporary Stormwater Section



# **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:

Regulated Entity Name: O'Reilly Auto Parts
Marisa Veiser
Signature of Customer/Agent:
Date: August 4, 2025
Print Name of Customer/Agent: Marisa Keiser, P

### **Project Information**

### **Potential Sources of Contamination**

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

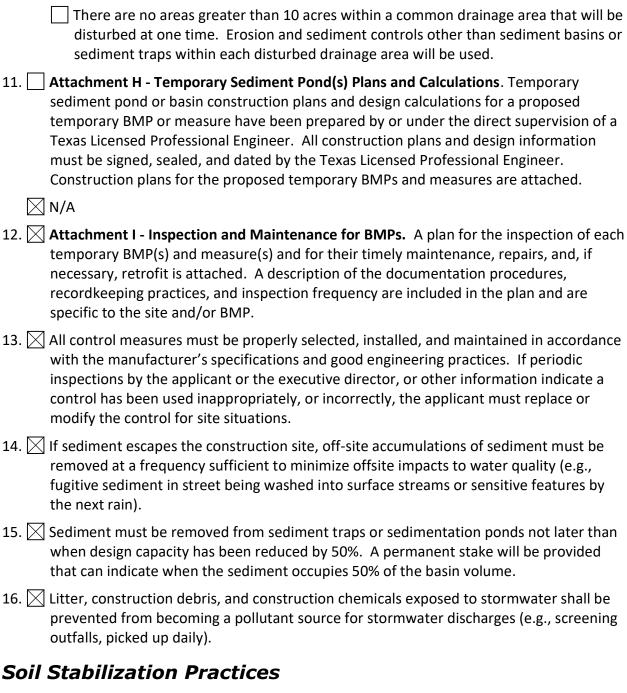
1.	Fuels for construction equipment and hazardous substances which will be used during construction:
	The following fuels and/or hazardous substances will be stored on the site:
	These fuels and/or hazardous substances will be stored in:
	Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

	<ul> <li>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.</li> <li>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.</li> </ul>
	igstyle igstyle 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.
S	equence 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.
	<ul> <li>For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.</li> <li>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.</li> </ul>
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:
T	emporary Best Management Practices (TBMPs)
sta coi ba	osion control examples: tree protection, interceptor swales, level spreaders, outlet abilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized instruction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment sins. Please refer to the Technical Guidance Manual for guidelines and specifications. All suctural 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:

	<ul> <li>A description of how BMPs and measures will prevent pollution of surface groundwater or stormwater that originates upgradient from the site and f across the site.</li> <li>A description of how BMPs and measures will prevent pollution of surface</li> </ul>	lows
	groundwater that originates on-site or flows off site, including pollution ca contaminated stormwater runoff from the site.	used by
	A description of how BMPs and measures will prevent pollutants from enti- surface streams, sensitive features, or the aquifer.	ering
	A description of how, to the maximum extent practicable, BMPs and meas maintain flow to naturally-occurring sensitive features identified in either geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.	
3.	The temporary sealing of a naturally-occurring sensitive feature which accepts to the Edwards Aquifer as a temporary pollution abatement measure during a construction should be avoided.	_
	Attachment E - Request to Temporarily Seal a Feature. A request to tem seal a feature is attached. The request includes justification as to why no and practicable alternative exists for each feature.	reasonable
	There will be no temporary sealing of naturally-occurring sensitive feature site.	s on the
€.	Attachment F - Structural Practices. A description of the structural practices to used to divert flows away from exposed soils, to store flows, or to otherwise lidischarge of pollutants from exposed areas of the site is attached. Placement structural practices in floodplains has been avoided.	mit runoff
10.	Attachment G - Drainage Area Map. A drainage area map supporting the following requirements is attached:	owing
	For areas that will have more than 10 acres within a common drainage are disturbed at one time, a sediment basin will be provided.	
	For areas that will have more than 10 acres within a common drainage are disturbed at one time, a smaller sediment basin and/or sediment trap(s) wused.	
	For areas that will have more than 10 acres within a common drainage are	
	disturbed at one time, a sediment basin or other equivalent controls are n attainable, but other TBMPs and measures will be used in combination to down slope and side slope boundaries of the construction area.	
	There are no areas greater than 10 acres within a common drainage area to disturbed at one time. A smaller sediment basin and/or sediment trap(s) was used in combination with other erosion and sediment controls within each drainage area.	will be



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

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

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

#### Education

- (1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information is available in 30 TAC 327.4 and 40 CFR 302.4.
- (2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- (3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- (4) Establish a continuing education program to indoctrinate new employees.
- (5) Have a contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

#### General Measures

- (1) To the extent that the work can be accomplished safely, spills of oil, petroleum, products, substances listed under 40 CFR parts 110, 117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- (2) Store hazardous materials and wastes in covered containers and protect from vandalism.
- (3) Place a stockpile of spill cleanup materials where it will be readily accessible.
- (4) Train employees in spill prevention and cleanup.
- (5) Designate responsible individuals to oversee and enforce control measures.
- (6) Spills should be covered and protected from stormwater runoff during rainfall to the extent that is doesn't compromise cleanup activities.
- (7) Do not bury or wash spills with water.
- (8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMP's.
- (9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
- (10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

- (11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- (12) Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

#### Cleanup

- (1) Clean up leaks and spills immediately
- (2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
- (3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

#### **Minor Spills**

- (1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
- (2) Use absorbent materials on small spills rather than hosing down or burying the spill.
- (3) Absorbent materials should be promptly removed and disposed of properly.
- (4) Follow the practice below for a minor spill:
- (5) Contain the spread of the spill
- (6) Recover spilled materials
- (7) Clean the contaminated area and properly dispose of contaminated materials.

#### Semi-Significant Spills

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

Spills should be cleaned up immediately using the following steps:

- (1) Contain spread of the spill
- (2) Notify the project foreman immediately
- (3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spreadwidely.
- (4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
- (5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

#### Significant/Hazardous Spills

- (1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
- (2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
- (3) Notification should first be made by telephone and followed up with a written report.
- (4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
- (5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at : <a href="http://www.tceq.texas.gov/response/">http://www.tceq.texas.gov/response/</a>

#### Vehicle and Equipment Maintenance

- (1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
- (2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
- (3) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- (4) Always use secondary containment, such as drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- (5) Place drip pans or absorbent materials under paving equipment when not in use.
- (6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- (7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- (8) Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over the waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- (9) Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all of the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

### Vehicle and Equipment Fueling

- (1) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.
- (2) Discourage "topping off" of fuel tanks.
- (3) Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

### Attachment B – Potential Sources of Contamination

Potential Source:	Oil, grease, fuel, and hydraulic fluid contamination from construction equipment and vehicle drippings
Preventative Measure:	Vehicle maintenance, when possible, will be performed within the construction staging areas.
Potential Source:	Miscellaneous trash and litter from construction
Preventative Measure:	Trash containers will be placed throughout the site to encourage proper trash disposal.
Potential Source:	Construction debris
Preventative 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.

#### Attachment C – Sequence of Major Activities

The sequence of major activities will be divided into two stages: Site Preparation and Site Construction. For all activities listed below, Erosion and Sediment control measures have been included in the construction plans to lessen the impact of disturbed soils during the major activities in construction. Please refer to these sheets in the Construction Drawings for more detailed information.

#### **Site Preparation:**

- Submit written notice of construction to TCEQ regional office at least 48 hours prior to the start of any regulated activities.
- Install Temporary BMPs
- Clearing and grubbing of vegetation
- Demolish of existing utilities, curb and gutter

#### Construction (Approximately 1.16 AC to be disturbed):

- Excavate/Sawcut for roadway improvements
- Utility trenching and installation, including water, wastewater, and stormsewers.
- Final grading
- Grading for pond
- Install Paving/Infrastructure
- Revegetating all disturbed areas

#### Attachment D – Temporary Best Management Practices and Measures

Temporary measures are intended to provide a method of slowing the flow or runoff from the construction site in order to allow sediment and suspended solids to settle out of the water. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features. BMP measures utilized in this plan are intended to allow storm water to continue downstream after passing through for treatment. This will allow stormwater runoff to continue downstream to any existing sensitive features.

#### Site Preparation:

The clearing and grading of the land will disturb the largest area of soil, so erosion control measures will be installed as the first step in construction. The methodology for pollution prevention of all on-site stormwater will include a) installation of inlet protection, b) the erection of silt fences along the downgradient boundary of the construction activities, c) installation of rock berms with silt fence covering downgradient from areas of concentrated stormwater flow, d) installation of stabilized construction entrances to reduce the dispersion of sediment from the site, e) installation of a construction staging and spoil area and f) installation of concrete washout.

#### Construction:

All installed erosion control measures will be inspected, and if necessary, repaired before any additional construction begins, as well as periodically throughout the construction process. The contractor will be responsible for all maintenance of erosion control measures, as well as the installation of all remaining on-site control measures, including the concrete truck washout, as necessary.

### Attachment E - Request to Temporarily Seal a Feature, if sealing a feature

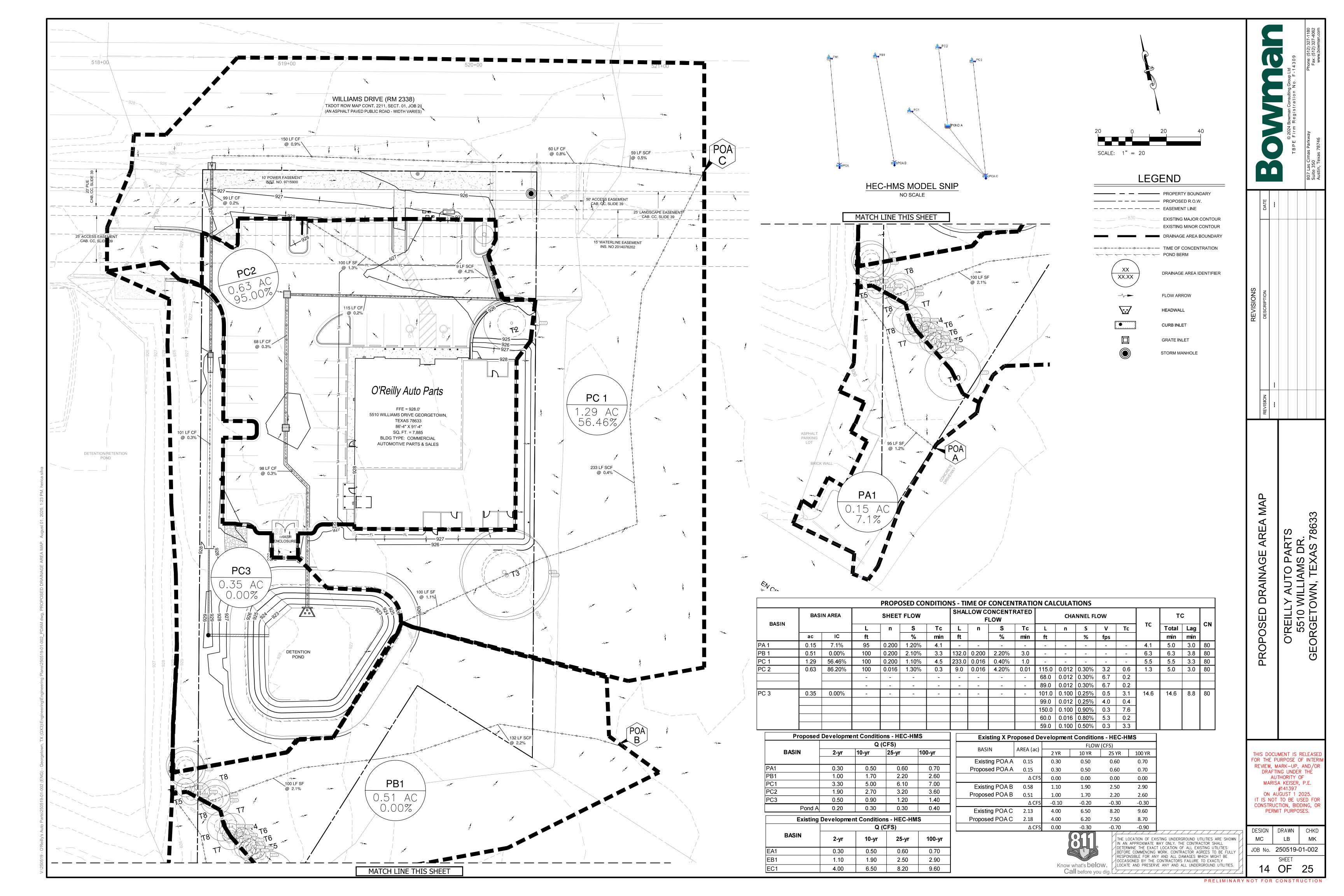
N/A

#### **Attachment F – Structural Practices**

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

- Silt fences along the downstream boundary of all construction activity, and rock berms with silt fence covering for secondary protection
- Installation of stabilized construction entrances and construction stagingareas
- Installation of concrete truck washout pits, as required

### Attachment G – Drainage Map



### Attachment H - Temporary Sediment Pond(s) Plans and Calculations

N/A

#### Attachment I – Inspection and Maintenance for BMPs

#### Inspections

Designated and qualified person(s) shall inspect BMPs every seven days, and within 24 hours after a storm event greater than 0.5 inches of rainfall. 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 shall be recorded and maintained as part of the Storm Water TPDES data for a period of three years after the date of the inspection. A copy of the Inspection Report Form is provided in the Storm Water Pollution Prevention Plan.

As a minimum, the inspector shall observe: (1) significant disturbed areas for evidence of erosion, (2) inspection and maintenance of inlet protection, (3) storage areas for evidence of leakage from the exposed stored materials, (4) structural controls (rock berm outlets, silt fences, drainage swales, etc.) for evidence of failure or excess siltation (over 6 inches deep), (5) vehicle exit point for evidence of off-site sediment tracking, (6) vehicle storage areas for signs of leaking equipment or spills, and (7) concrete truck rinse-out pit for signs of potential failure. Deficiencies noted during the inspection will be corrected and documented within seven (8) calendar days following the inspection or before the next anticipated storm event if practicable.

SWPPP Inspection R	eport
Project Name:	Date of Inspection:
nspection Frequency: (Every 7 Days, 14 Days, or Post Rain	1)
Post Significant Rainfall: N/A / Rainfall Amount:	
s inspector qualified to perform inspections? Yes	
Are inspector qualifications present in SWPPP? Yes	
Was the entire site inspected?	
If no, please list conditions limiting the scope of the	e inspection:
General Notes:	
Please note if the following areas or controls were observe	ed in compliance during the inspection.
Do the following items comply with SWPPP regulation?	Yes/No or Note Corrective Action Taken
Copy of the NOI with the SWPPP?	
Construction Site Notice posted at entrance(s) to site?	
Copy of the NOI at the site entrance?	
Do storage areas show signs of erosion?	
Do disturbed areas show signs of erosion?	
Are there signs of erosion at outfalls?	
BMPs working properly? (If no, make list of issue locations in area of concern/corrective action section below)	

Do BMPs need maintenance? (If yes, make a detailed list of issue locations in area of concern/corrective action seciton below.

Are new BMPs required on-site?

Did the site map/BMP map get updated?

### **SWPPP Inspection Report**

Control		Compliant (Yes - No - N/A)
General		
Revegetation		
Silt Fence		
Rock Berm		
Sediment Traps		
Tree Protection		
Site Stabilization		
Detention and/or Water Quality Pon	nd	
Stabilized Construction Entrance		
Concrete Washout		
Spoils/Materials Site		
Drainage Channels		
Outfall/Outlet Protections		
Inlet Protections		
No Off-site Discharge		
Equipment Area		
Trash receptacles		
Construction Debris		
Infrastructure		
Roadway clearing		
Utility clearing		
Roadway grading		
Utility construction		
Drainage construction		
Roadway base		
Roadway surfaces		
Site cleanups		
nspector Qualifications: By my signature below, I certify tha	at all terms are acceptable a	and the project site is in compliance with
nspector's Name	Inspector's Signature	
Name of Owner/Operator (Firm)	Date	<u>.</u>

### **SWPPP Inspection Report**

### **Project Milestone Dates**

Date when major site grading activities begin:			
Construction Activity		<u>Date</u>	
	i		
Dates when construction activities temperarily or no	rmanantly	acces on all or a portion of the	araiaat
Dates when construction activities temporarily or pe	тпапепцу с		orojeci
Construction Activity		<u>Date</u>	
	•		
Dates when stabilization measures are initiated:			
Stabilization Activity		<u>Date</u>	

#### Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

#### STABILIZATION PRACTICES

Installation and utilization of stabilization measures will begin as soon as practicable in any portion of the site where construction activities have either temporarily or permanently ceased. Stabilization measures must be initiated immediately, where construction activities have temporarily ceased and will not resume for a period exceeding 14 calendar days. The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth- disturbing activities have temporarily or permanently ceased. Temporary / Interim stabilization methods should be utilized in situations where development and/or construction practices have ceased temporarily, and permanent stabilization methods should be utilized after development and/or construction activities have been completed.

Disturbed areas to receive paving, landscape treatment and turfing shall be covered by erosion control blankets. All other rough graded slopes, disturbed ground surfaces and discharge channels shall receive seeding with native seed mix and then covered by erosion control blankets or straw mulching or other approved BMP. Stockpile materials shall be seeded and covered by soil erosion blankets. A storm water perimeter control device shall be established at a minimum distance of 10 feet from the toe of the stockpile. The materials excavated from utility trenching shall be protected from up gradient storm run- on. The excavated materials shall be covered by erosion control blankets.

#### **TEMPORARY STABILIZATION**

Temporary (Interim) Stabilization

Seed Specification: INTERIM SEEDING: N/A

**Temporary vegetation** - establishment of natural grassy areas that are intended to I be redisturbed during later phases of construction or development. Temporary vegetation is usually accomplished by spreading rapidly growing grasses via the process of hydro-seeding or hydro-mulching.

**Mulching** - the process of spreading a ground layer of chipped wood or brush to protect disturbed and unstable topsoil against erosion by storm water runoff by slowing run-off velocities, promoting sediment deposition, filtering sediment, and promoting increased ground infiltration rates. Mulching also provides the added benefits of reducing soil water loss, which is beneficial when attempting to establish newly planted vegetation. Applied in thicker layers and the size of mulch chips, mulching can also be used to prevent erosion on areas of steeper slope.

**Geo-textiles** - Geo-textiles (i.e. fiber matting, coir, filter fabrics) are porous materials or ground coverings which allow storm water run-off to pass through, but block the passage of most sediment and larger suspended particles. Geo-textiles matting can be used on newly seeded slopes to lessen seed and soil loss, or next to riprap to prevent run-off from washing out the soil beneath.

**Vegetative buffer strips** - areas where vegetation has been left undisturbed or where vegetation has been re-established, typically in long, narrow strips. Buffer strip areas retard the speed of storm water runoff, promote sediment filtration, increase ground infiltration, and improve site aesthetics. Vegetative buffer strips are extremely effective on steep, unstable slopes, or within floodplains, and along the bank slopes of waterways.

**Tree Protection** - is a required practice by most regulatory agencies. Only trees of certain sizes are required to be protected. Refer to your specific governing jurisdiction for specific regulations. However, even if tree protection is not a required, regulated practice it is still and important and cost effective erosion control method. (reference: **Preservation of mature vegetation** for specific details)

Preservation of mature vegetation - provides a natural buffer zone and promotes improved storm water run-off quality by helping minimize topsoil erosion as well as providing cost effective aesthetic benefits. Established, mature vegetation can withstand and tolerate heavier storm events than newly planted vegetation, due to a deeper, more established root system. It is necessary that preservation of existing, mature vegetation be planned for in advance of site construction. Areas to be preserved should be clearly marked and possibly even barricaded to prevent damage during construction.

Interim Stabilization Practices:	When Implemented:	Located:	Purpose:	In Use:
Temporary Vegetation	Throughout site development	N/A	Temporary vegetation growth is recommended to reduce soil erosion in areas that are not actively under development.	NO
Mulching	Throughout site development	N/A	Mulching is utilized to reduce topsoil erosion and to prevent soil water loss. This method can be used in planted/landscaped areas to prevent soil movement and water loss until vegetation is established.	NO

Geo-textiles	Throughout site development	N/A	Geo-textiles (i.e. matting, Curlex) can be used to temporarily stabilize soil in areas where it is not feasible to utilize mulching or temporary vegetation.	NO
Vegetative Buffer Strips	Throughout site development	Located at perimeters of the site and along natural creek beds	Vegetative buffer strips will be utilized throughout the site for both drainage and aesthetic purposes, as well as for the secondary benefits of improved water quality due to sediment deposition and improved infiltration.	NO
Tree Protection	Throughout site development	Located around all desirable trees to be retained, per plan	Desirable trees throughout the site are to be protected during and after construction to promote both water quality and aesthetics.	YES
Preservation of Existing Mature Vegetation	Throughout site development	Desirable existing vegetation to be preserved throughout the site, per plan	Desirable existent mature vegetation (i.e. under-story) is to be preserved throughout the site to promote water quality via sediment deposition and improved infiltration.	YES

PERMANENT STABILIZATION: Permanent drainage structures, including concrete curbs and gutters, concrete pavement, asphalt pavement, drainage swales, drainage ditch, turfing, vegetative strips, concrete culvert and pipe culvert will provide permanent erosion control at this project site. After initial stabilization, the Contractor shall inspect the site once a month until project acceptance as been granted by the Customer Representative/Contract Manager. Unsatisfactory stabilized areas shall be future stabilized at the request of the Customer Representative/Contract Manager. Final or permanent stabilization shall be in accordance with the specification sections: [2300 Earthwork], [02916 Mulching for erosion control], [02921 Seeding], [02922 Sodding], [02923 Sprigging], [02919 Top soil], [02924 Seeding] and [02925or 02926 Establishment of Turf].

**Seed Specification**: PERMANENT SEEDING: Permanent stabilization to be according to site specific re- stabilization / landscape plan and / or the San Antonio Ordinances.

**Permanent vegetation** - the process of establishing a permanent vegetative ground cover that helps reduce topsoil erosion by holding and stabilizing soil particles, which in turn slows storm water run-off velocity, promotes ground infiltration, promoting sediment deposition, and by providing secondary aesthetic benefits. Permanent vegetation is established by planting and seeding in areas where the soil needs stabilization due to existing soil structure, texture, or steeper grade slopes. Permanent vegetation can include trees, grasses and shrubs.

**Mulching** - the process of spreading a ground layer of chipped wood or brush to protect disturbed and unstable topsoil against erosion by storm water runoff by slowing run-off velocities, promoting sediment deposition, filtering sediment, and promoting increased ground infiltration rates. Mulching also provides the added benefits of reducing soil water loss, which is beneficial when attempting to establish newly planted vegetation. Applied in thicker layers and the size of mulch chips, mulching can also be used to prevent erosion on areas of steeper slope.

**Geo-textiles** - Geo-textiles (i.e. fiber matting, coir, filter fabrics) are porous materials or ground coverings which allow storm water run-off to pass through, but block the passage of most sediment and larger suspended particles. Geo-textiles matting can be used on newly seeded slopes to lessen seed and soil loss, or next to riprap to prevent run-off from washing out the soil beneath.

**Sod stabilization** - the practice of installing grass sod strips or squares over a disturbed or unprotected topsoil surface to provide instant protection of soil from the erosive forces of storm water run-off. Sod stabilization is an effective and feasible practice in areas where construction activities are complete increasing the chances that the grass cover will have the opportunity to become established. This measure requires maintenance such as the installation of sub-sod topsoil and frequent watering to promote sod growth.

**Hydro-mulch/seeding stabilization** - the practice of applying seed mixtures hydraulically with paper or wood mulch material over a disturbed or unprotected topsoil surface to provide vegetative protection of soil from the erosive forces of storm water run-off. Hydro-mulch/seeding stabilization is an effective and feasible practice in areas where construction activities are complete increasing the chances that the grass cover will have the opportunity to become established. This measure requires maintenance such as the placement of topsoil and frequent watering to promote sod growth.

**Vegetative buffer strips** - areas where vegetation has been left undisturbed or where vegetation has been re-established, typically in long, narrow strips. Buffer strip areas retard the speed of storm water runoff, promote sediment filtration, increase ground infiltration, and improve site aesthetics. Vegetative buffer strips are extremely effective on steep, unstable slopes, or within floodplains, and along the bank slopes of waterways

**Paved or impervious surfaces** - provides permanent stabilization by protecting soil from exposure of impact erosion by rainfall with a layer of concrete, asphalt or other impervious cover.

**Preservation of mature vegetation** - provides a natural buffer zone and promotes improved storm water run-off quality by helping minimize topsoil erosion as well as providing cost effective aesthetic benefits. Established, mature vegetation can withstand and tolerate heavier storm events than newly planted vegetation, due to a deeper, more established root system. It is necessary that preservation of existing, mature vegetation be planned for in advance of site construction. Areas to be preserved should be clearly marked and possibly even barricaded to prevent damage during construction.

Permanent Stabilization Practices:	When Implemented:	Located:	Purpose:	In Use:
Permanent Vegetation (i.e. grasses, shrubbery, trees)	Installed during the last phase of site development	To be located throughout site, per plan	Installation of permanent vegetation is a method of reducing and preventing soil erosion, improved infiltration and increases site aesthetics.	YES
Mulching	Installed during the last phase of site development	N/A	Mulching is utilized to reduce topsoil erosion and to prevent soil water loss. This method can be used in planted/landscaped areas to prevent soil movement and water loss until vegetation is well established.	NO
Geo-textiles	Installed during the last phase of site development	To be located in areas of significant soil	Geo-textiles are utilized to reduce soil erosion and promote vegetation growth in high slope and/or high water flow areas.	NO
Sod Stabilization	Installed during the last phase of site development	To be located throughout the site, per landscaping plan	Sod stabilization is used to establish a complete and instant vegetative ground cover in an effort to prevent topsoil erosion.	YES
Hydro- mulch/Seeding	Installed during the last phase of site development	To be used throughout the site, per landscaping plan	Hydro-mulch/seeding stabilization is used to establish a complete vegetative ground cover in an effort to prevent topsoil erosion.	YES
Vegetative Buffer Strips	Installed during the last phase of site development	To be located at perimeter of site	Vegetative buffer strips will be utilized throughout the site for both drainage and aesthetic purposes, as well as for the secondary benefits of improved water quality due to sediment deposition and improved infiltration.	YES
Paved and/or Impervious Surfaces	Installed during the last phase of site development	Throughout the site	Areas where structural concrete are located within the site; minimize and prevent erosion at those locations	YES
Preservation of Existing Mature Vegetation	Installed during the last phase of site development	Located at perimeters of site	Desirable existent mature vegetation (i.e. under-story) is to be preserved throughout the site to promote water quality via sediment deposition and improved infiltration.	YES

### 7-TCEQ - 0600 Attachments

**Permanent Stormwater Section** 



### **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:

executive director approval. The application was prepared by:
Print Name of Customer/Agent: Marisa Keiser, PE
Date: August 4, 2025
Signature of Customer/Agent

Marisa Veiser

Regulated Entity Name: O'Reilly Auto Parts

### 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.
	<ul> <li>The site will be used for low density single-family residential development and has 20% or less impervious cover.</li> <li>The site will be used for low density single-family residential development but has</li> </ul>
	more than 20% impervious cover. $\square$ 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 multifamily 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.
	<ul> <li>□ 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.</li> <li>□ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.</li> <li>□ The site will not be used for multi-family residential developments, schools, or small business sites.</li> </ul>
6.	

	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.
	<ul> <li>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.</li> <li>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.</li> </ul>
8.	<b>Attachment D - BMPs for Surface Streams</b> . 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.
	<ul> <li>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.</li> <li>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.</li> </ul>
10.	<b>Attachment F - Construction Plans</b> . 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:
	<ul> <li>☑ Design calculations (TSS removal calculations)</li> <li>☑ TCEQ construction notes</li> <li>☑ All geologic features</li> <li>☑ All proposed structural BMP(s) plans and specifications</li> </ul>
	N/A

inspection,	t G - Inspection, Maintenance, Repair and Retrofit Plan. A plan for the maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and attached. The plan includes all of the following:
measur Signed Procedu retrofit	by the owner or responsible party ures for documenting inspections, maintenance, repairs, and, if necessary
⊠ N/A	
recognized	t H - Pilot-Scale Field Testing Plan. Pilot studies for BMPs that are not by the Executive Director require prior approval from the TCEQ. A plan for field testing is attached.
⊠ N/A	
of the mea and change and develo creation of	t I-Measures for Minimizing Surface Stream Contamination. A description sures that will be used to avoid or minimize surface stream contamination as in the way in which water enters a stream as a result of the construction pment is attached. The measures address increased stream flashing, the stronger flows and in-stream velocities, and other in-stream effects caused plated activity, which increase erosion that results in water quality in.
☐ N/A	
Responsibil	ity for Maintenance of Permanent BMP(s)
Responsibility for construction is cor	maintenance of best management practices and measures after nplete.
until such t entity havii owner's ass ownership responsible	nt is responsible for maintaining the permanent BMPs after construction ime as the maintenance obligation is either assumed in writing by anothering ownership or control of the property (such as without limitation, an sociation, a new property owner or lessee, a district, or municipality) or the of the property is transferred to the entity. Such entity shall then be a for maintenance until another entity assumes such obligations in writing or is transferred.
☐ N/A	
appropriate multiple sir or a non-re	he transfer of responsibility must be filed with the executive director at the e regional office within 30 days of the transfer if the site is for use as a ngle-family residential development, a multi-family residential development, sidential development such as commercial, industrial, institutional, schools, sites where regulated activities occur.
☐ N/A	

Attachment A - 20% or Less Impervious Cover Declaration, if project is multifamily residential, a school, or a small business and 20% or less impervious cover is proposed for the site

### **Attachment B - BMPs for Upgradient Stormwater**

All disturbed areas are provided with perimeter erosion controls. There will be no surface water originating upstream flowing across the site. Offsite storm water runoff bypasses the disturbed areas unless it is included in the BMP. Reference construction plan set.

### Attachment C - BMPs for On-Site Stormwater

Flows from the proposed commercial development will be treated by Jellyfish Device. The system will be used to prevent pollution of surface water or groundwater that originates on-site of flows off the site. Please see the attached construction plans.

### Attachment D - BMPs for Surface Streams

All disturbed areas are provided with perimeter erosion controls. This development will be provided with an on-site water quality system that will be used to prevent pollutants of surface water from entering surface streams. See Construction Plans.

### Attachment E - Request to Seal Features, if sealing a feature

### **Attachment F – Construction Plans**

The full set of Construction Plans are attached, included but not limited to the following:

- General Notes
- TCEQ SCS General Notes
- SWPPP
- Proposed Conditions Plan
- Erosion & Sedimentation Control Plan
- Erosion & Sedimentation Control Details
- Proposed Water Quality Device and Drainage Area Map

PROJECT INFORMATION:

ADDRESS: 5510 WILLIAMS DRIVE GEORGETOWN, WILLIAMSON COU

GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78633

SITE ACREAGE: 1.41 ACRES

PROPOSED USE: AUTOMOBILE PARTS AND ACCESSORY SALES, INDOOR

ZONING DISTRICT: C-3 GENERAL COMMERCIAL

PROPOSED LIMITS OF CONSTRUCTION AREA: 50466 SF (1.16 AC)

PROPOSED TOTAL IMPERVIOUS COVER: 29,211.90 SF (.67 AC)

LEGAL DESCRIPTION: LOT 4, FOUNTAINWOOD PLAZA, A SUBDIVISION IN WILLIAMSON COUNTY, TEXAS, ACCORDING TO THE

MAP OR PLAT THEREOF RECORDED IN CABINET CC, SLIDE -41, PLAT RECORDS OF WILLIAMSON COUNTY TEXAS

BASIS OF BEARING: NAD 83/93 HARN - TEXAS CENTRAL ZONE AS REFLECTED IN THE BEARING OF NORTH 04°04'21" WEST

CALCULATED BETWEEN THE MONUMENTS FOUND AT THE SOUTHWEST CORNER OF LOT 4 AND ON NORTH LINE OF LOT 3, AS

SHOWN ON THE PLAT OF FOUNTAINWOOD PLAZA, ACCORDING TO THE PLAT THEREOF RECORDED IN CABINET CC, SLIDE -41,

PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS

VERTICAL DATUM: FOR THIS PROJECT IS NAVD88 BASED UPON THE CONCRETE MONUMENT AT THE SOUTHEAST CORNER OF LOT 15, FOUNTAINWOOD ESTATES PHASE 7, AS SHOWN ON THE PLAT OF FOUNTAINWOOD PLAZA, AND HAVING AN

SITE BENCHMARK: NAIL SET IN CURB IN THE DRIVE AISLE ADJACENT TO THE NORTHWEST CORNER OF THE SUBJECT PROPERTY ELEVATION = 930.21 FEET

### FLOODPLAIN NOTE

FEDERAL FLOODPLAIN MAPS: 48491C0280E, WITH REVISION DATE OF SEPTEMBER 26, 2008 AS PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY SHOWS THIS SITE AS BEING WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.

### WATERSHED STATUS:

THIS PROJECT IS LOCATED IN THE NORTH FORK SAN GABRIEL RIVER WATERSHED.

### **AQUIFER NOTE:**

THIS PROJECT IS IN THE EDWARDS AQUIFER RECHARGE ZONE.

### GENERAL NOTES

1. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER, AND SUCCESSORS TO THE CURRENT PROPERTY OWNER, TO ENSURE THE SUBJECT PROPERTY AND ANY IMPROVEMENTS ARE MAINTAINED IN CONFORMANCE WITH THIS SITE DEVELOPMENT PLAN.

2. THIS DEVELOPMENT SHALL COMPLY WITH ALL STANDARDS OF THE UNIFIED DEVELOPMENT CODE (UDC), THE CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL, THE DEVELOPMENT MANUAL AND ALL OTHER APPLICABLE CITY STANDARDS.

3. THIS SITE DEVELOPMENT PLAN SHALL MEET THE UDC STORMWATER REQUIREMENTS.

4. ALL SIGNAGE REQUIRES A SEPARATE APPLICATION AND APPROVAL FROM THE INSPECTION SERVICES DEPARTMENT. NO SIGNAGE IS APPROVED WITH THE SITE DEVELOPMENT PLAN.

5. SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH THE UDC.

6. DRIVEWAYS WILL REQUIRE APPROVAL BY THE DEVELOPMENT ENGINEER OF THE CITY OF GEORGETOWN.

7. OUTDOOR AND SITE LIGHTING SHALL COMPLY WITH SECTION 7.04 OF THE UDC.

8. SCREENING OF MECHANICAL EQUIPMENT, DUMPSTERS AND PARKING SHALL COMPLY WITH CHAPTER 8 OF THE UDC. THE SCREENING IS SHOWN ON THE LANDSCAPE AND ARCHITECTURAL PLANS, AS APPLICABLE.

9. THE COMPANION LANDSCAPE PLAN HAS BEEN DESIGNED AND PLANT MATERIALS SHALL BE INSTALLED TO MEET ALL REQUIREMENTS OF THE UDC.

10.ALL MAINTENANCE OF REQUIRED LANDSCAPE SHALL COMPLY WITH THE MAINTENANCE STANDARDS OF CHAPTER 8

11.A SEPARATE IRRIGATION PLAN SHALL BE REQUIRED AT THE TIME OF BUILDING PERMIT APPLICATION. PROJECTS PROPOSING PUBLIC PARKLAND SHALL INCLUDE IRRIGATION PLANS AS PART OF THIS PLAN AS REQUIRED BY THE PARKLAND DEVELOPMENT GUIDELINES.

12.FIRE FLOW REQUIREMENTS OF 1500 PER MINUTE ARE BEING MET BY THIS PLAN.

13.ANY HERITAGE TREE NOTED ON THIS SITE DEVELOPMENT PLAN IS SUBJECT, IN PERPETUITY, TO THE MAINTENANCE, CARE, PRUNING AND REMOVAL REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE.

14.THE CONSTRUCTION PORTION OF THESE 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

15. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS IN EFFECT AT THE

16.WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC UTILITY LINES SHALL BE LOCATED ALONG THE STREET AND WITHIN THE SITE. WHERE EXISTING OVERHEAD INFRASTRUCTURE IS TO BE RELOCATED, IT SHALL BE RE-INSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER.

17.ALL ELECTRIC AND COMMUNICATION INFRASTRUCTURE SHALL COMPLY WITH UDC SECTION 13.06.

18.A (VARIANCE OR SPECIAL EXCEPTION) WAS APPROVED BY THE ZONING BOARD OF ADJUSTMENT ON (DATE) TO ALLOW (DESCRIBALLOWANCE) (IF APPLICABLE)

19.ALTERNATIVE IMPERVIOUS COVER STANDARDS HAVE BEEN APPROVED IN ACCORDANCE WITH SECTION 11.02 OF THE UDC FOR \_\_\_\_\_\_\_. (IF APPLICABLE)

20.SCREENING AND LOCATION OF OUTDOOR STORAGE SHALL COMPLY WITH SECTION 5.09 OF THE UDC. (IF APPLICABLE)

21.THE PROPERTY SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN. (FOR PROPERTIES LOCATED OVER THE EDWARDS AQUIFER RECHARGE ZONE)

22.A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER QUALITY REGULATIONS, WAS COMPLETED ON JUNE 3, 2025. ANY SPRINGS AND STREAMS AS IDENTIFIED IN THE GEOLOGIC ASSESSMENT ARE SHOWN



BOWMAN CONSULTING GROUP

TBPE FIRM NO. 14309

RELIMINARY - FOR INTERIM REVIEW ONLY

PRELIMINARY - FOR INTERIM REVIEW ONLY

THESE DOCUMENTS ARE FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES. THEY WERE PREPARED BY, OR UNDER THE SUPERVISION OF:

CITY OF GEORGETOWN PLANNING DEPARTMENT

**APPROVED BY:** 

MARISA KEISER, P.E.

Marisa Veiser

MARISA KEISER - PE# 141397 ON August 1, 2025

NUMBER DESCRIPTION

REVISE (R) CORRECTION (C) ADD (A) VOID (V) SHEET NO.'S

REVISE (R) CORRECTION (C) IMPERVIOUS COVER (SQ. FT.)/%

REVISE (R) CORRECTION (C) IMPERVIOUS COVER (SQ. FT.)/%

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REVISE (R)

# O'REILLY AUTO PARTS CONSTRUCTION PLANS

5510 WILLIAMS DRIVE GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78633



### VICINITY MAP

SCALE: 1" = 400'

SUBMITTAL DATE: AUGUST 4, 2025

DEVELOPER/OWNER:

O'REILLY AUTO PARTS

233 S PATTERSON AVENUE

SPRINGFIELD, MO

EMAIL: RHICKS28@OREILLYAUTO.COM

(417)427-8062 EXT:65680

CONTACT: RICK HICKS

ENGINEER:

BOWMAN CONSULTING GROUP, LTD.

807 LAS CIMAS PKWY, LAS CIMAS II, SUITE 350

AUSTIN, TEXAS 78746

512-327-1180

CONTACT: MARISA KEISER, PE

SURVEYOR:
WINDROSE
9360 CORPORATE DRIVE, STE 102
SELMA, TEXAS 78154
210-634-1565
CONTACT: PAUL JONES



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### CONSTRUCTION GENERAL

1. CONTRACTORS SHALL HAVE AN APPROVED SET OF PLANS WITH APPROVED REVISIONS ON SITE AT ALL TIMES. FAILURE TO HAVE APPROVED PLANS ON SITE MAY RESULT IN ISSUANCE OF

2. CONTACT OF UTILITY COMPANIES NEAR PROJECT: 2.1. SEWER, WATER, STORM & ROADS CITY OF GEORGETOWN 300-1 INDUSTRIAL AVE GEORGETOWN, TEXAS 78633

(NO CONTACT PROVIDED) 512-930-3640 2.2. NATURAL GAS ATMOS ENERGY CORF 5420 LBJ FREEWAY STE 1700 DALLAS, TX 75420 DAVID DOBERNECKI

512-310-3854 2.3. ELECTRIC PEDERNALES ELECT COOP, INC. 201 S. AVENUE F JOHNSON CITY, TEXAS 78636 (NO CONTACT PROVIDED)

2.4. FIBER OPTIC FRONTIER COMMUNICATIONS

512-869-2231 2.5. FIBER OPTIC OPTIMUM/ALTICE USA 911 S CHURCH ST, STE 5931 GEORGETOWN, TX 78626 DEAN COLE 512-931-2965

911 S CHURCH ST, STE 5931

GEORGETOWN, TX 78626

TREY VALDEZ

512-355-2131 CONTACT 811 SYSTEM FOR EXISTING WATER AND WASTEWATER LOCATIONS 48 HOURS PRIOR TO CONSTRUCTION

REFRESH ALL LOCATES BEFORE 14 DAYS - LOCATE REFRESH REQUESTS MUST INCLUDE A COPY OF YOUR 811 TICKET. TEXAS PIPELINE DAMAGE PREVENTION LAWS REQUIRE

THAT A LOCATE REFRESH REQUEST BE SUBMITTED BEFORE 14 DAYS, OR IF LOCATION MARKERS ARE NO LONGER VISIBLE. a. REPORT PIPELINE DAMAGE IMMEDIATELY – IF YOU WITNESS OR EXPERIENCE PIPELINE EXCAVATION DAMAGE, PLEASE CONTACT THE CITY OF GEORGETOWN BY PHONE 512-930-3640.

4. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR 48 HOURS BEFORE:

a. BEGINNING EACH PHASE OF CONSTRUCTION. CONTACT ASSIGNED CITY INSPECTOR.

ANY TESTING. CONTRACTOR SHALL PROVIDE QUALITY TESTING FOR ALL INFRASTRUCTURES TO BE ACCEPTED AND MAINTAINED BY THE CITY OF GEORGETOWN AFTER

c. PROOF ROLLING SUB-GRADE AND EVERY LIFT OF ROADWAY EMBANKMENT, IN-PLACE DENSITY TESTING OF EVERY BASE COURSE, AND ASPHALT CORES. ALL OF THIS TESTING MUST BE WITNESSED BY A CITY OF GEORGETOWN REPRESENTATIVE.

 d. CONNECTING TO THE EXISTING WATER LINES e. THE INSTALLATION OF ANY DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET ROW. THE METHOD OF PLACEMENT AND COMPACTION OF BACKFILL IN THE CITY'S ROW MUST BE APPROVED PRIOR TO THE START OF BACKFILL OPERATIONS.

4. ALL RESPONSIBILITY FOR THE ACCURACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY MUST

RELY ON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD 5. EXCESS SOIL SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE. NOTIFY THE CITY OF GEORGETOWN IF THE DISPOSAL SITE IS INSIDE THE CITY'S JURISDICTIONAL

BOUNDARIES.

6. BURNING IS PROHIBITED UNLESS THE GEORGETOWN FIRE DEPARTMENT ISSUE AN OPERATIONAL PERMIT INSIDE THE CITY LIMITS AND E.S.D. 8 FOR OUTDOOR BURNING.

7. DAYTIME MEANS THE TIME BETWEEN 7:00 A.M. AND 10:00 P.M. NO WORK IS TO BE PERFORMED AT NIGHTTIME, CHRISTMAS, NEW YEAR'S OR OR THANKSGIVING. THE CITY INSPECTOR RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER ALL WORK PERFORMED WITHOUT INSPECTION.

8. CONTACT THE CITY INSPECTOR 4 DAYS PRIOR TO WORK FOR APPROVAL TO SCHEDULE ANY INSPECTIONS ON WEEKENDS OR CITY HOLIDAYS.

NO BLASTING IS ALLOWED.

10. ANY CHANGES OR REVISIONS TO THESE PLANS MUST FIRST BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO CONSTRUCTION OF THE REVISION. ALL CHANGES AND REVISIONS SHALL USE REVISION CLOUDS TO HIGHLIGHT ALL REVISIONS AND CHANGES WITH EACH SUBMITTAL. REVISION TRIANGLE MARKERS AND NUMBERS SHALL BE USED TO MARK REVISIONS. ALL CLOUDS AND TRIANGLE MARKERS FROM PREVIOUS REVISIONS MUST BE REMOVED. REVISION INFORMATION SHALL BE UPDATED ON COVER SHEET AND AFFECTED PLAN SHEET TITLE BLOCK.

11. THE CONTRACTOR AND ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF GEORGETOWN ACCURATE "RECORD DRAWINGS" FOLLOWING THE COMPLETION OF ALL CONSTRUCTION. THESE "RECORD DRAWINGS" SHALL MEET THE SATISFACTION OF THE ENGINEERING DEPARTMENTS PRIOR TO FINAL ACCEPTANCE

12. THE CONTRACTOR WILL REIMBURSE THE CITY FOR ALL REPAIR AND/OR COST INCURRED AS A RESULT OF ANY DAMAGE TO ANY PUBLIC INFRASTRUCTURE WITHIN CITY EASEMENT OR PUBLIC RIGHT-OF-WAY, REGARDLESS OF THESE PLANS.

13. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT EASEMENTS. CLEANUP SHALL BE TO THE SATISFACTION OF THE ENGINEER OF RECORD AND CITY

14. CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS AND PROJECT ENGINEERING REFERENCE POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO THE PROPERTY OWNER.

15. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE: INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 1033 LA POSADA DR. SUITE 375, AUSTIN, TEXAS 78752-3832.

16. ALL MANHOLE FRAMES/COVERS AND WATER VALVE/METER BOXES MUST BE ADJUSTED TO FINISHED GRADE AT THE OWNER'S EXPENSE BY THE CONTRACTOR FOR CITY CONSTRUCTION INSPECTOR INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL CONTRACTOR SHALL BACKFILL AROUND MANHOLES AND VALVE BOXES WITH CLASS A CONCRETE.

17. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT WHERE NOT SPECIFICALLY COVERED IN THE PROJECT SPECIFICATIONS SHALL

CONFORM TO ALL CITY OF GEORGETOWN DETAILS AND CITY OF AUSTIN STANDARD SPECIFICATIONS.

18. PROJECT SPECIFICATIONS TAKE PRECEDENCE OVER PLANS AND SPECIAL CONDITIONS GOVERN OVER TECHNICAL SPECIFICATIONS.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT

20. THE CONTRACTOR MUST OBTAIN A CONSTRUCTION WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY

21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE SITE FREE FROM SOIL, SEDIMENT AND DEBRIS. CONTRACTOR WILL NOT REMOVE SOIL SEDIMENT OR DEBRIS FROM ANY AREA OR VEHICLE BY MEANS OF WATER. ONLY SHOVELING AND SWEEPING WILL BE ALLOWED. THE CONTRACTOR WILL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE. THE CONTRACTOR SHALL KEEP THE SITE AREA CLEAN AND MAINTAINED AT ALL TIMES, TO THE SATISFACTION OF THE CITY. THE SUBDIVISION (OR SITE) WILL NOT BE ACCEPTED (OR CERTIFICATE OF OCCUPANCY ISSUED) UNTIL THE SITE HAS BEEN CLEANED TO THE SATISIFACTION OF THE CITY.

22. TREES IN EXISTING ROW SHOULD BE PROTECTED OR NOTED IN THE PLANS TO BE REMOVED

### CONSTRUCTION SEQUENCE NOTES

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

1. REACH OUT TO THE CITY FOR PRE-CONSTRUCTION MEETING AND CONSTRUCTION PERMIT.

 SET-UP E/S CONTROLS AND TREE PROTECTION AND REACH OUT TO CITY FOR INSPECTION. SET UP TEMPORARY TRAFFIC CONTROLS

CONSTRUCT THE DRAINAGE PONDS AND STORM WATER FEATURES.

START UTILITY, ROAD, GRADING, FRANCHISE UTILITY AND ALL NECESSARY INFRASTRUCTURE CONSTRUCTION. [NOTE: PLEASE UPDATE AS PER THE PROJECT]

REQUEST FINAL WALKTHROUGH AND CONDUCT WALKTHROUGH WITH ENGINEER OF RECORD AND CITY DEPARTMENT. ENGINEER OF RECORD IS RESPONSIBLE TO PREPARE AND SUBMIT CLOSEOUT DOCUMENTS FOR PROJECT CLOSEOUT.

### EROSION CONTROL NOTES

THE WEATHER EVENT HAS PASSED.

THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES AND SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.

2. THE TEMPORARY SPOILS DISPOSAL SITE IS TO BE SHOWN IN THE EROSION CONTROL MAP.

ANY ON-SITE SPOILS DISPOSAL SHALL BE REMOVED PRIOR TO ACCEPTANCE UNLESS SPECIFICALLY SHOWN ON THE PLANS. THE DEPTH OF SPOIL SHALL NOT EXCEED 10

4. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE RESTORED WITH A MINIMUM OF 6 INCHES OF TOPSOIL AND COMPOST BLEND. THE TOPSOIL AND COMPOST BLEND SHALL CONSIST OF 75% TOPSOIL AND 25% COMPOST.

SEEDING FOR REESTABLISHING VEGETATION SHALL COMPLY WITH THE AUSTIN GROW GREEN GUIDE OR WILLIAMSON COUNTY'S PROTOCOL FOR SUSTAINABLE ROADSIDES (SPEC 164--WC001 SEEDING FOR EROSION CONTROL). RESEEDING VARIETIES OF BERMUDA SHALL NOT BE USED.

6. STABILIZED CONSTRUCTION ENTRANCE IS REQUIRED AT ALL POINTS WHERE CONSTRUCTION TRAFFIC IS EXITING THE PROJECT ONTO EXISTING PAVEMENT. LINEAR

CONSTRUCTION PROJECTS MAY REQUIRE SPECIAL CONSIDERATION, ROADWAYS SHALL REMAIN CLEAR OF SILT AND MUD.

8. IN THE EVENT OF INCLEMENT WEATHER THAT MAY RESULT IN A FLOODING SITUATION, THE CONTRACTOR SHALL REMOVE INLET PROTECTION MEASURES UNTIL SUCH TIME AS

'. TEMPORARY STOP SIGNS SHOULD BE INSTALLED AT ALL CONSTRUCTION ENTRANCES WHERE A STOP CONDITION DOES NOT ALREADY EXIST.

### WATER AND WASTEWATER GENERAL NOTES

ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AND ORGANIZATION ACCREDITED BY ANSI.

2. ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY STAMPED AS FOLLOWS:

WATER SERVICE "W" ON TOP OF CURB

WASTEWATER SERVICE "S" ON TOP OF CURB

VALVE "V" ON TOP OF CURB.

OPEN UTILITIES SHALL NOT BE PERMITTED ACROSS THE EXISTING PAVED SURFACES. WATER AND WASTEWATER LINES ACROSS THE EXISTING PAVED SURFACES SHALL BE BORED AND INSTALLED IN STEEL ENCASEMENT PIPES. BELL RESTRAINTS SHALL BE PROVIDED AT JOINTS.

4. INTERIOR SURFACES OF ALL DUCTILE IRON POTABLE OR RECLAIMED WATER PIPE SHALL BE CEMENT-MORTAR LINED AND SEAL COATED AS REQUIRED BY AWWA C104.

5. SAND, AS DESCRIBED IN AUSTIN SPECIFICATION ITEM 510 PIPE, SHALL NOT BE USED AS BEDDING FOR WATER AND WASTEWATER LINES. ACCEPTABLE BEDDING MATERIALS ARE PIPE BEDDING STONE, PEA GRAVEL AND IN LIEU OF SAND, A NATURALLY OCCURRING OR MANUFACTURED STONE MATERIAL CONFORMING TO ASTM C33 FOR STONE QUALITY AND MEETING THE FOLLOWING GRADATION SPECIFICATION:

SIEVE SIZE PERCENT RETAINED BY WEIGHT

40-85 95-100

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

SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY PERSONNEL. AT THE CONTRACTORS' REQUEST, AND IN HIS PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY OF GEORGETOWN NOT LESS THAN 24 HOURS AFTER THE TREATED LINE HAS BEEN FLUSHED OF THE CONCENTRATED CHLORINE SOLUTION AND CHARGED WITH WATER APPROVED BY THE CITY.

2. CITY PERSONNEL WILL OPERATE OR AUTHORIZE THE CONTRACTOR TO OPERATE ALL WATER VALVES THAT WILL PASS THROUGH THE CITY'S POTABLE WATER. THE CONTRACTOR MAY BE FINED, INCLUDING ADDITIONAL THEFT OF WATER FINES, IF A WATER VALVE IS OPERATED IN AN UNAUTHORIZED MANNER, REGARDLESS OF WHO

THE CONTRACTOR IS HEREBY NOTIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING UTILITY LINES MAY HAVE TO OCCUR AT OFF-PEAK HOURS. SUCH HOURS ARE USUALLY OUTSIDE NORMAL WORKING HOURS AND POSSIBLY BETWEEN 12 AM AND 6 AM AFTER COORDINATING WITH CITY CONSTRUCTION INSPECTORS AND INFORMING AFFECTED PROPERTIES.

PRESSURE TAPS OR HOT TAPS SHALL BE IN ACCORDANCE WITH CITY OF GEORGETOWN STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION AND SHALL FURNISH, INSTALL AND AIR TEST THE SLEEVE AND VALVE. A CITY OF GEORGETOWN INSPECTOR MUST BE PRESENT WHEN THE CONTRACTOR MAKES A TAP, AND/OR ASSOCIATED TESTS. A MINIMUM OF TWO (2) WORKING DAYS NOTICE IS REQUIRED. "SIZE ON SIZE" TAPS SHALL NOT BE PERMITTED UNLESS MADE BY THE USE OF AN APPROVED FULL-CIRCLE GASKETED TAPPING SLEEVE.

CONCRETE THRUST BLOCKS SHALL BE PLACED BEHIND AND UNDER ALL TAP SLEEVES A MINIMUM OF 24 HOURS PRIOR TO THE BRANCH BEING PLACED INTO SERVICE. THRUST BLOCKS SHALL BE INSPECTED PRIOR TO BACKFILL

FIRE HYDRANTS ON MAINS UNDER CONSTRUCTION SHALL BE SECURELY WRAPPED WITH A BLACK POLY WRAP BAG AND TAPED INTO PLACE. THE POLY WRAP SHALL BE REMOVED WHEN THE MAINS ARE ACCEPTED AND PLACED INTO SERVICE.

THRUST BLOCKS OR RESTRAINTS SHALL BE IN ACCORDANCE WITH THE CITY OF GEORGETOWN STANDARD SPECIFICATIONS AND REQUIRED AT ALL FITTINGS PER DETAIL OR MANUFACTURER'S RECOMMENDATION. ALL FITTINGS SHALL HAVE BOTH THRUST BLOCKS AND RESTRAINTS.

ALL DEAD END WATER MAINS SHALL HAVE "FIRE HYDRANT ASSEMBLY" OR "BLOW-OFF VALVE AND THRUST BLOCK" OR "BLOW-OFF VALVE AND THRUST RESTRAINTS". THRUST RESTRAINTS SHALL BE INSTALLED ON THE MINIMUM LAST THREE PIPE LENGTHS (STANDARD 20' LAYING LENGTH). ADDITIONALL THRUST RESTRAINTS MAY BE REQUIRED BASED UPON THE MANUFACTURERS RECOMMENDATION AND/OR ENGINEER'S DESIGN

PIPE MATERIAL FOR PUBLIC WATER MAINS SHALL BE PVC (AWWA C900-DR14 MIN. 305 PSI PRESSURE RATING). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200PSI, AND SDR-(9)). COPPER PIPES AND FITTINGS ARE NOT ALLOWED IN THE PUBLIC RIGHT OF ALL PLASTIC PIPES FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-PW).

ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C115/C151 PRESSURE CLASS 350).

11. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE.

12. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE COORDINATED WITH THE PUBLIC WORKS DEPARTMENT.

13. ALL WATER METER BOXES SHALL MEET THE CITY STANDARDS. SEE DETAILS SHEET #20

14. ALL WATER VALVE COVERS ARE TO BE PAINTED BLUE.

SECTION NO 506 5

13. CURVILINEAR WASTEWATER DESIGN LAYOUT IS NOT PERMITTED.

MANDREL TESTING SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. MANHOLES SHALL BE COATED PER CITY OF GEORGETOWN SPL WW-511 (RAVEN 405 OR SPRAYWALL). PENETRATIONS TO EXISTING WASTEWATER MANHOLES REQUIRE THE CONTRACTOR TO RECOAT THE ENTIRE MANHOLE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATIONS

16. RECLAIMED AND RECYCLED WATER LINE SHALL BE CONSTRUCTED OF "PURPLE PIPE." ALL RECLAIMED AND RECYCLED WATER VALVE COVERS SHALL BE SQUARE AND

PAINTED PURPLE.

### 17. FORCE MAIN PIPES NEED TO HAVE SWEEPING WYES FOR JOINTS.

### STREET AND DRAINAGE NOTES

CLOSURE OF THE DRIVEWAY

THE CITY OF GEORGETOWN HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA). IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE COMPLIANCE WITH ALL LEGISTATION RELATED TO ACCESSIBLITY WITHIN THE LIMITS OF CONSTRUCTION SHOWN IN THESE PLANS. ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND TEXAS ACCESSIBILITY STANDARS (TAS).

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

A MINIMUM OF 6" OF TOPSOIL SHALL BE PLACED BETWEEN THE CURB AND RIGHT-OF-WAY AND IN ALL DRAINAGE CHANNELS EXCEPT CHANNELS CUT IN STABLE ROCK.

DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT, INCLUDING GAS, ELECTRIC TELEPHONE, CABLE TV, ETC., SHALL BE A MINIMUM OF 36" BELOW SUBGRADE.

ALL DRAINAGE PIPE IN PUBLIC RIGHT OF WAY OR EASEMENTS SHALL BE REINFORCED CONCRETE PIPE MINIMUM CLASS III OF TONGUE AND GROOVE OR O-RING JOINT DESIGN. CORRUGATED METAL PIPE IS NOT ALLOWED IN PUBLIC RIGHT OR WAY OR EASEMENTS.

6. ALL STRIPING, WITH THE EXCEPTION OF STOP BARS, CROSS WALKS, WORDS AND ARROWS, IS TO BE TYPE II (WATER BASED). STOP BARS, CROSS WALKS, WORDS AND ARROWS REQUIRE TYPE I THERMOPLASTIC.

MANHOLE FRAMES, COVERS, VALVES, CLEAN-OUTS, ETC. SHALL BE RAISED TO GRADE PRIOR TO FINAL PAVEMENT CONSTRUCTION.

8. A STOP BAR SHALL BE PLACED AT ALL STOP SIGN LOCATIONS.

9. THE GEOTECHNICAL ENGINEER SHALL INSPECT THE SUBGRADE FOR COMPLIANCE WITH THE DESIGN ASSUMPTIONS MADE DURING PREPARATION OF THE SOILS REPORT. ANY ADJUSTMENTS THAT ARE REQUIRED SHALL BE MADE THROUGH REVISIONS OF THE APPROVED CONSTRUCTION PLANS.

10. GEOTECHNICAL INVESTIGATION INFORMATION AND PAVEMENT RECOMMENDATIONS WERE PROVIDED BY ALPHA TESTING. REPORT NUMBER A230982. SEE PAVEMENT PLAN FOR REFERENCE.

A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL, CITY OF GEORGETOWN STANDARD DETAILS AND TEXAS DEPARTMENT OF TRANSPORTATION CRITERIA, SHALL BE SUBMITTED TO THE CITY OF GEORGETOWN FOR REVIEW AND APPROVAL PRIOR TO ANY PARTIAL OR COMPLETE ROADWAY CLOSURES. TRAFFIC CONTROL PLANS MUST BE SITE SPECIFIC AND SIGNED AND SEALED BY A REGISTERED

12. TEMPORARY ROCK CRUSHING IS NOT ALLOWED. ALL SOURCES OF FLEXIBLE BASE MATERIAL ARE REQUIRED TO BE APPROVED BY THE CITY. PRIOR TO BASE PLACEMENT ALL CURRENT TRIAXIAL TEST REPORTS FOR PROPOSED STOCK PILES ARE TO BE SUBMITTED TO THE CITY CONSTRUCTION INSPECTOR FOR REVIEW AND APPROVAL.

13. AT ROAD INTERSECTIONS THAT HAVE A VALLEY GUTTER, THE CROWN TO THE INTERSECTING ROAD WILL BE CULMINATED AT A DISTANCE OF 40 FEET FROM THE INTERSECTING

14. NO PONDING OF WATER SHALL BE ALLOWED TO COLLECT ON OR NEAR THE INTERSECTION OF PRIVATE DRIVEWAYS AND PUBLIC STREETS. RECONSTRUCTION OF THE

DRIVEWAY APPROACH SHALL BE AT THE CONTRACTOR'S EXPENSE. 15. IN A MANNER WHICH RETAINS OPERATIONS OF NOT LESS THAN HALF OF THE DRIVEWAY TO REMAIN OPEN AT ALL TIMES. FULL CLOSURE OF SUCH DRIVEWAY CAN BE CONSIDERED WITH WRITTEN AUTHORIZATION OBTAINED BY THE CONTRACTOR FROM ALL PROPERTY OWNERS AND ACCESS EASEMENT RIGHT HOLDERS ALLOWING THE FULL

20. CONTRACTOR MUST CLEAR FIVE (5) FEET BEYOND ALL PUBLIC RIGHT OF WAY TO PREVENT FUTURE VEGETATIVE GROWTH INTO THE SIDEWALK AREAS. SLOPE OF NATURAL GROUND ADJACENT TO THE PUBLIC RIGHT OF WAY SHALL NOT EXCEED 3:1 IF A 3:1 SLOPE IS NOT POSSIBLE, SLOPE PROTECTION OR RETAINING WALL MUST BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO FINAL ACCEPTANCE.

22. THERE SHALL BE NO WATER, WASTEWATER OR DRAINAGE APPURTENANCES, INCLUDING BUT NOT LIMITED TO VALVES, FITTINGS, METERS, CLEAN-OUTS, MANHOLES, OR VAULTS IN ANY DRIVEWAY, SIDEWALK, TRAFFIC OR PEDESTRIAN AREA.

23. PUBLIC SIDEWALKS SHALL NOT USE CURB INLETS AS PARTIAL WALKING SURFACE. SIDEWALKS SHALL NOT USE TRAFFIC CONTROL BOXES, METERS, CHECK VALVE VAULTS, COMMUNICATION VAULTS, OR OTHER BURIED OR PARTIALLY BURIED INFRASTRUCTURE AS A VEHICULAR OR PEDESTRIAN SURFACE.

24. ALL WET UTILITIES SHALL BE INSTALLED AND ALL DENSITIES MUST HAVE PASSED INSPECTION(S) PRIOR TO THE INSTALLATION OF DRY UTILITIES.

25. DRY UTILITIES SHALL BE INSTALLED AFTER SUBGRADE IS CUT AND BEFORE THE FIRST COURSE OF NO TRENCHING COMPACTED BASE. IF NECESSARY DRY UTILITIES INSTALLED AFTER FIRST COURSE BASE SHALL BE BORED ACROSS THE FULL WIDTH OF THE PUBLIC RIGHT-OF-WAY.

26. A MINIMUM OF SEVEN (7) DAYS OF CURE TIME IS REQUIRED FOR HMAC PRIOR TO THE INTRODUCTION OF VEHICULAR TRAFFIC TO ALL STREETS

### TRENCH SAFETY NOTES

1. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT ARE DESCRIBED IN ITEM 509S "TRENCH SAFETY SYSTEMS" OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND SHALL BE IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATION SAFETY AND HEALTH ADMINISTRATION REGULATIONS.

### GRADING NOTES

1. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY

2. THE CONTRACTOR SHALL CONSTRUCT EARTHEN EMBANKMENTS WITH SLOPES NO STEEPER THAN 3:1 AND COMPACT SOIL TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD SPECIFICATIONS.

3. AREAS OF SOIL DISTURBANCE ARE LIMITED TO GRADING AND IMPROVEMENTS SHOWN. ALL OTHER AREAS WILL NOT BE DISTURBED

### TEXAS COMMISSION ON ENVIRONMENTAL QUALITY WATER POLLUTION ABATEMENT PLAN GENERAL CONSTRUCTION NOTES EDWARDS AQUIFER PROTECTION PROGRAM CONSTRUCTION NOTES - LEGAL DISCLAIMER

THE FOLLOWING/LISTED "CONSTRUCTION NOTES" ARE INTENDED TO BE ADVISORY IN NATURE ONLY AND DO NOT CONSTITUTE AN APPROVAL OR CONDITIONAL APPROVAL BY THE EXECUTIVE DIRECTOR (ED), NOR DO THEY CONSTITUTE A COMPREHENSIVE LISTING OF RULES OR CONDITIONS TO BE FOLLOWED DURING CONSTRUCTION. FURTHER ACTIONS MAY BE REQUIRED TO ACHIEVE COMPLIANCE WITH TCEQ REGULATIONS FOUND IN TITLE 30. TEXAS ADMINISTRATIVE CODE (TAC). CHAPTERS 213 AND 217, AS WELL AS LOCAL ORDINANCES AND REGULATIONS PROVIDING FOR THE PROTECTION OF WATER QUALITY, ADDITIONALLY, NOTHING CONTAINED IN THE FOLLOWING/LISTED "CONSTRUCTION NOTES" RESTRICTS THE POWERS OF THE ED, THE COMMISSION OR ANY OTHER GOVERNMENTAL ENTITY TO PREVENT, CORRECT, OR CURTAIL ACTIVITIES THAT RESULT OR MAY RESULT IN POLLUTION OF THE EDWARDS AQUIFER OR HYDROLOGICALLY CONNECTED SURFACE WATERS. THE HOLDER OF ANY EDWARDS AQUIFER PROTECTION PLAN CONTAINING "CONSTRUCTION NOTES" IS STILL RESPONSIBLE FOR COMPLIANCE WITH TITLE 30, TAC, CHAPTERS 213 OR ANY OTHER APPLICABLE TCEQ REGULATION, AS WELL AS ALL CONDITIONS OF AN EDWARDS AQUIFER PROTECTION PLAN THROUGH ALL PHASES OF PLAN IMPLEMENTATION. FAILURE TO COMPLY WITH ANY CONDITION OF THE FD'S APPROVAL. WHETHER OR NOT IN CONTRADICTION OF ANY "CONSTRUCTION NOTES," IS A VIOLATION OF TCEQ REGULATIONS AND ANY VIOLATION IS SUBJECT TO ADMINISTRATIVE RULES, ORDERS, AND PENALTIES AS PROVIDED UNDER TITLE 30, TAC § 213.10 (RELATING TO ENFORCEMENT). SUCH VIOLATIONS MAY ALSO BE SUBJECT TO CIVIL PENALTIES AND INJUNCTION. THE FOLLOWING/LISTED "CONSTRUCTION NOTES" IN NO WAY REPRESENT AN APPROVED EXCEPTION BY THE ED TO ANY PART OF TITLE 30 TAC, CHAPTERS 213 AND 217, OR ANY OTHER TCEQ APPLICABLE REGULATION

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:

- THE NAME OF THE APPROVED PROJECT;

THE ACTIVITY START DATE; AND - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.

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

IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TOEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED. DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.

NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE

PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

6. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS. SENSITIVE FEATURES, ETC.

7. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.

8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.

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. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14 I H DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21 ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14 IT DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS

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

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

CONTACT: AUSTIN REGIONAL OFFICE 12100 PARK 35 CIRCLE, BUILDING A AUSTIN, TEXAS 78753-1808

§217.54. CRITERIA FOR LAYING PIPE (A) PIPE EMBEDMENT.

(B) COMPACTION.

(D) TRENCH WIDTH.

PHONE: (512) 339-2929

FAX: (512) 339-3795

(1) A RIGID PIPE MUST BE LAID WITH BEDDING, HAUNCHING, AND INITIAL BACKFILL THAT WILL MEET THE APPROPRIATE STANDARDS AND WILL SUPPORT THE ANTICIPATED LOAD. THE BEDDING CLASSES THAT ARE ALLOWED ARE A, B, OR C, AS DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) C 12, AMERICAN NATIONAL STANDARDS

INSTITUTE (ANSI) A 106.2, WATER ENVIRONMENT FEDERATION MANUAL OF PRACTICE NO. 9, OR AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) MOP 37. (2) A FLEXIBLE PIPE MUST BE LAID WITH BEDDING, HAUNCHING, AND INITIAL BACKFILL THAT WILL MEET THE APPROPRIATE STANDARDS AND WILL SUPPORT THE ANTICIPATED LOAD. THE BEDDING CLASSES THAT ARE ALLOWED ARE IA, IB, II, OR III, AS DESCRIBED IN ASTM D-2321 OR ANSI K65.171DEBRIS, LARGE CLODS, STONES THAT ARE GREATER THAN SIX INCHES IN DIAMETER, ORGANIC MATTER, AND OTHER UNSTABLE MATERIALS ARE PROHIBITED AS BEDDING, HAUNCHING, OR

(3) BACKFILL MUST NOT DISTURB THE ALIGNMENT OF A COLLECTION SYSTEM PIPE.

(4) IF A FRACTURE, FAULT ZONE, CAVE, OR SOLUTIONAL MODIFICATION TO THE ROCK STRATA THAT WOULD PREVENT PIPE BEDDING IS ENCOUNTERED DURING CONSTRUCTION, AN OWNER MUST HALT CONSTRUCTION UNTIL AN ENGINEER PREPARES A WRITTEN REPORT, WHICH MUST BE SUBMITTED WITH THE FINAL ENGINEERING REPORT, DETAILING HOW CONSTRUCTION WILL ACCOMMODATE THESE SITE CONDITIONS.

(1) COMPACTION OF THE PIPE EMBEDMENT MUST MEET THE MANUFACTURER'S RECOMMENDATIONS FOR THE COLLECTION SYSTEM PIPES USED IN A PROJECT.COMPACTION OF THE PIPE EMBEDMENT MUST PROVIDE THE MODULUS OF SOIL REACTION FOR THE BEDDING MATERIAL NECESSARY TO ENSURE A COLLECTION SYSTEM PIPE'S STRUCTURAL INTEGRITY AS REQUIRED BY §217.53 OF THIS TITLE (RELATING TO PIPE DESIGN). THE PLACEMENT OF THE BACKFILL ABOVE A PIPE MUST NOT AFFECT THE STRUCTURAL INTEGRITY

OF A PIPE.

(C) EMBEDMENT THICKNESS.

(1) A MINIMUM CLEARANCE OF 6.0 INCHES BELOW AND ON EACH SIDE OF THE BELL OF ALL PIPES TO THE TRENCH WALLS AND FLOOR IS REQUIRED. (2) THE EMBEDMENT MATERIAL USED FOR HAUNCHING AND INITIAL BACKFILL MUST BE INSTALLED TO A MINIMUM DEPTH OF 12 INCHES ABOVE THE CROWN OF A PIPE.

(1) THE WIDTH OF A TRENCH MUST ALLOW A PIPE TO BE LAID AND JOINTED PROPERLY AND MUST ALLOW THE BACKFILL TO BE PLACED AND COMPACTED AS NEEDED. (2) THE MAXIMUM AND MINIMUM TRENCH WIDTH NEEDED FOR SAFETY AND A PIPE'S STRUCTURAL INTEGRITY MUST BE INCLUDED IN THE ENGINEERING REPORT.

(3) THE WIDTH OF A TRENCH MUST ALLOW PROPER AND SAFE PLACEMENT AND COMPACTION OF HAUNCHING MATERIALS IN ACCORDANCE WITH THE STANDARDS IN SUBSECTION

(A) OF THIS SECTION. (4) THE SPACE BETWEEN A PIPE AND A TRENCH WALL MUST BE WIDER THAN THE COMPACTION EQUIPMENT USED IN THE PIPE ZONE.



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

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MARISA KEISER 141397 Warsa Yeise August 4, 2025 LB

DESIGN | DRAWN JOB No. 250519-01-002 SHEET

### **TEXAS COMMISSION ON ENVIRONMENTAL QUALITY ORGANIZED SEWAGE COLLECTION SYSTEM** GENERAL CONSTRUCTION NOTES

### EDWARDS AQUIFER PROTECTION PROGRAM CONSTRUCTION NOTES - LEGAL DISCLAIMER

THE FOLLOWING/LISTED "CONSTRUCTION NOTES" ARE INTENDED TO BE ADVISORY IN NATURE ONLY AND DO NOT CONSTITUTE AN APPROVAL OR CONDITIONAL APPROVAL BY THE EXECUTIVE DIRECTOR, NOR DO THEY CONSTITUTE A COMPREHENSIVE LISTING OF RULES OR CONDITIONS TO BE FOLLOWED DURING CONSTRUCTION. FURTHER ACTIONS MAY BE REQUIRED TO ACHIEVE COMPLIANCE WITH TCEQ REGULATIONS FOUND IN TITLE 30, TEXAS ADMINISTRATIVE CODE, CHAPTERS 213 AND 217, AS WELL AS LOCAL ORDINANCES AND REGULATIONS PROVIDING FOR THE PROTECTION OF WATER QUALITY. ADDITIONALLY, NOTHING CONTAINED IN THE FOLLOWING/LISTED "CONSTRUCTION NOTES" RESTRICTS THE POWERS OF THE EXECUTIVE DIRECTOR, THE COMMISSION OR ANY OTHER GOVERNMENTAL ENTITY TO PREVENT, CORRECT, OR CURTAIL ACTIVITIES THAT RESULT OR MAY RESULT IN POLLUTION OF THE EDWARDS AQUIFER OR HYDROLOGICALLY CONNECTED SURFACE WATERS. THE HOLDER OF ANY EDWARDS AQUIFER PROTECTION PLAN CONTAINING "CONSTRUCTION NOTES" IS STILL RESPONSIBLE FOR COMPLIANCE WITH TITLE 30, TEXAS ADMINISTRATIVE CODE, CHAPTERS 213 OR ANY OTHER APPLICABLE TCEQ REGULATION, AS WELL AS ALL CONDITIONS OF AN EDWARDS AQUIFER PROTECTION PLAN THROUGH ALL PHASES OF PLAN IMPLEMENTATION. FAILURE TO COMPLY WITH ANY CONDITION OF THE EXECUTIVE DIRECTOR'S APPROVAL, WHETHER OR NOT IN CONTRADICTION OF ANY "CONSTRUCTION NOTES," IS A VIOLATION OF TCEQ REGULATIONS AND ANY VIOLATION IS SUBJECT TO ADMINISTRATIVE RULES, ORDERS, AND PENALTIES AS PROVIDED UNDER TITLE 30, TEXAS ADMINISTRATIVE CODE § 213.10 (RELATING TO ENFORCEMENT). SUCH VIOLATIONS MAY ALSO BE SUBJECT TO CIVIL PENALTIES AND INJUNCTION. THE FOLLOWING/LISTED "CONSTRUCTION NOTES" IN NO WAY REPRESENT AN APPROVED EXCEPTION BY THE EXECUTIVE DIRECTOR TO ANY PART OF TITLE 30 TEXAS ADMINISTRATIVE CODE, CHAPTERS 213 AND 217, OR ANY OTHER TCEQ APPLICABLE REGULATION.

- THIS ORGANIZED SEWAGE COLLECTION SYSTEM (SCS) MUST BE CONSTRUCTED IN ACCORDANCE WITH 30 TEXAS ADMINISTRATIVE CODE (TAC) §213.5(C), THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES AND ANY LOCAL GOVERNMENT STANDARD SPECIFICATIONS.
- ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROPOSED REGULATED PROJECT MUST BE PROVIDED WITH COPIES OF THE SCS 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.
- A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE PRESIDING TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE: - THE NAME OF THE APPROVED PROJECT;
  - THE ACTIVITY START DATE; AND - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.

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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

PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

- 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 TCEQ 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 AND THE APPLICANT MUST 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.
- 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 6 INCHES.
- 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.
- 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 ON PLAN SHEET \_\_ OF \_\_.

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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.

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).

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

- 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
- IF NO STUB-OUT IS PRESENT AN ALTERNATE METHOD OF JOINING LATERALS IS SHOWN IN THE DETAIL ON PLAN SHEET \_\_ OF \_\_. (FOR POTENTIAL FUTURE
- THE PRIVATE SERVICE LATERAL STUB-OUTS MUST BE INSTALLED AS SHOWN ON THE PLAN AND PROFILE SHEETS ON PLAN SHEET \_\_ OF \_\_ AND MARKED AFTER BACKFILLING AS SHOWN IN THE DETAIL ON PLAN SHEET \_\_ OF \_\_.
- 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.
- 14. SEWER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW

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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).

SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN-OUT, IT MUST BE

15. 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

(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 GREATER THAN THE PRESSURE EXERTED SQUARE INCH (PSI) BY GROUNDWATER ABOVE THE (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:

> $T = \frac{0.085 \times D \times K}{1}$ EQUATION C.3

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

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

(H) A MANHOLE PASSES THE TEST IF AFTER 2.0 MINUTES AND WITH

CLOSED, THE VACUUM IS AT LEAST 9.0 INCHES OF

SAN ANTONIO REGIONAL OFFICE

PHONE (210) 490-3096

FAX (210) 545-4329

SAN ANTONIO, TEXAS 78233-4480

SQUARE FOOT INTERNAL SURFACE

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17. 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

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION

12100 PARK 35 CIRCLE, BUILDING | 14250 JUDSON ROAD

PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

(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:** 

PIPE DIAMETER (INCHES)	MINIMUM TIME (SECONDS)	MAXIMUM LENGTH FOR MINIMUM TIME (FEET)	TIME FOR LONGER LENGTH (SECONDS/FO OT)
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

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

(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

LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT INSTEAD OF FOLLOWING THE PROCEDURE OUTLINED IN THIS SECTION.

(F) WASTEWATER COLLECTION SYSTEM PIPES WITH A 27 INCH OR

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

(2) INFILTRATION/EXFILTRATION TEST. (A) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC EXCEED 50 GALLONS PER INCH OF HEAD TEST, MUST NOT 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 PIPES ARE INSTALLED BELOW THE EXFILTRATION TEST WHEN 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

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OR AT LEAST TWO FEET ABOVE EXISTING GROUNDWATER LEVEL. WHICHEVER IS GREATER.

WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN

DIAMETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD

OF THE INSIDE

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(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 UNDERTAKE REMEDIAL ACTION IN ORDER TO REDUCE

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 (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 THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A PIPE, AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTMS, AMERICAN

NATIONAL STANDARDS INSTITUTE, OR ANY RELATED APPENDIX. (II) IF A MANDREL SIZING DIAMETER IS NOT SPECIFIED IN THE 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

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 (III) A BARREL SECTION LENGTH MUST EQUAL AT LEAST 75%

(IV) EACH SIZE MANDREL MUST USE A SEPARATE PROVING AN ADJUSTABLE OR FLEXIBLE MANDREL IS PROHIBITED. A TEST MAY NOT USE TELEVISION INSPECTION AS A

DIAMETER OF A PIPE.

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

(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.

16. 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 VACUUM TESTING, OR OTHER METHOD APPROVED BY THE EXECUTIVE DIRECTOR. (1) HYDROSTATIC TESTING.

(A) THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING OR ANY METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH (B) TO PERFORM A HYDROSTATIC EXFILTRATION TEST, AN OWNER WASTEWATER PIPES COMING INTO A MANHOLE WITH AN INTERNAL PIPE PLUG, FILL

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

(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

(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 EXTERNAL CLAMPS THAT SECURE A TEST COVER TO TIGHTEN THE 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 RECOMMENDATIONS. (F) THERE MUST BE A VACUUM OF 10 INCHES OF MERCURY INSIDE

A MANHOLE TO PERFORM A VALID TEST.

TCEQ-0596 (Rev. July 15, 2015)

OFF.

ALL VALVES

COLLECTION SYSTEM.

**AUSTIN REGIONAL OFFICE** 

PHONE (512) 339-2929

FAX (512) 339-3795

MERCURY.

Page 8 of 8

§217.54. CRITERIA FOR LAYING PIPE

(1) A RIGID PIPE MUST BE LAID WITH BEDDING, HAUNCHING, AND INITIAL BACKFILL THAT WILL MEET THE APPROPRIATE STANDARDS AND WILL SUPPORT THE ANTICIPATED LOAD. THE BEDDING CLASSES THAT ARE ALLOWED ARE A, B, OR C, AS DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) C 12, AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A 106.2, WATER ENVIRONMENT FEDERATION MANUAL OF PRACTICE NO. 9, OR AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) MOP 37.

Page 1 of 8

(2) A FLEXIBLE PIPE MUST BE LAID WITH BEDDING, HAUNCHING, AND INITIAL BACKFILL THAT WILL MEET THE APPROPRIATE STANDARDS AND WILL SUPPORT THE ANTICIPATED LOAD. THE BEDDING CLASSES THAT ARE ALLOWED ARE IA, IB, II, OR III, AS DESCRIBED IN ASTM D-2321 OR ANSI K65.171DEBRIS, LARGE CLODS, STONES THAT ARE GREATER THAN SIX INCHES IN DIAMETER, ORGANIC MATTER, AND OTHER UNSTABLE MATERIALS ARE PROHIBITED AS BEDDING, HAUNCHING, OR

(3) BACKFILL MUST NOT DISTURB THE ALIGNMENT OF A COLLECTION SYSTEM PIPE.

(4) IF A FRACTURE, FAULT ZONE, CAVE, OR SOLUTIONAL MODIFICATION TO THE ROCK STRATA THAT WOULD PREVENT PIPE BEDDING IS ENCOUNTERED DURING CONSTRUCTION, AN OWNER MUST HALT CONSTRUCTION UNTIL AN ENGINEER PREPARES A WRITTEN REPORT, WHICH MUST BE SUBMITTED WITH THE FINAL ENGINEERING REPORT, DETAILING HOW

(1) COMPACTION OF THE PIPE EMBEDMENT MUST MEET THE MANUFACTURER'S RECOMMENDATIONS FOR THE COLLECTION SYSTEM PIPES USED IN A PROJECT.COMPACTION OF THE PIPE EMBEDMENT MUST PROVIDE THE MODULUS OF SOIL REACTION FOR THE BEDDING MATERIAL NECESSARY TO ENSURE A COLLECTION SYSTEM PIPE'S STRUCTURAL INTEGRITY AS REQUIRED BY §217.53 OF THIS TITLE (RELATING TO PIPE DESIGN). THE PLACEMENT OF THE BACKFILL ABOVE A PIPE MUST NOT AFFECT THE STRUCTURAL INTEGRITY

(1) A MINIMUM CLEARANCE OF 6.0 INCHES BELOW AND ON EACH SIDE OF THE BELL OF ALL PIPES TO THE TRENCH WALLS AND FLOOR IS REQUIRED.

(2) THE EMBEDMENT MATERIAL USED FOR HAUNCHING AND INITIAL BACKFILL MUST BE INSTALLED TO A MINIMUM DEPTH OF 12 INCHES ABOVE THE CROWN OF A PIPE.

(1) THE WIDTH OF A TRENCH MUST ALLOW A PIPE TO BE LAID AND JOINTED PROPERLY AND MUST ALLOW THE BACKFILL TO BE PLACED AND COMPACTED AS NEEDED.

(2) THE MAXIMUM AND MINIMUM TRENCH WIDTH NEEDED FOR SAFETY AND A PIPE'S STRUCTURAL INTEGRITY MUST BE INCLUDED IN THE ENGINEERING REPORT. (3) THE WIDTH OF A TRENCH MUST ALLOW PROPER AND SAFE PLACEMENT AND COMPACTION OF HAUNCHING MATERIALS IN ACCORDANCE WITH THE STANDARDS IN SUBSECTION

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(4) THE SPACE BETWEEN A PIPE AND A TRENCH WALL MUST BE WIDER THAN THE COMPACTION EQUIPMENT USED IN THE PIPE ZONE.

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

ART DR.

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O N

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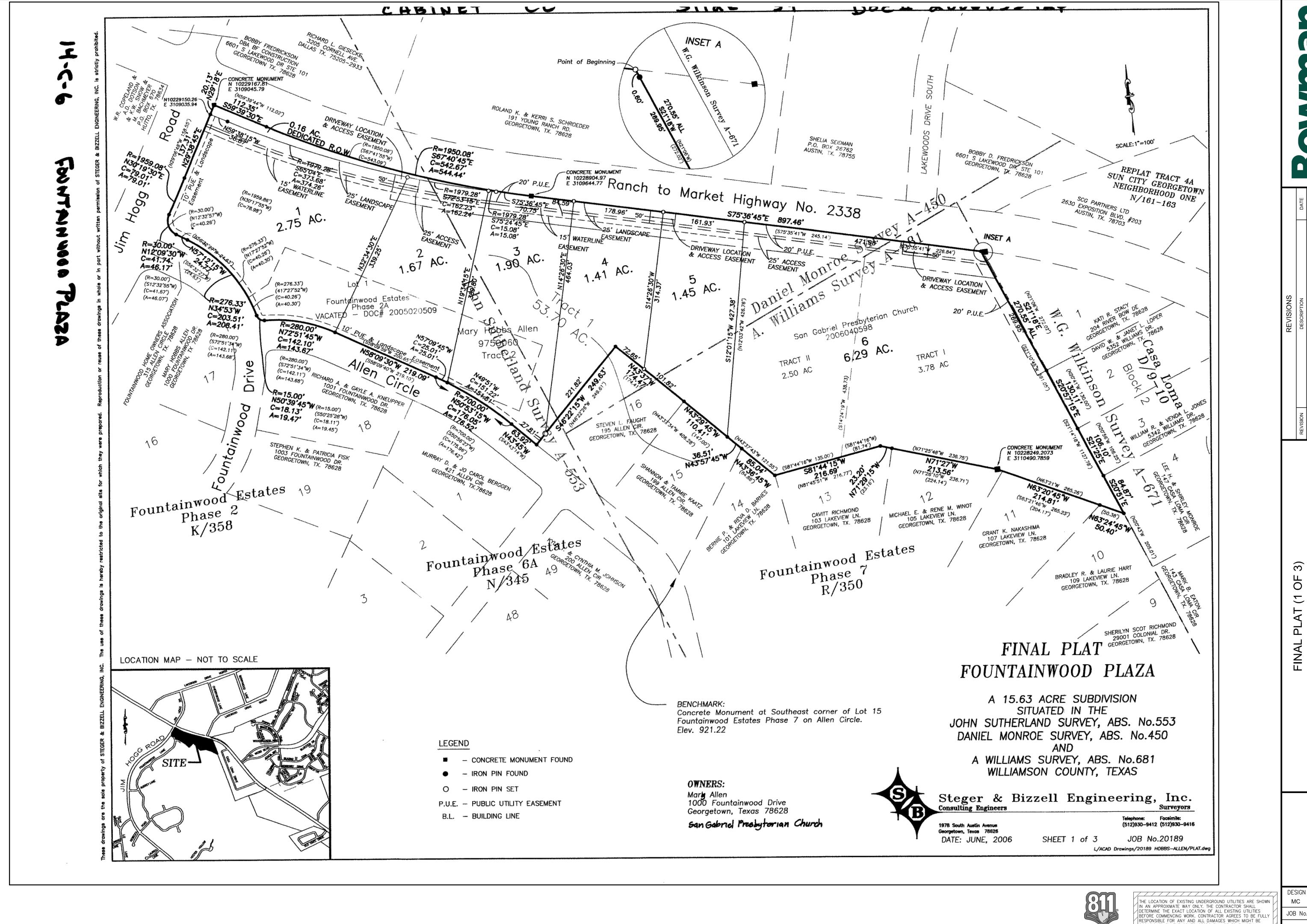
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MARISA KEISER 141397 Marisa Veiser

August 4, 2025 DESIGN | DRAWN | CHKD LB JOB No. 250519-01-002 SHEET

Call before you dig.



IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL
DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES
BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULL'
RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE
OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. DESIGN | DRAWN | CHKD LB JOB No. 250519-01-002 SHEET OF 25

O'REILLY 5510 W ORGETOV

BEING 15.63 acres of land, situated in the John Sutherland Survey, Abstract No. 553. the Daniel Monroe Survey, Abstract No. 450, and the A. Williams Survey, Abstract No. 681, in Williamson County, Texas, said land being a portion of that certain Tract 1, called 53.70 acres, and all of that certain Tract 2, (Tract 2 being Lot 1 of Fountainwood Estates, Phase 2A, a subdivision of record in Cabinet K, Slide 360, of the Plat Records of Williamson County, Texas) as conveyed to Mary Hobbs Allen of record as Document No. 9750060 of the Official Records of Williamson County, Texas, being that certain Tract I, called 3.78 acres and Tract II, called 2.50 acres, as conveyed to San Gabriel Presbyterian Church, of record as Document No. 2006040598 of the Official Public Records of Williamson County, Texas. Surveyed on the ground in the month of June, 2003, under the supervision of Brian F. Peterson, Registered Professional Land Surveyor, and being more particularly described as follows;

BEGINNING at a point on the Southwest line of Ranch to Market Highway No. 2338, being on, or near, the east line of the A. Williams Survey, Abstract No. 681, being on, or near, the west line of the W.G. Wilkinson Survey, Abstract No. 671, for the Northeast corner of the above-referenced 53.70 acre Allen Tract 1, being the Northeast corner of the said 3.78 acre San Gabriel Presbyterian Church Tract I, and the most northerly corner of Casa Loma, a subdivision of record in Cabinet D, Slides 9-10, of the Plat Records of Williamson County, Texas, from said point the Northeast corner of the said A. Williams Survey, A-681, bears approximately N 21° W, 110 feet,

THENCE, along, or near, the east line of the said A. Williams Survey, A-681, being along, or near, the west line of the said W.G. Wilkinson Survey, A-671, along the east line of the said 53.70 acre Allen Tract 1, being the west line of the said Casa Loma, S 21° 18' E, at 0.60 of a foot pass an iron pin found for a total distance of 270.55 feet, in all, to an iron pin found; S 20° 57' 15" E, 130.11 feet to an iron pin found; S 21° 25' E, 106.10 feet to an iron pin found and S 20° 51' E, 84.87 feet to an iron pin found marking the Southeast corner of the said 3.78 acre San Gabriel Presbyterian Church Tract I, being the Northeast corner of Fountainwood Estates, Phase 7, a subdivision of record in Cabinet R, Slide 350, of the Plat Records of Williamson County, Texas, for the Southeast corner hereof;

THENCE, along the north line of the said Fountainwood Estates, Phase 7, along the south line of the said 3.78 acre San Gabriel Presbyterian Church Tract I, N 63' 24' 45" W, 50.40 feet to a railroad spike found and N 63" 20' 45" W, 214.81 feet to a concrete monument found; N 71° 27' W, 213.56 feet to an iron pin found; N 71° 29' 15" W, 23.20 feet to an iron pin found; S 81" 44' 15" W, at 81.74 feet, more or less, pass the Southwest corner of the said 3.78 acre San Gabriel Presbyterian Church Tract I, being the Southeast corner of the above-referenced 2.50 acre San Gabriel Presbyterian Church Tract II, and continuing along the south line of the said 2.50 acre San Gabriel Presbyterian Church Tract II, for a total distance of 216.69 feet, in all, to an iron pin found; N 43° 36' 45" W, 85.04 feet to an iron pin found and N 43° 57' 45" W, 36.51 feet to an iron pin found marking the Southwest corner of the said 2.50 acre San Gabriel Presbyterian Church Tract II, N 43' 29' 45" W. 110.41 feet to an iron pin found and N 43° 37' W, passing the north line of the A. Williams Survey, A-681, being the south line of the Daniel Monroe Survey, A-450, for a total distance of 174.47 feet, in all, to an iron pin found and S 46' 22' 15" W, passing the west line of the said Daniel Monroe Survey, A-450, being the east line of the John Sutherland Survey, A-553, for a total distance of 249.63 feet, in all, to an iron pin found on the north line of Allen Circle, a dedicated roadway, being the north line of Fountainwood Estates, Phase 6A, a subdivision of record in Cabinet N, Slide 345, of the Plat Records of Williamson County, Texas, being the most westerly corner of the said Fountainwood Estates, Phase 7, being a westerly line of the said 53.70 acre Allen tract, for a southerly corner hereof;

THENCE, along the said north line of Allen Circle, N 43' 45' W, 63.92 feet to an iron pin found at the beginning of a curve to the left, (Radius = 700.00 feet, Long Chord bears N 50° 53' 15" W. 176.05 feet).

Thence, along the said curve for an arc distance of 176.52 feet to an iron pin found on the south line of the above-referenced Allen Tract 2, being a corner of the soid

53.70 acre Allen Tract 1; Thence, continuing along the south line of the said Tract 2, N 58° 09' 30" W, 219.09 feet to an iron pin found at the beginning of a curve to the left, (Radius = 280 00 feet, Long Chord bears N 72' 51' 45" W, 142.10 feet);

Thence, along the said curve for an arc distance of 143.67 feet to an iron pin found at the beginning of a curve to the right, (Radius = 15.00 feet, Long Chord bears N 50° 39' 45" W. 18.13 feet);

Thence, along the said curve for an arc distance of 19.47 feet to an iron pin found at the intersection of the said north line of Allen Circle and the east line of Fountainwood Drive, a dedicated roadway, being the Northwest corner of the said Fountainwood Estates, Phase 6A, being on the Northeast line of Fountainwood Estates, Phase 2, a subdivision of record in Cabinet K, Slide 358, of the Plat Records of Williamson County, Texas, and continuing along the said east line of Fountainwood Drive, along a curve to the left, (Radius = 276.33 feet, Long Chord bears N 34" 53"

W, 203.51 feet); Thence, along the said curve, at an arc distance of 40.30 feet, more or less, pass the Northwest corner the said Allen Tract 2, being a southerly corner of the said 53.70 acre Allen Tract 1, and continuing along the west line of the said 53.70 acre Allen Tract 1, for a total arc distance of 208.41 feet, in all, to an iron pin found; Thence, N 57° 12′ 15″ W. 24.77 feet to an iron pin found at the beginning of a curve to the right, (Radius = 30.00 feet, Long Chord bears N 12° 09' 30" W, 41.74

Thence, along the said curve for an arc distance of 46.17 feet to an iron pin found at the intersection of Fountainwood Drive and the Southeast line of Jim Hogg Road, marking the most northerly corner of the said Fountainwood Estates, Phase 2, for the most westerly corner of the said 53.70 acre Allen Tract 1, for the most westerly corner hereof;

THENCE, along the said Southeast line of Jim Hogg Road, along a curve to the left, (Radius = 1959.08 feet, Long Chord bears N 30° 19° 30″ E, 79.01 feet), an arc distance of 79.01 feet to an iron pin found;

Thence, N 29' 38' 45" E, 137.31 feet to an iron pin found and N 29' 18' E, 20.13 feet to a concrete monument found at the intersection of the said Southeast line of Jim Hogg Road and the said Southwest line of R.M. Highway No. 2338, for the most northerly corner of the said 53.70 acre Allen Tract 1, for the most northerly corner

THENCE, along the said Southwest line of R.M. Highway No. 2338, being the north line of the said 53.70 acre Allen Tract 1, as follows; S 59° 39' 30" E, 112.35 feet to an iron pin found at the beginning of a curve to the left, (Radius = 1950.08 feet, Long

Chord bears S 67° 40' 45" E, 542.67 feet); Thence, along the said curve for an arc distance of 544.44 feet to a concrete

monument found; Thence, S 75° 36' 45" E, at 425.48 feet pass an iron pin set for the Northeast corner of the aid 53.70 acre Allen Tract 1, being the Northwest corner of the said 2.50 acre San Gabriel Presbyterian Church Tract II, at 670.62 feet pass the Northeast corner of the said 2.50 acre San Gabriel Presbyterian Church Tract II, being the Northwest corner of the said 3.78 acre San Gabriel Presbyterian Church Tract I, for total distance of 897.46 feet, in all, to the Place of BEGINNING and containing 15.63 STATE OF TEXAS

KNOW ALL MEN BY THESE PRESENTS

COUNTY OF WILLIAMSON }

I, Brian F. Peterson, Registered Professional Land Surveyor, in the State of Texas, do hereby certify that this plat is true and correctly made from an actual survey 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 perimeter field notes hereon have a mathematical closure in compliance with standards as set out in the "Manual of Practice" of the Texas Society of Professional Surveyors, to the best of my knowledge and belief.

TO CERTIFY WHICH, WITNESS my hand and seal at Georgetown, Williamson County, Texas,

this the 26sh day of June

Professional Land Surveyor, No. 3967 State of Texas

STATE OF TEXAS }

COUNTY OF WILLIAMSON }

KNOW ALL MEN BY THESE PRESENT

I, Jonathan O. Nobles, Licensed Professional Engineer, do hereby certify that this subdivision is in the Edwards Aquifer Recharge Zone. An approved Water Pollution Abatement Plan is required by the Texas Natural Resource Conservation Commission prior to construction. No lot within this subdivision is encroached by any Special Flood Hazard Areas inundated by 100—Year Flood as identified by the U.S. Federal Emergency Management Agency Boundary map (Flood Insurance Rate Map), Community-Panel Numbers 48491C0100C and 48491C0115C, effective date September 27, 1991.

The engineering work for the roads and drainage (including driveway drain pipes) within the subdivision have been completed in compliance with the Williamson County Subdivision Regulations (including the Engineering Guidelines incorporated as Appendix B) and all generally accepted engineering standards.

TO CERTIFY WHICH, WITNESS my hand and seal at Georgetown, Williamson County, Texas,

Professional Engineer, No. 95826

Jonathan O. Nobles

BRIAN F. PETERSON



GENERAL NOTES:

1. Total Acres: 15.63 Acres

2. Number of lots: 6 3. Number of blocks: 1

4. Area of smallest lot: 1.414 Acres

5. There is no area within the boundaries of this subdivision in the 100-year Flood plain as defined by FIRM Map Number 48491C0115C, effective date of September 27, 1991. 6. Water service will be provided by Chisholm Trail Special Utility District,

wastewater service shall be provided by the City of Georgetown. Electric service provided by P.E.C.. 7. 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 a least 10 feet.

8. Maximum impervious cover is 50% allowable up to 65% if appropriate impervious coverage waivers are met in accordance with UDC Section 11.02.020 9. The bearings on this plat have been rotated to the NAD 83/93 HARN - Texas Central Zone and elevation is based upon NAVD 88.

10. This subdivision is located in the limits of the City of Georgetown. 11. This tract is located in the Edwards Aquifer Recharge Zone. An approved Water Pollution Abatement Plan is required by the Texas Natural Resource Conservation Commission prior to construction.

12. All driveway pipes to be minimum 18" RCP or dip driveway. 13. Building setbacks will be in accordance with the City of Georgetown UDC.

14. Sidewalks and street trees will be constructed in accordance with the City of Georgetown UDC. 15. A TIA, Traffic Impact Analysis will be required during the site plan review process when the cumulative Average Daily Trips (ADT) exceeds 2000 according to

Institute of Transportation Engineer (ITE) manual. 16. No access shall be permitted onto either Fountainwood Drive or Allen Circle from this development. Access to Williams Drive for all lots shall be from the driveway locations shown on this plat.

17. A rock wall will be built by the developer along the boundary length of Fountainwood Drive and Allen Circle with the submittal of a site plan within this subdivision and prior to final certificate of occupancy..

# FINAL PLAT FOUNTAINWOOD PLAZA

A 15.63 ACRE SUBDIVISION SITUATED IN THE JOHN SUTHERLAND SURVEY, ABS. No.553 DANIEL MONROE SURVEY, ABS. No.450 AND

A WILLIAMS SURVEY, ABS. No.681 WILLIAMSON COUNTY, TEXAS

Steger & Bizzell Engineering, Inc. Telephone: Facsimile: (512)930-9416

Georgetown, Texas 78626 DATE: June, 2006

SHEET 2 of 3

JOB No.20189 L/ACAD Drawings/20189 HOBBS-ALLEN/PLAT.dwg



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULI RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

PARTS IS DR. XAS 78( 3) OF (2 O'REILLY AUTO F 5510 WILLIAMS ORGETOWN, TEX PLAT OR

DESIGN | DRAWN | LB JOB No. 250519-01-002 SHEET 5 OF 25

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF WILLIAMSON {

That I, Mary Hobbs Allen, owner of that certain tract of land shown hereon and described in a deed recorded in Documents No. 9750060 of the Official Records of Williamson County, Texas, do hereby join, approve, and consent to all dedications and plat note requirements shown hereon. I do hereby approve the recordation of this subdivision plat and dedicate to the public use forever any easements and roads that are shown hereon. This subdivision is to be known as FOUNTAINWOOD PLAZA. I hereby acknowledge that I am the owner of this property and do hereby state that there are no lienholders or any unpaid debt for which this property represents collateral on any loan. It is also understood that it is the responsibility of the owner, not the County, to assure compliance with the provisions of all applicable state, federal, and local laws and regulations relating to the environment, including, but not limited to the Endangered Species Act, State Aquifer Regulations, and Municipal Watershed Ordinances.

Mary Hobbe allen

1000 Fountainwood Drive Georgetown, Texas 78628

Before me, the undersigned authority, on this day personally appeared Mary Hobbs Allen known by the to be the person whose name is subscribed to the foregoing instrument as the owner of the property described hereon.

Notary Public in and for the State of Texas

Signature and Date Notary and Notary Stamp

Printed Name of

Date Notary

Commission Expires

P J STEVENS Notary Public, State of Texas My Commission Expires November 26, 2009

STATE OF TEXAS

KNOW ALL MEN BY THESE PRESENTS;

COUNTY OF WILLIAMSON

That we, San Gabriel Presbyterian Church of Georgetown, owner of the certain tract of land shown hereon and described in a deed recorded in Document #2006040598 of the Deed Records of Williamson County, Texas, do hereby join, approve, and consent to all dedications and plat note requirements shown hereon. I do hereby approve the recordation of this subdivision plat and dedicate to the public use forever any easements and roads that are shown hereon. This subdivision is to be known as: FOUNTAINWOOD PLAZA. It is also understood that it is the responsibility of the owner, not the County, to assure compliance with the provisions of all applicable state, federal, and local laws and regulations relating to the environment, including, but not limited to the Endangered Species Act, State Aquifer Regulations, and Municipal Watershed Ordinances.

Donald Harris Harpen Donald J. Harber, Building Committe Chairman San Gabriel Presbyterian Church of Georgetown 6920 RR 2338 Georgetown, Texas 78628

Before me, the undersigned authority, on this day personally appeared Donald J. Harper, known by me to be the person whose name is subscribed to the foregoing instrument. It has been acknowledged to me that she executed the foregoing instrument as the owner of the property described hereon.

Signature and Date

Drane F. Schiller Notary Stamp DIANE F SCHILLER 3-19-08 NOTARY PUBLIC

State of Texas

Comm. Exp. 03-19-2008 - NOTARY PUBLIC -

STATE OF TEXAS

KNOW ALL MEN BY THESE PRESENTS;

COUNTY OF WILLIAMSON {

That I, First Texas Bank, the lien holder of the certain tract of land shown hereon and described in a DEED OF TRUST recorded in Document #2006040597 of the Official Records of Williamson County, Texas, do hereby join, approve, and consent to all dedications and plat note requirements shown hereon. I do hereby approve the recordation of this subdivision plat and dedicate to the public use forever any easements and roads that are shown hereon. This subdivision is to be known as FOUNTAINWOOD PLAZA.

Kevin R. Kelly, V.P. 900 S. Austin Ave. Georgetown, TX 78626

Before me, the undersigned authority, on this day personally appeared Kevin R. Kelly known by me to be the person whose name is subscribed to the foregoing instrument. It has been acknowledge to me that he/she executed the foregoing instrument as the legal representative of the lienholder of the property described

MY COMMISSION EXPIRES December 2, 2007 Printed Name of Notary and

12/2/07

Date of Notary Commission

Printed Name of Notary and

Date Notary Commission

Expires

I, Bobby Ray, AICP, Director of the Planning and Development Services of the City of Georgetown, do hereby certify this plat as approved for filing of record with the County Clerk of Williamson County, Texas.

Date: 6 29 06

Bobby Ray, Director Planning and Development Services

The subdivision, known as FOUNTAINWOOD PLAZA, has been approved for filing for record according to the minutes of the meeting of the Georgetown City Council on the 27th day of April, 2004, A.D.

City of Georgetown, Texas

Sandra Lee, City City of Georgetown, Texas

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.

Dave Halk Flood Plain Coordinator City of Georgetown

STATE OF TEXAS {

KNOW ALL MEN BY THESE PRESENTS

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 30+h , 2006 A.D., at 8:36 o'clock, A .M., and duly recorded this the 6th day of July , 2006 A.D., at 11:4 o'clock, A .M., in the Plat Records of said County in Cabinet CC , Slides 39, 40 AND 41.

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

Faren Miller Deputy



## FINAL PLAT FOUNTAINWOOD PLAZA

A 15.63 ACRE SUBDIVISION SITUATED IN THE JOHN SUTHERLAND SURVEY, ABS. No.553 DANIEL MONROE SURVEY, ABS. No.450 AND

A WILLIAMS SURVEY, ABS. No.681

WILLIAMSON COUNTY, TEXAS

Steger & Bizzell Engineering, Inc.

Telephone: Facsimile: (512)930-9412 (512)930-9416

DATE: JUNE, 2006

SHEET 3 of 3

JOB No.20189 L/ACAD Drawings/20189 HOBBS-ALLEN/PLAT.dwg

Know what's below.

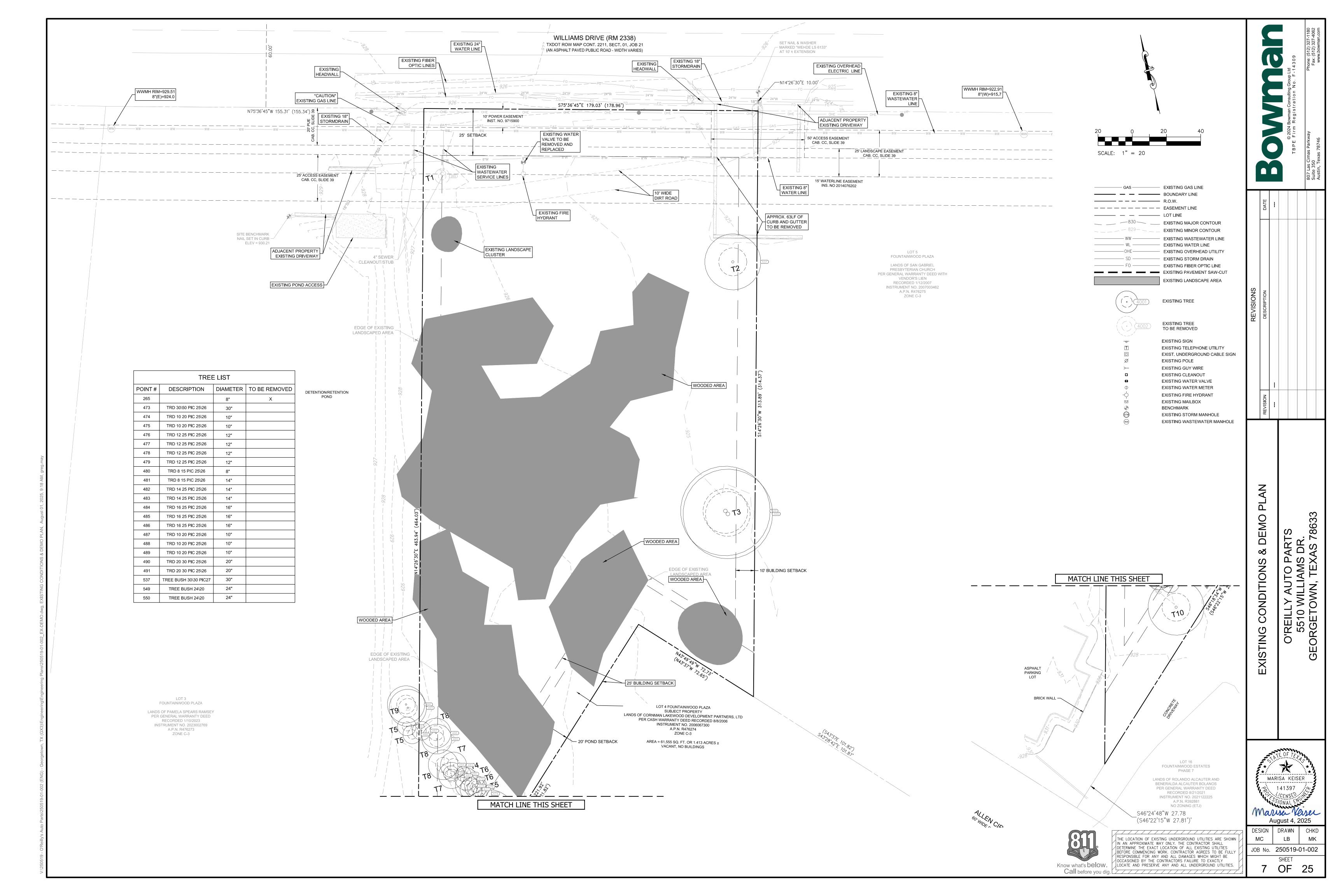
	DESIGN	DRAWN	CHKD
THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL	MC	LB	MK
DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, CONTRACTOR AGREES TO BE FULLY	JOB No.	250519-	01-002
RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY		SHEET	
LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.	6	OF	25

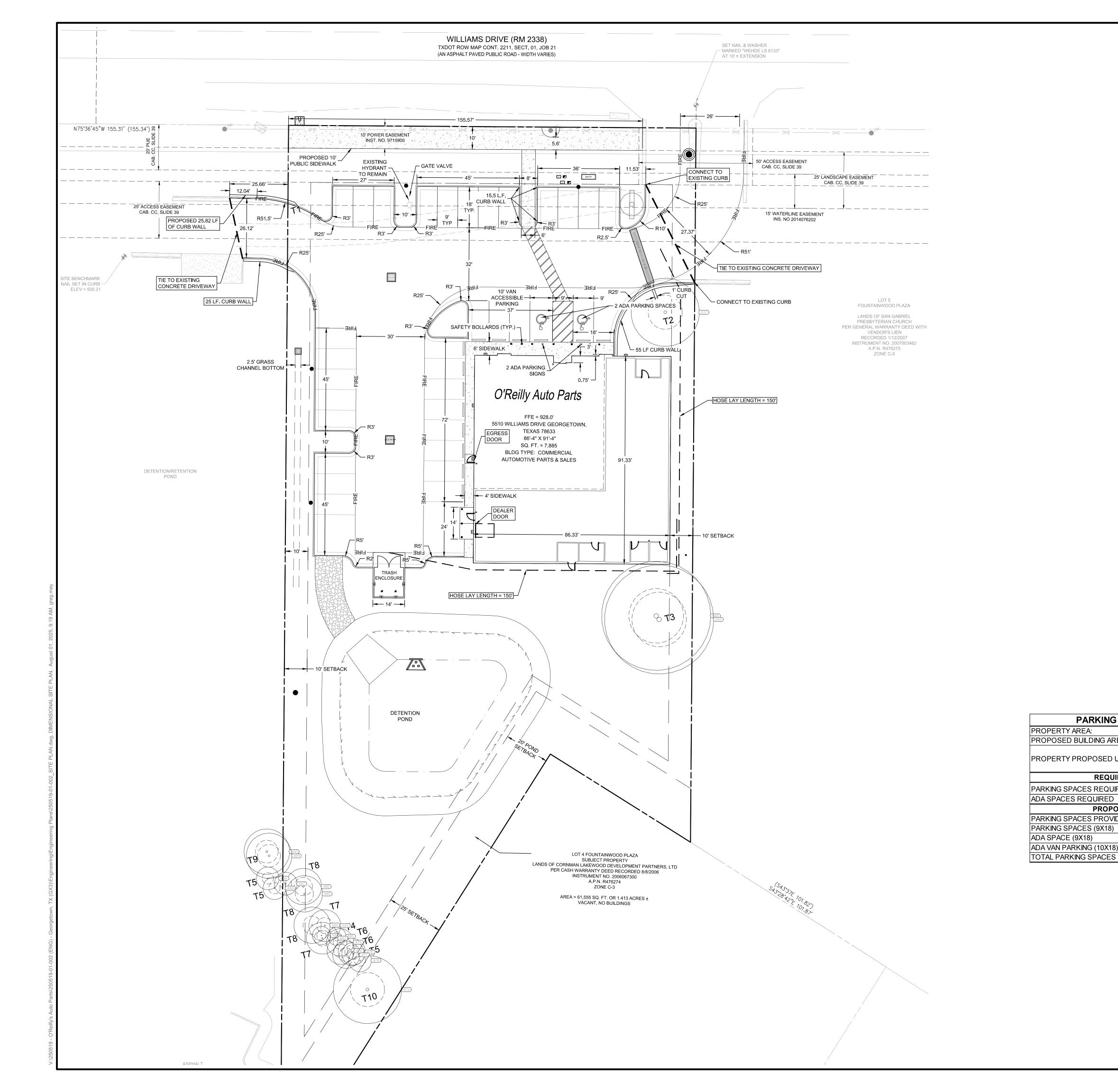
3)

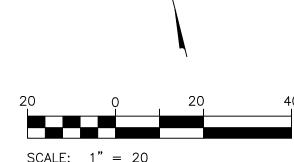
OF

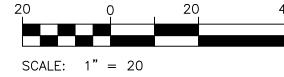
O'REILLY 5510 W

ORGE







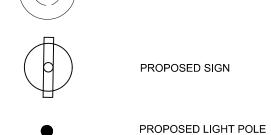


### LEGEND

---- BUILDING SETBACK

	R.O.W.
	EASEMENT LINE
	LOT LINE
	POND BOUNDARY
	PROPOSED CURB & GUTTER
	PROPOSED SIDEWALK BY DEVELOPER
	EXISTING CURB & GUTTER
	EXISTING SIDEWALK BY DEVELOPER
	HOSE LAY
FIRE———	FIRE LANE

EXISTING FIRE HYDRANT



PROPOSED SIGN

TREE TO REMAIN



SAFETY END OF

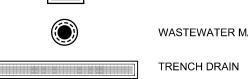
POND PUMP LOCATION

TREATEMENT HEADWALL



**GRATE INLET** 

CURB INLET



WASTEWATER MANHOLE

PARKING TABLE		
AREA:	1.41 AC	
D BUILDING AREA	7,885 SF	
	AUTOMOTIVE	
PROPOSED USE:	SALES AND	
	SERVICES	
REQUIRED		
PACES REQUIRED	20	
S REQUIRED	1	
PROPOSED		
PACES PROVIDED	35	
PACES (9X18)	33	
E (9X18)	1	
ARKING (10X18)	1	

SITE DATA			
PROPERTY AREA:	1.41 AC		
PROPOSED BUILDING AREA	7,885 SF		
PROPOSED IMPERVIOUS COVER	.67 AC		
MAX. IMPERVIOUS COVER ALLOWABLE	50% - 0.705 AC		
IMPERVIOUS COVER WAIVER #			

BENCHMARK NOTES

NAIL SET IN CURB IN THE DRIVE AISLE ADJACENT TO THE NORTHWEST CORNER OF THE SUBJECT PROPERTY

DIMENSIONAL SITE PLAN NOTES:

ELEV.: 930.21

- 1. ALL LIGHTING FIXTURES SHALL BE DESIGNED TO COMPLETELY CONCEAL AND FULLY SHIELD, WITHIN AN OPAQUE HOUSING, THE LIGHT SOURCE FROM VISIBILITY FROM ANY STREET RIGHT-OF-WAY. THE CONE OF LIGHT SHALL NOT CROSS ANY ADJACENT PROPERTY LINE. THE ILLUMINATION SHALL NOT EXCEED 2-FOOT CANDLES AT A HEIGHT OF THREE FEET AT THE PROPERTY LINE. ONLY INCANDESCENT, FLUORESCENT, XOLOR-CORRECTED HIGH-PRESSURE SODIUM OR METAL HALIDE MAY BE USED. ALL VEHICLE OR PEDESTRIAN ACCESS SHALL BE SUFFICIENTLY LIGHTED TO ENSURE SECURITY OF PROPERTY AND PERSONS.
- 2. ALL ROOF, WALL AND GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED IN ACCORDANCE WITH CHAPTER 8 OF THE UDC. IF ROOF AND WALL MOUNTED EQUIPMENT OF ANY TYPE INCLUDING DUCT WORK AND LARGE VENTS IS PROPOSED IT SHALL BE SHOWN ON THE SITE PLAN AND SCREENING IDENTIFIED. SCREENING OF MECHANICAL EQUIPMENT SHALL RESULT IN THE MECHANICAL EQUIPMENT BLENDING IN WITH THE PRIMARY BUILDING AND NOT APPEARING SEPARATE FROM THE BUILDING AND SHALL BE SCREENED FROM VIEW OF ANY RIGHTS-OF-WAY OR ADJOINING PROPERTIES.
- 3. PER CHAPTER 8, THE DUMPSTER ENCLOSURES MUST BE ONE (1) FOOT ABOVE THE HEIGHT OF THE WASTE CONTAINER. USE PROTECTIVE POLES IN CORNERS AND AT IMPACT AREAS. FENCE POSTS SHALL BE OF RUST PROTECTED METAL OR CONCRETE. A MINIMUM 6" SLAB IS REQUIRED AND MUST BE SLOPED TO DRAIN; THE ENCLOSURE MUST HAVE STEEL FRAMED GATES WITH SPRING LOADED HINGES AND FASTENERS TO KEEP CLOSED. SCREENING MUST BE ON ALL FOUR SIDES BY MASONRY WALL OR APPROVED FENCE OR SCREENING WITH OPAQUE GATES.



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULL RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY Know what's below. | LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. Call before you dig.

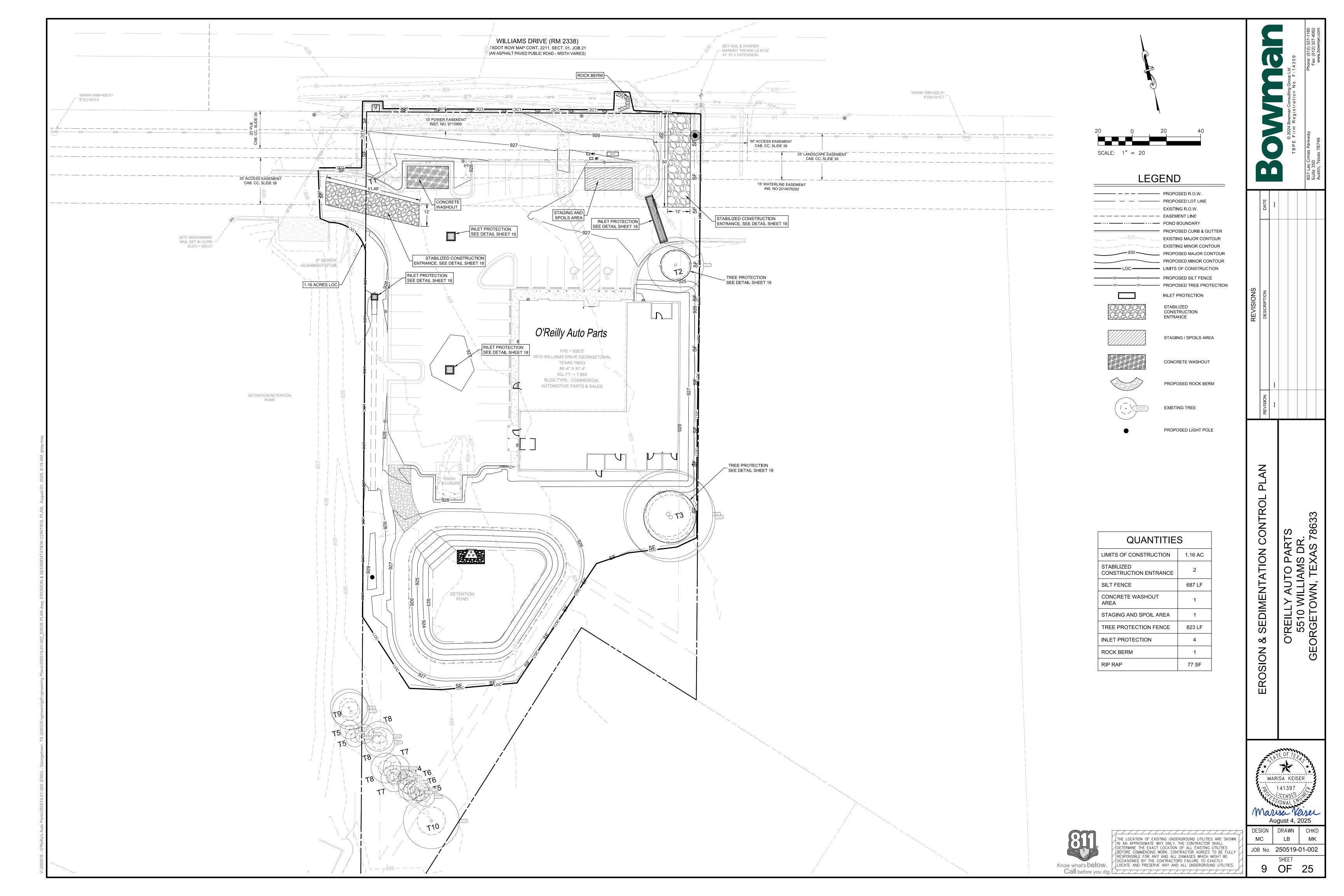
	ARISA KEIS	***
Moul	S/ONAL EN	esser
DESIGN MC	DRAWN LB	CHKD <b>MK</b>

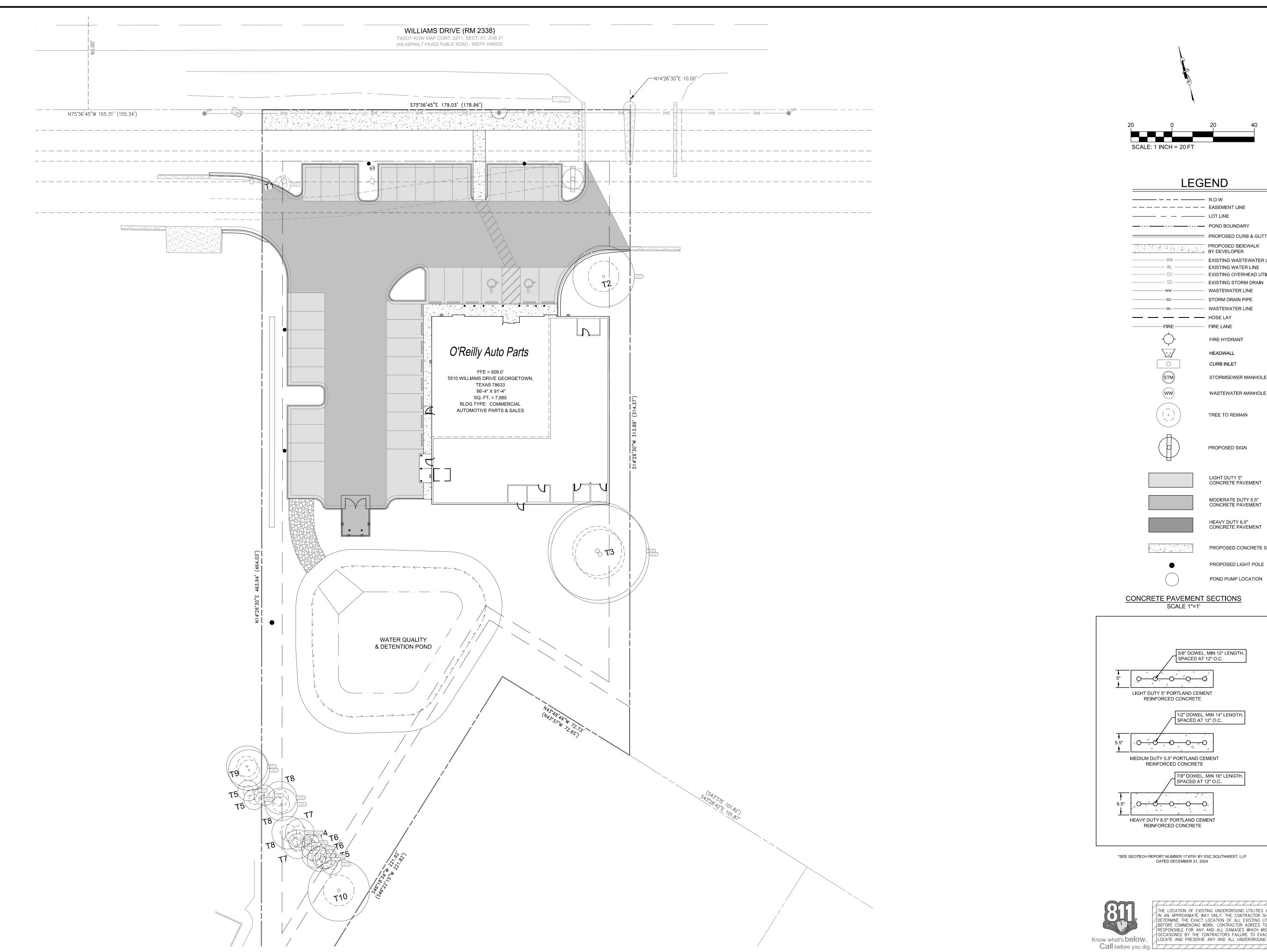
JOB No. **250519-01-002** 

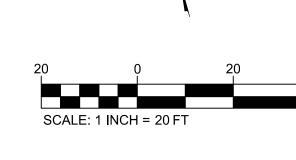
SHEET

DIMENSIONAL

O'REILLY , 5510 WI ORGETOM







### LEGEND

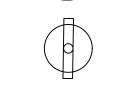
	R.O.W.
	EASEMENT LINE
	LOT LINE
	POND BOUNDARY
	PROPOSED CURB & GUTTE
	PROPOSED SIDEWALK BY DEVELOPER
WW	EXISTING WASTEWATER LII
	EXISTING WATER LINE
OU	EXISTING OVERHEAD UTILI
SD	EXISTING STORM DRAIN
	WASTEWATER LINE
SD	STORM DRAIN PIPE
	WASTEWATER LINE
- — — — —	HOSE LAY
FIRE	FIRE LANE
$\leftarrow$	

HEADWALL CURB INLET

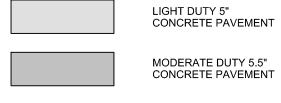
FIRE HYDRANT

STORMSEWER MANHOLE WASTEWATER MANHOLE

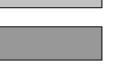
TREE TO REMAIN



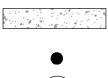
PROPOSED SIGN



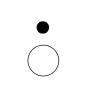
CONCRETE PAVEMENT



HEAVY DUTY 6.5" CONCRETE PAVEMENT

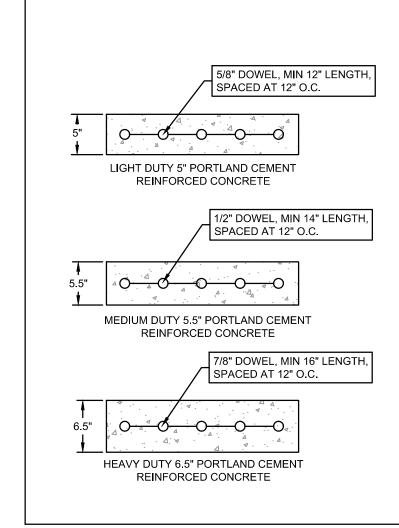


PROPOSED CONCRETE SIDEWALK PROPOSED LIGHT POLE



POND PUMP LOCATION

### CONCRETE PAVEMENT SECTIONS SCALE 1"=1'



\*SEE GEOTECH REPORT NUMBER 17:6791 BY ESC SOUTHWEST, LLP DATED DECEMBER 31, 2024

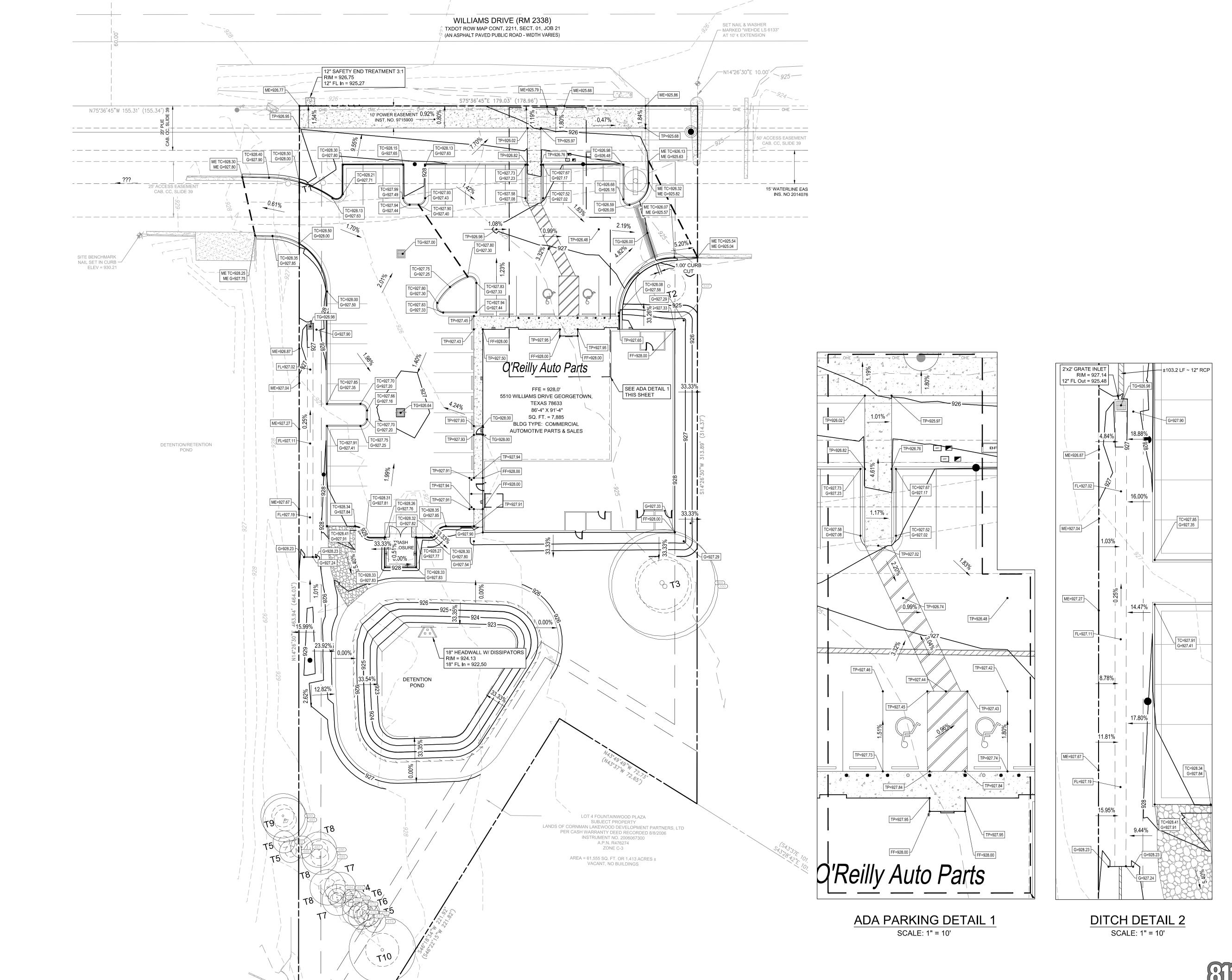


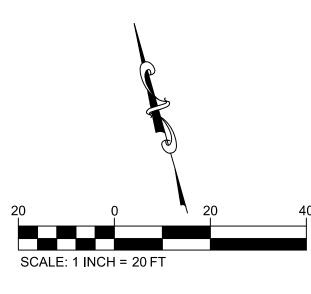
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MARISA KEISER Marisa Veiser August 4, 2025

O'REILLY AUTO F 5510 WILLIAMS EORGETOWN, TEX

DESIGN | DRAWN | CHKD LB JOB No. **250519-01-002** SHEET 10 OF 25



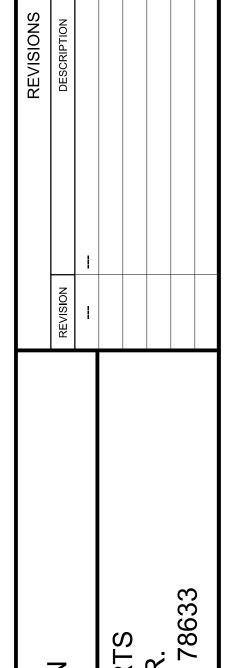


### LEGEND

PROPOSED R.O.W.
PROPOSED LOT LINE

EASEMENT LINE
POND BOUNDARY
PROPOSED CURB & GUTTER
EXISTING MAJOR CONTOUR
EXISTING MINOR CONTOUR
PROPOSED MAJOR CONTOUR
PROPOSED MINOR CONTOUR
PROPOSED SIDEWALK
POND BOTTOM
POND BERM
PROPOSED LIGHT POLE
POND PUMP

TP = TOP OF PAVEMENT
TC = TOP OF CURB
G = GRADE
ME = MATCH EXISTING
TG = TOP OF GRATE
FF = FINISHED FLOOR
TW = TOP OF WALL
BW = BOTTOM OF WALL
RIM = RIM



GRADING PI O'REILLY AUTO F 5510 WILLIAMS GEORGETOWN, TEX



Marsa Verse August 4, 2025

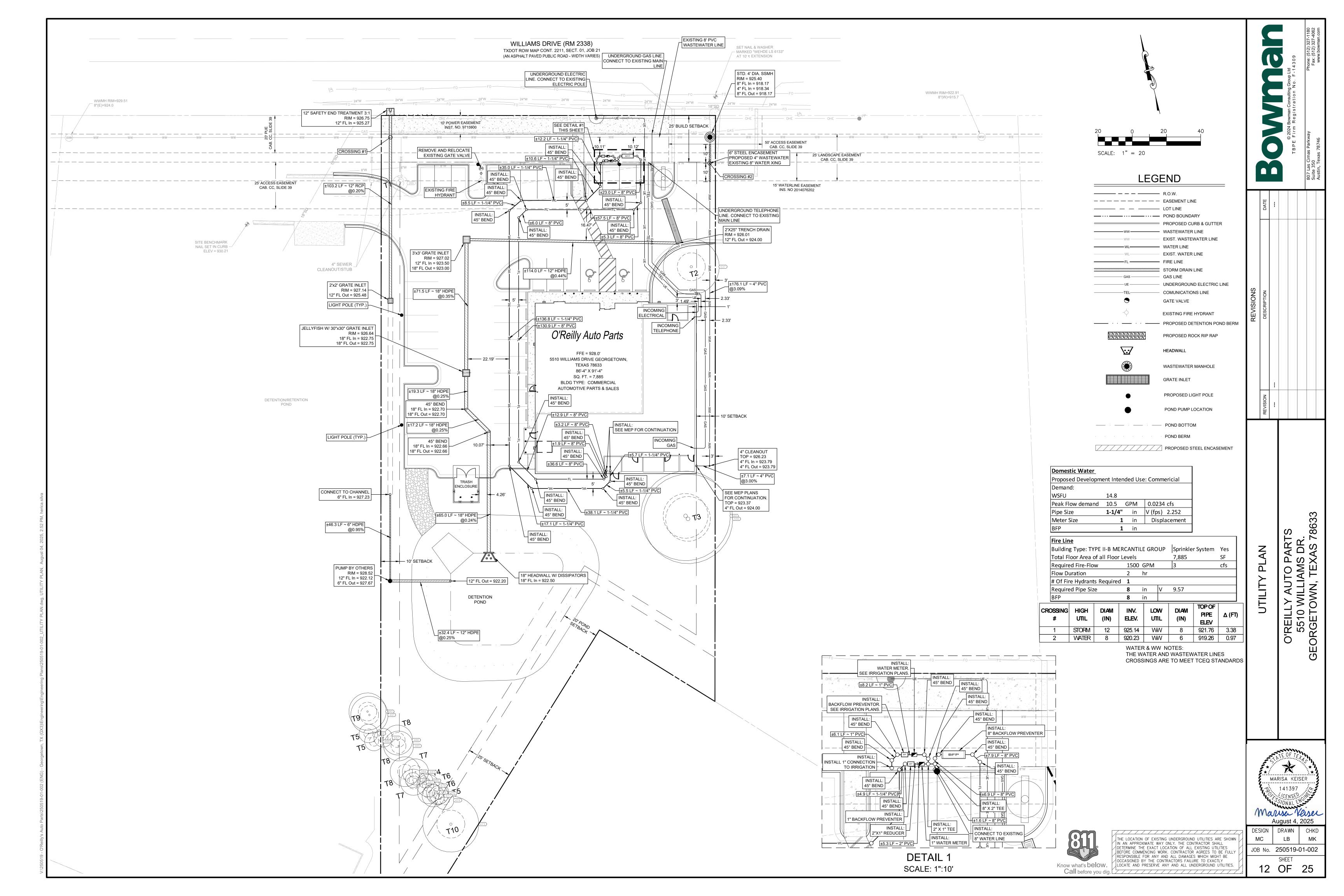
DESIGN DRAWN CHKI
MC LB MK

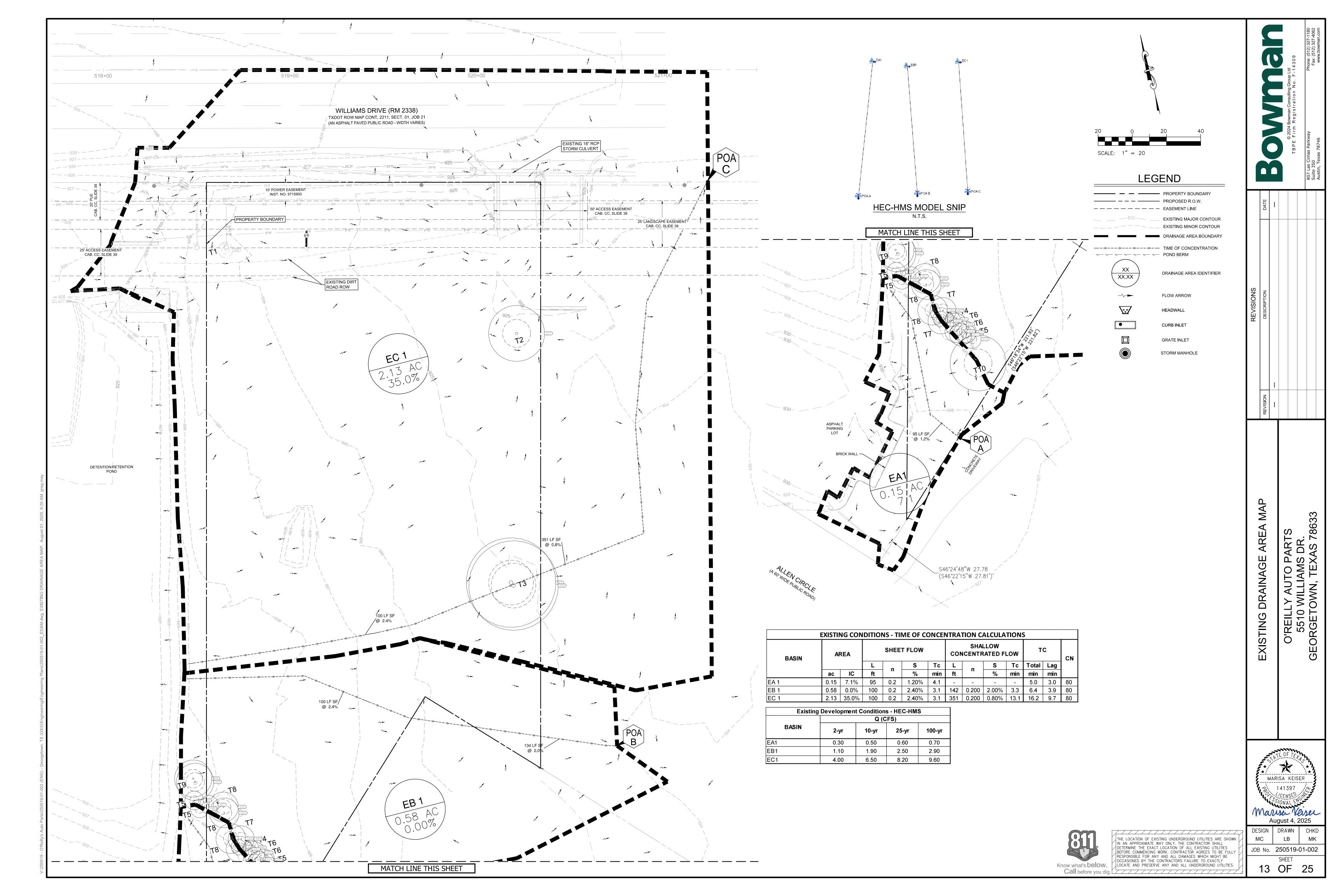
JOB No. **250519-01-002**SHEET

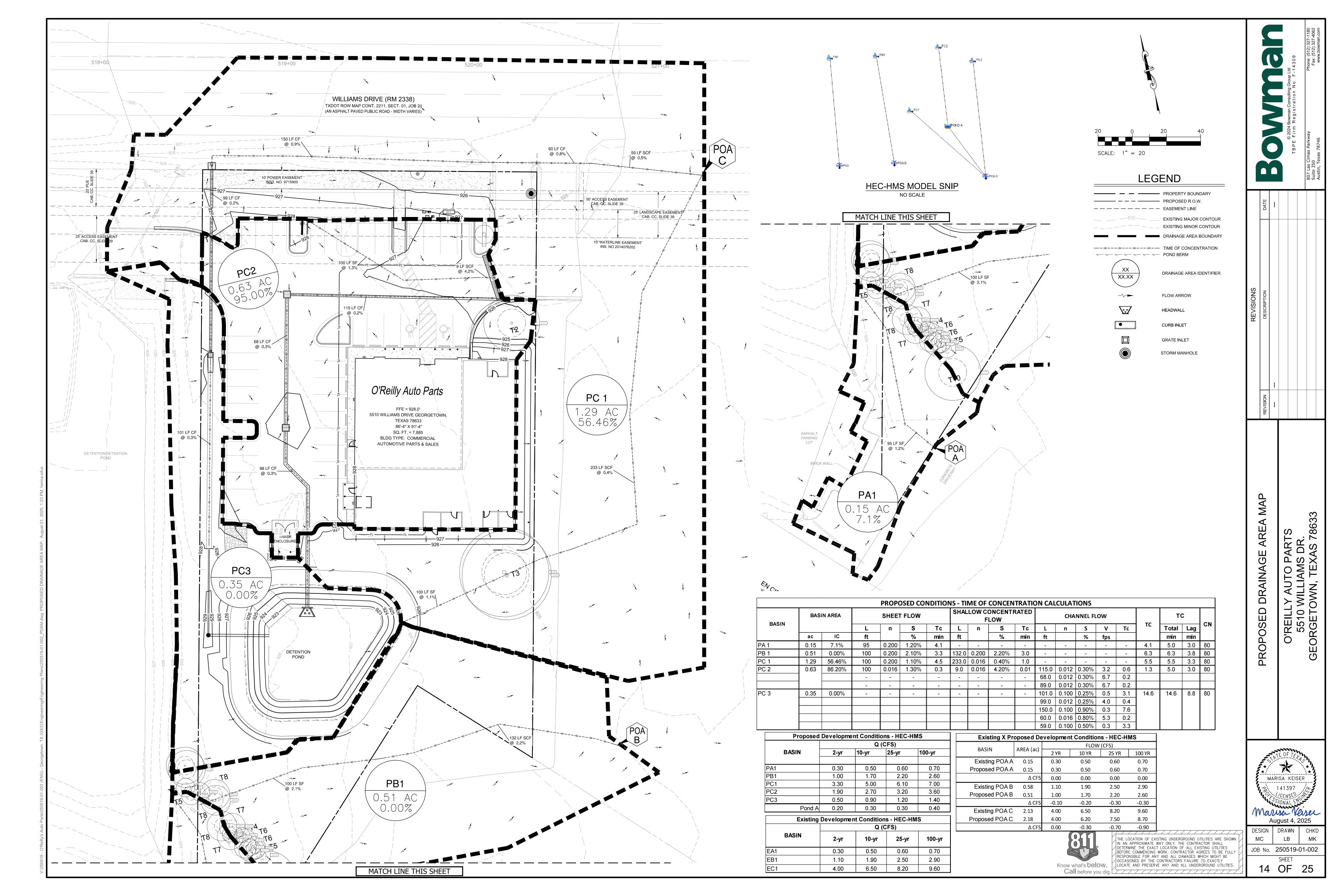
11 OF 25

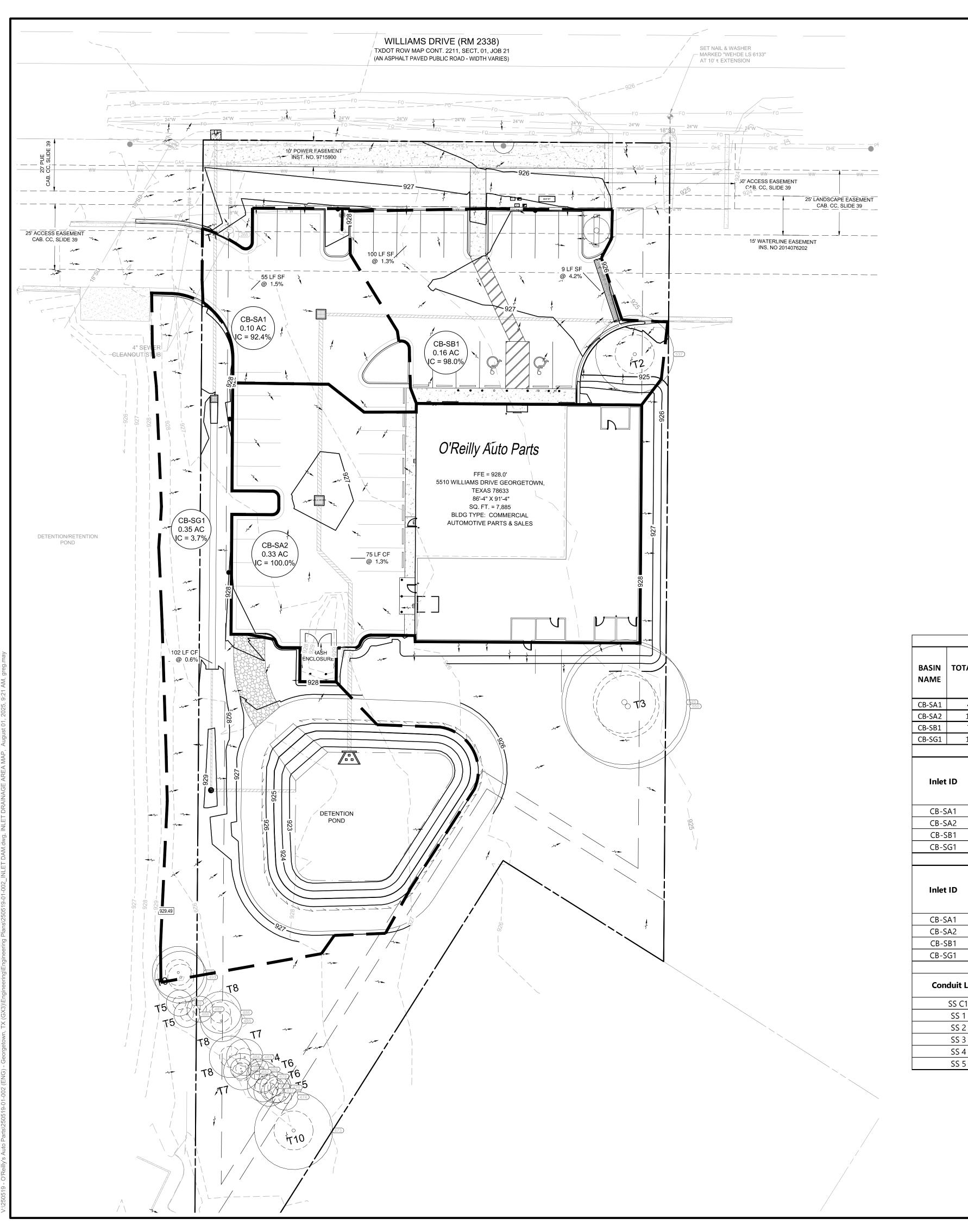
Know what's below.
Call before you dig.

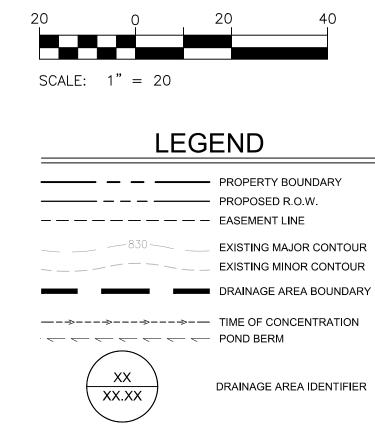
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CURB INLET
GRATE INLET
STORM MANHOLE

FLOW ARROW

HEADWALL

	C	)'REILLY'S - PRO	OPOSED CONDIT	IONS	
BASIN NAME	TOTAL AREA (SF)	TOTAL AREA (AC)	CONCRETE (SF)	GRASS (SF)	IMPERVIOUS COVER (%)
CB-SA1	4406	0.10	4070	336	92.4
CB-SA2	14584	0.33	14584	0	100.0
CB-SB1	7172	0.16	7028	172	98.0
CB-SG1	15179	0.35	563	14616	3.7

				O'REILLY I	NLET CALCULA	TIONS - 25 YR	STORM				
Inlet ID	Drainage Area	Inlet Type	Length of Inlet (ft)	Q25 (cfs)	Peak Flow Including Bypass	Peak Flow Intercepted by Inlet	Peak Flow Bypassing Inlet	Inlet Accepting Bypass Flow	Depth in Gutter (ft)	Ponding Width (ft)	Inlet Efficiency
CB-SA1	0.10	3'x3' GRATE INLET	3	0.97	0.96	2.49	0.00	No	0.10	0.13	100%
CB-SA2	0.33	2'x2' GRATE INLET	2.5	3.20	3.17	5.50	0.00	No	0.30	0.20	100%
CB-SB1	0.16	2' X 25' TRENCH D.	25	1.57	1.54	1.54	0.00	No	0.10	0.36	100%
CB-SG1	0.35	30"x30" GRATE INLET	2.5	3.33	3.37	3.37	0.00	No	0.40	0.47	100%
				O'REILLY IN	NLET CALCULAT	TONS - 100 YR	STORM				
Inlet ID	Drainage Area	Inlet Type	Length of	Q100 (cfs)	Peak Flow Including	Peak Flow Intercepted	Peak Flow Bypassing	Inlet Accepting	Depth in	Ponding Width (ft)	Inlet Efficiency

Inlet ID	Drainage Area	Inlet Type	Length of Inlet (ft)	Q100 (cfs)	Peak Flow Including Bypass	Peak Flow Intercepted by Inlet	Peak Flow Bypassing Inlet	Inlet Accepting Bypass Flow	Depth in Gutter (ft)	Ponding Width (ft)	Inlet Efficiency
CB-SA1	0.10	3'x3' GRATE INLET	3	1.17	1.16	2.97	0.00	No	0.20	0.14	100%
CB-SA2	0.33	2'x2' GRATE INLET	2.5	3.86	3.83	6.66	0.00	No	0.40	0.22	100%
CB-SB1	0.16	2' X 25' TRENCH D.	25	1.88	1.86	1.86	0.00	No	0.10	0.38	100%
CB-SG1	0.35	30"x30" GRATE INLET	2.5	4.02	4.07	4.07	0.00	No	0.40	0.51	100%

	O'REILLY	PIPE CALCULA	TIONS - STORM	CAD	
Conduit Label	Diameter	25	-YR	100	-YR
Conduit Laber	(in)	Flow (cfs)	Velocity (fps)	Flow (cfs)	Velocity (fps)
SS C1	12	3.37	4.29	4.07	5.18
SS 1	12	1.54	3.40	1.86	3.55
SS 2	18	2.45	3.51	2.97	3.69
SS 3	18	5.50	3.73	6.66	3.77
SS 4	18	5.49	3.54	6.65	3.76
SS 5	18	5 47	3 64	6.63	3 75



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

		1					
	REVISION						
٩	INLE I DKAINAGE AKEA MAP		O'DELLY VILLA BABTE	O REILLI AOIO PARIO	5510 WILLIAMS DR.	GEORGETOWN, TEXAS 78633	

MARISA KEISER

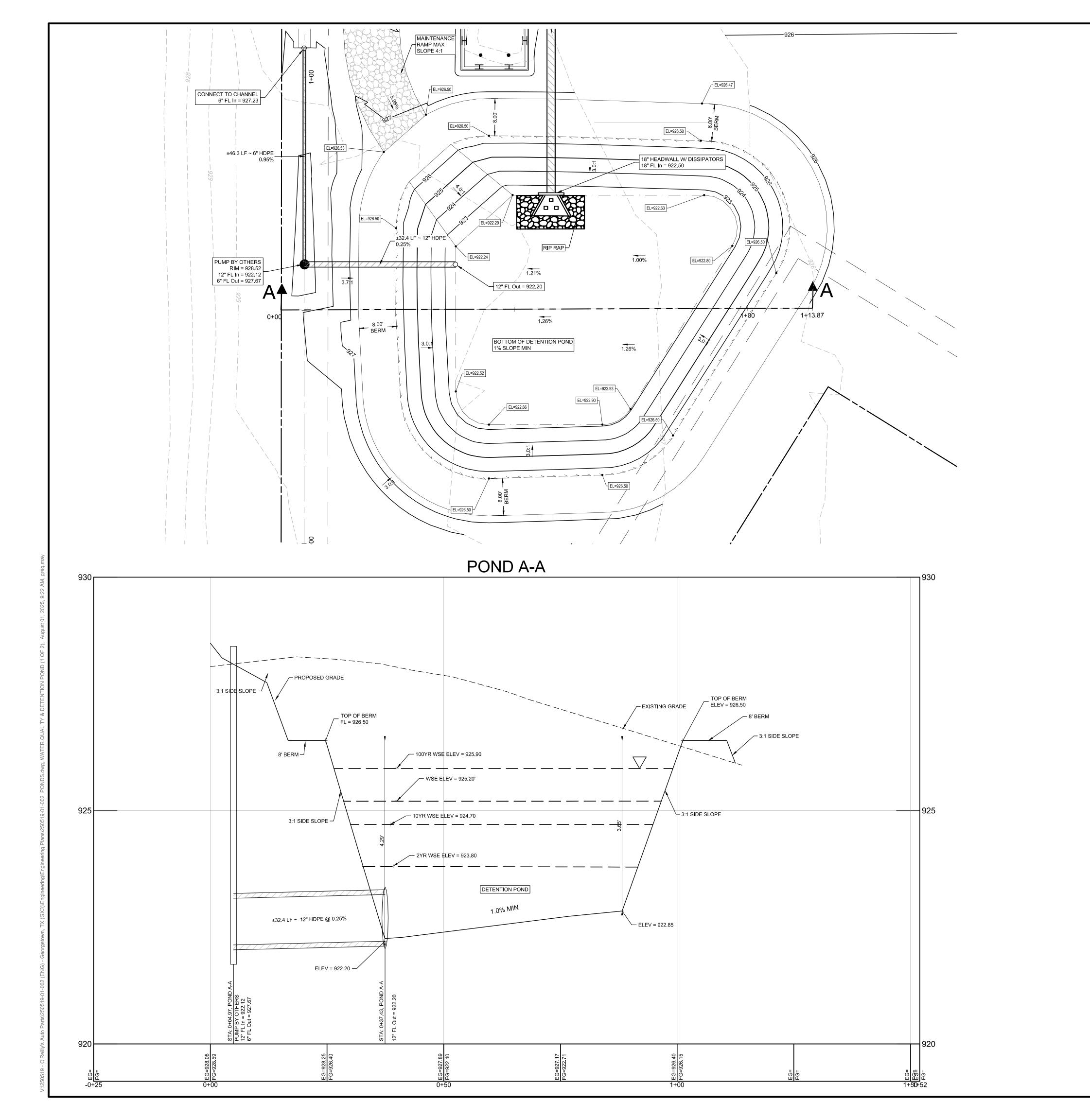
Marisa Veiser

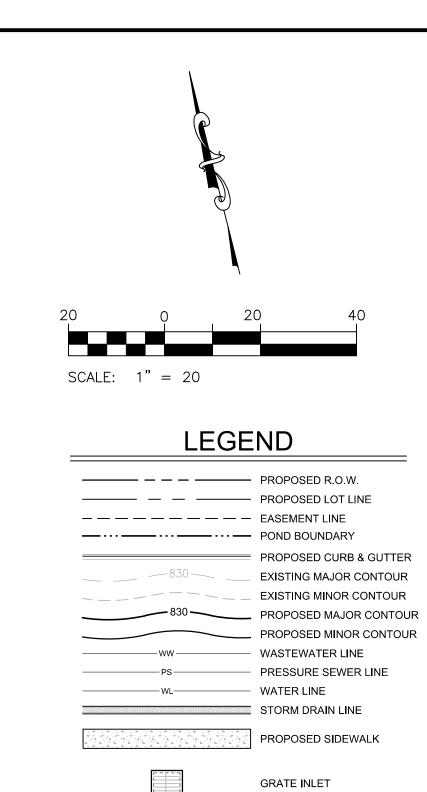
DESIGN | DRAWN | CHKD

JOB No. **250519-01-002** SHEET 15 OF 25

LB

August 4, 2025





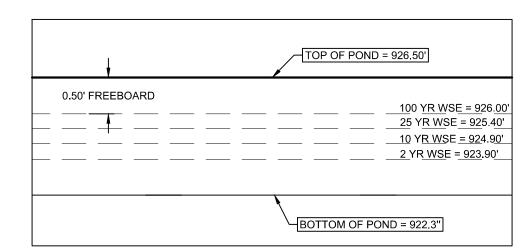
**CURB INLET** 

FLOW ARROW

—— · —— · —— POND BOTTOM POND BERM

PROPOSED CLEANOUT

POND PUMP BY OTHERS



### **DETENTION POND WSE - DETAIL** NOT TO SCALE

	DETENTION POND	)
STAGE (ft msl)	AREA (sq.ft.)	CUMULATIVE STORAGE (cf
922.3	242.30	(
923.0	2625.14	1090.53
924.0	3258.11	4027.3
925.0	3949.28	7626.14
926.0	4699.51	11945.4
926.5	5017.68	14055.74
DE	TENTION POND ELEVA	TION
STORM EVENT	PEAK WATE	R ELEVATION (ft)
Proposed 2-yr	g	923.90
Proposed 10-yr	g	924.90
Proposed 25-yr	g	925.40
Proposed 100-yr	g	926.00
D	ETENTION POND DETA	AILS
	Required	Provided (FT)
Pond Freeboard (Q100)	min 0.5 ft	0.50

PIPE CAPA	CITY - MANNING'S EQU	JATION
Input Parameters	Value	
Pipe Diameter (D) [ft]	0.5	(6" pipe)
Pipe Area (sf)	0.19634375	
R	0.125	
Q required (cfs)	0.4	
Manning's Roughness C	0.012	
Slope Required	0.95	
Velocity (ft/s)	3.01	
Q (cfs)	0.590	Qcapacity



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Call before you dig.

	REVISIONS	
REVISION	DESCRIPTION	DATE
		-
		•

**DETENTION POND** 

QUALITY



DESIGN DRAWN CHKD LB JOB No. **250519-01-002** SHEET 16 OF 25

```
Contech Engineered Solutions Calculations for Texas Commission on Environmental Quality
TSS Removal Calculations
                  Project Name: O'Reilly - Georgetown
                 Date Prepared: 7/17/2025
1. The Required Load Reduction for the total project:
Calculations from RG-348
                                                Page 3-29 Equation 3.3: L_{\rm M} = 28.9(A_{\rm N} \times P)
Pages 3-27 to 3-30
                  L<sub>M TOTAL PROJECT</sub> = Required TSS removal resulting from the proposed development = 85% of increased load
                             A_N = Net increase in impervious area for the project
                              P = Average annual precipitation, inches
                         Site Data: Determine Required Load Removal Based on the Entire Project
                                                                 Total project area included in plan * =
                                                                                                           1.14
                                                                                                                    acres
                                        Predevelopment impervious area within the limits of the plan * =
                                                                                                                      acres
                                                                                                           0.09
                                  Total post-development impervious area within the limits of the plan* =
                                                                                                           0.68
                                                                                                                      acres
                                                   Total post-development impervious cover fraction * =
                                                                                                           0.60
                                                                                                            32
                                                                                                                      _{
m inches}
                                                                                    L_{M TOTAL PROJECT} =
                                        Number of drainage basins / outfalls areas leaving the plan area = 5
2. Drainage Basin Parameters (This information should be provided for each basin):
                                                               Drainage Basin/Outfall Area No. = PC1
                                                                    Total drainage basin/outfall area =
                                                                                                           0.63
                                    Predevelopment impervious area within drainage basin/outfall area =
                                                                                                           0.06
                                                                                                                      acres
                                   Post-development impervious area within drainage basin/outfall area =
                                                                                                           0.54
                                                                                                                    acres
                               Post-development impervious fraction within drainage basin/outfall area =
                                                                                                           444
3. Indicate the proposed BMP Code for this basin.
                                                                                     Proposed BMP =
                                                                                                                       abbreviation
                                                                                  Removal efficiency =
                                                                                                                       percent
4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.
                                            RG-348 Page 3-33 Equation 3.7:

LR = (BMP \text{ efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)
                              A<sub>C</sub> = Total On-Site drainage area in the BMP catchment area
                             A<sub>I</sub> = Impervious area proposed in the BMP catchment area
                             A_P = Pervious area remaining in the BMP catchment area
                             L_R = TSS Load removed from this catchment area by the proposed BMP
                                                                                                                      acres
                                                                                                           0.09
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area
                                                                                Desired L_{M THIS BASIN} =
                                                                                                           465 lbs.
                                                                                                           0.90
6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.
                                                                       Offsite area draining to BMP =
                                                                                                           0.04
                                                                                                                     acres
                                                           Offsite impervious cover draining to BMP =
                                                                                                           0.04
                                                                                                                     acres
Calculations from RG-348
Pages Section 3.2.22
                                                                                   Rainfall Intensity =
                                                                                                                      inches per hour
                                                                                     Effective Area =
                                                                                                           \mathbf{0.52}
                                                                                                                      acres
                                                                                   Cartridge Length =
                                                                                                           54
                                                                                                                     inches
                                                                Peak Treatment Flow Required =
                                                                                                                      cubic feet per second
<u>7. Jellyfish</u>
Designed as Required in RG-348
Section 3.2.22
                                   Flow Through Jellyfish Size
                                                                                                           Vault
```

Jellyfish Size for Flow-Based Configuration = **JFPD0406-3-1** Jellyfish Treatment Flow Rate = **0.62** 

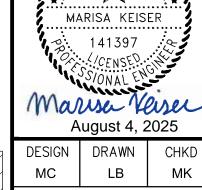
THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL

DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES

BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY

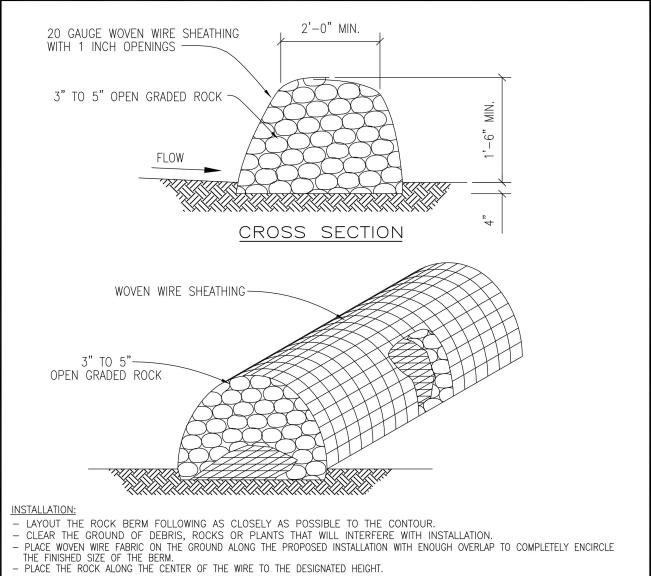
RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE

OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY Know what's below. | LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. Call before you dig.



JOB No. **250519-01-002** SHEET

17 OF 25



WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE

THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROX. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED. INSPECTION AND MAINTENANCE GUIDELINES:

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 MANAMER ANY LOOSE WIRE SHEATHING

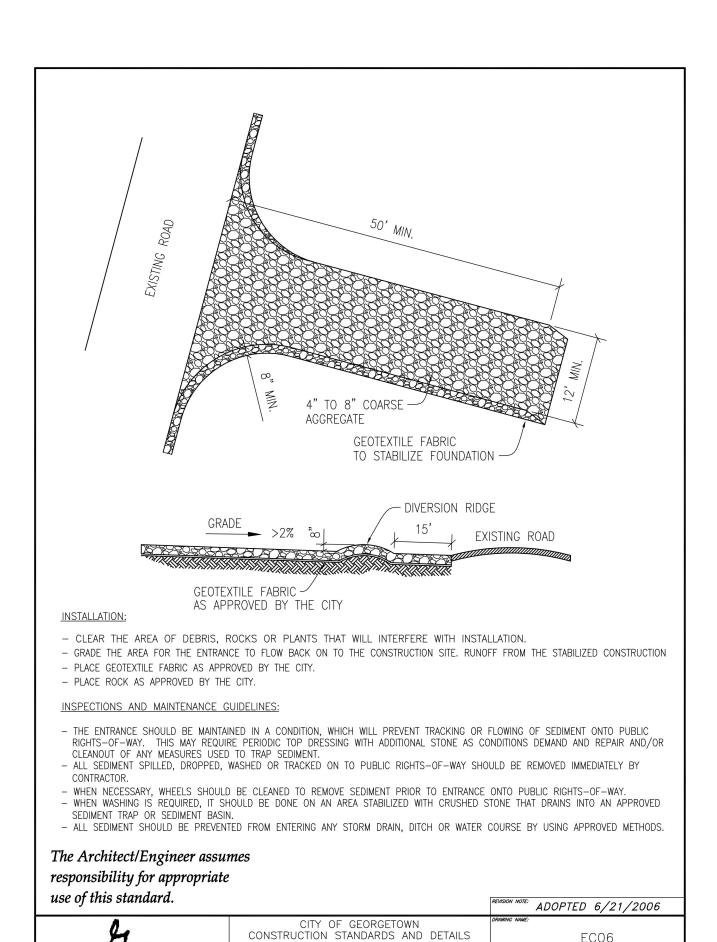
THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

### The Architect/Engineer assumes responsibility for appropriate

use of this standard.

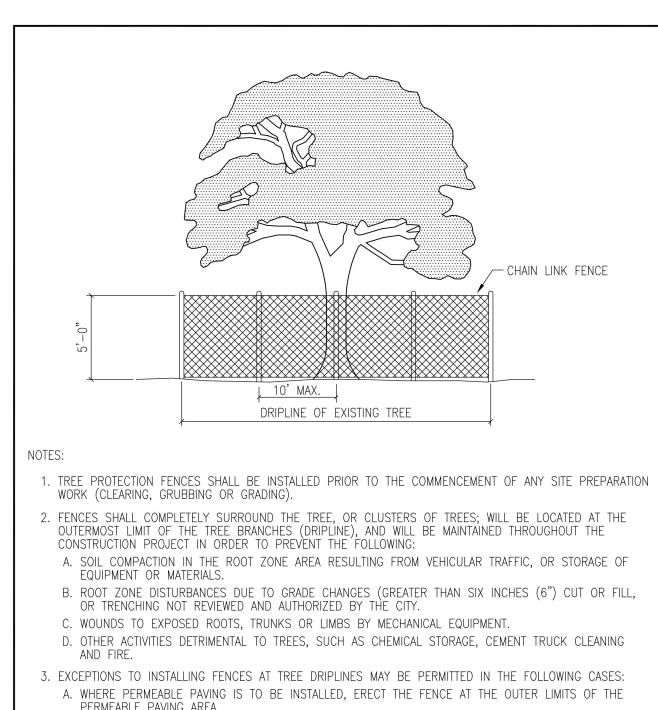
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS ROCK BERM DETAIL

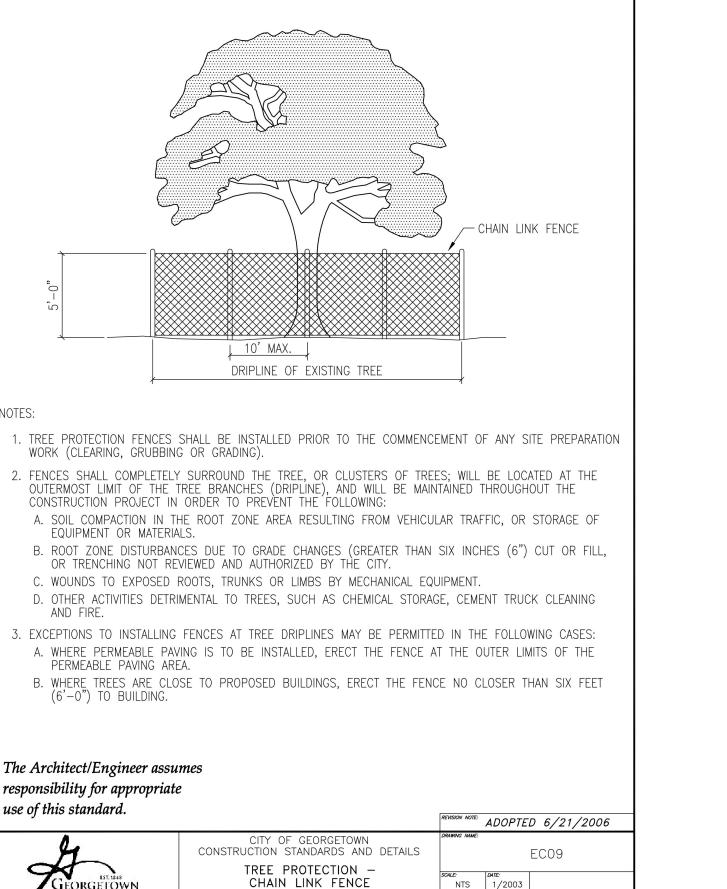
· INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN REVISION NOTE: ADOPTED 6/21/2006

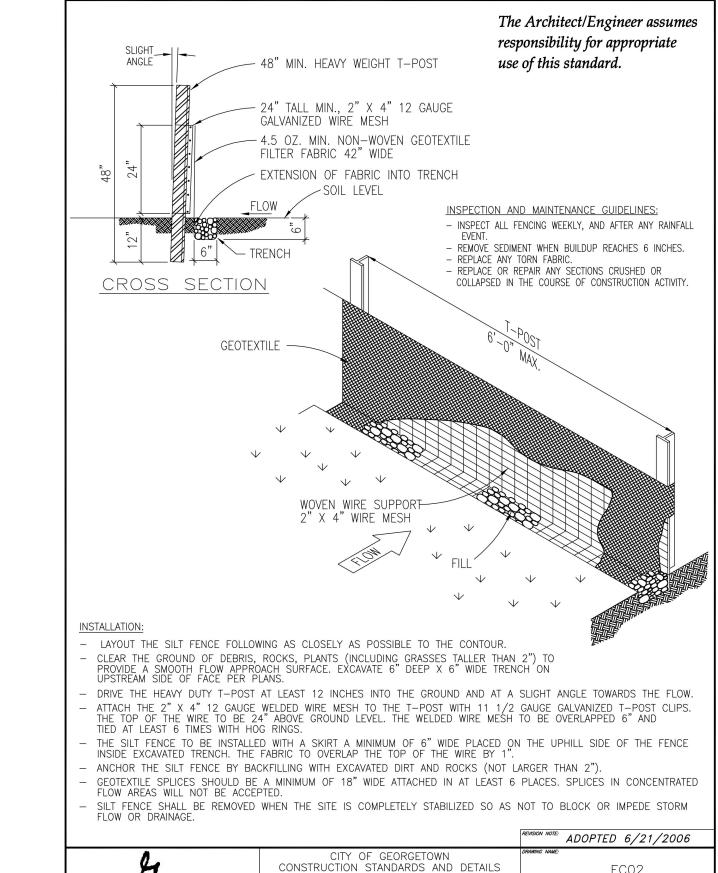


STABILIZED CONSTRUCTION ENTRANCE | SCALE:

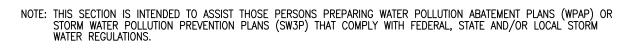
GEORGETIOWN







SILT FENCE DETAIL

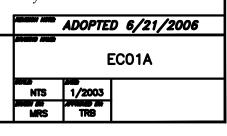


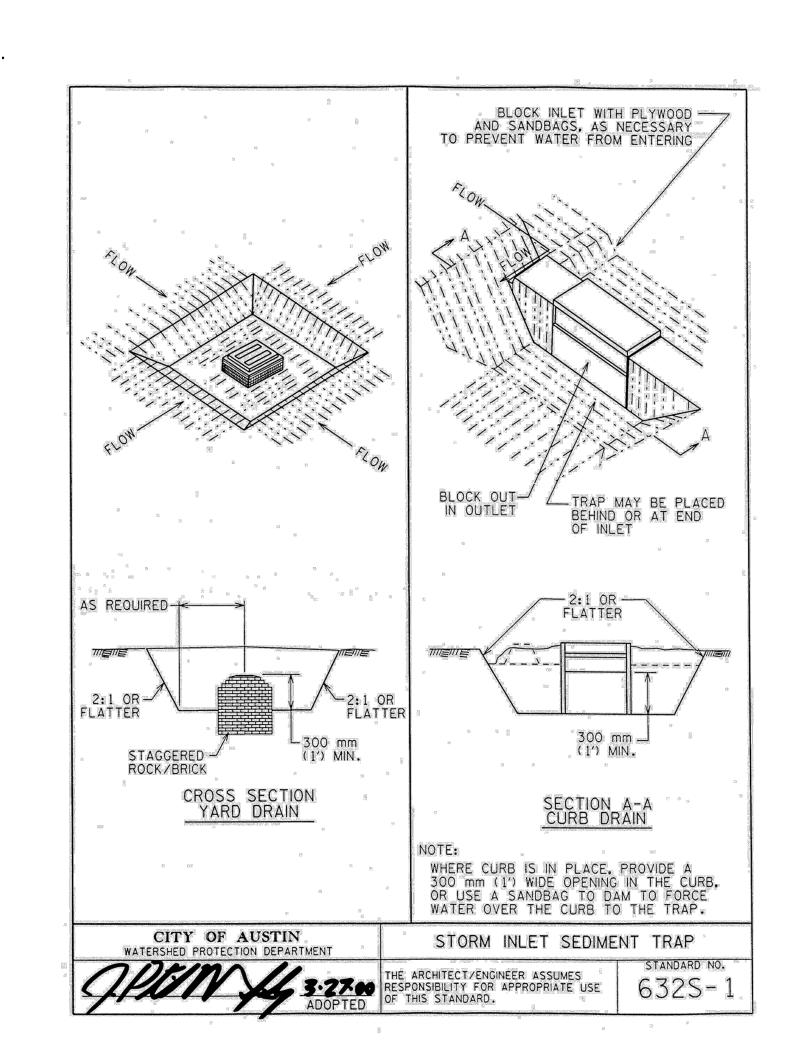
- 1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION. 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.
- 4. ALL PLANTING SHALL BE DONE BETWEEN MAY 1 AND SEPTEMBER 15 EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING.
  IF PLANTING IS AUTHORIZED TO BE DONE OUTSIDE THE DATES SPECIFIED, THE SEED SHALL BE PLANTED WITH THE ADDITION
  OF WINTER FESCUE (KENTUCKY 31) AT A RATE OF 1001b/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED. ÁLL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE "A" RECENT CROP, RECLEANED AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEED SHALL BE FURNISHED IN SEALED, STANDARD CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS. 5. ALL DISTURBED AREAS TO BE RESTORED AS NOTED IN THE WATER POLLUTION ABATEMENT PLAN.
- 6. THE PLANTED AREA TO BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF FOUR (4) INCHES. THE IRRIGATION TO OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO MONTHS TO INSURE GERMINATION AND ESTABLISHMENT OF THE GRASS . RAINFALL OCCURRENCES OF 1/2 INCH OR GREATER TO POSTPONE THE WATERING SCHEDULE ONE WEEK. 7. RESTORATION TO BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1-1/2 INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 25 SQUARE FEET EXIST.
- 8. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL TO BE PLACED IN ALL AREAS DISTURBED BY CONSTRUCTION.
- 9. THE CONTRACTOR TO HYDROMULCH OR SOD (AS SHOWN ON PLANS) ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION.
- 10. EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIPLINE.
- 11. TO AVOID SOIL COMPACTION, CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIPLINE AREAS.
- 12. WHERE A FENCE IS CLOSER THAN FOUR (4) FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT (8) FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE FENCING. 13. TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
- 14. ANY ROOT EXPOSED BY CONSTRUCTION ACTIVITY TO BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LÓSS
- 15. CONTRACTOR TO PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHAPE TREES")
- STANDARDS FOR SHADE TREES"). 16. THE CONTRACTOR IS TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/4 INCH TO VERIFY THAT THEY HAVE NOT BEEN SIGNIFICANTLY DISTURBED. ANY ACCUMULATED SEDIMENT AFTER A SIGNIFICANT RAINFALL TO BE REMOVED AND PLACED IN THE OWNER DESIGNATED SPOIL DISPOSAL SITE. THE CONTRACTOR TO CONDUCT PERIODIC INSPECTIONS OF ALL EROSION/SEDIMENTATION CONTROLS AND TO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
- 17. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR FEET (2'-4') BEHIND THE AREA IN QUESTION.
- 18. NO ABOVE AND/OR BELOW GROUND TEMPORARY FUEL STORAGE FACILITIES TO BE STORED ON THE PROJECT SITE. 19. IF EROSION AND SEDIMENTATION CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER'S REPRESENTATIVE AND THE CONTRACTOR TO EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEMS FOR DAMAGE PRIOR TO CONSTRUCTION. ANY DAMAGE TO PREEXISTING EROSION AND SEDIMENTATION CONTROLS NOTED
- TO BE REPAIRED AT OWNERS EXPENSE. 20. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

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



CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES







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

MARISA KEISER Marisa Veiser August 4, 2025 DESIGN | DRAWN | LB

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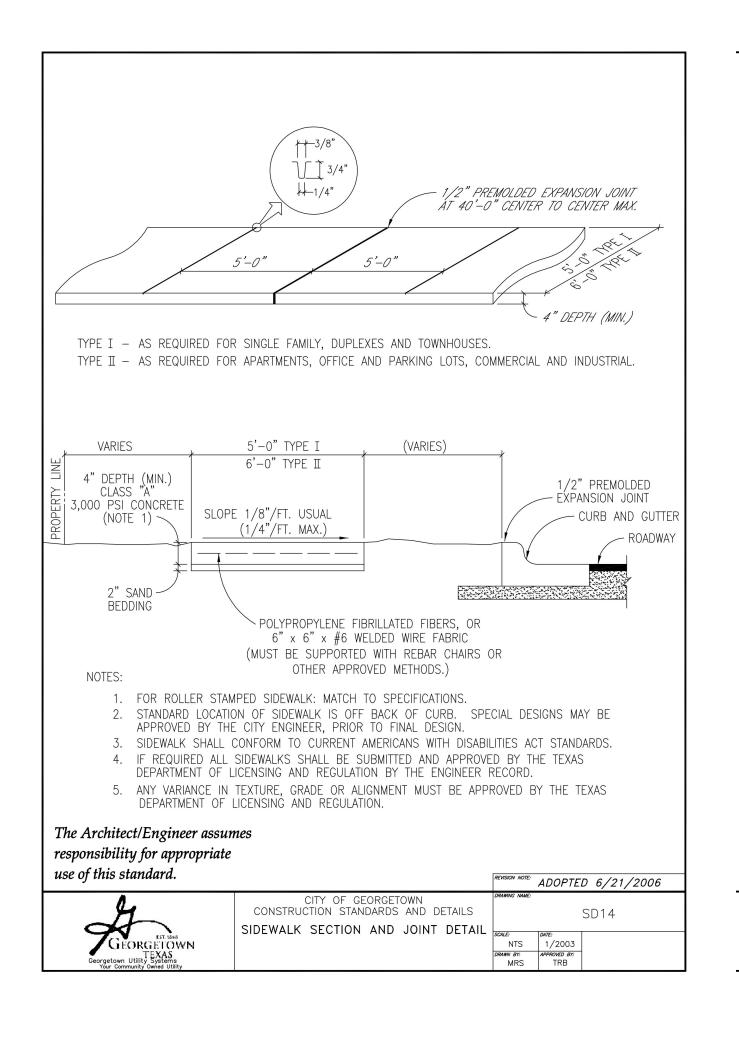
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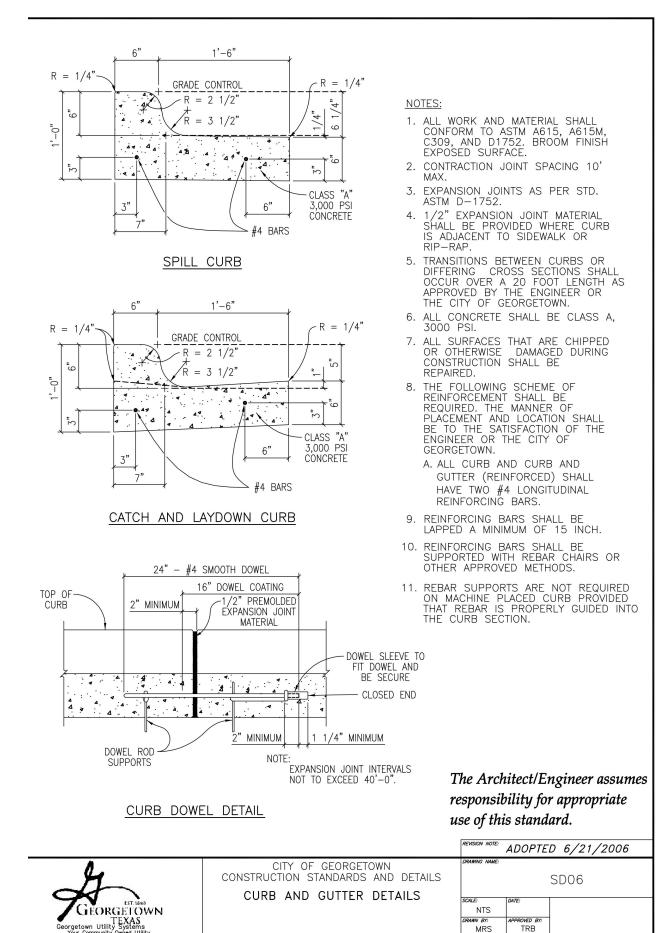
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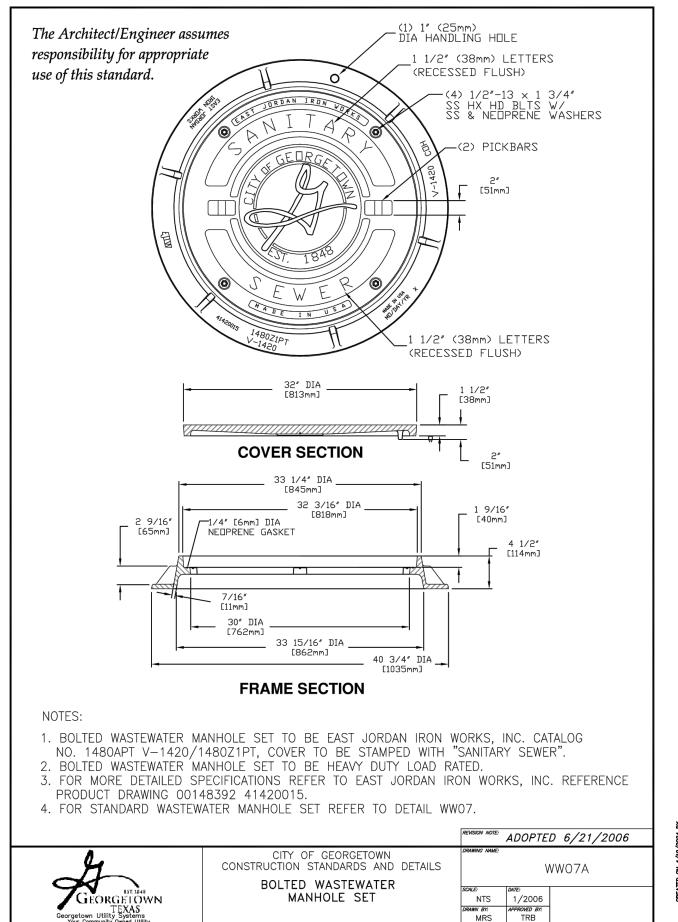
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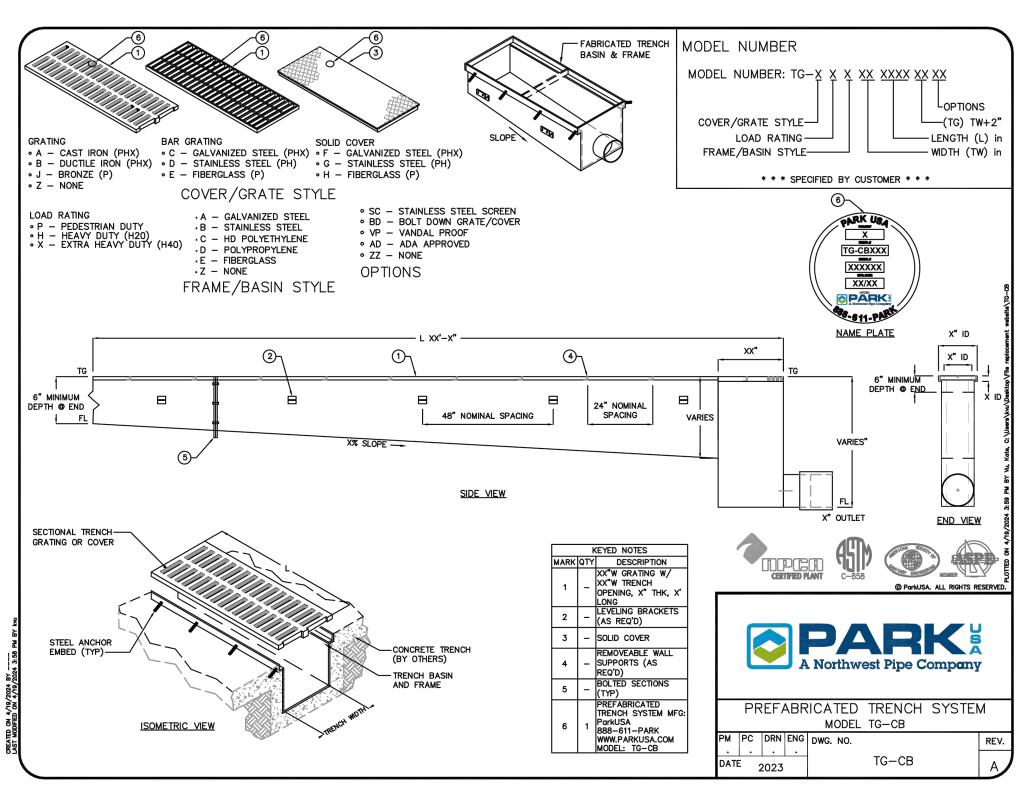
JOB No. 250519-01-002

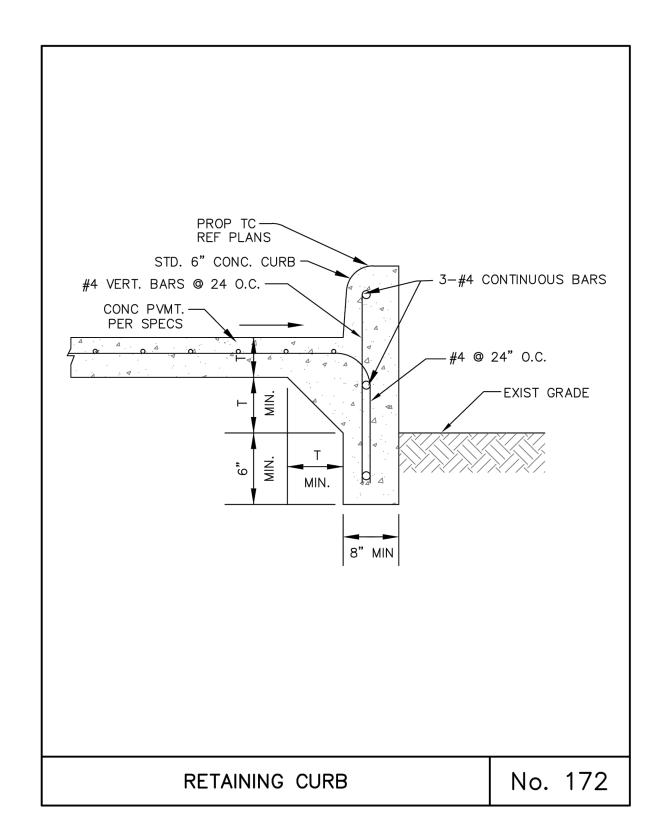
SHEET

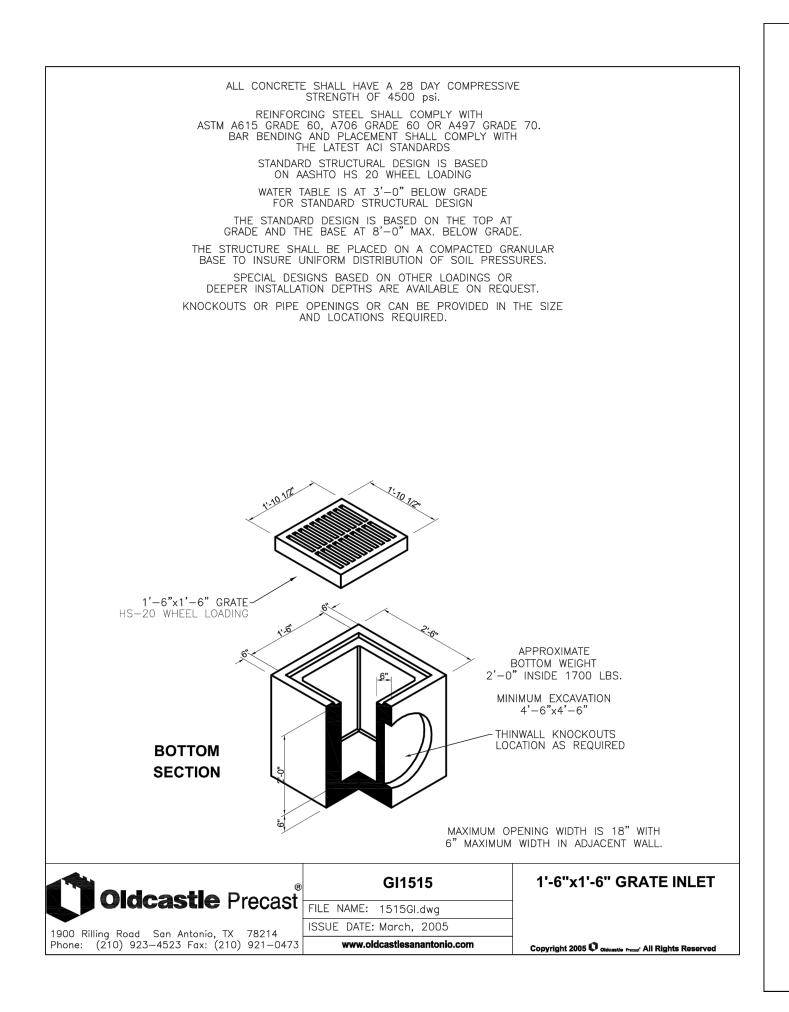


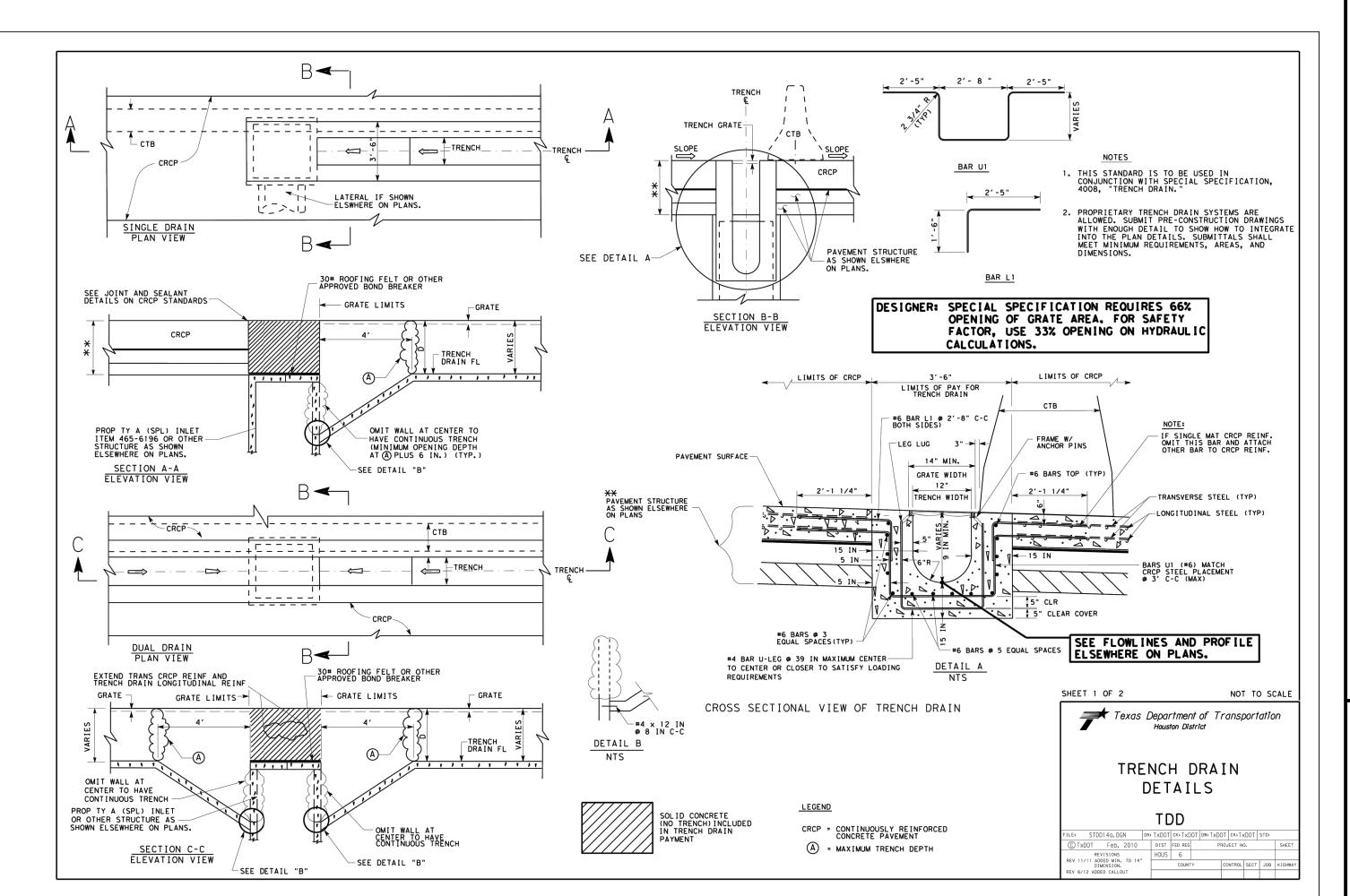














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Marisa Verser August 4, 2025 DESIGN | DRAWN | LB JOB No. 250519-01-002 SHEET 19 OF 25

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MARISA KEISER

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DETAIL

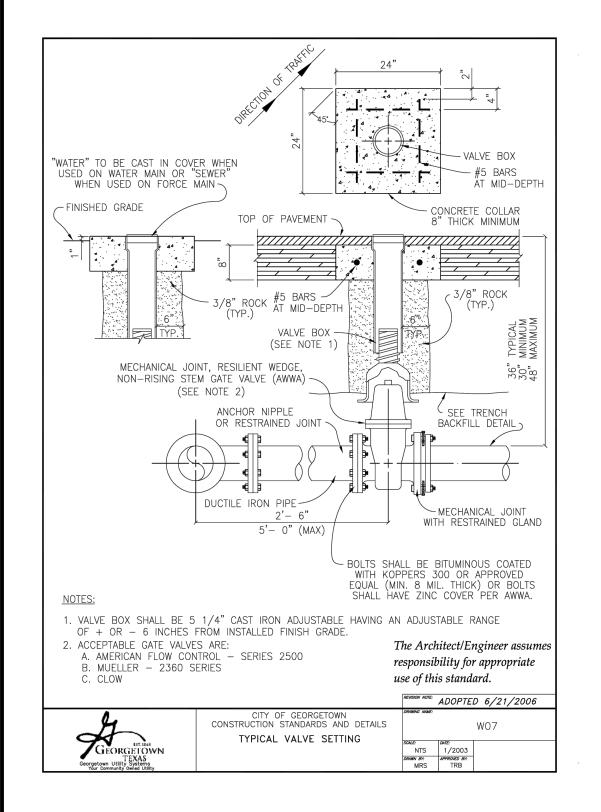
CONSTRUCTION

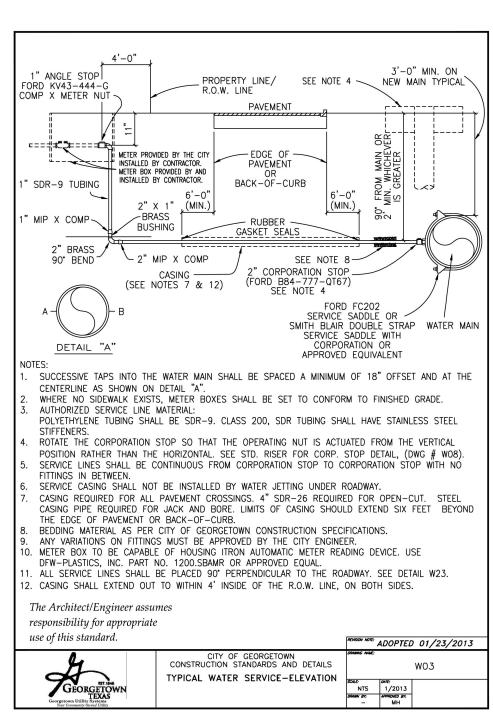
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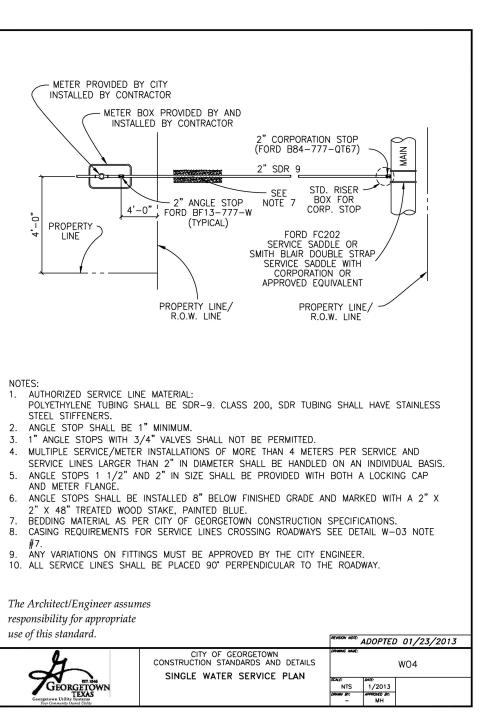
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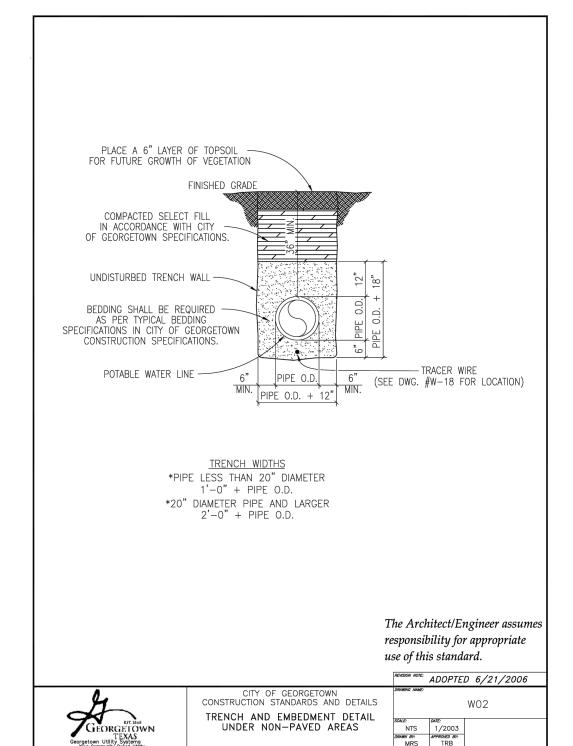
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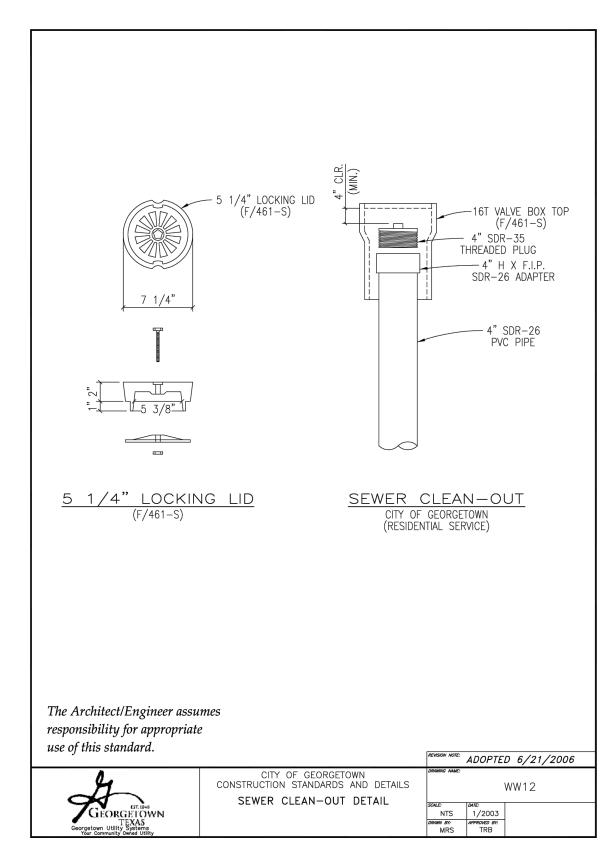
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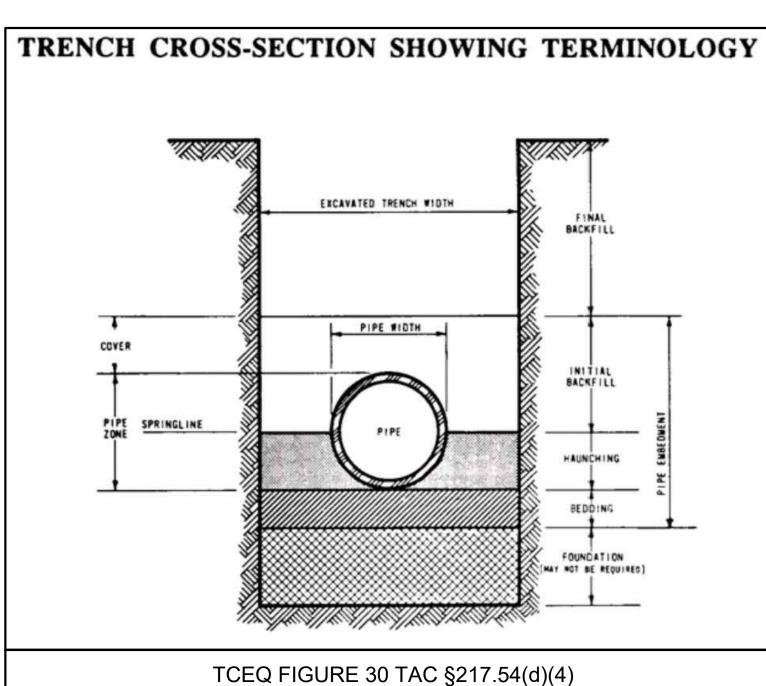


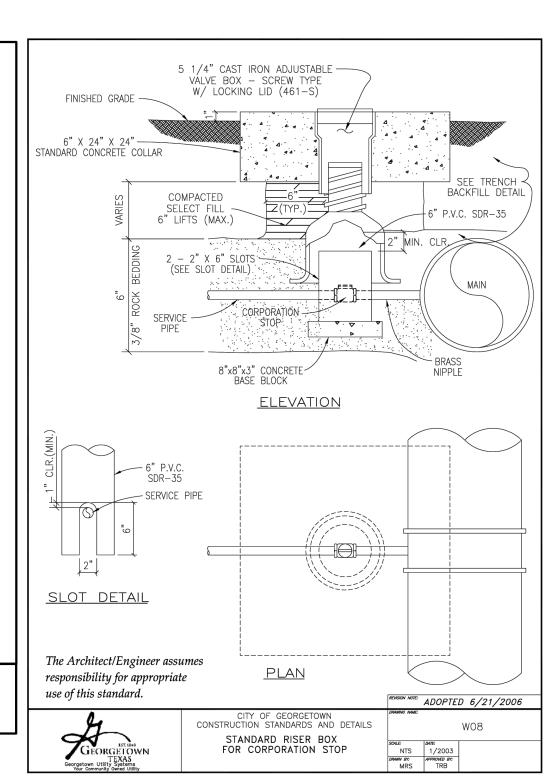


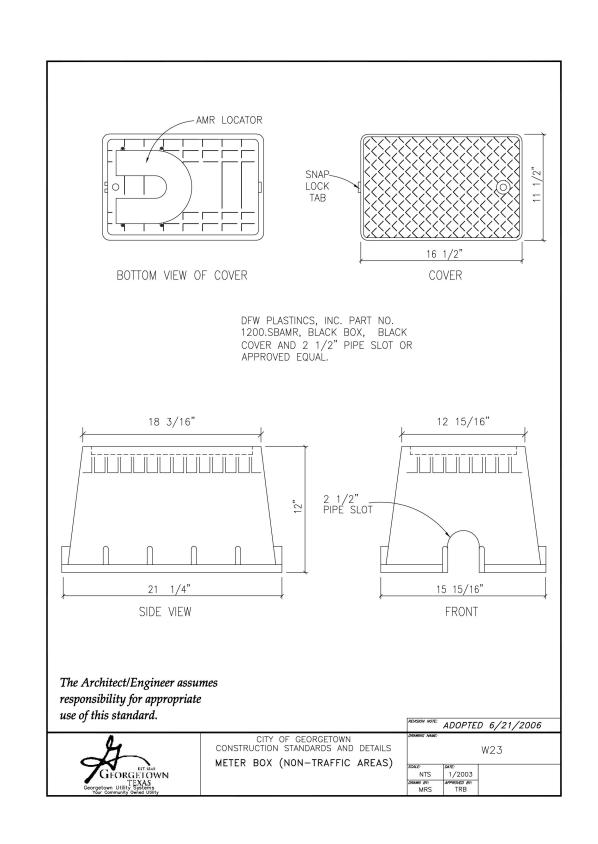


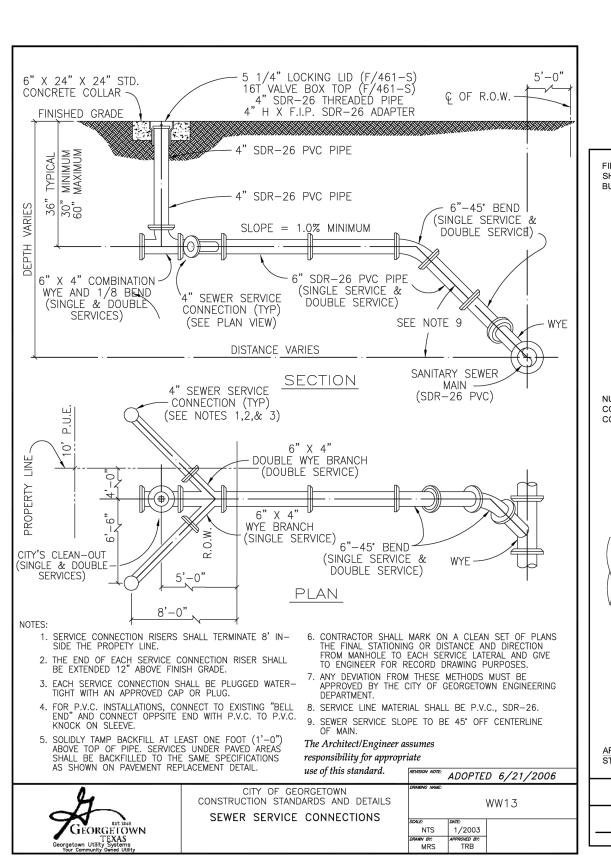


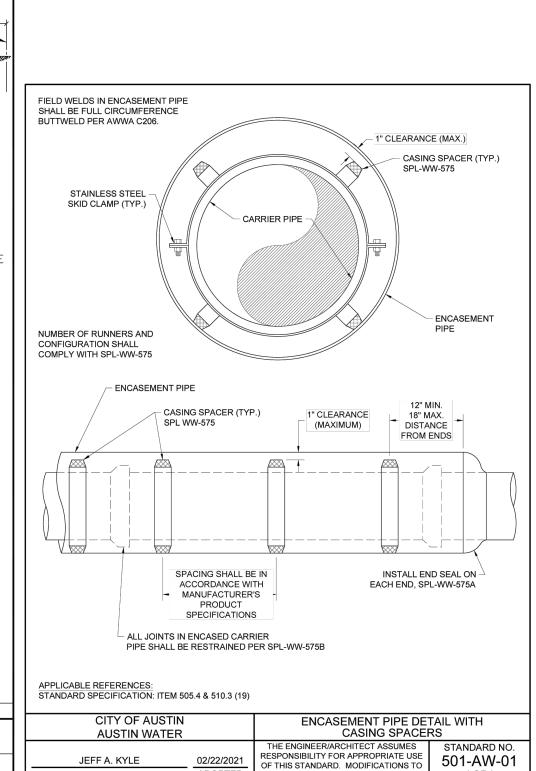














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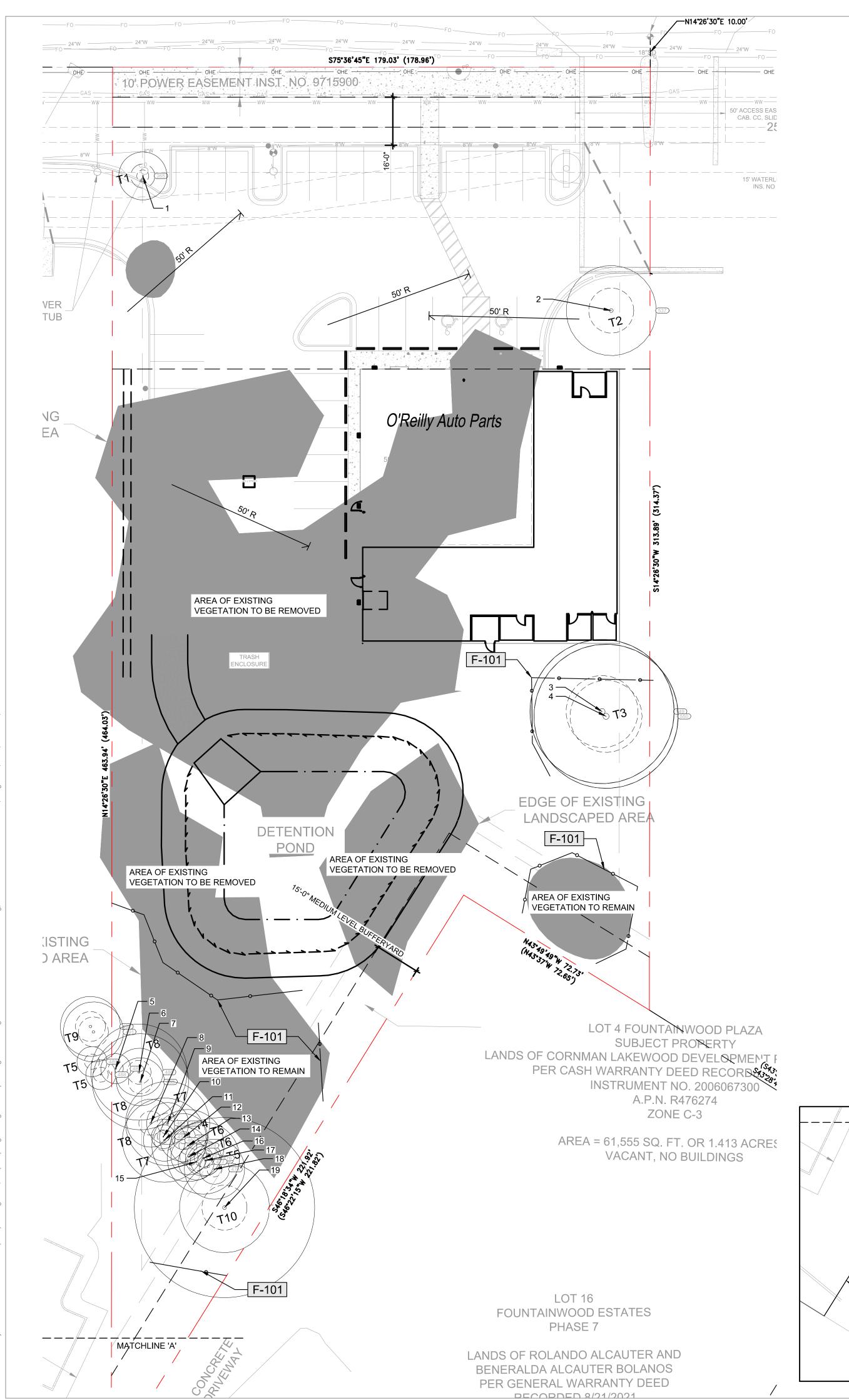
DETAIL

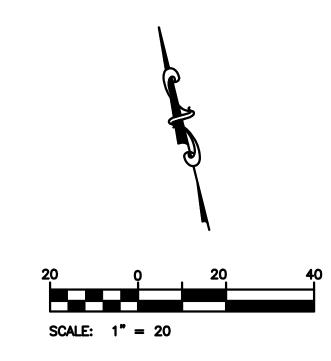
UTILITY

811.	
Know what's below.	ľ
Call before you dig.	ľ

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	7.9	August 4, 2025		
al	DESIGN	DRAWN	CHKD	
	MC	LB	MK	
	JOB No.	250519-	01-002	
		SHEET		
	20	OF	25	





EXISTING ON-SITE TREE TABLE EVERGREEN N/A
EVERGREEN HERITAGE
EVERGREEN PROTECTED
EVERGREEN PROTECTED REMAIN T2(CLUSTER) 30 REMAIN REMAIN T3(CLUSTER) PROTECTED
N/A
PROTECTED
PROTECTED
PROTECTED
N/A
PROTECTED
N/A
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N/A
N/A
N/A
HERITAGE DECIDUOUS
DECIDUOUS REMAIN REMAIN REMAIN REMAIN REMAIN

DECIDUOUS DECIDUOUS

TOTAL CALIPER IN. ON SITE: TOTAL CALIPER IN. HERITAGE TREES: 60 TOTAL CALIPER IN. PROTECTED TREES: 172

TOTAL CALIPER IN. REMOVED: TOTAL CALIPER IN. HERITAGE TREES REMOVED: 0

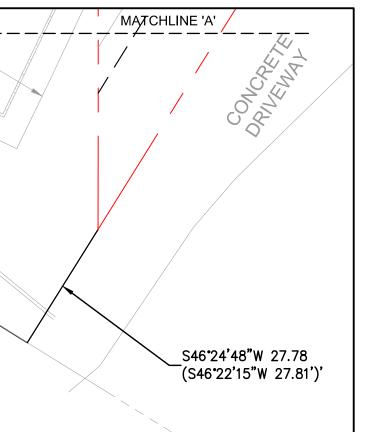
TOTAL CALIPER IN. REMAINING: TOTAL CALIPER IN. PROTECTED TREES REMAIN: 172 (100%)

NO HERITAGE TREES ARE REMOVED. NO MITIGATION IS REQUIRED FOR THE 8 CALIPER INCHES THAT ARE REMOVED.

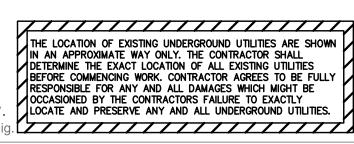
REFERENCE NOTES SCHEDULE F-101 TREE PRESERVATION FENCING 

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REMAIN

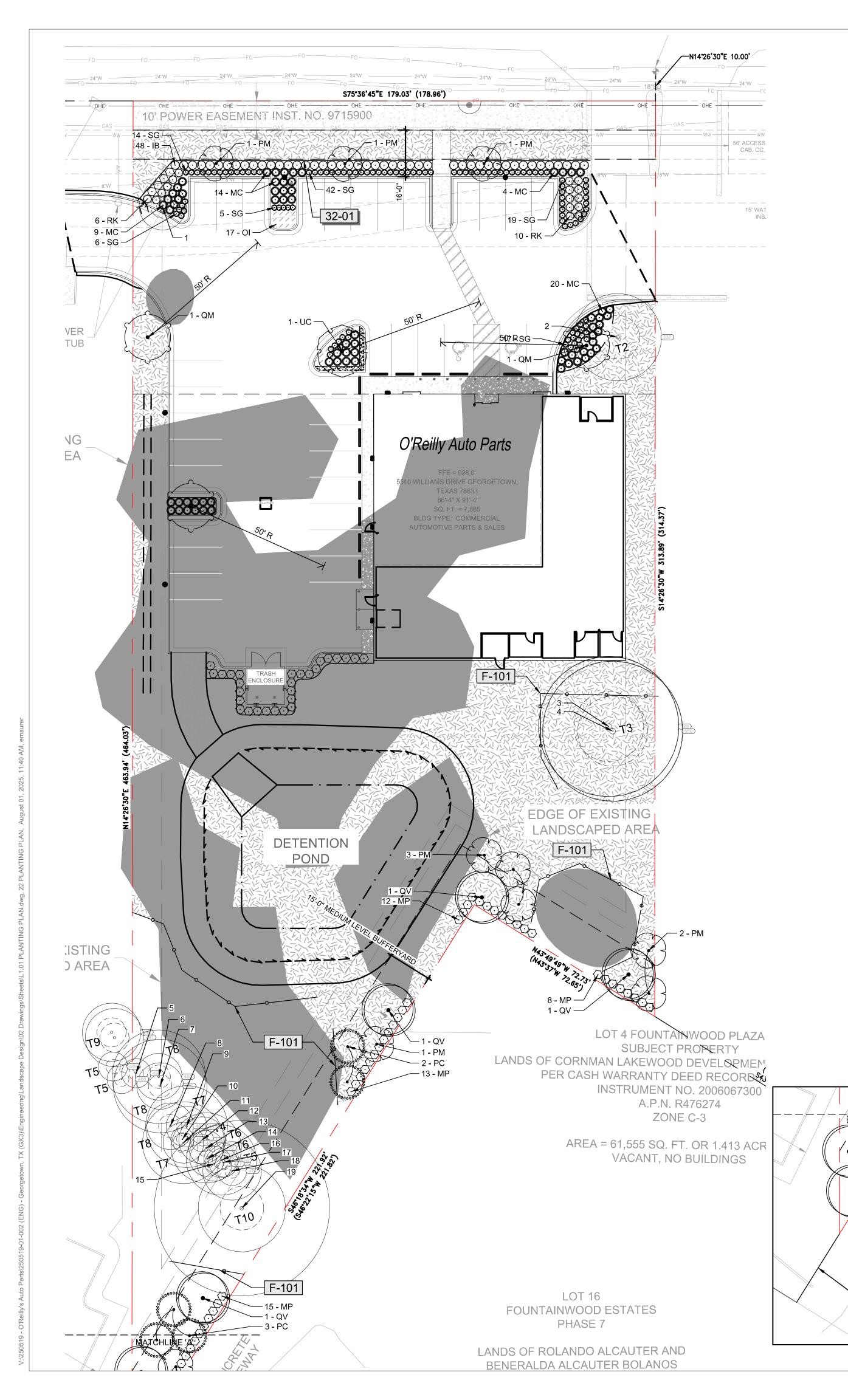






DESIGN DRAWN CHKD **JOB No.** 250519-01-002 SHEET

O'REILLY AUTO F 5510 WILLIAMS SEORGETOWN, TEX





SYMBOL	CODE	QTY	COMMON / BOTANICAL NAME	CONT.	CAL.	HT.	SP.	BR. HT.
TREES								
000000000000000000000000000000000000000	PC	5	Carolina Cherry Laurel / Prunus caroliniana	30 gal	2"Cal	6`-8`	4`-5`	4`-5`
	РМ	10	Mexican Plum / Prunus mexicana	30 gal	2"Cal	6`-8`	4`-5`	4`-5`
	QM	3	Burr Oak / Quercus macrocarpa	45 gal	3"Cal	10`-12`	5`-6`	5`+
	QV	6	Southern Live Oak / Quercus virginiana	45 gal	3"Cal	10`-12`	5`-6`	5`+
	UC	1	Cedar Elm / Ulmus crassifolia	45 gal	3"Cal	10`-12`	5`-6`	5`+
SYMBOL	CODE	QTY	COMMON / BOTANICAL NAME	CONT.	<u>HT.</u>	<u>O.C.</u>		
<u>SHRUBS</u>								
$\odot$	IB	46	Dwarf Burford Holly / Ilex cornuta 'Burfordii Nana'	5 gal	12"	36"		
	MC	69	Pink Muhly Grass / Muhlenbergia capillaris	5 gal	10"	36"		
•	MP	80	Dwarf Wax Myrtle / Myrica cerifera 'Pumila'	5 gal	12"	36"		
, , , , , , , , , , , , , , , , , , ,	RK	16	Knock Out Rose / Rosa shrub 'Knock Out'	5 gal	12"	36"		
5 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	SG	109	Autumn Sage / Salvia greggii	3 gal	10"	24"		
GROUND (	COVERS							
	CT SOD	22,375 sf	Bermuda Grass / Cynodon dactylon `Tif 419`	sod				
	OI	42	Aztec Grass / Ophiopogon intermedius	1 gal	8"	18"		

REFERE	NCE NOTES SCHEDULE	
CODE 32-01	DESCRIPTION STEEL BED EDGE	QTY 340 lf
FENCE F-101	TREE PRESERVATION FENCING	292 lf
K-102	DECOMPOSED GRANITE	105 sf

### REQUIREMENTS CALCULATIONS:

STREET YARDS BETWEEN 10,000 AND 100,000 SF:

1. LANDSCAPE AREA TOTALING 20% OF THE STREET YARD

2. FOUR SHADE TREES AND 12 SHRUBS PER THE FIRST 10,000 SF OF STREET YARD, PLUS ONE AND ONE—HALF SHADE TREES AND FOUR SHRUBS PER EVERY ADDTIONAL 10,000 SQUARE FEET OF STREET YARD THEREAFTER.

TOTAL STREET YARD AREA: 17,991 SF

17,991 SF X .2 = 3,598 SF LANDSCAPE AREA REQUIRED

4,458 SF LANDSCAPE AREA PROVIDED IN STREET YARD

17,991 SF - 10,000 = 7,991 SF 7,991 / 10,000 = .7991 .7991 X 1.5 = 1.1 ~ 2 TREES .7991 X 4 = 3.1 ~ 4 SHRUBS

4 TREES + 2 TREES = 6 FRONTAGE TREES REQUIRED 12 SHRUBS + 4 SHRUBS = 16 FRONTAGE SHRUBS REQUIRED

6 FRONTAGE TREES AND 124 SHRUBS PROVIDED

LANDSCAPE AREA: 20 SF FOR EACH FRONTAGE PARKING STALL

20 PARKING STALLS IN THE FRONT YARD.

20 X 20 SF = 400 SF REQUIRED

S SE LANDSCADE ADEA DDOMDE

615 SF LANDSCAPE AREA PROVIDED

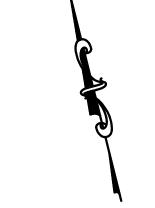
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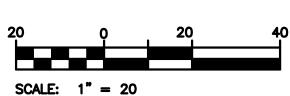
(S46°22'15"W 27.81')'

LANDSCAPE AREA: 10 SF EACH ADDITIONAL PARKING STALL

14 PARKING STALLS X 10 = 140 SF LANDSCAPE AREA REQ.

159 SF LANDSCAPE AREA PROVIDED





### LANDSCAPE NOTES

- 1. ALL MATERIAL QUANTITIES ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. CONTRACTOR SHALL VERIFY ALL QUANTITIES.
- 2. CONTRACTOR SHALL HAVE ALL UTILITY LINES LOCATED BEFORE PERFORMING ANY EXCAVATION FOR LANDSCAPE AND/OR IRRIGATION INSTALLATION. CONTRACTOR SHALL TAKE NECESSARY STEPS TO PROTECT EXISTING UTILITIES.
- 3. PRIOR TO APPLYING SOD OR HYDROSEED, ALL STONES AND DEBRIS LARGER THAN 1 INCH IN ANY DIMENSION SHALL BE REMOVED AND SURFACE MUST BE TOP DRESSED WITH 2" OF TOPSOIL AND FINE GRADED SMOOTH.
- 4. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A FULL AND HEALTHY STAND OF GRASS AT THE TIME OF POSSESSION BY THE OWNER.
- 5. ALL AREAS DISTURBED BY CONSTRUCTION (INCLUDING AREAS OUTSIDE PROPERTY LINES) SHALL BE PLANTED AND WATERED A MINIMUM OF 10 WEEKS OR UNTIL GRASS IS FULLY ESTABLISHED.
- 6. LANDSCAPE BED EDGING SHALL BE PROVIDED WHERE INDICATED ON PLANS AND BETWEEN PLANTING/STONE BEDS AND LAWN AREAS/SIDEWALKS.
- 7. OPEN AREAS WITHIN LANDSCAPE BEDS SHALL BE MULCHED.
- 3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING PHOTOGRAPHS OF ACTUAL LANDSCAPE MATERIALS AND SUBMITTING THEM TO THE LANDSCAPE ARCHITECT OF RECORD FOR APPROVAL PRIOR TO INSTALLATION.
- 9. PLANT MATERIAL SELECTED SHALL FOLLOW THE GUIDELINES OF THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND MEET OR EXCEED ALL SIZE REQUIREMENTS LISTED ON PLANT SCHEDULE.
- 10. ALL PLANTINGS SHALL BE MAINTAINED IN A HEALTHY STATE BY LANDSCAPE CONTRACTOR AND SHALL BE WARRANTED (FOR REPLACEMENT) FOR ONE (1) CALENDAR YEAR AFTER ACCEPTANCE OF THE LANDSCAPE INSTALLATION.

SHADE TREES

1 SHADE TREE PER EVERY 12 PARKING STALLS

34 PARKING STALLS TOTAL / 12 = 2.8  $\sim$  3 SHADE TREES REQUIRED

3 SHADE TREES PROVIDED

BUFFER YARD LEVEL: DISTRICT C3 ADJACENT TO TF = TYPE C BUFFER - MEDIUM 294 LF

15' WIDE PLANTING AREA PROVIDED

ONE SHADE TREE, TWO EVERGREEN ORNAMENTAL TREES, AND EIGHT EVERGREEN SHRUBS PER EACH 50 LF OF BUFFERYARD.

294 LF / 50 = 5.88

5.88 ~ 6 SHADE TREES REQUIRED 5.88 X 2 = 11.7 ~ 12 EVERGREEN ORNAMENTAL TREES REQUIRED 5.88 X 8 = 47 EVERGREEN SHRUBS REQUIRED

6 SHADE TREES, 12 EVERGREEN ORNAMENTAL TREES, AND 48 EVERGREEN SHRUBS PROVIDED

STATEMENT OF COMPLIANCE
THE PLANS SUBMITTED FOR APPROVAL COMPLY WITH
THE REQUIREMENTS OF THE GEORGETOWN, TX
UNIFIED DEVELOPMENT CODE CHAPTER 8.



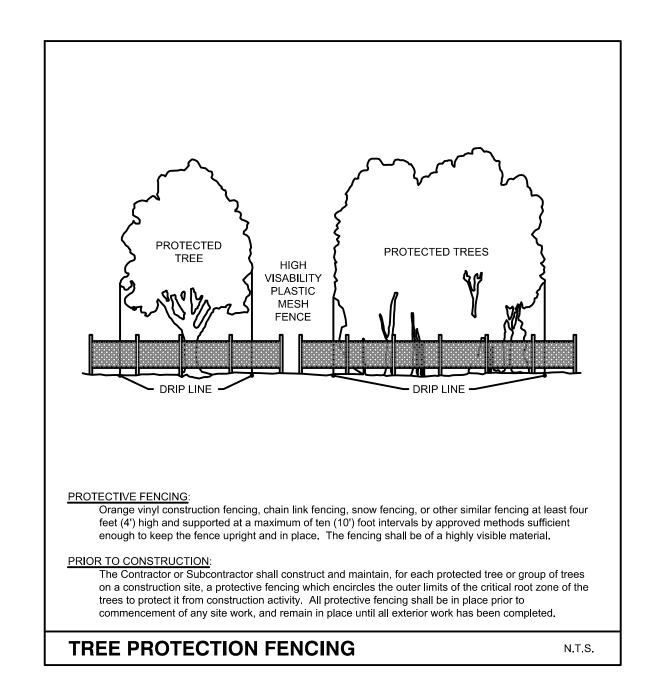
THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE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

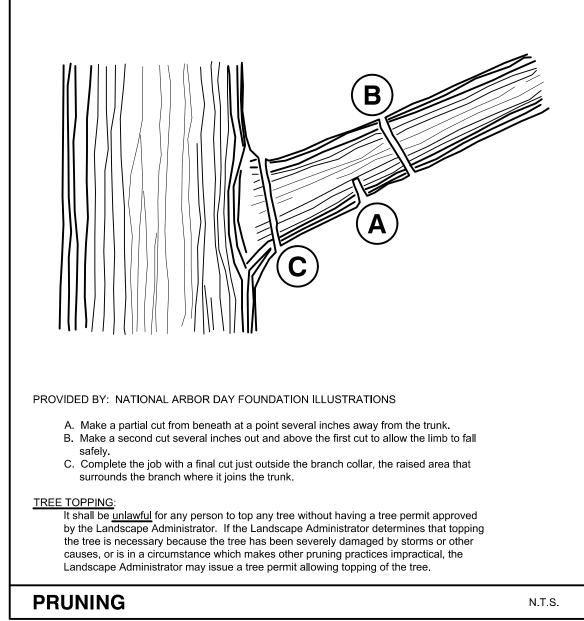
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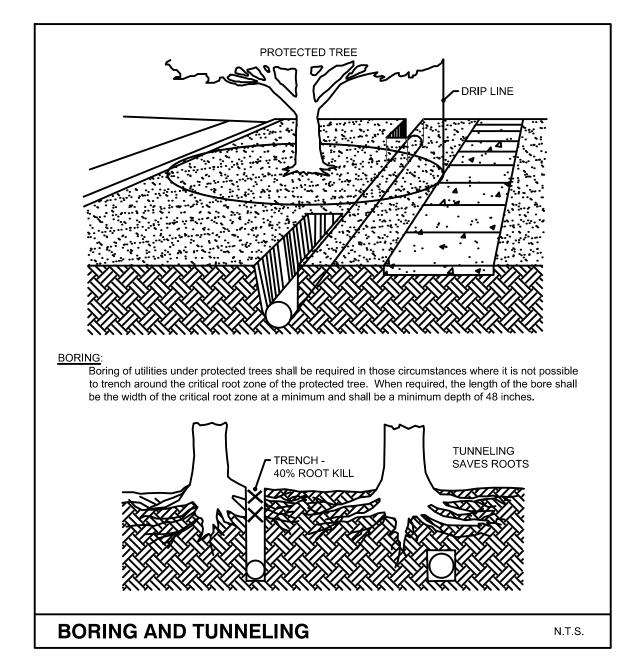
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MC LB MK

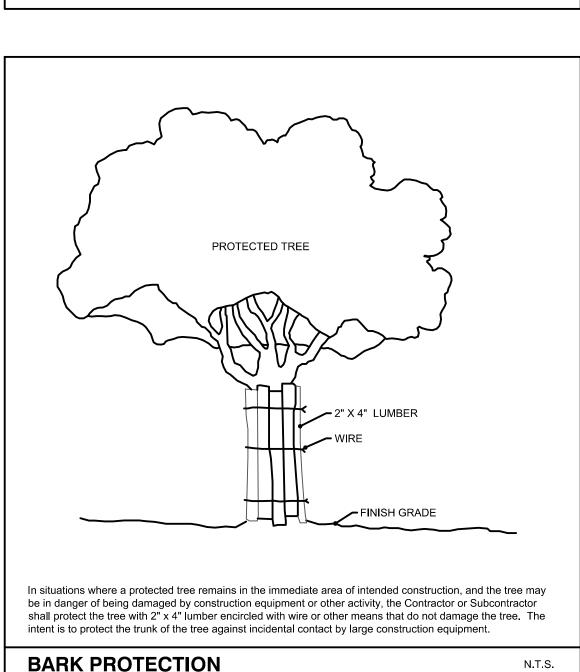
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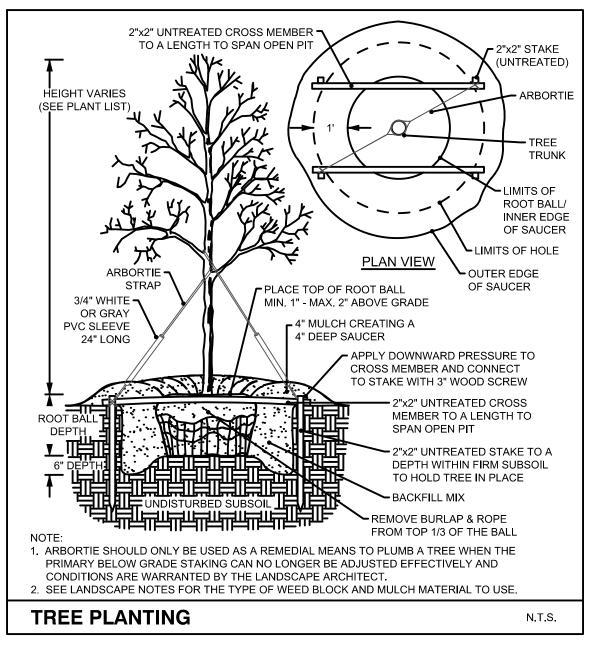
SHEET
22 OF 25











SEE PLANT

MATERIAL LIST

FOR MIN. HT.

ROOT BALI

DEPTH

NOTE: SEE LANDSCAPE NOTES FOR THE TYPE OF

SHRUB PLANTING

WEED BLOCK AND MULCH MATERIAL TO USE.

← 4" STEEL EDGE - BORDER ENTIRE

FIF SHRUB IS BALL AND BURLAP,

FROM TOP 1/3 OF ROOTBALL

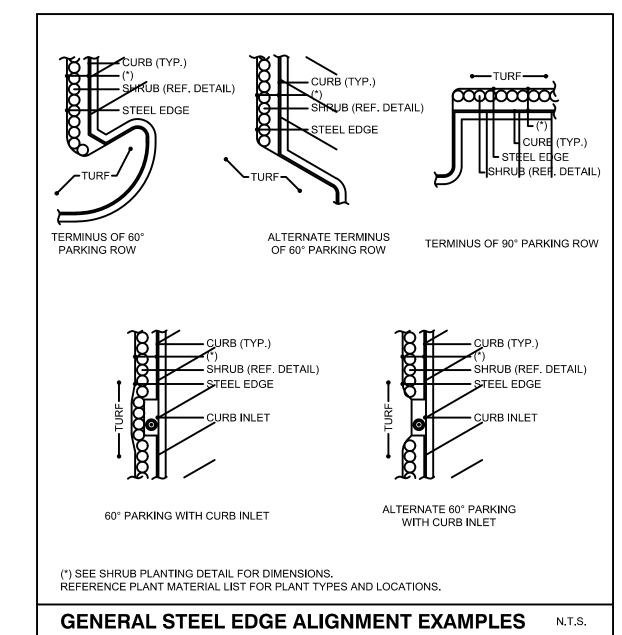
UNDISTURBED SUBSOIL

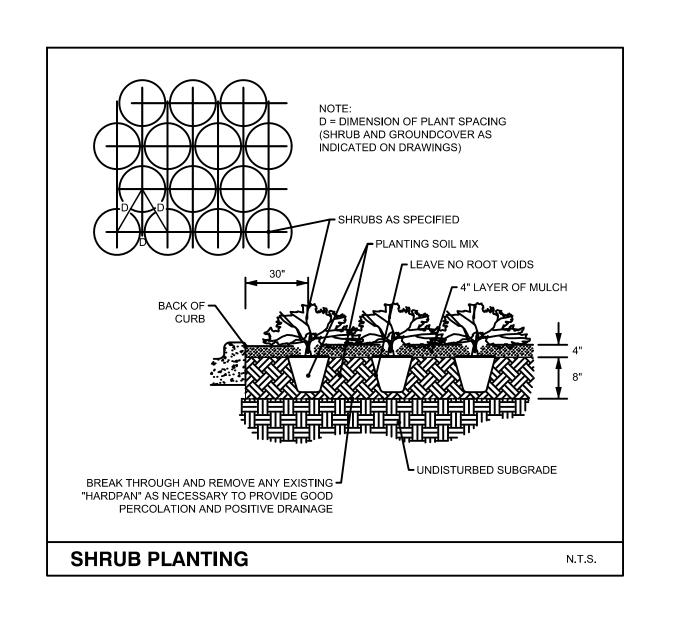
THEN REMOVE BURLAP AND ROPE

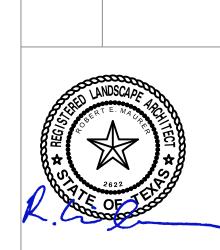
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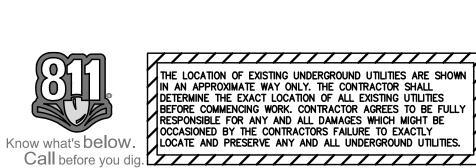
BED AS SHOWN IN LANDSCAPE PLAN

(REF. LANDSCAPE PROJECT NOTES)



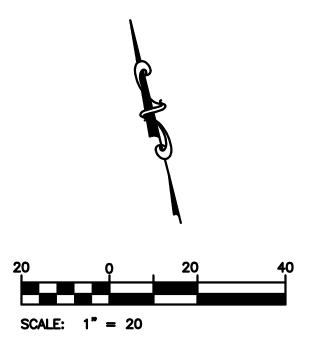








O'REILLY AUT 5510 WILLIA FORGETOWN,



# VALVE SCHEDULE

NUMBER	MODEL	SIZE	<u>TYPE</u>	<u>GPM</u>	DESIGN PSI	<u>PSI</u>	PSI @ POC	PRECIP
1	Hunter ICV-G	1"	Turf Rotary	14.53	40	43.7	62.2	0.31 in/h
2	Hunter ICV-G	1"	Turf Rotary	11.79	40	43.8	59.9	0.73 in/h
3	Hunter ICV-G	1"	Bubbler	3.5	30	32.9	45.1	1.7 in/h
4	Hunter ICV-G	1"	Turf Rotary	13.6	40	43.8	57.6	0.75 in/h
5	Hunter PCZ-101-25	1"	Area for Dripline	9.22	25	36.3	50.2	0.43 in/h
6	Hunter ICV-G	1"	Turf Rotary	9.31	40	48.0	61.6	0.57 in/h

# WATERING SCHEDULE

<u>NUMBER</u>	<u>MODEL</u>	<u>TYPE</u>	PRECIP	IN./WEEK	MIN./WEEK	GAL./WEEK	GAL./DAY
1	Hunter ICV-G	Turf Rotary	0.31 in/h	0.9	175	2,543	363
2	Hunter ICV-G	Turf Rotary	0.73 in/h	0.9	75	884	126
3	Hunter ICV-G	Bubbler	1.7 in/h	0.9	32	112	16
4	Hunter ICV-G	Turf Rotary	0.75 in/h	0.9	73	993	142
5	Hunter PCZ-101-25	Area for Dripline	0.43 in/h	0.9	127	1,171	167
6	Hunter ICV-G	Turf Rotary .	0.57 in/h	0.9	95	885	126
		TOTALS:			577	6,588	941.1

SOIL TO MEET THIS REQUIREMENT MUST BE NOTED ON THE IRRIGATION PLAN AND DISCUSSED WITH THE IRRIGATION SYSTEM OWNER OR OWNER'S REPRESENTATIVE AND LICENSED IRRIGATOR OF RECORD TO ADDRESS ANY SAFETY ISSUES.

- 15. ALL TRENCHES AND HOLES CREATED DURING INSTALLATION OF AN IRRIGATION SYSTEM MUST BE BACKFILLED AND COMPACTED TO FINISHED GRADE.
- I G. ALL UNDERGROUND WIRING MUST BE LISTED BY UNDERWRITERS LABORATORIES AS ACCEPTABLE FOR BURIAL AND MUST BE BURIED WITH A MINIMUM OF SIX (6) INCHES OF BACKFILL.
- 17. ALL ELECTRICAL WIRE SPLICES EXPOSED TO MOISTURE MUST BE WATERPROOFED WITH 3M
- DBO/B-6KIT WATERPROOF WIRE CONNECTORS OR APPROVED EQUAL.
- I 8. ALL QUICK COUPLERS MUST BE INSTALLED USING A QUICK COUPLER KEY AND PLACED IN A VALVE BOX. AN ISOLATION VALVE MUST BE INSTALLED UPSTREAM OF EACH QUICK COUPLER.

19. A FINAL WALK THROUGH WITH OWNER'S REPRESENTATIVE MUST BE SCHEDULED PRIOR TO FINAL

- COMPLETION, TO EXPLAIN OPERATION OF THE SYSTEM. O. UPON COMPLETION OF THE IRRIGATION SYSTEM INSTALLATION, PROVIDE THE OWNER OR OWNER'S REPRESENTATIVE WITH A DOCUMENT CONTAINING, BUT NOT LIMITED TO THE FOLLOWING
- DRAWING SHOWING ACTUAL INSTALLATION (ALL VARIANCES FROM ORIGINAL PLAN MUST BE AUTHORIZED BY LICENSED IRRIGATOR OF RECORD). DRAWING MUST INCLUDE THE STATEMENT "THIS IRRIGATION SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL LAWS, ORDINANCES, RULES, REGULATIONS OR ORDERS, I HAVE TESTED THE SYSTEM AND DETERMINED THAT IT HAS BEEN INSTALLED ACCORDING TO THE IRRIGATION PLAN
- AND IS PROPERLY ADJUSTED FOR THE MOST EFFICIENT APPLICATION OF WATER AT THIS TIME." HOW TO OPERATE AND REPAIR THE IRRIGATION SYSTEM
- MANUFACTURER'S MANUAL FOR THE AUTOMATIC CONTROLLER
- HOW TO CHECK THE RAIN/MOISTURE SENSOR
- A LIST OF COMPONENTS THAT REQUIRE MAINTENANCE, SUCH AS FILTERS, AND THE RECOMMENDED FREQUENCY FOR THE SERVICE.
- HOW TO PRUNE GRASS AND PLANTS AWAY FROM IRRIGATION EMITTERS
- LIST OF PRECIPITATION RATES OF EACH IRRIGATION ZONE WITHIN THE SYSTEM
- DOCUMENTATION OUTLINING ANY WATER CONSERVATION MEASURES CURRENTLY IN EFFECT FROM THE WATER PURVEYOR
- THE NAME OF THE WATER PURVEYOR

INTERNATIONAL PLUMBING CODE (SECTION 605)

THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS.

I 2. RAIN/MOISTURE SHUT-OFF TECHNOLOGY MUST BE INSTALLED AND DONE SO IN ACCORDANCE WITH

13. AN ISOLATION VALVE MUST BE INCLUDED ON ALL IRRIGATION INSTALLATIONS AND SHALL BE

14. ALL IRRIGATION PIPING MUST HAVE A MINIMUM DEPTH COVERAGE OF SIX (6) INCHES OF SELECT

BACKFILL BETWEEN THE TOP OF THE PIPE AND THE FINISHED GRADE OF THE TOPSOIL. MOUNDING

PLACED BETWEEN THE WATER METER AND THE BACKFLOW PREVENTION DEVICE.

 A SUGGESTED SEASONAL OR MONTHLY WATERING SCHEDULE BASED ON CURRENT EVAPOTRANSPIRATION DATA FOR THE GEOGRAPHIC REGION AND MINIMUM WATER REQUIREMENTS FOR THE PLANT MATERIAL IN EACH ZONE BASED ON THE SOIL TYPE AND PLANT MATERIAL WHERE THE SYSTEM IS INSTALLED.

- A WRITTEN WARRANTY COVERING MATERIALS AND LABOR FURNISHED IN THE NEW INSTALLATION OF THE IRRIGATION SYSTEM FOR A MINIMUM PERIOD OF ONE YEAR. WARRANTY MUST INCLUDE THE ON-SITE LICENSED IRRIGATION CONTRACTOR'S SEAL, NAME, SIGNATURE, DATE, BUSINESS ADDRESS AND BUSINESS TELEPHONE NUMBER(S). WARRANTY MUST INCLUDE THE STATEMENT, "IRRIGATION IN TEXAS IS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), MC-178, P.O. BOX 130897, AUSTIN, TEXAS 78711-3087. TCEQ'S WEBSITE IS: WWW.TCEQ.STATE.TX.US." IRRIGATION CONTRACTOR SHALL ALSO SUPPLY INFORMATION REGARDING APPLICABLE MANUFACTURER'S WARRANTIES.
- 2 I . AFFIX A PERMANENT STICKER TO THE IRRIGATION CONTROLLER THAT LISTS THE ON-SITE LICENSED IRRIGATOR'S NAME, LICENSE NUMBER, COMPANY NAME, TELEPHONE NUMBER(S) AND THE DATES OF THE WARRANTY PERIOD.
- 22. AFFIX A LAMINATED AS-BUILT IRRIGATION ZONE MAP TO THE INSIDE COVER OF THE CONTROLLER. NUMBER ALL ZONES ON THE MAP. PROVIDE A CHART SHOWING THE PROGRAM, WATERING DAYS,
- START TIMES, AND RUN TIMES FOR EACH ZONE.
- 23. REFER TO IRRIGATION SPECIFICATIONS FOR MORE INFORMATION.
- 24. WHEN INSTALLING IRRIGATION UNDER OR NEAR EXISTING TREES, ALL TRENCHES MUST BE HAND DUG. ROOTS LARGER THAN TWO (2) INCHES IN DIAMETER MAY NOT BE CUT.

INSTALL MANUAL FLUSH VALVE(S) IN EACH ZONE AT LOW POINT(S), PER MANUFACTURER

4. ALL ON-SURFACE DRIPLINE SHALL BE BURIED TO MAXIMUM DEPTH RECOMMENDED BY

- 2. INSTALL ONE <u>AIRWACUUM RELIEF VALVE</u> IN EACH SUB-SURFACE ZONE AT HIGHEST POINT PER MANUFACTURER SPECIFICATIONS.
- INSTALL DRIP OPERATION INDICATOR(S) IN EACH ZONE. FOR END-FED ZONES PLACE INDICATOR AT OPPOSITE END FROM VALVE. FOR CENTER-FED ZONES AN INDICATOR SHALL BE PLACED AT EACH END OF ZONE. WHEN ZONE HAS MULTIPLE END AREAS, I.E. PARKING LOTS, PLACE ONE INDICATOR PER END AREA. PLACEMENT SHOULD BE ACCESSIBLE BUT SCREENED FROM PUBLIC VIEW.
- MANUFACTURER AND COVERED BY A MULCH LAYER (MIN. 3" DEEP) EXCEPT IN AREAS OF SEASONAL COLOR AND SURFACE SPREADING GROUNDCOVERS.
- 5. ALL DRIPLINE, BOTH ON-SURFACE INSTALLATIONS AND BELOW GRADE, MUST BE SECURED EVERY
- HREE (3) LINEAR FEET WITH GALVANIZED TIE-DOWN STAKES 6. INSTALL CONTROL VALVES WITH MAXIMUM 18 GAUGE WIRE.



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DESIGN DRAWN **JOB No.** 250519-01-002

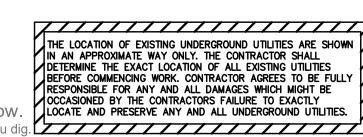
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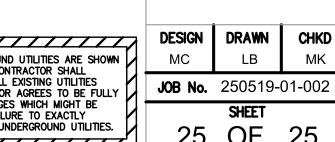
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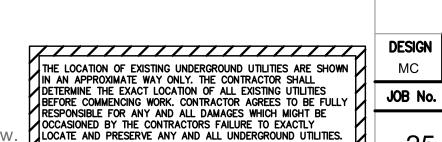
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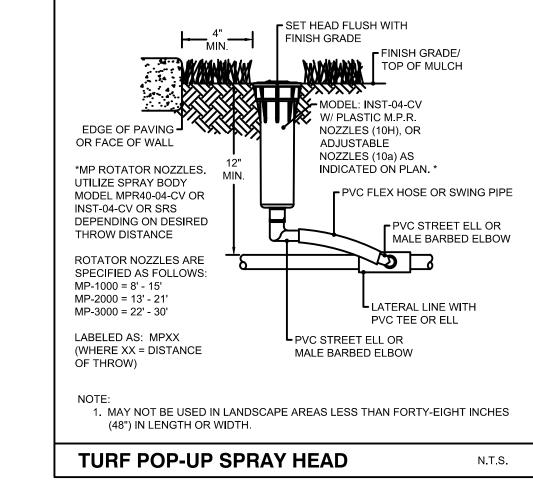


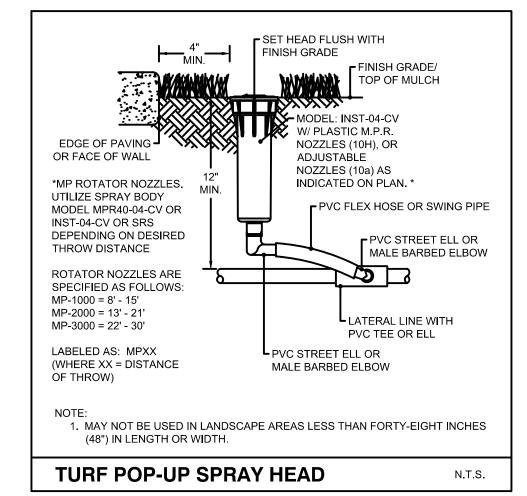
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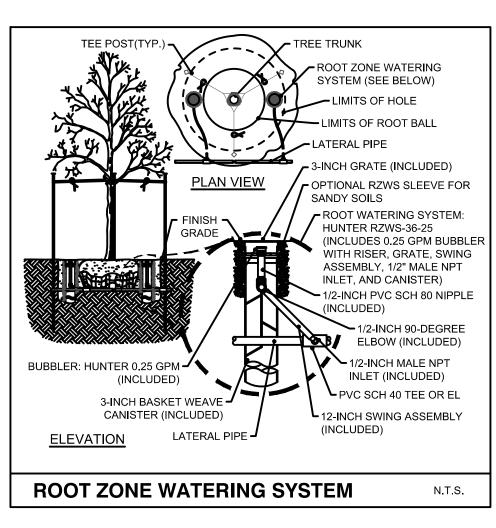


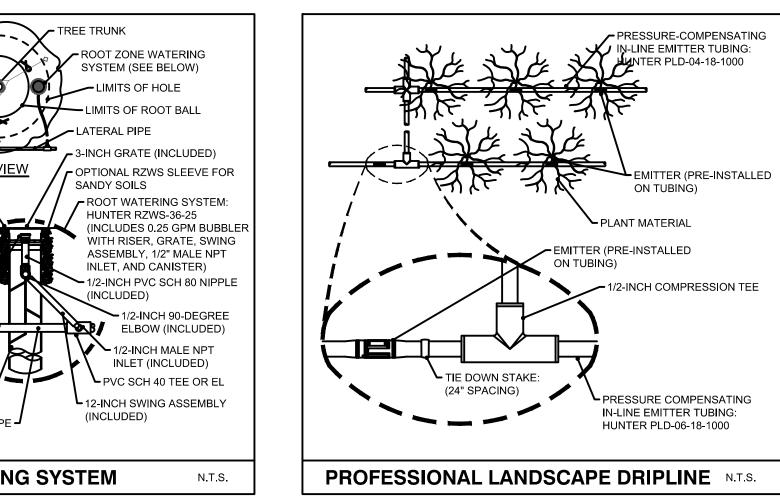


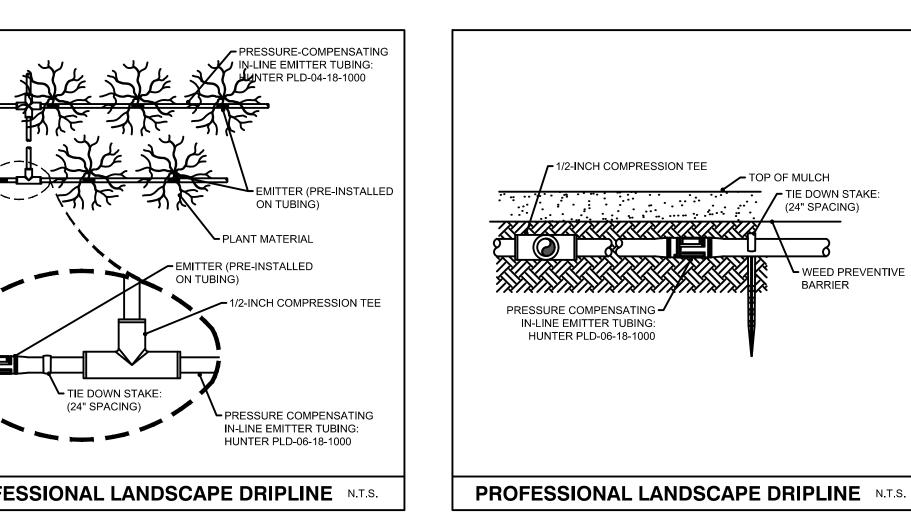


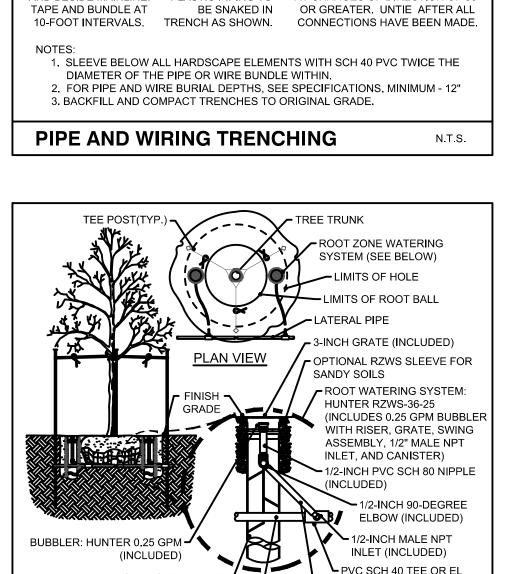


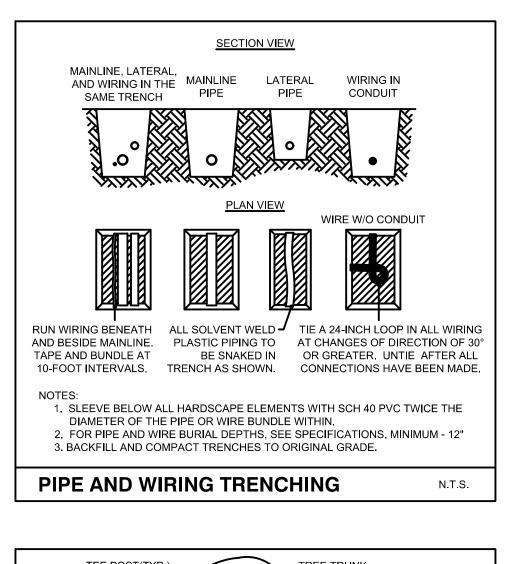


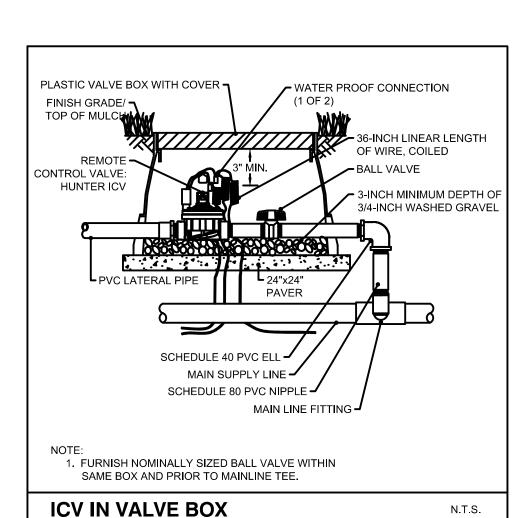


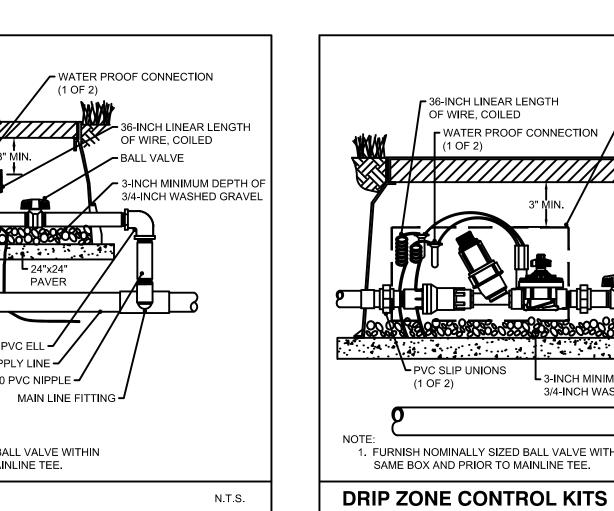


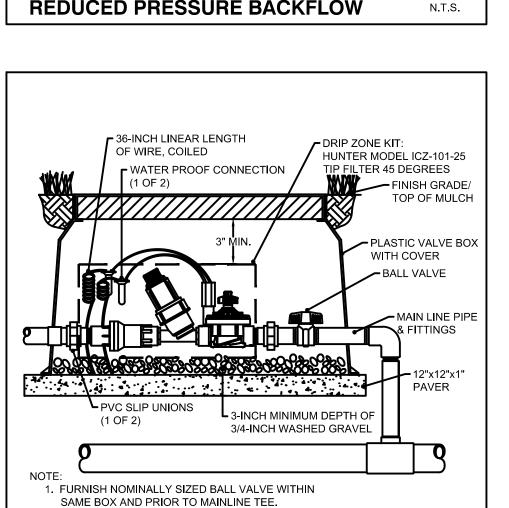


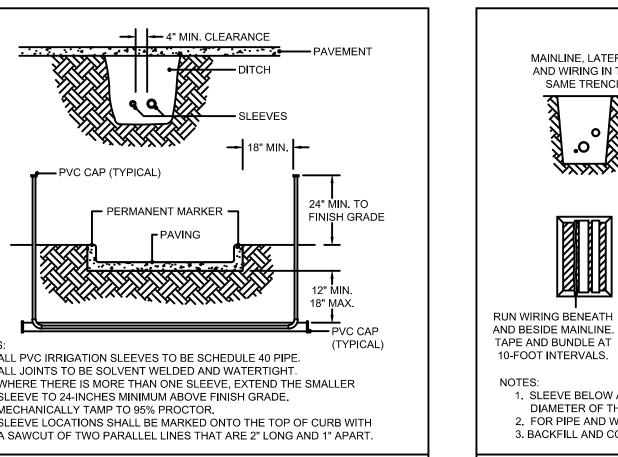




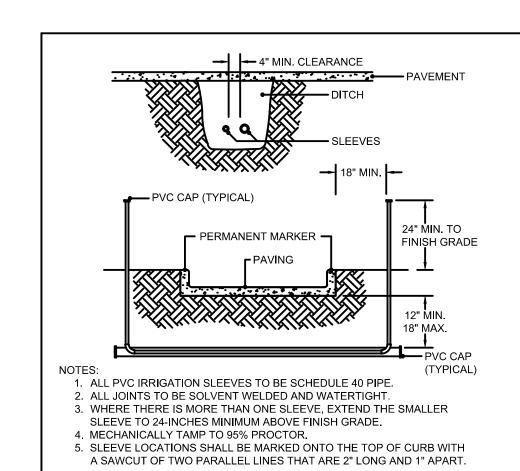








N.T.S.



**IRRIGATION PVC SLEEVES** 

PRO-C CONTROLLER -

──1.9 CLEARANCE MIN.──

1-1/4", 1-1/2" OR 2" CONDUIT FOR -

VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.

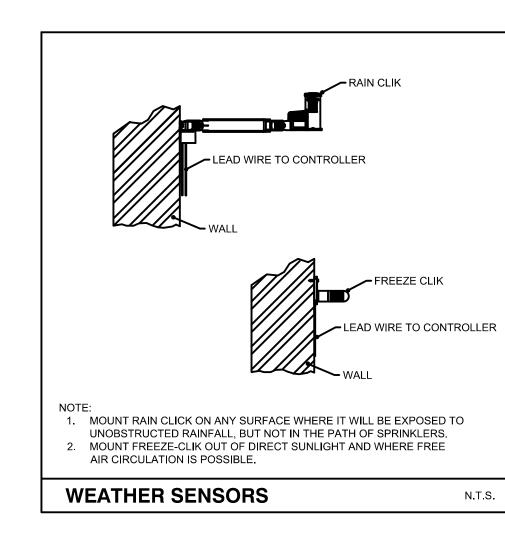
PRO-C CONTROLLER (OUTDOOR)

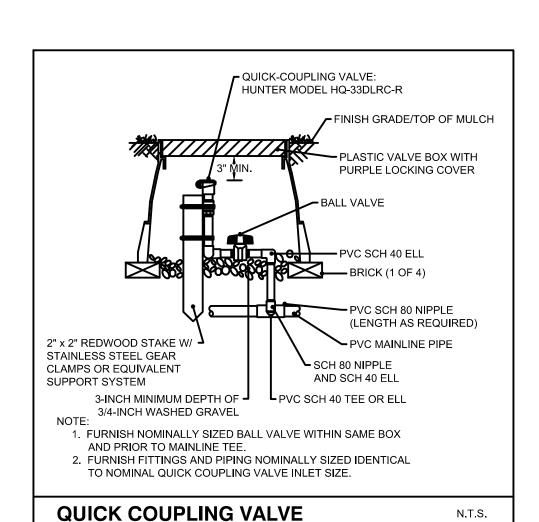
1. WEATHER SENSORS ARE TO BE PROVIDED AS REQUIRED BY LOCAL CODES.

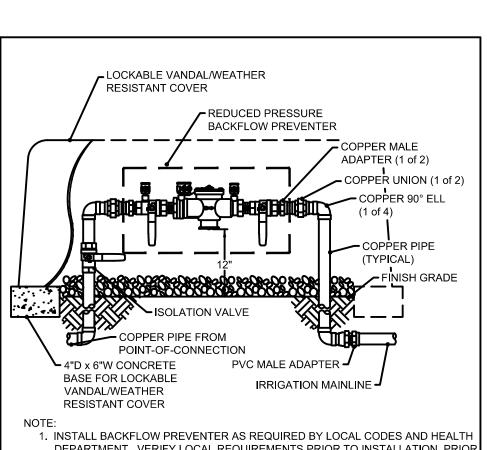
VALVE WIRES AS APPROPRIATE BY

UNDERWRITERS LABORATORIES

3/4" CONDUIT FOR 120/230 VAC —







DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION. PRIOR TO BACKFLOW PREVENTER, INSTALL A NOMINALLY SIZED ISOLATION VALVE. REDUCED PRESSURE BACKFLOW

> O'REILLY AUTO PARTS 5510 WILLIAMS DR. ORGETOWN, TEXAS 78633 IRRIGATION DETAILS

**JOB No.** 250519-01-002

### Attachment G - Inspection, Maintenance, Repair and Retrofit Plan

#### Jellyfish Filter

Jellyfish cartridges are passively backwashed automatically after each storm event, which removes accumulated sediment from the membranes and significantly extends the service life of the cartridges and the maintenance interval. If required, the cartridges can be easily manually backwashed without removing the cartridges. Additionally, the lightweight cartridges can be removed by hand and externally rinsed, and rinsed cartridges then re-installed. These simple maintenance options allow for cartridge regeneration, thereby minimizing cartridge replacement costs and life-cycle treatment costs while ensuring long-term treatment performance.

Regular inspection and maintenance are proven, cost-effective ways to maximize water resource protection for all stormwater pollution control practices, and are required to insure proper functioning of the Jellyfish® Filter. Inspection of the Jellyfish® Filter is performed from the surface, while proper maintenance requires a combination of procedures conducted from the surface and with worker entry into the structure.

Please refer to the following information and guidelines before conducting inspection and maintenance activities:

#### When is inspection needed?

Post-construction inspection is required prior to putting the Jellyfish Filter into service.

Routine inspections are recommended quarterly during the first year of operation to accurately assess the sediment and floatable pollutant accumulation, and to ensure that the automatic backwash feature is functioning properly.

Inspection frequency in subsequent years is based on the maintenance plan developed in the first year, but must occur annually at a minimum.

Inspections should also be performed immediately after oil, fuel or other chemical spill.

#### When is maintenance service needed?

The unit must be cleaned annually. This cleaning includes removal and appropriate disposal of all water, sediment, oil and grease, and debris that has accumulated within the unit. The Jellyfish Filter is inspected and maintained by professional vacuum c I e a n i n g service providers with experience in the maintenance of underground tanks, sewers and catch basins. Since some of the maintenance procedures require manned entry into the Jellyfish structure, only professional maintenance service providers trained in confined space entry procedures should enter the vessel. Service provider companies typically have personnel who are trained and certified in confined space entry procedures according to local, state, and federal standards.

Filter cartridges should be tested for adequate flow rate, every 12 months and cleaned and recommissioned, or replaced if necessary. A manual backflush must be performed on a single draindown cartridge using a Jellyfish Cartridge Backflush Pipe (described in the Jellyfish® Filter Owner's Manual). If the time required to drain 14 gallons of backflush water from the Backflush Pipe (from top of pipe to the top of the open flapper valve) exceeds 15 seconds, it is recommended to perform a manual backflush on each of the cartridges. After the manual backflush, the draindown test should be repeated on a single cartridge to determine if the cartridge can drain 14 gallons of water in 15 seconds. If the cartridge still does not achieve the design flow rate, it must be replaced.

The unit should be cleaned out immediately after an oil, fuel or chemical spill.

### **External Rinsing**

This cartridge cleaning procedure is performed by removing the cartridge from the cartridge deck and externally rinsing the filtration tentacles using a low-pressure water sprayer, as described in the Jellyfish® Filter Owner's Manual. If this procedure is performed within the structure, the cartridge or individual filtration tentacles should be rinsed while safely suspended over the maintenance access wall opening in the cartridge deck, such that rinsate flows into the lower chamber of the Jellyfish® Filter. If the rinsing procedure is performed outside the structure, the cartridge or individual filtration tentacles should be rinsed in a suitable basin such as a plastic barrel or tub, and rinsate subsequently poured into the maintenance access wall opening in the cartridge deck. Sediment is subsequently removed from the lower chamber by standard vacuum service.

O'Reilly Auto Enterprises, LLC 233 S Patterson Avenue

Springfield, MO

Date

Statement of Certification: I Marke Verse certify that the methods outlined within this attachment are adequate to adhere to the inspection, maintenance, and repair requirements outlined in TCEQ RG-348.

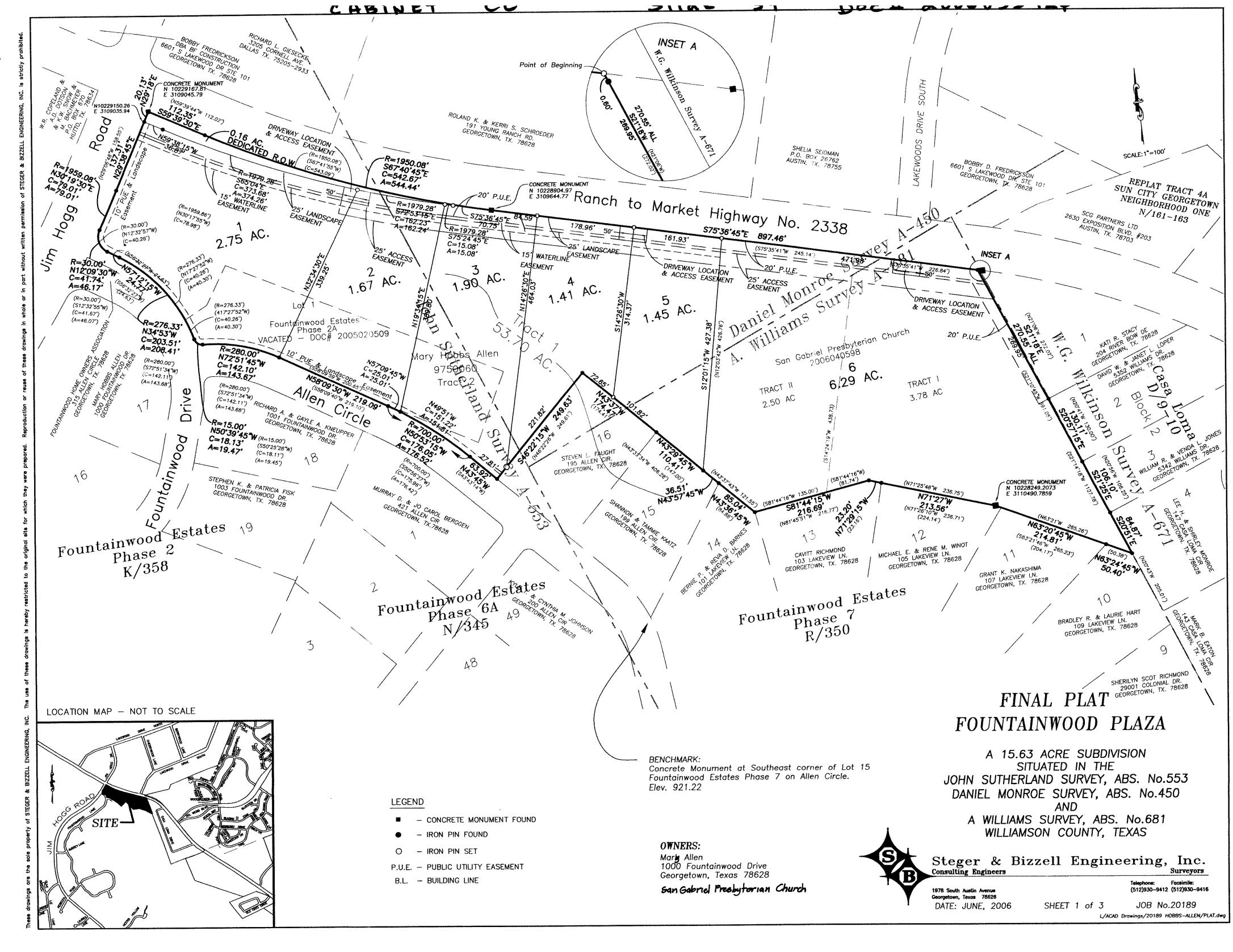
# Attachment H - Pilot-Scale Field Testing Plan, if BMPs not based on Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs

# **Attachment I – Measures for Minimizing Surface Stream Contamination**

All flows from the proposed development will be treated by the Jellyfish device before discharging at detention pond and after that it will be directed to any surface streams. The proposed Permanent BMPs TSS removal will exceed the requirements of TCEQ 80% and the City of Georgetown 85%.

Detailed calculations are shown within the construction plans.

# Attachment J - Final Plat



### PERIMETER DESCRIPTION

BEING 15.63 acres of land, situated in the John Sutherland Survey, Abstract No. 553. the Daniel Monroe Survey, Abstract No. 450, and the A. Williams Survey, Abstract No. 681, in Williamson County, Texas, said land being a portion of that certain Tract 1, called 53.70 acres, and all of that certain Tract 2, (Tract 2 being Lot 1 of Fountainwood Estates, Phase 2A, a subdivision of record in Cabinet K, Slide 360, of the Plat Records of Williamson County, Texas) as conveyed to Mary Hobbs Allen of record as Document No. 9750060 of the Official Records of Williamson County, Texas, being that certain Tract I, called 3.78 acres and Tract II, called 2.50 acres, as conveyed to San Gabriel Presbyterian Church, of record as Document No. 2006040598 of the Official Public Records of Williamson County, Texas. Surveyed on the ground in the month of June, 2003, under the supervision of Brian F. Peterson, Registered Professional Land Surveyor, and being more particularly described as follows;

BEGINNING at a point on the Southwest line of Ranch to Market Highway No. 2338, being on, or near, the east line of the A. Williams Survey, Abstract No. 681, being on, or near, the west line of the W.G. Wilkinson Survey, Abstract No. 671, for the Northeast corner of the above-referenced 53.70 acre Allen Tract 1, being the Northeast corner of the said 3.78 acre San Gabriel Presbyterian Church Tract I, and the most northerly corner of Casa Loma, a subdivision of record in Cabinet D, Slides 9-10, of the Plat Records of Williamson County, Texas, from said point the Northeast corner of the said A. Williams Survey, A-681, bears approximately N 21° W, 110 feet, more or less;

THENCE, along, or near, the east line of the said A. Williams Survey, A-681, being along, or near, the west line of the said W.G. Wilkinson Survey, A-671, along the east line of the said 53.70 acre Allen Tract 1, being the west line of the said Casa Loma, S 21° 18' E, at 0.60 of a foot pass an iron pin found for a total distance of 270.55 feet, in all, to an iron pin found; S 20° 57' 15" E, 130.11 feet to an iron pin found; S 21° 25' E, 106.10 feet to an iron pin found and S 20° 51' E, 84.87 feet to an iron pin found marking the Southeast corner of the said 3.78 acre San Gabriel Presbyterian Church Tract I, being the Northeast corner of Fountainwood Estates, Phase 7, a subdivision of record in Cabinet R, Slide 350, of the Plat Records of Williamson County, Texas, for the Southeast corner hereof;

THENCE, along the north line of the said Fountainwood Estates, Phase 7, along the south line of the said 3.78 acre San Gabriel Presbyterian Church Tract I, N 63' 24 45" W, 50.40 feet to a railroad spike found and N 63° 20' 45" W, 214.81 feet to a concrete monument found; N 71° 27' W, 213.56 feet to an iron pin found; N 71° 29' 15" W, 23.20 feet to an iron pin found; S 81° 44' 15" W, at 81.74 feet, more or less, pass the Southwest corner of the said 3.78 acre San Gabriel Presbyterian Church Tract I, being the Southeast corner of the above-referenced 2.50 acre San Gabriel Presbyterian Church Tract II, and continuing along the south line of the said 2.50 acre San Gabriel Presbyterian Church Tract II, for a total distance of 216.69 feet, in all, to an iron pin found; N 43° 36' 45" W, 85.04 feet to an iron pin found and N 43° 57' 45" W, 36.51 feet to an iron pin found marking the Southwest corner of the said 2.50 acre San Gabriel Presbyterian Church Tract II, N 43' 29' 45" W, 110.41 feet to an iron pin found and N 43° 37' W, passing the north line of the A. Williams Survey, A-681, being the south line of the Daniel Monroe Survey, A-450, for a total distance of 174.47 feet, in all, to an iron pin found and S 46° 22' 15" W, passing the west line of the said Daniel Monroe Survey, A-450, being the east line of the John Sutherland Survey, A-553, for a total distance of 249.63 feet, in all, to an iron pin found on the north line of Allen Circle, a dedicated roadway, being the north line of Fountainwood Estates, Phase 6A, a subdivision of record in Cabinet N, Slide 345, of the Plat Records of Williamson County, Texas, being the most westerly corner of the said Fountainwood Estates, Phase 7, being a westerly line of the said 53.70 acre Allen tract, for a southerly corner hereof;

THENCE, along the said north line of Allen Circle, N 43' 45' W, 63.92 feet to an iron pin found at the beginning of a curve to the left, (Radius = 700.00 feet, Long Chord bears N 50° 53' 15" W, 176.05 feet),

Thence, along the said curve for an arc distance of 176.52 feet to an iron pin found on the south line of the above-referenced Allen Tract 2, being a corner of the soid 53.70 acre Allen Tract 1;

Thence, continuing along the south line of the said Tract 2, N 58° 09' 30" W, 219.09 feet to an iron pin found at the beginning of a curve to the left, (Radius = 280 00 feet, Long Chord bears N 72° 51' 45" W, 142.10 feet);

Thence, along the said curve for an arc distance of 143.67 feet to an iron pin found at the beginning of a curve to the right, (Radius = 15.00 feet, Long Chord bears

N 50° 39' 45" W. 18.13 feet): Thence, along the said curve for an arc distance of 19.47 feet to an iron pin found at the intersection of the said north line of Allen Circle and the east line of Fountainwood Drive, a dedicated roadway, being the Northwest corner of the said Fountainwood Estates, Phase 6A, being on the Northeast line of Fountainwood Estates, Phase 2, a subdivision of record in Cabinet K, Slide 358, of the Plat Records of Williamson County, Texas, and continuing along the said east line of Fountainwood Drive, along a curve to the left, (Radius = 276.33 feet, Long Chord bears N 34 53' W. 203.51 feet):

Thence, along the said curve, at an arc distance of 40.30 feet, more or less, pass the Northwest corner the said Allen Tract 2, being a southerly corner of the said 53.70 acre Allen Tract 1, and continuing along the west line of the said 53.70 acre Allen Tract 1, for a total arc distance of 208.41 feet, in all, to an iron pin found; Thence, N 57° 12′ 15″ W, 24.77 feet to an iron pin found at the beginning of a curve to the right, (Radius = 30.00 feet, Long Chord bears N 12° 09' 30" W, 41.74

Thence, along the said curve for an arc distance of 46.17 feet to an iron pin found at the intersection of Fountainwood Drive and the Southeast line of Jim Hogg Road, marking the most northerly corner of the said Fountainwood Estates, Phase 2, for the most westerly corner of the said 53.70 acre Allen Tract 1, for the most westerly

THENCE, along the said Southeast line of Jim Hogg Road, along a curve to the left, (Radius = 1959.08 feet, Long Chord bears N 30° 19' 30" E, 79.01 feet), an arc distance of 79.01 feet to an iron pin found;

Thence, N 29° 38' 45" E, 137.31 feet to an iron pin found and N 29° 18' E, 20.13 feet to a concrete monument found at the intersection of the said Southeast line of Jim Hogg Road and the said Southwest line of R.M. Highway No. 2338, for the most northerly corner of the said 53.70 acre Allen Tract 1, for the most northerly corner hereof;

THENCE, along the said Southwest line of R.M. Highway No. 2338, being the north line of the said 53.70 acre Allen Tract 1, as follows; S 59° 39' 30" E, 112.35 feet to an iron pin found at the beginning of a curve to the left, (Radius = 1950.08 feet, Long Chord bears S 67" 40" 45" E, 542.67 feet);

Thence, along the said curve for an arc distance of 544.44 feet to a concrete monument found;

Thence, S 75° 36' 45" E, at 425.48 feet pass an iron pin set for the Northeast corner of the aid 53.70 acre Allen Tract 1, being the Northwest corner of the said 2.50 acre San Gabriel Presbyterian Church Tract II, at 670.62 feet pass the Northeast corner of the said 2.50 acre San Gabriel Presbyterian Church Tract II, being the Northwest corner of the said 3.78 acre San Gabriel Presbyterian Church Tract I, for a total distance of 897.46 feet, in all, to the Place of BEGINNING and containing 15.63

# STATE OF TEXAS

# KNOW ALL MEN BY THESE PRESENTS

# COUNTY OF WILLIAMSON }

I, Brian F. Peterson, Registered Professional Land Surveyor, in the State of Texas, do hereby certify that this plat is true and correctly made from an actual survey 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 perimeter field notes hereon have a mathematical closure in compliance with standards as set out in the "Manual of Practice" of the Texas Society of Professional Surveyors, to the best of my knowledge and belief.

TO CERTIFY WHICH, WITNESS my hand and seal at Georgetown, Williamson County, Texas.

this the 26th day of

2006, A.D.

Brian F. Peterson Professional Land Surveyor, No. 3967 State of Texas



# STATE OF TEXAS }

# KNOW ALL MEN BY THESE PRESENTS

# COUNTY OF WILLIAMSON }

I, Jonathan O. Nobles, Licensed Professional Engineer, do hereby certify that this subdivision is in the Edwards Aquifer Recharge Zone. An approved Water Pollution Abatement Plan is required by the Texas Natural Resource Conservation Commission prior to construction. No lot within this subdivision is encroached by any Special Flood Hazard Areas inundated by 100—Year Flood as identified by the U.S. Federal Emergency Management Agency Boundary map (Flood Insurance Rate Map), Community—Panel Numbers 48491C0100C and 48491C0115C, effective date September 27, 1991.

The engineering work for the roads and drainage (including driveway drain pipes) within the subdivision have been completed in compliance with the Williamson County Subdivision Regulations (including the Engineering Guidelines incorporated as Appendix B) and all generally accepted engineering standards.

TO CERTIFY WHICH, WITNESS my hand and seal at Georgetown, Williamson

State of Texas



#### GENERAL NOTES:

- 1. Total Acres: 15.63 Acres
- 2. Number of lots: 6 3. Number of blocks: 1
- 4. Area of smallest lot: 1.414 Acres
- 5. There is no area within the boundaries of this subdivision in the 100-year Flood plain as defined by FIRM Map Number 48491C0115C, effective date of September 27, 1991.
- 6. Water service will be provided by Chisholm Trail Special Utility District, wastewater service shall be provided by the City of Georgetown. Electric service
- 7. 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
- 8. Maximum impervious cover is 50% allowable up to 65% if appropriate impervious coverage waivers are met in accordance with UDC Section 11.02.020
- 9. The bearings on this plat have been rotated to the NAD 83/93 HARN Texas Central Zone and elevation is based upon NAVD 88.
- 10. This subdivision is located in the limits of the City of Georgetown.
- 11. This tract is located in the Edwards Aquifer Recharge Zone. An approved Water Pollution Abatement Plan is required by the Texas Natural Resource Conservation Commission prior to construction.
- 12. All driveway pipes to be minimum 18" RCP or dip driveway.
- 13. Building setbacks will be in accordance with the City of Georgetown UDC. 14. Sidewalks and street trees will be constructed in accordance with the City of
- Georgetown UDC. 15. Ă TIA, Traffic Impact Analysis will be required during the site plan review process when the cumulative Average Daily Trips (ADT) exceeds 2000 according to
- Institute of Transportation Engineer (ITE) manual. 16. No access shall be permitted onto either Fountainwood Drive or Allen Circle from this development. Access to Williams Drive for all lots shall be from the
- driveway locations shown on this plat. 17. A rock wall will be built by the developer along the boundary length of Fountainwood Drive and Allen Circle with the submittal of a site plan within this subdivision and prior to final certificate of occupancy..

# FINAL PLAT FOUNTAINWOOD PLAZA

A 15.63 ACRE SUBDIVISION SITUATED IN THE JOHN SUTHERLAND SURVEY, ABS. No.553 DANIEL MONROE SURVEY, ABS. No.450

A WILLIAMS SURVEY, ABS. No.681 WILLIAMSON COUNTY, TEXAS

Steger & Bizzell Engineering, Inc. Consulting Engineers 1978 South Austin Avenue

Georgetown, Texas 78626

DATE: June, 2006

Telephone: Facsimile: (512)930-9412 (512)930-9416

JOB No.20189

SHEET 2 of 3 L/ACAD Drawings/20189 HOBBS-ALLEN/PLAT.dwg COUNTY OF WILLIAMSON {

That I, Mary Hobbs Allen, owner of that certain tract of land shown hereon and described in a deed recorded in Documents No. 9750060 of the Official Records of Williamson County, Texas, do hereby join, approve, and consent to all dedications and plat note requirements shown hereon. I do hereby approve the recordation of this subdivision plat and dedicate to the public use forever any easements and roads that are shown hereon. This subdivision is to be known as FOUNTAINWOOD PLAZA. I hereby acknowledge that I am the owner of this property and do hereby state that there are no lienholders or any unpaid debt for which this property represents collateral on any loan. It is also understood that it is the responsibility of the owner, not the County, to assure compliance with the provisions of all applicable state, federal, and local laws and regulations relating to the environment, including, but not limited to the Endangered Species Act, State Aquifer Regulations, and Municipal Watershed Ordinances.

Mary Hobbs Allen 1000 Fountainwood Drive Georgetown, Texas 78628

Before me, the undersigned authority, on this day personally appeared Mary Hobbs Allen known by the to be the person whose name is subscribed to the foregoing instrument. It has been acknowledged to me that he/she executed the foregoing instrument as the owner of the property described hereon.

Notary Public in and for the State of Texas

Date Notary

Signature and Date P.I. Stevens Printed Name of Notary and Notary Stamp

Commission Expires

P. J. STEVENS Notary Public, State of Texas November 26, 2009

STATE OF TEXAS

COUNTY OF WILLIAMSON {

KNOW ALL MEN BY THESE PRESENTS;

That we, San Gabriel Presbyterian Church of Georgetown, owner of the certain tract of land shown hereon and described in a deed recorded in Document #2006040598 of the Deed Records of Williamson County, Texas, do hereby join, approve, and consent to all dedications and plat note requirements shown hereon. I do hereby

approve the recordation of this subdivision plat and dedicate to the public use forever any easements and roads that are shown hereon. This subdivision is to be known as: FOUNTAINWOOD PLAZA. It is also understood that it is the responsibility of the owner, not the County, to assure compliance with the provisions of all applicable state, federal, and local laws and regulations relating to the environment, including, but not limited to the Endangered Species Act, State Aquifer Regulations, and Municipal Watershed Ordinances.

Word Harper Donald J. Harper Building Committe Chairman San Gabriel Presbyterian Church of Georgetown 6920 RR 2338 Georgetown, Texas 78628

Before me, the undersigned authority, on this day personally appeared Donald J. Harper, known by me to be the person whose name is subscribed to the foregoing instrument. It has been acknowledged to me that she executed the foregoing instrument as the owner of the property described hereon.

June 7. Schiller June 23, 2004 Public in and for the State of Texas

Diane F. Schiller Printed Name of Notary and Notary Stamp

DIANE F SCHILLER 3-19-08 NOTARY PUBLIC State of Texas 

Date Notary Commission

STATE OF TEXAS

KNOW ALL MEN BY THESE PRESENTS;

COUNTY OF WILLIAMSON }

That I, First Texas Bank, the lien holder of the certain tract of land shown hereon and described in a DEED OF TRUST recorded in Document #2006040597 of the Official Records of Williamson County, Texas, do hereby join, approve, and consent to all dedications and plat note requirements shown hereon. I do hereby approve the recordation of this subdivision plat and dedicate to the public use forever any easements and roads that are shown hereon. This subdivision is to be known as FOUNTAINWOOD PLAZA.

First Texas Bank 900 S. Austin Ave. Georgetown, TX 78626

Before me, the undersigned authority, on this day personally appeared Kevin R. Kelly known by me to be the person whose name is subscribed to the foregoing instrument. It has been acknowledge to me that he/she executed the foregoing instrument as the legal representative of the lienholder of the property described

MY COMMISSION EXPIRES December 2, 2007

APRIL WEATHER State of Texas Printed Name of Notary and

12/2/07

Date of Notary Commission

Expires

I. Bobby Ray, AICP, Director of the Planning and Development Services of the City of Georgetown, do hereby certify this plat as approved for filing of record with the County Clerk of Williamson County, Texas.

Date: 6 29 06

Planning and Development Services

The subdivision, known as FOUNTAINWOOD PLAZA, has been approved for filing for record according to the minutes of the meeting of the Georgetown City Council on the 27th day of April, 2004, A.D.

Georgetown, Texas

Sandra Lee, City Seefetar

City of Georgetown, Texas

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.

Dave Halk Flood Plain Coordinator City of Georgetown

STATE OF TEXAS {

KNOW ALL MEN BY THESE PRESENTS

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 30+ , 2006 A.D., at 8:36 o'clock, A .M., and duly recorded this the 6th day of July , 2006 A.D., at 11:5 A.D., at 11:49 o'clock, A .M., in the Plat Records of said County in Cabinet CC , Slides 39, 40 and 41

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



# FINAL PLAT FOUNTAINWOOD PLAZA

A 15.63 ACRE SUBDIVISION SITUATED IN THE JOHN SUTHERLAND SURVEY, ABS. No.553 DANIEL MONROE SURVEY, ABS. No.450

A WILLIAMS SURVEY, ABS. No.681 WILLIAMSON COUNTY, TEXAS



Steger & Bizzell Engineering, Inc. Consulting Engineers

Telephone: Facsimile: (512)930-9416

orgetown, Texas 78626 SHEET 3 of 3 DATE: JUNE, 2006

JOB No.20189

L/ACAD Drawings/20189 HOBBS-ALLEN/PLAT.dwg

# 8-TCEQ - 0599 Attachments

Agent Authorization Form



#### **Agent Authorization Form**

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

11

I	Philip Hopper	
	Print Name	
Senior Vic	President of Real tolete tExpusion	1
	Title - Owner/President/Other	
of	O'Reilly Auto Enterprises, LLC	
	Corporation/Partnership/Entity Name	
have authorized	Marisa Keiser	
	Print Name of Agent/Engineer	
of	Bowman Consulting Group, LTD	
	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 THE STATE OF S County of S BEFORE ME, the undersigned authority, on this day personally appeared known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed. GIVEN under my hand and seal of office on this 12 day of NOTARY PUBLIC Notary Public - Notary Seal Greene County - State of Missouri Commission Number 22635072 My Commission Expires Jun 20, 2026 Typed or Printed Name of Notary

MY COMMISSION EXPIRES:

06/20/2026



# **Owner Authorization Form**

## **Edwards Aquifer Protection Program**

#### **Instructions**

Complete the following form by adding the requested information in the fields below. The form must be notarized for it to be considered complete. Attach it to other programmatic submittals required by 30 Texas Administrative Code (30 TAC), Chapter 213, and provide it to TCEO's Edwards Aquifer Protection Program (EAPP) as part of your application.

If you have questions on how to fill out this form or about EAPP, please contact us by phone at 512-339-2929 or by e-mail at <a href="mailto:eapp@tceq.texas.gov">eapp@tceq.texas.gov</a>.

## Landowner Authorization

I, Tory (ornman Lakewood Development, Partners Limited am the owner of the property located at:

Parcel #: R476274 5510 Williams Drive Georgetown TX

and am duly authorized in accordance with 30 TAC 213.4(c)(2) and 213.4(d)(1), or 30 TAC 213.23(c)(2) and 213.23(d), relating to the right to submit an application, signatory authority, and proof of authorized signatory.

I do hereby authorize CASCO To conduct signing on behalf of the landowner At 5510 Williams Drive Georgetown, TX

# Landowner Acknowledgement

I understand that: O'Reilly Auto Enterprises LLC

Is ultimately responsible for the compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation even if the responsibility for compliance and the right to possess and control the property referenced in the application has been contractually assumed by another legal entity. I further understand that any failure to comply with any condition of the executive director's approval is a violation and subject to administrative rule or orders and penalties as provided under 30 TAC 213.10, relating to enforcement. Such violations may also be subject to civil penalties.

# Landowner Signature

Signature Landowner Signature Landowner Signature	runan
Date	
Date 10/02/2025	
Date 1 1	
THE STATE & OF State Texas	
County & of County Williamson	
BEFORE ME, the undersigned authority, on this da	v personally appeared
O'Reilly Auto Enterprises LLC	, percentally eppeared
O Relily Auto Enterprises LLC	
known to me to be the person whose name is sub acknowledged to me that (s)he executed same fo expressed.	r the purpose and consideration therein
GIVEN under my hand and seal of office on this D	ay <b>day</b> of Month
	10.2.2025
Click or tap here to add ID	10 2 2025
NOTARY PUBLIC	JENNIFER J DAVISSON
	Notary Public State of Texas
Typed or Printed Name of Notary	1D # 135515667 My Comm. Expires 05-14-2029
MY COMMISSION EXPIRES: Date	
	Goci
Optional Attachments	
Select All that apply:	
□ Lease Agreement	
□ Signed Contract	
□ Deed Restricted Easement	
☐ Other legally binding documents	

# 9-TCEQ - 0574 Attachments

Application Fee Form



# **Application Fee Form**

#### **Texas Commission on Environmental Quality** Name of Proposed Regulated Entity: O'Reilly Auto Parts Regulated Entity Location: City of Georgetown Name of Customer: O'Reilly Auto Enterprises, LLC Contact Person: Rick Hicks Phone: (417) 427-8062 Ext: 65680 Customer Reference Number (if issued):CN Regulated Entity Reference Number (if issued):RN \_\_\_\_\_ **Austin Regional Office (3373)** Travis × Williamson Havs San Antonio Regional Office (3362) Medina Uvalde Bexar Comal Kinney Application fees must be paid by check, certified check, or money order, payable to the Texas Commission on Environmental Quality. Your canceled check will serve as your receipt. This form must be submitted with your fee payment. This payment is being submitted to: Austin Regional Office San Antonio Regional Office Mailed to: TCEQ - Cashier Overnight Delivery to: TCEQ - Cashier **Revenues Section** 12100 Park 35 Circle Mail Code 214 Building A, 3rd Floor P.O. Box 13088 Austin, TX 78753 Austin, TX 78711-3088 (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 1.41 Acres | \$ 4,000.0 184 L.F. \$ 650.0 Sewage Collection System Lift Stations without sewer lines Acres | \$ Underground or Aboveground Storage Tank Facility Tanks | \$ Each | \$ Piping System(s)(only) Each | \$ Exception Each | \$ Extension of Time Signature: Marisa Veiser Date: August 4, 2025

# **Application Fee Schedule**

**Texas Commission on Environmental Quality** 

Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

### Water Pollution Abatement Plans and Modifications

**Contributing Zone Plans and Modifications** 

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

Organized Sewage Collection Systems and Modifications

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

# Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

**Exception Requests** 

Project	Fee
Exception Request	\$500

**Extension of Time Requests** 

Project	Fee
Extension of Time Request	\$150

# 10 - TCEQ - 10400 Attachments

Core Data Form





# **TCEQ Core Data Form**

TCEQ Use Only

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

# **SECTION I: General Information**

1. Reason fo	r Submis	sion (If other is c	hecked please o	describ	e in s	расе р	orovide	1.)				
New Per     New Per	New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)											
Renewa	l (Core Da	ta Form should b	e submitted witl	h the re	enewa	al form)	)		Other			
2. Customer	Referenc	e Number <i>(if i</i> ss	-	Follow this link to search  3. Regulated Entity Reference Number (if iss					if issued)			
CN				for CN or RN numbers in Central Registry**  RN								
SECTION	II: Cu	stomer Info	<u>ormation</u>									
4. General C	ustomer l	nformation	5. Effective D	• Date for Customer Information Updates (mm/dd/yyyy) 7/25/2025							2025	
New Cust		ne (Verifiable wit					Informa Texas (		otroller of	Change in Public Accounts)	Regulated E	Entity Ownership
The Customer Name submitted here may be updated automatically based on what is current and active with the												
		f State (SOS)	-	-				•				
6. Customer	6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)  If new Customer, enter previous Customer below:											
O'Reilly Auto Enterprises, LLC												
7. TX SOS/CI			8. TX State T	ax ID (	11 digits	s)		ç	9. Federa	al Tax ID (9 digits)	10. DUN	S Number (if applicable)
18602213	18602213128											
11. Type of C	11. Type of Customer:				☐ Individual				Partnership: ☐ General ☒ Limited			
Government:	☐ City ☐	County 🔲 Federal 🗀	☐ State ☐ Other			Sole Pr	roprieto	rship		Other:		
<b>12. Number  ⊙</b> 0-20	of Employ 21-100	ees 101-250	<u></u>	5	01 an	d highe	er	1	I3. Indep	pendently Owned	I and Opera	ited?
14. Custome	r Role (Pr	oposed or Actual) -	as it relates to th	e Regu	lated E	Entity lis	sted on	his fo	orm. Pleas	se check one of the	following	
Owner		Operat	tor		⊠ Ov	vner &	Opera	or				
Occupatio	nal Licens	ee 🗌 Respo	nsible Party		Vo	oluntary	/ Clean	up A	pplicant	Other: D	EVELOPE	R
	233 S	Patterson Av	e									
15. Mailing Address:												
	City	Springfield		Sta	ite	МО	ZIP 65802		02	ZIP + 4	2298	
16. Country	Mailing In	formation (if outsi	de USA)	•			17. E-	Mail	Address	S (if applicable)		
							Rick	Hi	cks <r< td=""><td>CHICKS28@0</td><td>OREILLY</td><td>YAUTO.COM&gt;</td></r<>	CHICKS28@0	OREILLY	YAUTO.COM>
18. Telephon	e Numbe		•	19. Ext	ensio	on or C	ode			20. Fax Number	<b>r</b> (if applical	ble)
(417)42	7-8062		(	65680	$\mathbf{C}$					( )	-	
SECTION	III: R	egulated En	tity Inform	natio	on							
		-	-			v" is se	lected	belov	w this for	m should be acco	mpanied by	a permit application)
New Regu	_	-	to Regulated E		-					Entity Information		, , ,
The Regula	ated Ent	ity Name sub	mitted may l	be up	date	d in c	order	to n	neet TC	EQ Agency D	ata Stand	lards (removal
		ndings such			•							
22. Regulate	d Entity N	ame (Enter name	of the site where	the regu	ulated	action i	is taking	place	e.)			
O'Reilly Auto Enterprises												

TCEQ-10400 (02/21) Page 1 of 2

23. Street Address of	233 S Patterson Ave											
the Regulated Entity:												
(No PO Boxes)	City	Spi	ringfield	State	MO	ZIP	65802		ZIP + 4	2298		
24. County		, *	_	•	•		•		•	•		
		Enter P	hysical Loc	ation Descript	ion if no str	eet addres	s is provid	ed.				
25. Description to Physical Location:	This 1	project	site is loc	ated at 5510	) William	s Dr.						
26. Nearest City							State		Near	rest ZIP Code		
Georgetown							TX		786	533		
27. Latitude (N) In Decimal: 30.7			702849		28. L	ongitude (	W) In Deci	nal:	-97.74559	)		
Degrees	Minutes	•	Sec	conds	Degre	es	Mir	utes		Seconds		
30	30 42			10		97		44	1	44		
29. Primary SIC Code (4	digits)	30. Secor	ndary SIC Co	ode (4 digits)	31. Prima (5 or 6 digits	ry NAICS (	ode	<b>32. Sec</b> (5 or 6 dig	ondary NAI	CS Code		
5531			441310									
33. What is the Primary	Busines	s of this	entity? (Do	not repeat the SIC	or NAICS des	cription.)						
Commercial												
					233 S P	atterson A	ve					
34. Mailing												
Address:	City	y S	pringfield	State	МО	ZIP		302	ZIP + 4	2298		
35. E-Mail Address					icks <rhic< td=""><td>KS28@OR</td><td>EILLYAUT</td><td>O.COM&gt;</td><td></td><td></td></rhic<>	KS28@OR	EILLYAUT	O.COM>				
36. Teleph	one Num	nber		37. Extensi					ber (if appli	cable)		
(417)	427-8062	2		656	80			(	) -			
9. TCEQ Programs and II orm. See the Core Data Form					ermits/registra	tion numbers	s that will be	affected by	y the updates	submitted on this		
☐ Dam Safety		stricts			☐ Emissions Inventory Air			☐ Industrial Hazardous Waste				
							-					
☐ Municipal Solid Waste	□Ne	w Source F	Review Air	OSSF		☐ Petroleum Storage Tank			□PWS			
Sludge	⊠ Sto	orm Water		☐ Title V Air		Tires			Used Oil			
_	<u> </u>											
☐ Voluntary Cleanup	⊠ Wa	aste Water		☐ Wastewater	Agriculture	☐ Water Rights			Other:			
SECTION IV. P	newar	Infor	nation									
SECTION IV: Pro	parer	11110f1	<u>nauon</u>									
40. Name:Marisa Keiser, P.E.41. Title:Team Lead												
42. Telephone Number	43. Ext./	Code	44. Fax N	lumber	45. E-M	ail Addres	S					
(512) 327-1180			( )	-	mkeis	er@bow	man.con	1				
SECTION V: Aut	thoriz	ed Sigr	<u> ature</u>									
<b>46.</b> By my signature below signature authority to submidentified in field 39.												

Name (In Print):Marisa Keiser, P.E.Phone:(512) 327- 1180Signature:Marisa VeiseDate:

Company:

**Bowman Consulting** 

Job Title:

Team Lead

TCEQ-10400 (02/21) Page 2 of 2