Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

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

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

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

Technical Review

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

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

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

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

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Titan NorthPark35						**2. Regulated Entity No.: RN111023883**			
3. Customer Name: Titan NorthPark35 LLC						**4. Customer No.: CN605804855**			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**		17.9 ac	
9. Application Fee:	$6,500		**10. Permanent BMP(s):**			Existing Extended Detention w/ Grassy Swale			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson County		**14. Watershed:**			Berry Creek			

Application Distribution

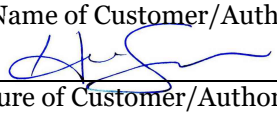
Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which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

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

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

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

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Hollis Scheffler, P.E.
Print Name of Customer/Authorized Agent
 5/7/2025 Signature of Customer/Authorized Agent Date

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

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

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

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

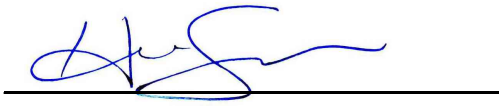
Signature

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

Print Name of Customer/Agent: Hollis Scheffler, P.E.

Date: 02/11/2025

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Titan NorthPark35
2. County: Williamson
3. Stream Basin: Berry Creek
4. Groundwater Conservation District (If applicable): n/a
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

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

7. Customer (Applicant):

   Contact Person: Joe Iannacone
   Entity: Titan NP35 Phase II, LLC
   Mailing Address: 4903 Woorow Avenue
   City, State: Austin, Texas Zip: 78756
   Telephone: 210-388-5220 FAX: n/a
   Email Address: jiannacone@titan-development.com

8. Agent/Representative (If any):

   Contact Person: Hollis Scheffler, P.E.
   Entity: Westwood Professional Services
   Mailing Address: 8701 N. Mopac Expw. Ste. 320
   City, State: Austin, Texas Zip: 78759
   Telephone: 512-485-0831 FAX: n/a
   Email Address: hollis.scheffler@westwoodps.com

9. Project Location:

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

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

    _____

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

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

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

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

    ☐ Survey staking will be completed by this date: _____

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

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

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

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

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

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

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

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

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

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

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

Administrative Information

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

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

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

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

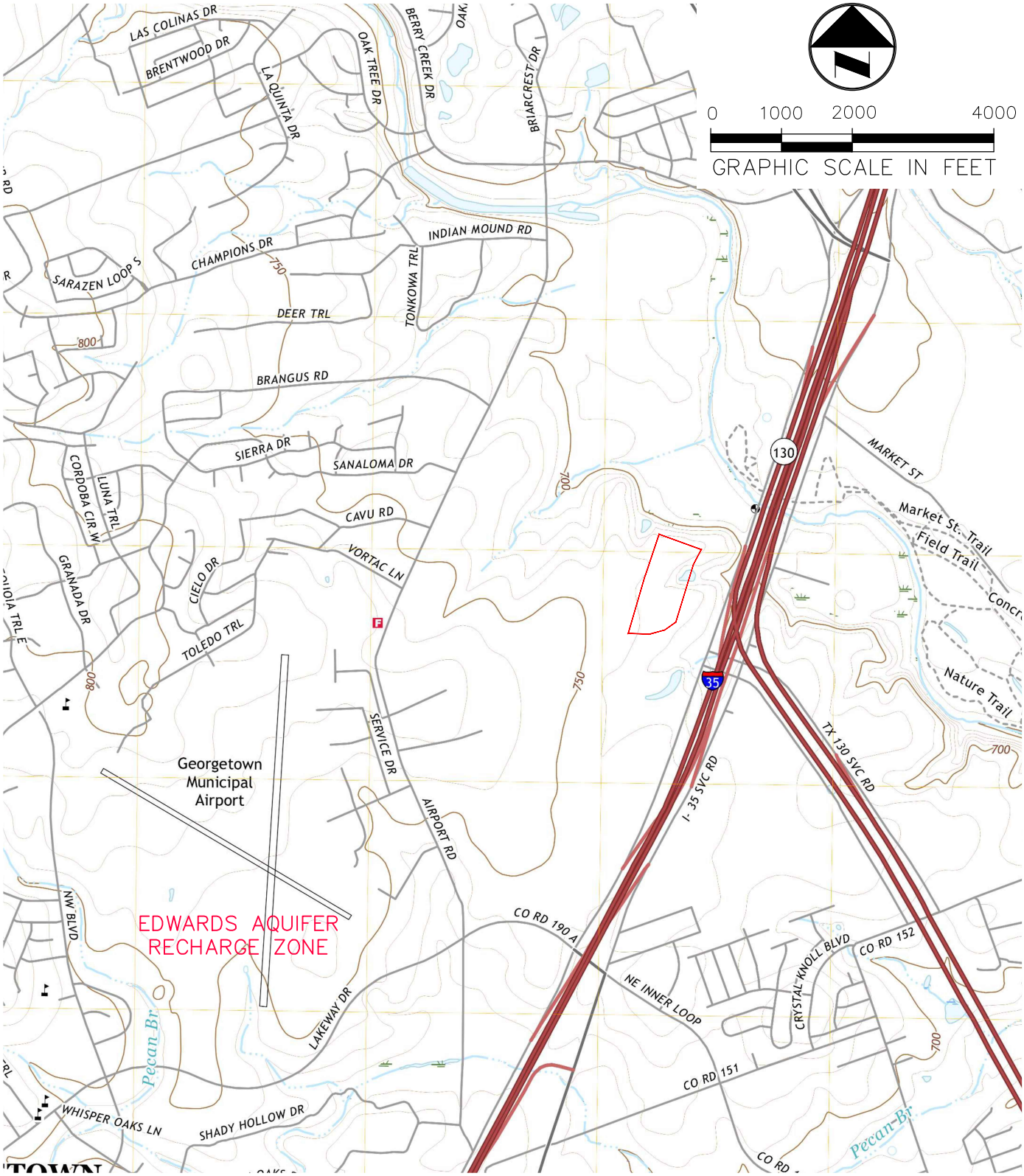
20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies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

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

Attachment A – Road Map



Attachment B – USGS / Edwards Recharge Zone Map



ATTACHMENT "B"

USGS/EDWARDS RECHARGE ZONE MAP

GEORGETOWN QUADRANGLE
TEXAS - WILLIAMSON COUNTY
7.5-MINUTE SERIES

TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

Westwood
Westwood Professional Services, Inc.
Phone (512) 485-0831
Toll Free (888) 937-5150
8701 N. Mopac Expy, Suite 320
Austin, TX 78759
westwoodps.com

DRAWN BY	CHECKED BY	SCALE	DATE	JOB NUMBER
HAS	HAS	1"=2000'	3/20/2024	R0041495.00

TITAN NORTHPARK35 TOWN CENTER

SFORERO 6/23/2025 3:49 PM
N:\0041495.00\05 SERVICE GROUPS\SITE DESIGN & INFRASTRUCTURE DESIGN\1_DESIGN\WPAP APPLICATION\MODIFICATION\QUAD MAP.DWG

Attachment C – Project Description

The proposed development includes the construction of a city roadway, an office-warehouse building and utility extensions. The proposed improvements will occupy 17.9 acres of undeveloped land. The proposed site is located at 1809 Titan Drive in Georgetown, Texas 78628 in the City of Georgetown full-purpose jurisdiction. The existing site consists mostly of undeveloped grass meadows with few trees or brushy vegetation and Class D soil classification. According to FEMA Maps 48491C0283F and 48491C0291F (dated 12/20/2019), the subject site does not fall within a regulatory floodplain.

The site generally slopes at ±2% from the middle of the southwest side of the site to the north and east. The adjacent properties include industrial property to the north and east, agricultural sites to the south, and state right of way to the west.

The project will consist of a city roadway (Sienna Peak Drive) as well as a 281,152 square foot office-warehouse building (Titan NorthPark Building 9) with all associated grading, parking, utility extensions, and paving. The total impervious cover on the site is 11.58 acres. All proposed impervious cover was previously accounted for in the existing WQ Pond A (2020-55-CON). The pond has adequate water quality storage to account for the proposed development.

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.

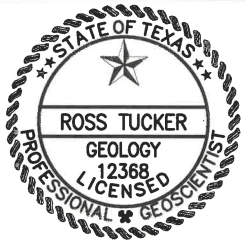
Print Name of Geologist: Ross Tucker, P.G. Telephone: 512-593-8232

Date: 12/14/2020 Fax: 512-493-9693

Representing: Braun Intertec Corporation, TBPG Registration No. 50151 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:





THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ROSS TUCKER, P.G. 12368 ON 12/14/2020. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE GEOSCIENTIST IS AN OFFENSE UNDER THE TEXAS GEOSCIENCE PRACTICE ACT.

TEXAS GEOSCIENCE FIRM REGISTRATION 50151

Regulated Entity Name: Titan NorthPark35

Project Information

1. Date(s) Geologic Assessment was performed: 12/02/2020
2. Type of Project:

   ☒ WPAP ☐ AST
   ☐ SCS ☐ UST
3. Location of Project:

   ☒ Recharge Zone
   ☐ Transition Zone
   ☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

5. ☒ 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)
Denton silty clay, 1-3% slopes (DnB)	D	3
Doss silty clay, 1-5% slopes (DoC)	D	1.5
Denton silty clay, 3-5% slopes (DnC)	D	3
Brackett-Rock outcrop-Real complex, 8-30% slopes (BkrG)	D	1.2
Eckrant cobbly clay, 1-8% slopes (EaD)	D	1

** Soil Group Definitions (Abbreviated)*

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate infiltration rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

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.

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.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

   Applicant's Site Plan Scale: 1" = 200'
   Site Geologic Map Scale: 1" = 200'
   Site Soils Map Scale (if more than 1 soil type): 1" = 200'

9. Method of collecting positional data:

☒ Global Positioning System (GPS) technology.
☐ Other method(s). Please describe method of data collection: _____

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ 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 described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.

13. ☐ 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.

    ☒ There are 1 (#) 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.

Administrative Information

15. ☒ 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.

LIST OF ATTACHMENTS

Attachment A Geologic Assessment Table
Attachment B Stratigraphic Column
Attachment C Site Geology & Photographic Log
Attachment D Site Geologic Map

GEOLOGIC ASSESSMENT TABLE

ATTACHMENT A

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: S IH 35 Service Road, Georgetown, Texas

LOCATION			FEATURE CHARACTERISTICS											EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
Well-1	30.69012	-97.65976	MB	30	Qu									5	35	x		0		Hilltop
Pond-1	30.68894	-97.65978	MB	30	Qu									5	35	x		0.7		Hillside

* DATUM: WGS 84

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	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
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY

Hilltop, Hillside

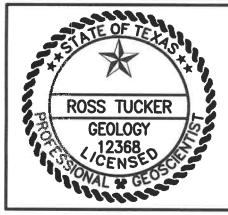
I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

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

Ross Tucker, P.G.

Date 12/14/2020

Sheet ___1___ of __1___ (Attachment)



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ROSS TUCKER, P.G. 12368 ON 12/14/2020. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE GEOSCIENTIST IS AN OFFENSE UNDER THE TEXAS GEOSCIENCE PRACTICE ACT.

TEXAS GEOSCIENCE FIRM REGISTRATION 50151

TCEQ-0585-Table (Rev. 10-01-04)

Geologic Assessment Table - Attachment 1
GPS Requirements

DATUM: WGS 84
METHOD: GPS Unit - Garmin eTrex 30x
DATE: December 2, 2020
USER: Jeremiah Roy

STRATIGRAPHIC COLUMN

ATTACHMENT B

SYSTEM	GROUP	FORMATION or MEMBER	APPROX. THICKNESS (ft)
QUATERNARY	N/A	Quaternary Deposits, undivided (Qu)	Up to 20 ft
LOWER CRETACEOUS	WASHITA	Georgetown Formation (Kgt)	30 to 80 ft
	FREDRICKSBURG	Edwards and Commanche Peak Limestones, undivided (Kec)	60 to 350 ft

Attachment B
Stratigraphic Column
S IH 35 Service Road
Georgetown, Texas

BRAUN INTERTEC
The Science You Build On.

12/11/2020	Braun Project No.: B2010550	Drawn by: SL	Checked by: JR	Revised by:

SITE GEOLOGY &
PHOTOGRAPHIC LOG

ATTACHMENT C

The approximately 187-acre tract (Site) is located in central Williamson County, Texas on the western edge and uplifted portion of the Balcones Fault Zone. The Balcones Fault Zone divides two distinct physiographic provinces; the structurally uplifted Hill Country of the Edwards Plateau to the west and the Blackland Prairie of the Gulf Coast Plain to the east. The uplifted portion of the Balcones Fault Zone contains generally flat-lying beds, and few faults. The nearest mapped fault is located adjacent to the southwest portion of the Site.

The Site is agricultural land with an elevation change from approximately 770 feet above mean sea level (AMSL) near the southwestern property boundary, to 700 feet AMSL at the northeastern property boundary, near the IH-35 Service Road. A pond is located in the low-lying eastern portion of the Site. Surface water runoff appears to occur as overland flow across the Site to the east. A vacant homestead including a residence, barn, and well house is located on the eastern portion of the Site. The central and western portions of the Site are primarily utilized as agricultural land. The western edge of the Site is currently under development.

Based on a review of the Bureau of Economic Geology (BEG) Geologic Atlas of Texas, Austin Sheet (1974), Quaternary Deposits (Qu) and Georgetown Limestone (Kgt) underlay the majority of the Site, with the contact between the two formations occurring on the eastern portion of the Site. The Georgetown Limestone formation is comprised of limestone and marl that is fine grained, brittle, and thick bedded. The Quaternary Deposits formation is comprised of sand, silt, clay, and gravel and locally indurated with calcium carbonate (caliche). Edwards and Comanche Peak Limestones (undivided, Kec) underlay a small portion of the Site. These formations are prevalent throughout the region to the west of the Site. The Edwards Limestone formation is comprised of limestone, dolostone, and chert that is fine grained, massive- to thin-bedded, hard, and brittle. The Comanche Peak Limestone formation is comprised of limestone that is fine to very fine grained, fairly hard, and nodular.

A field survey of the Site was conducted by Jeremiah Roy on December 2, 2020. The field survey included a reconnaissance on foot of the property and adjacent properties, with particular interest in undisturbed areas where rock outcrops might be observed. No evidence of karst features, sinkholes, solution cavities, faults or other potential recharge features was observed during the field survey. Additionally, a review of published records did not reveal any caves or other mapped karst features in the general Site vicinity.

Two manmade features in bedrock were observed during the Site survey: one private water well (Well-1) and one pond (Pond-1).

Well-1: The private water well was observed within a well house near the homestead on the eastern portion of the Site. Well depth and construction characteristics were not available for the private water well observed during the field survey, and the water well was not identified in any established well databases. The well appeared to be in good condition, covered, and located within an enclosed structure, and therefore the probability for rapid infiltration is considered low.

Pond-1: The pond is approximately 0.7 acres in area and is located on the eastern portion of the Site. Limestone outcrop was observed along the banks of the pond during the field survey. The

pond holds water for livestock use, and the probability for rapid infiltration is therefore considered low.

No other manmade features and no natural features were observed during the Site survey, and no documented sensitive features were found in the area. As previously stated, the property is primarily utilized for agricultural purposes.

Based on field observations and review of published literature, no evidence of sensitive features likely to allow rapid infiltration to the Edwards Aquifer were identified at the Site.



Photo 1: Water well house near the homestead on the hilltop, viewed facing north.



Photo 2: Private water well (Well-1) and pressure tank inside well house.



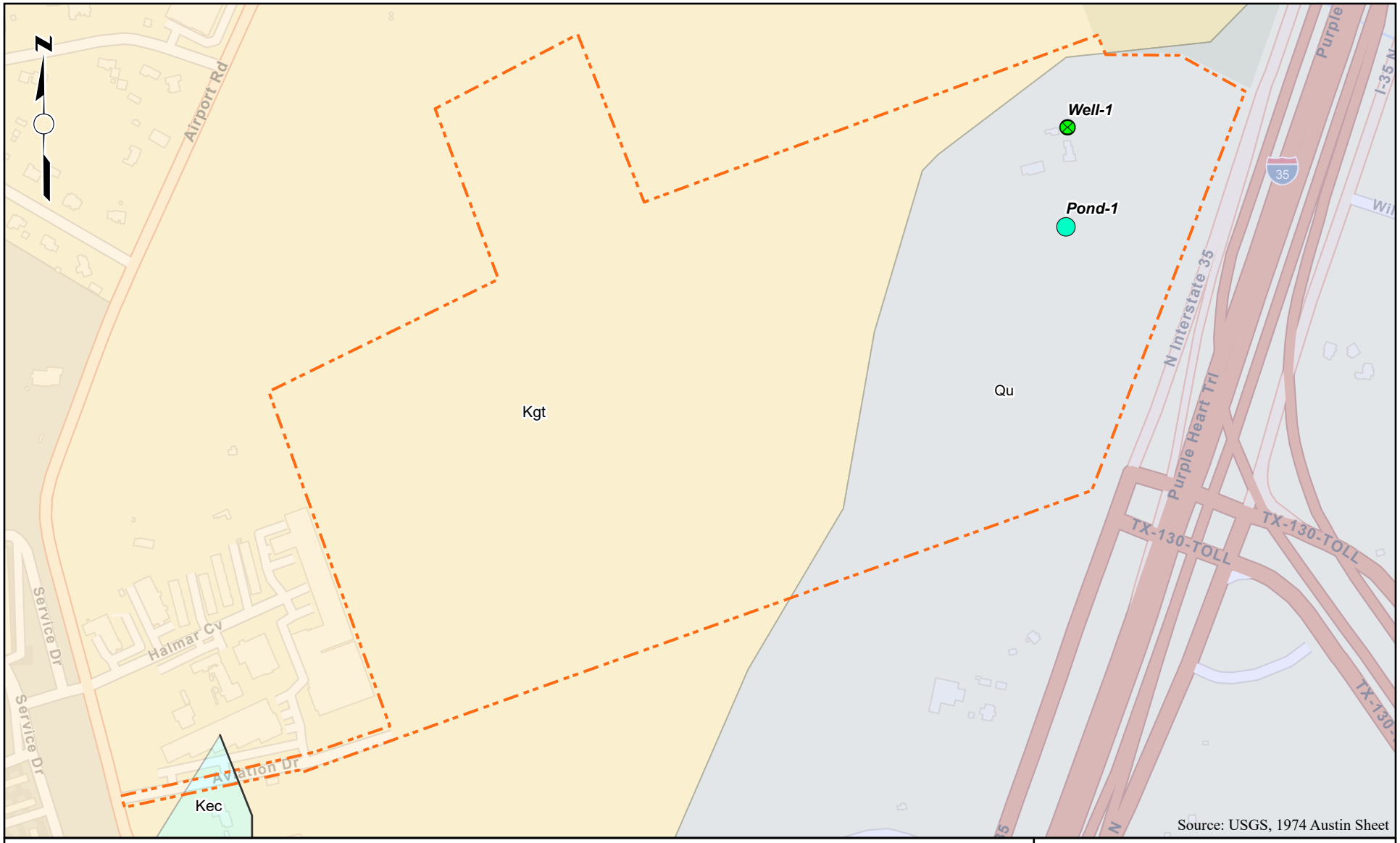
Photo 3: Livestock pond (Pond-1) near the homestead, viewed facing south.



Photo 4: Hillside drainage area as viewed from the livestock pond, facing southwest.

SITE MAPS

ATTACHMENT D



Legend

- Approximate Site Boundary
- Edwards and Comanche Peak Limestones, undivided
- Georgetown Limestone
- Quaternary deposit, undivided
- Normal fault, certain
- Pond
- Well

0 350 700 1,400 Feet

SCALE: 1" = 700'

Attachment D
Site Geologic Map

S IH 35 Service Road
Georgetown, Texas

BRAUN INTERTEC
The Science You Build On.

12/14/2020	Braun Project No.: B2010550	Drawn by: SL	Checked by: JR	Revised by:

Document Path: F:\2020\B2010550\GIS\B2010550.aprx

Well-1

Pond-1

Qu

Kgt

Kec

Cavu Rd

Vortac Ln

Airport Rd

Service Dr

Halmar Cv

Aviation Dr

N Interstate 35

Purple Heart Trl

TX-130-TOLL

130

Old Bishop Rd

Source: USGS, 1974 Austin Sheet

N

Legend

- Approximate Site Boundary
- Edwards and Comanche Peak Limestones, undivided
- Georgetown Limestone
- Quaternary deposit, undivided
- Normal fault, certain
- Pond
- Well

0 100 200 400 Feet

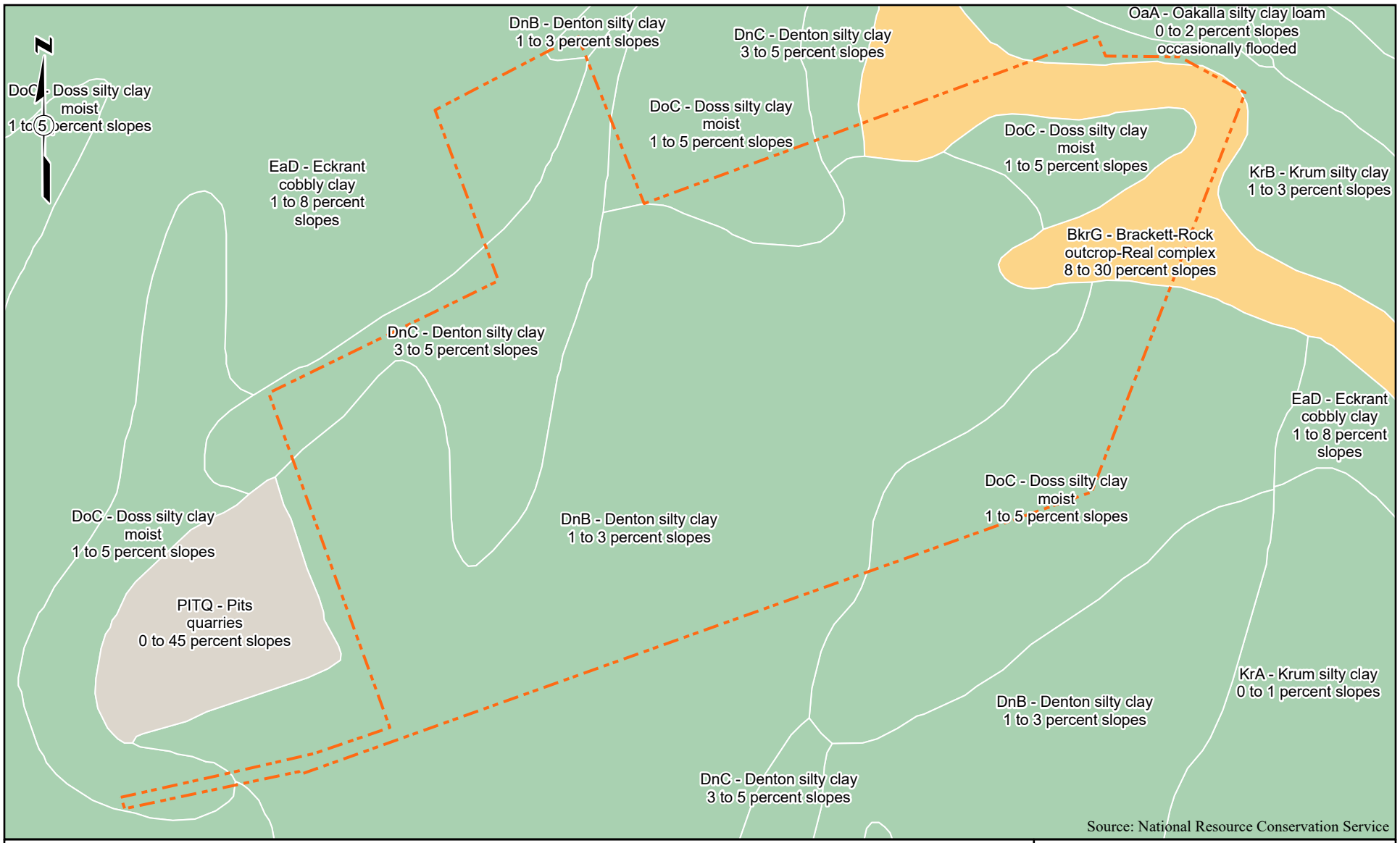
SCALE: 1" = 200'

12/14/2020	Braun Project No.: B2010550	Drawn by: SL	Checked by: JR	Revised by:

Attachment D
Site Geologic Map
S IH 35 Service Road
Georgetown, Texas

BRAUN INTERTEC
The Science You Build On.

Document Path: P:\2020\B2010550\GIS\MXD\Maps



Legend

- Approximate Site Boundary
- Inceptisols
- Mollisols
- No Soil

0 350 700 1,400 Feet

SCALE: 1" = 700'

Attachment D
Site Soils Map

S IH 35 Service Road
Georgetown, Texas

BRAUN INTERTEC
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12/11/2020	Braun Project No.: B2010550	Drawn by: SL	Checked by: JR	Revised by:

Document Path: F:\2020\B2010550\GIS\B2010550.aprx

DnB - Denton silty clay
1 to 3 percent slopes

DnC - Denton silty clay
3 to 5 percent slopes

OaA - Oakalla silty clay loam
0 to 2 percent slopes
occasionally flooded

OkA - Oakalla silty clay loam
0 to 2 percent slopes
frequently flooded

SvA - Sunev
silty clay loam
0 to 1 percent slopes

DoC - Doss silty clay
moist
1 to 5 percent slopes

EaD - Eckrant
cobbly clay
1 to 8 percent
slopes

DoC - Doss silty clay
moist
1 to 5 percent slopes

DoC - Doss silty clay
moist
1 to 5 percent slopes

KrB - Krum silty clay
1 to 3 percent slopes

BkrG - Brackett-Rock
outcrop-Real complex
8 to 30 percent slopes

DnC - Denton silty clay
3 to 5 percent slopes

EaD - Eckrant
cobbly clay
1 to 8 percent
slopes

DoC - Doss silty clay
moist
1 to 5 percent slopes

DoC - Doss silty clay
moist
1 to 5 percent slopes

PITQ - Pits
quarries
0 to 45 percent slopes

DnB - Denton silty clay
1 to 3 percent slopes

KrA - Krum silty clay
0 to 1 percent slopes

DnB - Denton silty clay
1 to 3 percent slopes

DnC - Denton silty clay
3 to 5 percent slopes

Source: National Resource Conservation Service

Legend
- Approximate Site Boundary
- Inceptisols
- Mollisols
- No Soil

0 100 200 400 Feet
SCALE: 1" = 200'

Attachment D
Site Soils Map
S IH 35 Service Road
Georgetown, Texas

BRAUN INTERTEC
The Science You Build On.

12/14/2020	Braun Project No.: B2010550	Drawn by: SL	Checked by: JR	Revised by:

Document Path: P:\2020\B2010550\Engineering\Soils\Soils.aprx

Modification of a Previously Approved Plan

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), 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.

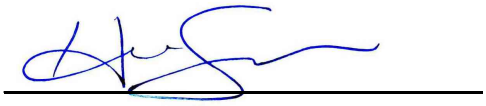
Signature

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 request for a **Modification of a Previously Approved Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Hollis Scheffler, P.E.

Date: 02/11/2025

Signature of Customer/Agent:



Project Information

1. Current Regulated Entity Name: Titan Northpark35
   Original Regulated Entity Name: Titan Northpark35
   Regulated Entity Number(s) (RN): 111023883
   Edwards Aquifer Protection Program ID Number(s): 11002393
   ☒ The applicant has not changed and the Customer Number (CN) is: CN605804855
   ☐ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.

2. ☒ **Attachment A: Original Approval Letter and Approved Modification Letters**. A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):
   - ☐ 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;
   - ☐ 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;
   - ☒ Development of land previously identified as undeveloped in the original water pollution abatement plan;
   - ☐ Physical modification of the approved organized sewage collection system;
   - ☐ Physical modification of the approved underground storage tank system;
   - ☐ Physical modification of the approved aboveground storage tank system.

4. ☐ Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

WPAP Modification Summary	***Approved Project***	***Proposed Modification***
Acres	32.507	17.9
Type of Development	Non-residential	Roadway and Office/warehouse
Number of Residential Lots	n/a	n/a
Impervious Cover (acres)	14.65	11.58
Impervious Cover (%	45	64.69
Permanent BMPs	2	n/a
Other	n/a	n/a

SCS Modification Summary	***Approved Project***	***Proposed Modification***
Linear Feet	_____	_____
Pipe Diameter	_____	_____
Other	_____	_____

AST Modification Summary	***Approved Project***	***Proposed Modification***
Number of ASTs	_____	_____
Volume of ASTs	_____	_____
Other	_____	_____

UST Modification Summary	***Approved Project***	***Proposed Modification***
Number of USTs	_____	_____
Volume of USTs	_____	_____
Other	_____	_____

5. ☒ **Attachment B: Narrative of Proposed Modification**. A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved, including any previous modifications, and how this proposed modification will change the approved plan.

6. ☒ **Attachment C: Current Site Plan of the Approved Project**. A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
   - ☐ The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
   - ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
   - ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
   - ☒ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
   - ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.

7. ☐ The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.
   ☒ Acreage has not been added to or removed from the approved plan.

8. ☒ 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.

Attachment A – Original Approval Letter

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 10, 2021

Mr. Joe Iannacone
Titan North Park 35, LLC
6901 McAllister Fwy, Ste 1120
San Antonio TX 78216

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Aviation Drive Extension; Located at Aviation Dr. from East of Airport Rd. to IH 35; Georgetown, Texas

TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11002393; Regulated Entity No. RN111023883

Dear Mr. Iannacone:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP for the above-referenced project submitted to the Austin Regional Office by Pacheco Koch Consulting Engineers, Inc on behalf of Titan North Park 35, LLC. on February 23, 2021. Final review of the WPAP was completed after additional material was received on May 17, 2021 and June 3, 2021. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The original WPAP, approved on June 11, 2020 (EAPP ID No. 11002001) authorized the construction of two warehouse facilities and associated sidewalks, parking and driveways for a total of 13.37 acres (65.3 %) of impervious cover on 20.47 acres. Permanent stormwater treatment was approved to be provided by one batch detention basin.

A modification of the WPAP, approved on November 12, 2020 (EAPP ID No. 11002158) authorized increased impervious cover for the two warehouse facilities for a total of 15.74 acres (70.0 %) of impervious cover on 22.48 acres. Permanent stormwater treatment was approved to be provided by two extended detention basins and two grassy swales.

PROJECT DESCRIPTION

The proposed non-residential project will have an area of approximately 32.51 acres. It will include approximately 4,560 linear feet of roadway with sidewalk along the roadway, a driveway and turning lane, and a building with parking, utilities and associated appurtenances. The impervious cover will be 14.65 acres (45.1 percent). Project wastewater will be disposed of by conveyance to the existing Pecan Branch Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two extended detention basins and two grassy swales and a Jellyfish® Filter designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 12,751 pounds of TSS generated from the 14.65 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The two extended detention basins, grassy swales, and Jellyfish® Filter are sized for future development and are designed to remove 86,191 pounds of TSS to treat stormwater runoff from a maximum of 73.26 acres of impervious cover. The project area will expand to have an area of approximately 104.66 acres.

GEOLOGY

According to the Geologic Assessment (GA) included with the application, the site includes Denton silty clay, Doss silty clay and Brackett-Rock Outcrop real complex. The surficial geologic units are the Edwards and Comanche Peak limestones, undivided and Georgetown limestone and Quaternary deposit, undivided. No sensitive features were identified on site. The TCEQ site assessment conducted on April 19, 2021 revealed the site to be generally in accordance with the description included in the GA.

SPECIAL CONDITIONS

I. This WPAP is subject to all Special and Standard Conditions listed in the approval letters dated June 11, 2020 (EAPP ID No. 11002001) and November 12, 2020 (EAPP ID No. 11002158).

II. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

III. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director 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.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

18. 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 Austin Regional Office within 30 days of site completion.
19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of

the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Bob Castro, P.E. of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Lori Wilson for

David Van Soest, Regional Director
Austin and Waco Regions
Texas Commission on Environmental Quality

DVS/rbc

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

PROJECT DESCRIPTION

The proposed project will have an area of approximately 32.68 acres. The modification includes an increase in the project area and an increase in the previously approved impervious cover. The project includes one commercial building with associated parking, drives, sidewalks, and utilities. The impervious cover will be 20.48 acres (62.7 percent). Project wastewater will be disposed of by conveyance to the existing Pecan Branch Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a previously approved extended detention basin and grassy swale in series (Pond A and Grassy Swale A), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be utilized to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 17,826 pounds of TSS generated from the 20.48 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

GEOLOGY

According to the geologic assessment included with the application, the surficial geologic units underlying the site are the Georgetown Limestone (Kgt) and the Quaternary Deposits (Qu). There are no geologically sensitive features on site. The Austin Regional Office site assessment conducted on July 14, 2022, revealed the site to be generally as described by the geologic assessment.

SPECIAL CONDITIONS

I. This modification is subject to all Special and Standard Conditions listed in the original WPAP approval and subsequent modifications dated June 11, 2020, November 12, 2020, June 10, 2021, and January 28, 2022.

II. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

III. All sediment and/or media removed from the permanent pollution abatement measures during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP-MOD is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP-MOD and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP-MOD application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.

12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director 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.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

<u>After Completion of Construction:</u>

18. 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 Austin Regional Office within 30 days of site completion.
19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

21. An Edwards Aquifer protection plan approval or extension will expire, and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Ryan Soutter of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/rts

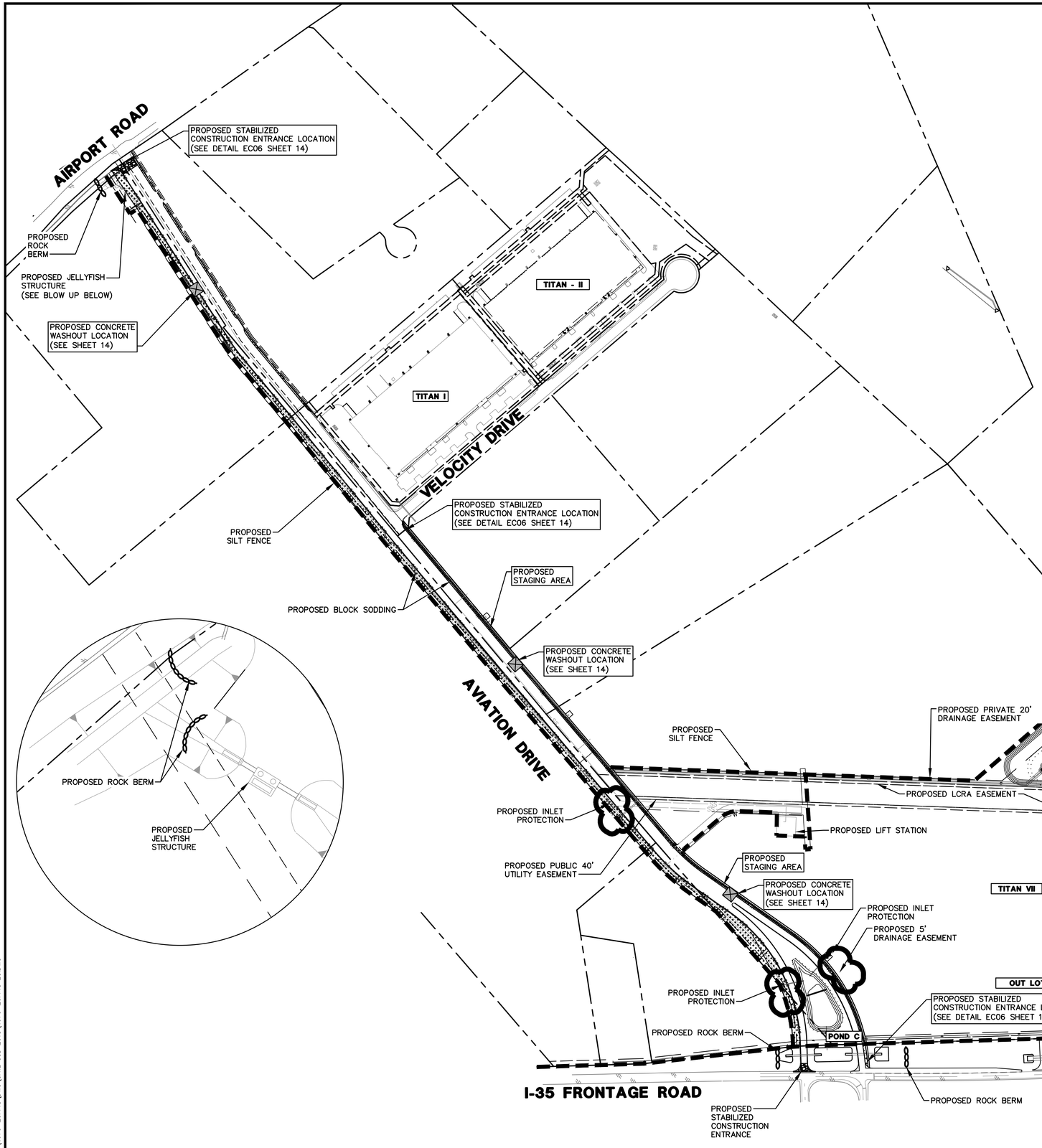
Enclosures: Deed Recordation Affidavit, Form TCEQ-0625
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

CC: Ms. Hollis Scheffler, P.E., Pacheco Koch Consulting Engineers, Inc.

Attachment B – Narrative of Proposed Modification

The enclosed application is proposing a modification to the previously approved Titan NorthPark35 WPAP (RN111023883; ID No. 11002393). This modification is based upon development of land previously identified as undeveloped in the original WPAP that is now proposed to be developed. The proposed development includes a city roadway, as well as a 281,152 sqft office/warehouse building with associated impervious cover that was previously accounted for in the existing WQ Pond A. The pond has adequate water quality storage to account for the proposed development.

Attachment C – Current Site Plan of the Approved Project



0 100 200 400 600

HORIZONTAL SCALE IN FEET

LEGEND

- INLET PROTECTION (3 EA)
- SILT FENCE (12,300 LF)
- PROPOSED BLOCK SODDING (32,248 SY)
- ROCK CHECK DAM (7 EA)
- CONCRETE WASHOUT AREA (3 EA)
- PROPOSED CONSTRUCTION ENTERANCE

Pacheco Koch
8701 N. MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.465.0831
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008000

REVISIONS

NO.	DATE	DESCRIPTION	BY

AVIATION DRIVE EXTENSION
CIVIL INFRASTRUCTURE
GEORGETOWN, WILLIAMSON COUNTY, TEXAS
95% SUBMITTAL

EROSION CONTROL PLAN

STATE OF TEXAS * KEVIN C. MINKLER * 124843 * LICENSED PROFESSIONAL ENGINEER

06/01/2021

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN C. MINKLER, P.E. 124843 ON 06/01/2021. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
DMS/KCM	DMS/KCM	JUNE 2021

SHEET NO.

13

PK FILE: 4670-20.448 CITY FILE: 2020-55-CON

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Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), Effective June 1, 1999

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

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

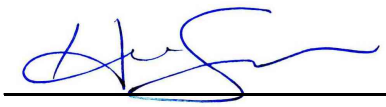
Signature

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

Print Name of Customer/Agent: Hollis Scheffler, P.E.

Date: 02/11/2025

Signature of Customer/Agent:



Regulated Entity Name: Titan NorthPark 35

Regulated 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):17.9 acres

3. Estimated projected population:n/a

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	281512	÷ 43,560 =	6.45
Parking	0	÷ 43,560 =	0
Other paved surfaces	223509	÷ 43,560 =	5.13
Total Impervious Cover	504661	÷ 43,560 =	11.58

Total Impervious Cover 11.58 **÷ Total Acreage** 17.9 **X 100 =** 64.69**% Impervious Cover**

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

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

For Road Projects Only

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

7. Type of project:

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

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

   ☐ Concrete
   ☐ Asphaltic concrete pavement
   ☐ Other: _____

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

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

10. Length of pavement area: _____ feet.

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

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

_____% Domestic	63,513 Gallons/day
_____% Industrial	_____Gallons/day
_____% Commingled	_____Gallons/day

TOTAL gallons/day 63,513

15. Wastewater will be disposed of by:

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

- ☐ **Attachment C - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.
- ☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☒ Sewage Collection System (Sewer Lines):

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

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

☒ The sewage collection system will convey the wastewater to the Pecan Branch WWTP (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = 40'.

18. 100-year floodplain boundaries:

☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
☒ No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FIRM Panels 4891C0283F & 48491C0291F dated 12/20/2019

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

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

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

☒ There are 1 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

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

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

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

☐ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
☒ No sensitive geologic or manmade features were identified in the Geologic Assessment.
☐ **Attachment D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

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

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

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

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

26. ☐ Surface waters (including wetlands).

    ☒ N/A

27. ☐ Locations where stormwater discharges to surface water or sensitive features are to occur.

    ☒ There will be no discharges to surface water or sensitive features.

28. ☒ Legal boundaries of the site are shown.

Administrative Information

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

30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Attachment A – Factors Affecting Surface Water Quality

The following are potential sources of surface and groundwater contamination from construction activities:

- Clearing and grubbing
- Grading and site excavation
- Vehicle tracking
- Topsoil stripping and stockpiling
- Landscaping operations
- Staging and storage area
- Paving (including curb and gutter)
- Building Construction
- Concrete washout area

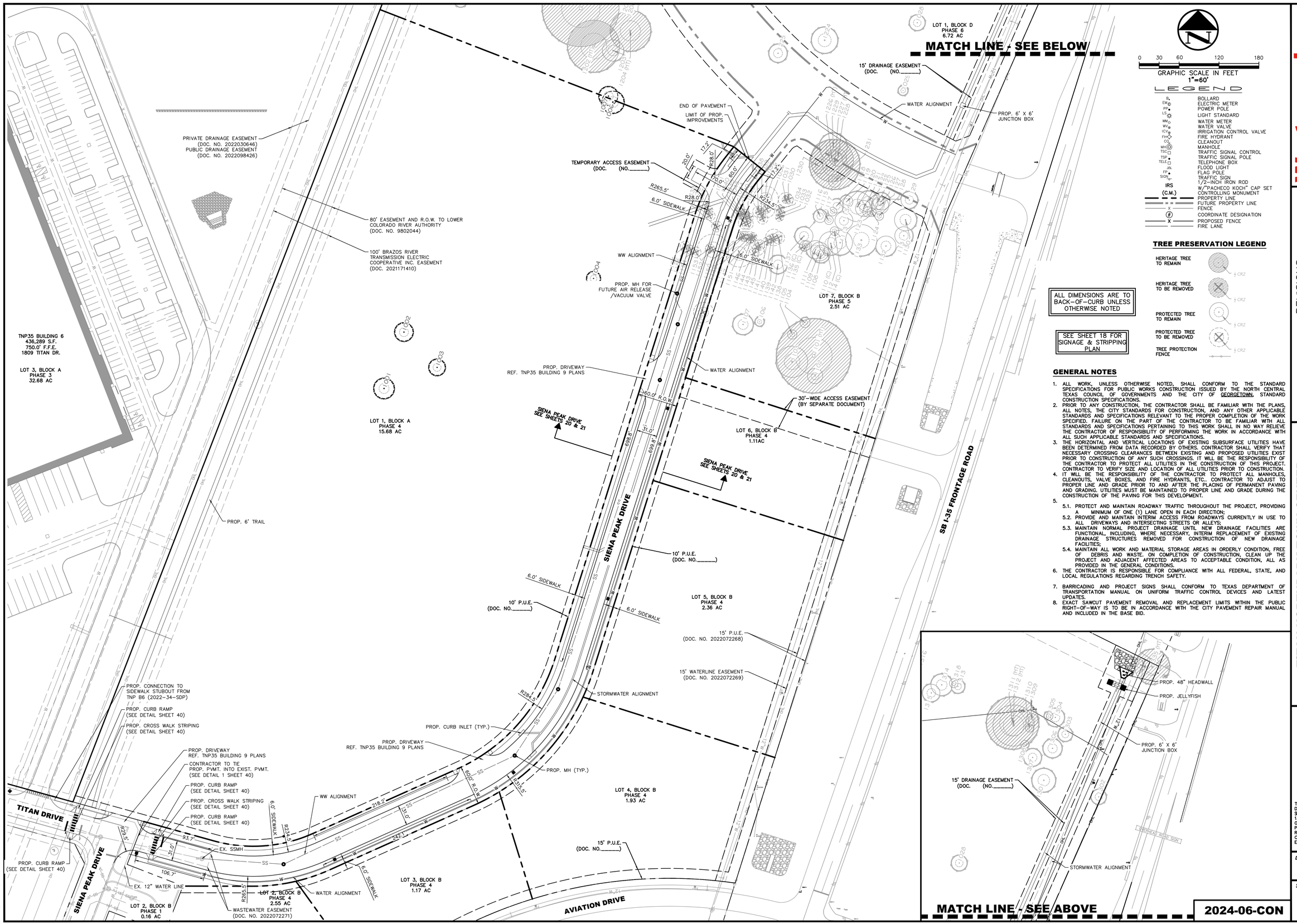
Attachment B – Volume and Character of Stormwater

The existing site generates approximately 129.40 cfs flowing over 21.90 acres primarily west to east over 75% grass cover at roughly 2%. The runoff coefficient utilized for the existing site is 0.40.

The proposed development generates an approximate additional 65.60 cfs and has a required TSS removal of 85%. The runoff from the site is generated from the streets, building roof, driveways, parking, and other paved and impervious surfaces. The runoff coefficient utilized for the proposed site impervious cover is 0.97.

Flow is directed utilizing both impervious and pervious structures until it is sent into catch basins to then be piped off-site, following the existing drainage pattern. The existing BMP series, existing extended detention WQ Pond A with secondary grassy swale, meets the City of Georgetown's required 85% TSS removal efficiency. The pond has adequate water quality storage and detention to account for the proposed development.

Site Plan



0 30 60 120 180

GRAPHIC SCALE IN FEET
1"=60'

LEGEND

	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
FF	FLOOD LIGHT
SIGN	FLAG POLE
	TRAFFIC SIGN
IRS	1/2-INCH IRON ROD
(C.M.)	W/"PACHECO KOCH" CAP SET
	CONTROLLING MONUMENT
	PROPERTY LINE
	FUTURE PROPERTY LINE
X	FENCE
#	COORDINATE DESIGNATION
X	PROPOSED FENCE
	FIRE LANE

TREE PRESERVATION LEGEND

- HERITAGE TREE TO REMAIN — ½ CRZ
- HERITAGE TREE TO BE REMOVED — ½ CRZ
- PROTECTED TREE TO REMAIN — ½ CRZ
- PROTECTED TREE TO BE REMOVED — ½ CRZ
- TREE PROTECTION FENCE

ALL DIMENSIONS ARE TO BACK-OF-CURB UNLESS OTHERWISE NOTED

SEE SHEET 18 FOR SIGNAGE & STRIPPING PLAN

GENERAL NOTES

1. ALL WORK, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS AND THE CITY OF GEORGETOWN, STANDARD CONSTRUCTION SPECIFICATIONS.
2. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL BE FAMILIAR WITH THE PLANS, ALL NOTES, THE CITY STANDARDS FOR CONSTRUCTION, AND ANY OTHER APPLICABLE STANDARDS AND SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO BE FAMILIAR WITH ALL STANDARDS AND SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY OF PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.
3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. CONTRACTOR SHALL VERIFY THAT NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSINGS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEANOUTS, VALVE BOXES, AND FIRE HYDRANTS, ETC., CONTRACTOR TO ADJUST TO PROPER LINE AND GRADE PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING THE CONSTRUCTION OF THE PAVING FOR THIS DEVELOPMENT.
5.
   - 5.1. PROTECT AND MAINTAIN ROADWAY TRAFFIC THROUGHOUT THE PROJECT, PROVIDING A MINIMUM OF ONE (1) LANE OPEN IN EACH DIRECTION;
   - 5.2. PROVIDE AND MAINTAIN INTERIM ACCESS FROM ROADWAYS CURRENTLY IN USE TO ALL DRIVEWAYS AND INTERSECTING STREETS OR ALLEYS;
   - 5.3. MAINTAIN NORMAL PROJECT DRAINAGE UNTIL NEW DRAINAGE FACILITIES ARE FUNCTIONAL, INCLUDING, WHERE NECESSARY, INTERIM REPLACEMENT OF EXISTING DRAINAGE STRUCTURES REMOVED FOR CONSTRUCTION OF NEW DRAINAGE FACILITIES;
   - 5.4. MAINTAIN ALL WORK AND MATERIAL STORAGE AREAS IN ORDERLY CONDITION, FREE OF DEBRIS AND WASTE. ON COMPLETION OF CONSTRUCTION, CLEAN UP THE PROJECT AND ADJACENT AFFECTED AREAS TO ACCEPTABLE CONDITION, ALL AS PROVIDED IN THE GENERAL CONDITIONS.
6. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.
7. BARRICADING AND PROJECT SIGNS SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND LATEST UPDATES.
8. EXACT SAWCUT PAVEMENT REMOVAL AND REPLACEMENT LIMITS WITHIN THE PUBLIC RIGHT-OF-WAY IS TO BE IN ACCORDANCE WITH THE CITY PAVEMENT REPAIR MANUAL AND INCLUDED IN THE BASE BID.

Westwood
Phone (512) 485-0831
Toll Free (888) 937-5150
8701 N. Mopac Expy, Suite 320
Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

SITE PLAN

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

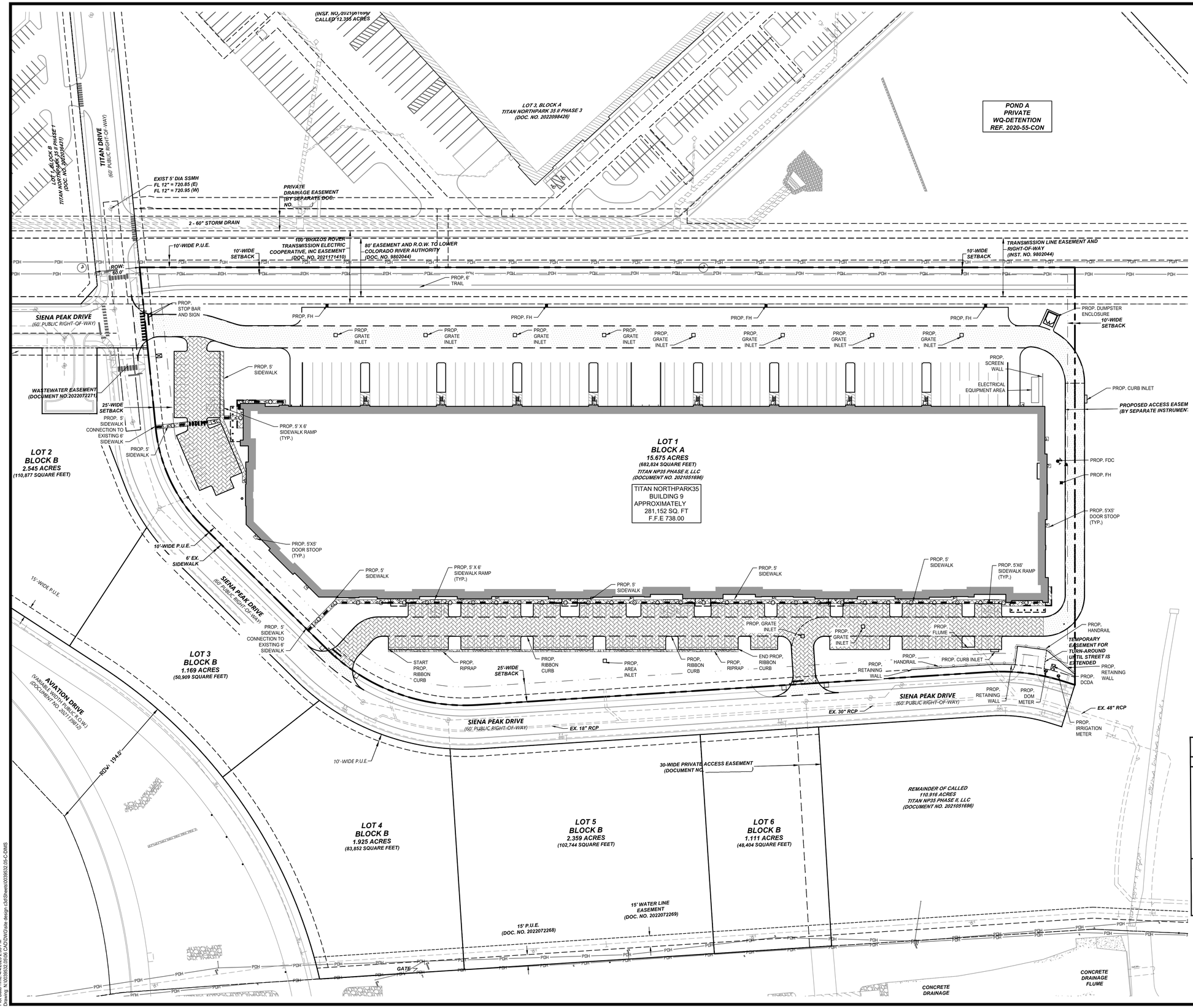
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISOR OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

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HAS	NBB	MAR 2024

SHEET NO. 17

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LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- EASEMENT LINE
- ROAD CENTER LINE
- BUILDING SETBACK LINE
- BACK OF CURB LINE
- PROPOSED FIRELANE
- PROPOSED PAVEMENT
- PERVIOUS PARKING AREA
- PROP. ACCESSIBLE ROUTE

ALL DIMENSIONS ARE TO BACK-OF-CURB UNLESS OTHERWISE NOTED

NOTES:

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, COLOR-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 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.**

PARKING REQUIREMENT

RATIO	REQUIRED	PROVIDED
INDOOR FACILITY 10% - 1/500 (31,250 SF)	63	167
INDOOR STORAGE 90% - 1/2,500 (249,902 SF)	102	
ADA SPACES	6	8
TOTAL	*171*	*175*

IMPERVIOUS COVER CALCULATIONS

TOTAL SITE AREA	**15.675 AC (682,824 SF)**	
ALLOWED IC		
PER PRELIM PLAT (2023-35-PP) ALLOWABLE IC%		**49.44%**
WAIVERS:		
• LOW IMPACT DESIGN		+7.00%
• PARKING LOT DESIGN		+5.00%
• PLANT MATERIALS CLASSIFIED AS LOW WATER USERS		+3.00%
ALLOWABLE IC%	**10.10 AC (440,011 SF)**	**64.44%**
PROPOSED IC		
BUILDING	**6.45 AC (281,152 SF)**	**41.15 %**
PAVEMENT (excludes pavers)	**3.29 AC (143,300 SF)**	**20.99%**
TOTAL	**9.74 AC (424,452 SF)**	**62.16%**

Westwood
Westwood Professional Services, Inc.
8701 NORTH MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX OVERALL SITE PLAN

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS

PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

13
SHEET 13 OF 48

2025-20-SDP

Last Saved by: SForeen
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Full Name: N:\0039532.05\06 CAD\DWG\site design c3d\Sheets\0039532.05-C-DIMS
Drawing: N:\0039532.05\06 CAD\DWG\site design c3d\Sheets\0039532.05-C-DIMS

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(Ii), (E), and (5), Effective June 1, 1999

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

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

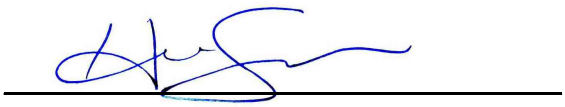
Signature

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

Print Name of Customer/Agent: Hollis Scheffler, P.E.

Date: 02/11/2025

Signature of Customer/Agent



Regulated Entity Name: Titan NorthPark 35

Permanent Best Management Practices (BMPs)

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

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

   ☐ N/A

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

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

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

☐ N/A

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

   ☐ N/A

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

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

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

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

6. ☒ **Attachment B - BMPs for Upgradient Stormwater**.

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

☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

☒ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

7. ☒ **Attachment C - BMPs for On-site Stormwater**.

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

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

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

☒ N/A

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

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

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

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

☒ Design calculations (TSS removal calculations)
☒ TCEQ construction notes
☒ All geologic features
☒ All proposed structural BMP(s) plans and specifications

☐ N/A

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

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

    ☐ N/A

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

    ☒ N/A

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

    ☐ N/A

Responsibility for Maintenance of Permanent BMP(s)

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

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

    ☐ N/A

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

    ☒ N/A

Attachment B – BMPs for Upgradient Stormwater

The primary extended detention WQ Pond A with secondary grassy swale was previously sized to receive offsite flows from stormwater coming from the western adjacent property. Construction plans for this BMP were previously approved with this WPAP.

Attachment C – BMPs for On-site Stormwater

The primary extended detention WQ Pond A with secondary grassy swale was previously sized to receive flows from future development. Construction plans for this BMP were previously approved with this WPAP. The Titan NorthPark Entity is proposing the roadway infrastructure and an office/warehouse building with associated impervious cover that was previously accounted for in the existing WQ Pond A. The pond has adequate water quality storage to account for the proposed development.

Attachment D – BMPs for Surface Streams

The primary extended detention WQ Pond A with secondary grassy swale was previously sized to receive flows from future development. Construction plans for this BMP were previously approved with this WPAP. The Titan NorthPark Entity is proposing the roadway infrastructure with associated impervious cover that was previously accounted for in the existing WQ Pond A. The pond has adequate water quality storage to account for the proposed development. The aforementioned BMP will provide adequate measures to prevent pollutant removal from entering the aquifer. No surface streams or sensitive features are located on the site.

Attachment F – Construction Plans
Roadway Plans (Siena Peak Drive)

CONSTRUCTION PLANS
FOR
TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
GEORGETOWN, TX 78628

OWNER

TITAN NP35 PHASE II, LLC
JOE IANNACONE
4903 WOODROW AVENUE
AUSTIN TX, 78756
JIANNACONE@TITAN-DEVELOPMENT.COM
TITAN-DEVELOPMENT.COM
210.338.5220

DEVELOPER

TITAN DEVELOPMENT
4903 WOODROW AVENUE
AUSTIN, TX 78756
TITAN-DEVELOPMENT.COM
512.720.7200

CONTRACTOR

CERRIS BUILDERS
3712 HELIOS WAY
PFLUGERVILLE, TX, 78660
512.687.6400
KMAXWELL@CERRIS.COM
CERRISBUILDERS.COM

ENGINEER

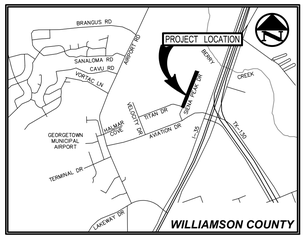
HOLLIS SCHEFFLER, P.E.
8701 N. MOPAC EXPY, SUITE 320
AUSTIN TX 78759
512.485.0831
HOLLIS.SCHEFFLER@WESTWOODPS.COM
WESTWOODPS.COM

LANDSCAPE ARCHITECT

SCOTT SINN, PLA
8701 N. MOPAC EXPY, SUITE 320
AUSTIN TX 78759
512.485.0831
SCOTT.SINN@WESTWOODPS.COM
WESTWOODPS.COM

GENERAL NOTES:

1. THESE PLANS WERE PREPARED, SEALED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE, BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE PLANS FOR CONSTRUCTION OF THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE, AND FEDERAL REQUIREMENTS AND CODES.
2. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
3. WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC UTILITY LINES SHALL B E 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 (ONLY APPLICABLE FOR NON-RESIDENTIAL AND MULTI-FAMILY DEVELOPMENT.)
4. ALL ELECTRIC AND COMMUNICATION INFRASTRUCTURE SHALL COMPLY WITH UDC SECTION 13.06.
5. THE PROPERTY SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN.
6. A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER QUALITY REGULATIONS, WAS COMPLETED ON DECEMBER 14, 2020. NO SPRINGS OR STREAMS WERE IDENTIFIED IN THE GEOLOGIC ASSESSMENT.



VICINITY MAP
1" = 3000'

LEGAL DESCRIPTION:

AW0013 - WRIGHT, D. SUR., ACRES 32.047, DOC. NO. 2021051696 (O.P.R.)

FLOODPLAIN INFORMATION:

PER FEMA FIRM PANEL NO. 48491C0291F DATED 12/20/2019 AND FEMA FIRM PANEL NO. 48491C0283F DATED 12/20/2019, THE PROPOSED IMPROVEMENTS ARE IN THE AREA OF MINIMAL FLOOD HAZARD, ZONE X, AND NOT IN THE 100 YEAR FLOODPLAIN.
THERE ARE NO SPRINGS, STREAMS OR BUFFER ZONES LOCATED ON THE SUBJECT SITE.

PROPOSED USE:

CITY ROADWAY & UTILITY EXTENSION

ACREAGE:

2.22 AC (96,903 SF)

TOTAL IMPERVIOUS COVER:

EXISTING: 0 ACRES (00.0%)
PROPOSED: 1.49 AC (63.71%)

FIRE DEPARTMENT:

GEORGETOWN FIRE DEPARTMENT
3500 DB WOOD RD.
GEORGETOWN, TEXAS 78628
(512) 930-3473

ELECTRICITY, WATER & WASTEWATER:

GEORGETOWN UTILITY SYSTEMS
300-1 INDUSTRIAL AVENUE
GEORGETOWN, TX 78626
(512) 930-3555
HTTPS://GUS.GEORGETOWN.ORG/

TDLR:

PENDING

REVISIONS/CORRECTIONS

NO.	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET NO.S	TOTAL # SHEETS IN PLAN SET	NET CHANGE TO IMP. COVER (sq. ft.)	TOTAL SITE IMP. COVER (sq. ft.) (%)	CITY OF GEORGETOWN APPROVAL/DATE	DATE IMAGED

PREPARED BY

Westwood

Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
westwoodps.com

Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

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5/7/2025 9:56 AM
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SHEET SET INDEX

SHEET	SHEET NUMBER	SHEET TITLE
1	1	COVER
2	2	GENERAL NOTES
3	3	PRELIMINARY PLAT 1 OF 3
4	4	PRELIMINARY PLAT 2 OF 3
5	5	PRELIMINARY PLAT 3 OF 3
6	6	FINAL PLAT 1 OF 3
7	7	FINAL PLAT 2 OF 3
8	8	FINAL PLAT 3 OF 3
9	9	EXISTING CONDITIONS & DEMO PLAN
10	10	EROSION CONTROL PLAN
11	11	EROSION CONTROL DETAILS
12	12	EXISTING DRAINAGE AREA MAP
13	13	INTERIM DRAINAGE AREA MAP
14	14	PROPOSED DRAINAGE AREA MAP
15	15	SITE DRAINAGE AREA MAP
16	16	DRAINAGE AREA CALCULATIONS
17	17	SITE PLAN
18	18	SIGNAGE & STRIPING PLAN
19	19	ROADWAY TYPICAL SECTIONS
20	20	SIENA PEAK DRIVE 1 OF 2
21	21	SIENA PEAK DRIVE 2 OF 2
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25	25	STORM SEWER PROFILE SHEET 1 OF 2
26	26	STORM SEWER PROFILE SHEET 2 OF 2
27	27	STORM SEWER DETAILS
28	28	WATER QUALITY TREATMENT PLAN
29	29	WATER QUALITY TREATMENT DETAILS
30	30	OVERALL WATER & WASTEWATER PLAN
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32	32	WATER PLAN & PROFILE 2 OF 2
33	33	WASTEWATER PLAN & PROFILE 1 OF 2
34	34	WASTEWATER PLAN & PROFILE 2 OF 2
35	35	UTILITY STUBOUT PROFILES
36	36	RESTRAINED JOINT CALCS
37	37	UTILITY DETAILS 1 OF 2
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39	39	PAVING PLAN
40	40	PAVING DETAILS
41	41	SIENA PEAK DR CROSS SECTIONS
42	L1.00	OVERALL TREE MITIGATION PLAN
43	L1.01	TREE MITIGATION PLAN
44	L1.02	TREE MITIGATION DATA & DETAILS
45	L2.00	OVERALL PLANTING PLAN
46	L2.01	PLANTING PLAN
47	L2.02	PLANTING PLAN
48	L3.00	SPECIFICATIONS

PROJECT ZONING: TITAN NORTHPARK 35 PUD (2023-58)

PROJECT ADDRESS: 3001 IH, 35, GEORGETOWN, TX 78628

SUBMITTAL DATE: MARCH 4, 2024

2024-06-CON

Westwood
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

COVER



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISON OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
1

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

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.

2. 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.

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

4. 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.

5. 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 TCEQ-0592 (REV. JULY 15, 2015) PAGE 2 OF 2
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 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.

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.

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

1. 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.

2. 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.

3. 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.

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

5. 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.

6. 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 TCEQ-0596 (REV. JULY 15, 2015) PAGE 2 OF 6
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.

7. 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.

8. 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.

9. 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 __.
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.

10. 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).

11. 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: N/A
IF PIPE FLEXURE IS PROPOSED, THE FOLLOWING METHOD OF PREVENTING DEFLECTION OF THE JOINT MUST BE N/A SPECIFIC CARE MUST BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC §217.54.

12. NEW SEWAGE COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH STUB OUTS FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. THE LOCATION OF SUCH STUB OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH STUB OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB-OUTS MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE END OF THE STREET PAVEMENT. ALL STUB-OUTS MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING SEWER LINE NOT FURNISHED WITH STUB OUTS MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING TECHNIQUES.
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IF NO STUB-OUT IS PRESENT AN ALTERNATE METHOD OF JOINING LATERALS IS SHOWN IN THE DETAIL ON PLAN SHEET __ OF __. (FOR POTENTIAL FUTURE LATERALS).
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 __.

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

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 C924, OR ASTM F-1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS REQUIRED IN TABLE C.3 IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH.
(B) FOR SECTIONS OF COLLECTION SYSTEM PIPE LESS THAN 36 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY, UNLESS A PIPE IS TO BE TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION.
(I) A PIPE MUST BE PRESSURIZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE.
(II) ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS COMPUTED FROM THE FOLLOWING EQUATION:
EQUATION C.3

$$T = \frac{0.085 * D * K}{Q}$$

WHERE:
T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS
K = 0.000419 X D X L, BUT NOT LESS THAN 1.0
D = AVERAGE INSIDE PIPE DIAMETER IN INCHES
L = LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET
Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE
(C) SINCE A K VALUE OF LESS THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING TABLE C.3:

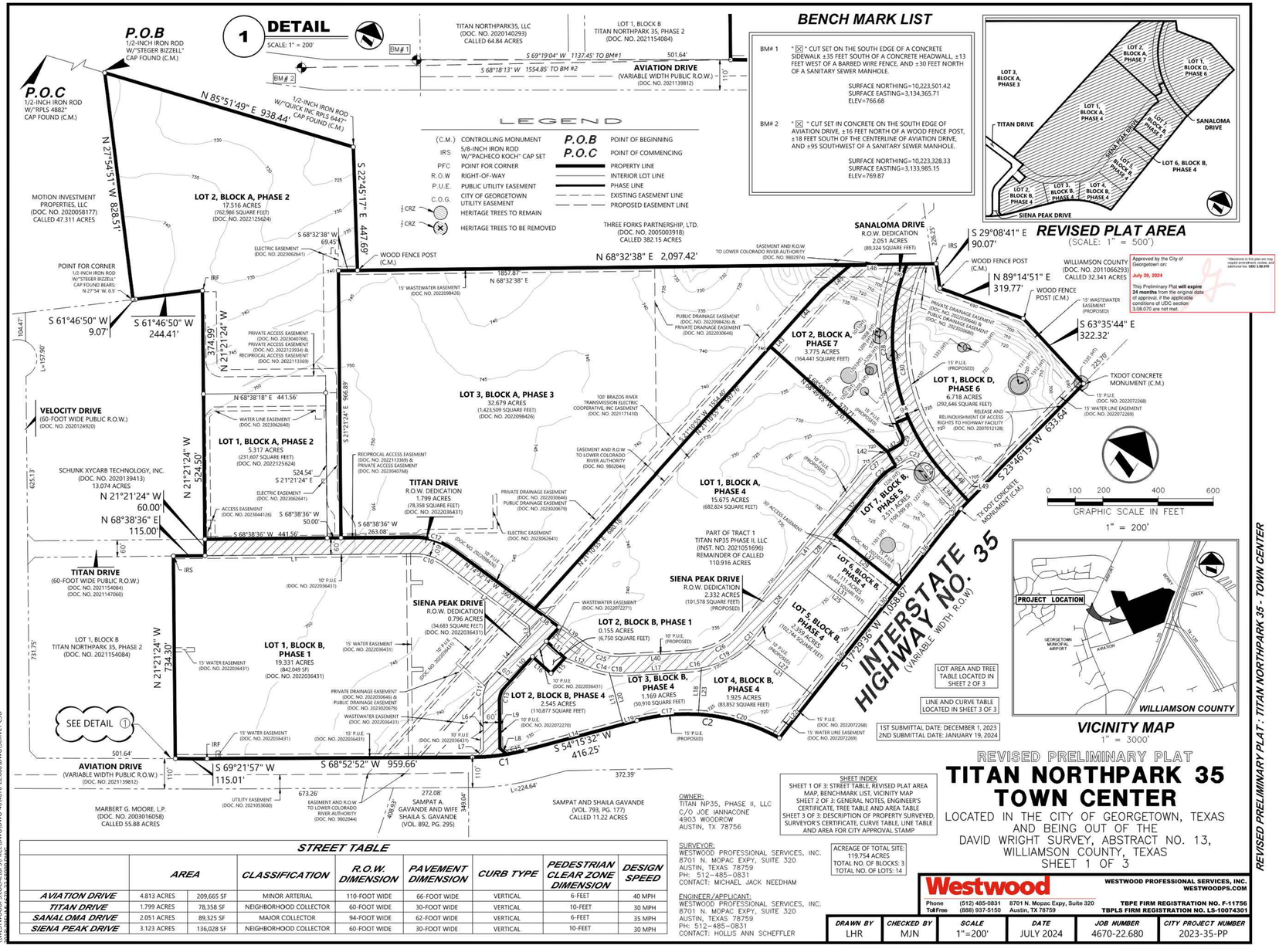
PIPE DIAMETER (INCHES)	MINIMUM TIME (SECONDS)	MAXIMUM LENGTH FOR MINIMUM TIME (FEET)	TIME FOR LONGER LENGTH (SECONDS/FOOT)
6	340	398	0.855
8	454	298	1.520
10	467	239	2.374
12	680	199	3.419
15	850	159	5.342
19	1020	133	7.693
21	1190	114	10.471
14	1360	100	13.676
17	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

(A) AN OWNER MAY STOP A TEST IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME.
(B) IF ANY PRESSURE LOSS OR LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF A TESTING PERIOD, THEN THE TEST MUST CONTINUE FOR THE ENTIRE TEST DURATION AS OUTLINED ABOVE OR UNTIL FAILURE.
(C) WASTEWATER COLLECTION SYSTEM PIPES WITH A 27 INCH OR LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT INSTEAD OF FOLLOWING THE PROCEDURE OUTLINED IN THIS SECTION.
(D) A TESTING PROCEDURE FOR PIPE WITH AN INSIDE DIAMETER GREATER THAN 33 INCHES MUST BE APPROVED BY THE EXECUTIVE DIRECTOR.
(2) INFILTRATION/EXFILTRATION TEST.
(A) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF 2.0 FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE.
(B) AN OWNER SHALL USE AN INFILTRATION TEST IN LIEU OF AN EXFILTRATION TEST WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER LEVEL.
(C) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST TWO FEET ABOVE EXISTING GROUNDWATER LEVEL, WHICHEVER IS GREATER.
(D) FOR CONSTRUCTION WITHIN A 25-YEAR FLOOD PLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD AS IN SUBPARAGRAPH (C) OF THIS PARAGRAPH.
(E) IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, AN OWNER SHALL UNDERTAKE REMEDIAL ACTION IN ORDER TO REDUCE
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THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED. AN OWNER SHALL RETEST A PIPE FOLLOWING A REMEDIATION ACTION.
(b) IF A GRAVITY COLLECTION PIPE IS COMPOSED OF FLEXIBLE PIPE, DEFLECTION TESTING IS ALSO REQUIRED. THE FOLLOWING PROCEDURES MUST BE FOLLOWED:
(1) FOR A COLLECTION PIPE WITH INSIDE DIAMETER LESS THAN 27 INCHES, DEFLECTION MEASUREMENT REQUIRES A RIGID MANDREL.
(A) MANDREL SIZING.
(i) A RIGID MANDREL MUST HAVE AN OUTSIDE DIAMETER (OD) NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A PIPE, AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTMS, AMERICAN WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN NATIONAL STANDARDS INSTITUTE, OR ANY RELATED APPENDIX.
(ii) IF A MANDREL SIZING DIAMETER IS NOT SPECIFIED IN THE APPROPRIATE STANDARD, THE MANDREL MUST HAVE AN OD EQUAL TO 95% OF THE ID OF A PIPE. IN THIS CASE, THE ID OF THE PIPE, FOR THE PURPOSE OF DETERMINING THE OD OF THE MANDREL, MUST EQUAL BE THE AVERAGE OUTSIDE DIAMETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD CONTROLLED PIPE AND THE AVERAGE INSIDE DIAMETER FOR ID CONTROLLED PIPE.
(iii) ALL DIMENSIONS MUST MEET THE APPROPRIATE STANDARD.
(B) MANDREL DESIGN.
(i) A RIGID MANDREL MUST BE CONSTRUCTED OF A METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200 PSI WITHOUT BEING DEFORMED.
(ii) A MANDREL MUST HAVE NINE OR MORE ODD NUMBER OF RUNNERS OR LEGS.
(iii) A BARREL SECTION LENGTH MUST EQUAL AT LEAST 75% OF THE INSIDE DIAMETER OF A PIPE.
(iv) EACH SIZE MANDREL MUST USE A SEPARATE PROVING RING.
(C) METHOD OPTIONS.
(i) AN ADJUSTABLE OR FLEXIBLE MANDREL IS PROHIBITED.
(ii) A TEST MAY NOT USE TELEVISION INSPECTION AS A SUBSTITUTE FOR A DEFLECTION TEST.
(iii) IF REQUESTED, THE EXECUTIVE DIRECTOR MAY APPROVE THE USE OF A DEFLECTOMETER OR A MANDREL WITH REMOVABLE LEGS OR RUNNERS ON A CASE-BY-CASE BASIS.
(2) FOR A GRAVITY COLLECTION SYSTEM PIPE WITH AN INSIDE DIAMETER 27 INCHES AND GREATER, OTHER TEST METHODS MAY BE USED TO DETERMINE VERTICAL DEFLECTION.
(3) AN ADJUSTABLE OR DEFLECTOMETER 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 TESTING, VACUUM TESTING, OR OTHER METHOD APPROVED BY THE EXECUTIVE DIRECTOR.
(1) HYDROSTATIC TESTING.
(A) THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING OR ANY ALTERNATIVE TEST METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH PER HOUR.
(B) TO PERFORM A HYDROSTATIC EXFILTRATION TEST, AN OWNER SHALL SEAL ALL WASTEWATER PIPES COMING INTO A MANHOLE WITH AN INTERNAL PIPE PLUG, FILL THE MANHOLE WITH WATER, AND MAINTAIN THE TEST FOR AT LEAST ONE HOUR.
(C) A TEST FOR CONCRETE MANHOLES MAY USE A 24-HOUR WETTING PERIOD BEFORE TESTING TO ALLOW SATURATION OF THE CONCRETE.
(2) VACUUM TESTING.
(A) TO PERFORM A VACUUM TEST, AN OWNER SHALL PLUG ALL LIFT HOLES AND EXTERIOR JOINTS WITH A NON-SHRINK GROUT AND PLUG ALL PIPES ENTERING A MANHOLE.
(B) NO GROUT MUST BE PLACED IN HORIZONTAL JOINTS BEFORE TESTING.
(C) STUB-OUTS, MANHOLE BOOTS, AND PIPE PLUGS MUST BE SECURED TO PREVENT MOVEMENT WHILE A VACUUM IS DRAWN.
(D) AN OWNER SHALL USE A MINIMUM 60 INCH/LB TORQUE WRENCH TO TIGHTEN THE EXTERNAL CLAMPS THAT SECURE A TEST COVER TO THE TOP OF A MANHOLE.
(E) A TEST HEAD MUST BE PLACED AT THE INSIDE OF THE TOP OF A CONE SECTION, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
(F) THERE MUST BE A VACUUM OF 10 INCHES OF MERCURY INSIDE A MANHOLE TO PERFORM A VALID TEST.
(G) A TEST DOES NOT BEGIN UNTIL AFTER THE VACUUM PUMP IS OFF.
(H) A MANHOLE PASSES THE TEST IF AFTER 2.0 MINUTES AND WITH ALL VALVES CLOSED, THE VACUUM IS AT LEAST 9.0 INCHES OF MERCURY.
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 COLLECTION SYSTEM.

GENERAL NOTES

1. ALL WORK, UNLESS OTHERWISE NOTED, SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION SPECIFICATIONS OR THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ISSUED BY THE CITY OF GEORGETOWN STANDARD CONSTRUCTION SPECIFICATIONS.
2. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL BE FAMILIAR WITH THE PLANS, ALL NOTES, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, THE CITY STANDARDS FOR CONSTRUCTION, AND ANY OTHER APPLICABLE STANDARDS AND SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO BE FAMILIAR WITH ALL STANDARDS AND SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY OF PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.
3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. CONTRACTOR SHALL VERIFY ELEVATIONS SHOWN AND ENSURE THAT NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSINGS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEANOUTS, VALVE BOXES, AND FIRE HYDRANTS, ETC. CONTRACTOR TO ADJUST TO PROPER LINE AND GRADE PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING THE CONSTRUCTION OF THE PAVING FOR THIS DEVELOPMENT.
5.
5.1. PROTECT AND MAINTAIN ROADWAY TRAFFIC THROUGHOUT THE PROJECT, PROVIDING A MINIMUM OF ONE (1) LANE OPEN IN EACH DIRECTION;
5.2. PROVIDE AND MAINTAIN INTERIM ACCESS FROM ROADWAYS CURRENTLY IN USE TO ALL DRIVEWAYS AND INTERSECTING STREETS OR ALLEYS;
5.3. MAINTAIN NORMAL PROJECT DRAINAGE UNTIL NEW DRAINAGE FACILITIES ARE FUNCTIONAL, INCLUDING, WHERE NECESSARY, INTERIM REPLACEMENT OF EXISTING DRAINAGE STRUCTURES REMOVED FOR CONSTRUCTION OF NEW DRAINAGE FACILITIES;
5.4. MAINTAIN ALL WORK AND MATERIAL STORAGE AREAS IN ORDERLY CONDITION, FREE OF DEBRIS AND WASTE. ON COMPLETION OF CONSTRUCTION, CLEAN UP THE PROJECT AND ADJACENT AFFECTED AREAS TO ACCEPTABLE CONDITION, ALL AS PROVIDED IN THE GENERAL CONDITIONS.
6. PRIOR TO COMMENCEMENT OF CONSTRUCTION, BONDS AND THREE-WAY CONTRACTS SHALL BE SUBMITTED TO THE CITY AS REQUIRED.
7. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.
8. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
9. REFER TO ARCHITECTURAL PLANS FOR DETAILED BUILDING ENTRANCE LAYOUTS, RAMPS, LANDSCAPE, AND SIDEWALKS.
10. ALL GRADING AND PROJECT SIGNS SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND LATEST UPDATES.
11. EXACT SAWCUT PAVEMENT REMOVAL AND REPLACEMENT LIMITS WITHIN THE PUBLIC RIGHT-OF-WAY IS TO BE IN ACCORDANCE WITH THE CITY PAVEMENT REPAIR MANUAL AND INCL

Approved by COG on 7/29/2024



STREET TABLE

	AREA		CLASSIFICATION	R.O.W. DIMENSION	PAVEMENT DIMENSION	CURB TYPE	PEDESTRIAN CLEAR ZONE DIMENSION	DESIGN SPEED
AVIATION DRIVE	4.813 ACRES	209,665 SF	MINOR ARTERIAL	110-FOOT WIDE	66-FOOT WIDE	VERTICAL	6-FEET	40 MPH
TITAN DRIVE	1.799 ACRES	78,358 SF	NEIGHBORHOOD COLLECTOR	60-FOOT WIDE	30-FOOT WIDE	VERTICAL	10-FEET	30 MPH
SANALOMA DRIVE	2.051 ACRES	89,325 SF	MAJOR COLLECTOR	94-FOOT WIDE	62-FOOT WIDE	VERTICAL	6-FEET	35 MPH
SIENA PEAK DRIVE	3.123 ACRES	136,028 SF	NEIGHBORHOOD COLLECTOR	60-FOOT WIDE	30-FOOT WIDE	VERTICAL	10-FEET	30 MPH

OWNER:
TITAN NP35, PHASE II, LLC
C/O JOE IANNACONE
4903 WOODROW
AUSTIN, TX 78756

SURVEYOR:
WESTWOOD PROFESSIONAL SERVICES, INC.
8701 N. MOPAC EXPY, SUITE 320
AUSTIN, TEXAS 78759
PH: 512-485-0831
CONTACT: MICHAEL JACK NEEDHAM

ENGINEER/APPLICANT:
WESTWOOD PROFESSIONAL SERVICES, INC.
8701 N. MOPAC EXPY, SUITE 320
AUSTIN, TEXAS 78759
PH: 512-485-0831
CONTACT: HOLLIS ANN SCHEFFLER

SHEET INDEX
SHEET 1 OF 3: STREET TABLE, REVISED PLAT AREA MAP, BENCHMARK LIST, VICINITY MAP
SHEET 2 OF 3: GENERAL NOTES, ENGINEER'S CERTIFICATE, TREE TABLE AND AREA TABLE
SHEET 3 OF 3: DESCRIPTION OF PROPERTY SURVEYED, SURVEYOR'S CERTIFICATE, CURVE TABLE, LINE TABLE AND AREA FOR CITY APPROVAL STAMP

ACREAGE OF TOTAL SITE: 119.754 ACRES
TOTAL NO. OF BLOCKS: 3
TOTAL NO. OF LOTS: 14

REVISED PRELIMINARY PLAT
TITAN NORTHPARK 35 TOWN CENTER
LOCATED IN THE CITY OF GEORGETOWN, TEXAS AND BEING OUT OF THE DAVID WRIGHT SURVEY, ABSTRACT NO. 13, WILLIAMSON COUNTY, TEXAS
SHEET 1 OF 3

DRAWN BY	CHECKED BY	SCALE	DATE	JOB NUMBER	CITY PROJECT NUMBER
LHR	MJN	1"=200'	JULY 2024	4670-22.680	2023-35-PP

REVISED PRELIMINARY PLAT - TITAN NORTHPARK 35 - TOWN CENTER

Westwood
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

PRELIMINARY PLAT 1 OF 3

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO. 3

2024-06-CON

ZNMOORE
7/7/2024 6:03 PM
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Approved by COG on 7/29/2024

GENERAL NOTES

1. Bearing system for this survey is based on the State Plane Coordinate System, North American Datum of 1983 (2011), Texas Central Zone 4203. Distances reported have been scaled by applying the surface adjustment factor of 1.0001313201.
2. The water, wastewater, and electric utility provider for this development is the City of Georgetown.
3. There are no areas within the boundaries of this subdivision in the 100-year floodplain as defined by FIRM Map Number 48491C0291F, effective date of December 20, 2019 and by FIRM Map Number 48491C0283F, effective date of December 20, 2019.
4. In order to promote drainage away from a structure, the slab elevation should be built at least one-foot above the surrounding ground, and the ground should be graded away from the structure at a slope of 1/2'' per foot for a distance of at least 10 feet.
5. The monuments of this plat have been rotated to the NAD 83/93 HARN - Texas Central Zone and NAVD 88.
6. All sedimentation, filtration, detention, and/or retention basins and related appurtenances shown shall be situated within a drainage easement or drainage lot. The owners, HOA, or assignees of the tracts upon which are located such easements, appurtenances, and detention facilities shall maintain same and be responsible for their maintenance, routine inspection, and upkeep.
7. The landowner assumes all risks associated with improvements located in the right-of-way, or road widening easements. By placing anything in the right-of-way or road widening easements, the landowner indemnifies and holds the City of Georgetown, Williamson County, their officers, agents and employees harmless from any liability owing to property defects or negligence not attributable to them and acknowledges that the improvements may be removed by the City and/or County and that the owner of the improvements will be responsible for the relocation and/or replacement of the improvements.
8. The building of all streets, roads, and other public thoroughfares and any bridges or culverts necessary to be constructed or placed is the responsibility of the owners of the tract of land covered by this plat in accordance with the plans and specifications prescribed by the City of Georgetown and/or Williamson County, Texas. Neither the City of Georgetown nor Williamson County assumes any obligation to build any of the streets, roads, or other public thoroughfares shown on this plat or of constructing any of the bridges or drainage improvements in connection therewith. Neither the City of Georgetown nor Williamson County assumes any responsibility for drainage ways or easements in the subdivision, other than those draining or protecting the road system and streets in their respective jurisdictions.
9. Right-of-way easements for widening roadways or improving drainage shall be maintained by the landowner until road or drainage improvements are actually constructed on the property. The City and/or County have the right at any time to take possession of any road widening easement for construction, improvement, or maintenance of the adjacent road.
10. A 10-foot or 15-foot Public Utility Easement is hereby dedicated along all street frontages within this plat as noted.
11. Neither the City of Georgetown nor Williamson County assumes any responsibility for the accuracy of representations by other parties in this plat. Floodplain data, in particular, may change depending on subsequent development. It is further understood that the owners of the tract of land covered by this plat must install at their own expense all traffic control devices and signage that may be required before the streets in the subdivision have finally been accepted for maintenance by the City and / or County.
12. This plat is subject to the provisions of the City of Georgetown Water Conservation Ordinance.
13. The subdivision subject to this application is subject to the Water Quality Regulations of the City of Georgetown.
14. A geologic assessment, in accordance with the City of Georgetown water quality regulations, was completed on December 02, 2020. any springs and streams as identified in the geologic assessment are shown herein.
15. The maximum impervious coverage per non-residential lot shall be pursuant to the UDC at the time of Site Plan application based on the zoning designation of the property.
16. There is hereby granted for the use and benefit of the public a continuing avigation easement for the free and unobstructed flight of aircraft (which term shall include any contrivance now or hereafter used for flight through the air) and the right of flight for the passage of aircraft in the air space above the surface of the Property, together with such noise and other effects as may be inherent in the operation of aircraft landing at, taking off from, or engaged in other flight activities at the Georgetown Municipal Airport.
17. Grantors do hereby grant and convey an easement for the Horizontal Zone, as that term is defined in Section 12.36 of the City of Georgetown Code of Ordinances and as shown on this plat, being further described as affecting Lot 1 and 2 of Block B (Phase 1), Lots 1-3 of Block A (Phase 2), Lot 1 of Block D (Phase 5), Lot 1 and 2 of Block A (Phase 4), Lots 2-7 of Block B (Phase 4) of this plat.
18. These easements shall be perpetual and shall be binding on Grantor and its assigns, heirs, and successors.
19. Any Heritage Tree as noted on this plat is subject, in perpetuity, to the maintenance, care, pruning and removal requirements of the City of Georgetown. Approved removal does not require modification of the plat.
20. All individual lots containing Heritage Trees are configured and designed so that the lot is developable for the intended purpose without requiring removal of the Heritage Trees or exceeding the percentage of allowable disturbance within the Heritage Trees CRZ.
21. Unless otherwise noted herein, all easements dedicated to the City of Georgetown by this plat shall be EXCLUSIVE to the City of Georgetown, and Grantor covenants that Grantor and Grantor's heirs, successors, and assigns shall not convey any other easement, license, or conflicting right to use in any manner, the area (or any portion thereof) covered by this grant.
22. All easements dedicated to the City of Georgetown by this plat additionally include the following rights: (1) the right of the City to change the size of any facilities installed, maintained, or operated within the easement area; (2) the right of the City to relocate any facilities within the easement area; and (3) the right of the City to remove from the easement area all trees and parts thereof, or other obstructions, which endanger or may interfere with the efficiency and maintenance of any facilities within the easement area.
23. State-owned riverbeds and beds of navigable streams in the public domain are held trust for the public. There is hereby granted for the use and benefit of the public a continuing access easement for the free and unobstructed use of the navigable river and the right of portage along its banks, across any portion of the Property between the mean high-water marks of the river in its natural state.

TREE TABLE

TAG NO.	NORTHING	EASTING	DESCRIPTION
1008	10,226,250.29	3,137,256.69	LIVE OAK 26"
1011	10,226,243.71	3,137,192.02	MULTI-TRUNK LIVE OAK 40.5"
1101	10,225,542.24	3,137,566.61	MULTI-TRUNK LIVE OAK 55.5"
1201	10,226,064.75	3,137,216.46	LIVE OAK 57.5"
1202	10,226,008.07	3,137,235.94	LIVE OAK 39"
1204	10,226,031.54	3,137,291.14	LIVE OAK 29"
1205	10,226,107.59	3,137,281.25	LIVE OAK 29"
1206	10,226,115.79	3,137,284.54	LIVE OAK 42.5"
1208	10,226,188.85	3,137,337.10	LIVE OAK 40"

TREE TABLE

TAG NO.	NORTHING	EASTING	DESCRIPTION
1209	10,226,236.10	3,137,270.40	LIVE OAK 51"
1226	10,225,835.99	3,137,594.53	LIVE OAK 32"
1227	10,225,830.37	3,137,598.33	MULTI-TRUNK LIVE OAK 37.5"
1311	10,226,253.62	3,137,802.65	MULTI-TRUNK LIVE OAK 39"
1312	10,226,249.97	3,137,804.09	MULTI-TRUNK LIVE OAK 31"
1330	10,226,310.38	3,137,579.50	MULTI-TRUNK LIVE OAK 26"
1333	10,226,305.80	3,137,563.41	MULTI-TRUNK LIVE OAK 34.5"
1335	10,226,338.32	3,138,012.40	CEDAR ELM 26"

ENGINEER'S CERTIFICATE

STATE OF TEXAS

COUNTY OF TRAVIS

I, Hollis A. Scheffler, Registered Professional Engineer in the State of Texas, do hereby certify that this subdivision is in the Edwards Aquifer Recharge Zone and is not encroached by Zone A flood area, as denoted herein and as defined by Federal Emergency Management Administration Flood Hazard Boundary Map, Community Panel Number 48491C0291F, effective date December 20, 2019 and Community Panel Number 48491C0283F, effective date December 20, 2019 and that each lot conforms to the City of Georgetown regulations.

The fully developed, concentrated stormwater runoff resulting from the one hundred (100) year frequency storm is contained within the drainage easement shown and/or public rights-of-way dedicated by this plat.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT AUSTIN, TEXAS THIS 29TH DAY OF July, 2024.

Hollis A. Scheffler
Registered Professional Engineer
No. 136049 State of Texas

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

7/29/2024

AREA TABLE

LOT 1, BLOCK B, PHASE 1	19.331 ACRES	842,049 SF
LOT 2, BLOCK B, PHASE 1	0.155 ACRES	6,750 SF
LOT 1, BLOCK A, PHASE 2	5.317 ACRES	231,607 SF
LOT 2, BLOCK A, PHASE 2	17.516 ACRES	762,986 SF
LOT 3, BLOCK A, PHASE 3	32.679 ACRES	1,423,509 SF
LOT 1, BLOCK A, PHASE 4	15.675 ACRES	682,824 SF
LOT 2, BLOCK B, PHASE 4	2.545 ACRES	110,877 SF
LOT 3, BLOCK B, PHASE 4	1.169 ACRES	50,910 SF
LOT 4, BLOCK B, PHASE 4	1.925 ACRES	83,852 SF
LOT 5, BLOCK B, PHASE 4	2.359 ACRES	102,744 SF
LOT 6, BLOCK B, PHASE 4	1.111 ACRES	48,404 SF
LOT 7, BLOCK B, PHASE 5	2.511 ACRES	109,399 SF
LOT 1, BLOCK D, PHASE 6	6.718 ACRES	292,646 SF
LOT 2, BLOCK A, PHASE 7	3.775 ACRES	164,441 SF
TITAN DRIVE R.O.W. (PROPOSED)	1.799 ACRES	78,358 SF
SIENA PEAK DRIVE (PROPOSED)	0.796 ACRES	34,683 SF
SANALOMA DRIVE (PROPOSED)	2.051 ACRES	89,324 SF
SIENA PEAK DRIVE (PROPOSED)	2.332 ACRES	101,578 SF
TOTAL AREA	119.754 ACRES	5,216,466 SF

IMPERVIOUS COVER TABLE

LOT	BLOCK	PHASE	ACREAGE AREA	IMPERVIOUS COVER AREA	IMPERVIOUS COVER PERCENTAGE
1	B	1	19.331	14.01	72.47%
2	B	1	0.155	0.07	45.16%
1	A	2	5.317	3.66	68.84%
2	A	2	17.516	8.65	49.38%
3	A	3	32.679	19.41	59.40%
1	A	4	15.675	7.75	49.44%
2	B	4	2.545	1.20	47.15%
3	B	4	1.169	0.47	40.21%
4	B	4	1.925	0.80	41.56%
5	B	4	2.359	1.33	56.38%
6	B	4	1.111	0.55	49.50%
7	B	5	2.511	1.10	43.81%
1	D	6	6.718	2.50	37.21%
2	A	7	3.775	1.05	27.81%
TITAN DRIVE			1.799	1.36	75.60%
SIENA PEAK DRIVE			3.128	1.58	50.51%
TOTALS			117.713	65.49	55.64%
ALLOWABLE IMPERVIOUS COVER				65.49	55.64%

TOTAL NO. OF LOTS	14 LOTS
TOTAL NO. OF BLOCKS	3 BLOCKS

REVISED PRELIMINARY PLAT

TITAN NORTHPARK 35 TOWN CENTER

LOCATED IN THE CITY OF GEORGETOWN, TEXAS
AND BEING OUT OF THE
DAVID WRIGHT SURVEY, ABSTRACT NO. 13,
WILLIAMSON COUNTY, TEXAS
SHEET 2 OF 3

Westwood
WESTWOOD PROFESSIONAL SERVICES, INC.
WESTWOODPS.COM
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

DRAWN BY	CHECKED BY	SCALE	DATE	JOB NUMBER	CITY PROJECT NUMBER
LHR	MJN	NONE	JULY 2024	4670-22.680	2023-35-PP

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TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

PRELIMINARY PLAT 2 OF 3

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
4

2024-06-CON

HASCHEFLER
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Approved by COG on 7/29/2024

DESCRIPTION OF PROPERTY SURVEYED

DESCRIPTION, of a 119.754 acre tract of land situated in the David Wright Survey, Abstract No. 13, Williamson County, Texas; said tract being part of that certain tract of land described as "Tract 1" and all of that certain tract of land described as "Tract 2" in Special Warranty Deed to Titan NP35 Phase II, LLC recorded in Document Number 2021051696 in said Official Public Records; said 119.754 acre tract being more particularly described as follows:

COMMENCING, at a 1/2-inch iron rod with "RPLS 4882" cap found in the southeast right-of-way of Airport Road (a variable width right-of-way); said point being the northwest corner of said Motion Investment Properties tract and in a northwest line of that certain tract of land described in Special Warranty Deed to Motion Investment Properties tract recorded in Document No. 2020058177 of said Official Public Records;

THENCE, **North 85 degrees 51 minutes 17 seconds East**, along the north line of said Motion Investment Properties tract, a distance of **809.69 feet** to the **POINT OF BEGINNING**; said point also being a 1/2-inch iron rod with "STEGER BIZZELL" cap found for the northeast corner of said Motion Investment Properties tract and the northwest corner of said Tract 2;

THENCE, **North 85 degrees 51 minutes 49 seconds East**, continuing along the north line of said Tract 2, a distance of **938.44 feet** to a 1/2-inch iron rod with "QUICK INC RPLS 6447" cap found for the northeast corner of said Tract 2;

THENCE, **South 22 degrees 45 minutes 17 seconds East**, along the northeast line of said Motion Investment Properties tract, a distance of **447.69 feet** to a wood post found, said point being the northeast corner of said "Tract 1" and the southeast corner of said "Tract 2";

THENCE, **North 68 degrees 32 minutes 38 seconds East**, continuing along the said south line of the Three Forks Partnership tract, a distance of **2,097.42 feet** to a 5/8-inch iron rod with "PACHECO KOCH" cap set for corner; said point being a southwest corner of that certain tract of land described in Deed without Warranty to Williamson County recorded in Document No. 2011066293 of said Official Public records;

THENCE, along the south line of said Williamson County tract, the following **three (3) calls**:

South 29 degrees 08 minutes 41 seconds East, a distance of **90.07 feet** to a wood fence post found for corner;

North 89 degrees 14 minutes 51 seconds East, a distance of **319.77 feet** to a wood fence post found for corner;

South 63 degrees 35 minutes 44 seconds East, a distance of **322.32 feet** to a TXDOT Type I concrete monument found for corner in the west right-of-way line of Interstate Highway No. 35 (a variable width right-of-way);

THENCE, **South 23 degrees 46 minutes 15 seconds West**, along the said west line of Interstate Highway No. 35, a distance of **633.64 feet** to a TXDOT Type I concrete monument found for corner;

THENCE, **South 17 degrees 29 minutes 36 seconds West**, continuing along the said west line of Interstate Highway 35, a distance of **1,058.87 feet** to 5/8-inch iron rod with "PACHECO KOCH" cap set for corner; said point being the beginning of a curve to the left;

THENCE, Along the north line of Aviation Drive a variable width right-of-way being recorded Document Number 2021139812 of the said Official Public Records, the following **five (5) calls**:

along said curve, having a central angle of **43 degrees 58 minutes 20 seconds**, a **radius** of **695.50 feet**, a **chord bearing** and distance of **South 76 degrees, 14 minutes, 41 seconds West 520.76 feet**, an **arc distance** of **533.77 feet** to a 5/8-inch iron rod with "PACHECO KOCH" cap set at the end of said curve;

South 54 degrees 15 minutes 32 seconds West, a distance of **416.25 feet** to a 5/8-inch iron rod with "PACHECO KOCH" cap set; said point being the beginning of a curve to the right;

along said curve, having a central angle of **14 degrees 51 minutes 30 seconds**, a **radius** of **757.01 feet**, a **chord bearing** and distance of **South 61 degrees 40 minutes 10 seconds West 195.76 feet**, an **arc distance** of **196.31 feet** to a 5/8-inch iron rod with "PACHECO KOCH" cap set at the end of said curve;

South 68 degrees 52 minutes 52 seconds West, a **distance** of **959.66 feet** to a 5/8-inch iron rod with "PACHECO KOCH" cap set;

South 69 degrees 21 minutes 57 seconds West, a **distance** of **115.01 feet** to a 1/2-inch iron rod found for corner;

THENCE, departing the said north line of Aviation Drive and along the west line of said Tract 1 the following **five (5) calls**:

North 20 degrees 38 minutes 03 seconds West, a distance of **55.00 feet** to a point for corner;

North 21 degrees 21 minutes 24 seconds West, a distance of **734.30 feet** to a 5/8-inch iron rod with "PACHECO KOCH" cap found for corner;

North 68 degrees 38 minutes 36 seconds West, a distance of **115.00 feet** to a point for corner;

North 21 degrees 21 minutes 24 seconds West, a distance of **959.49 feet** to a point for corner;

South 61 degrees 46 minutes 50 seconds West, at a distance of **244.41 feet** to a point for corner;

South 62 degrees 20 minutes 14 seconds West, a distance of **9.07 feet** to a point for corner; from said point a 1/2-inch iron rod with "STEGER BIZZELL" cap found bears, North 27 degrees 54 minutes West, a distance of 0.5 feet;

THENCE, **North 27 degrees 55 minutes 23 seconds West**, a distance of **828.23 feet** to a point for corner; the POINT OF BEGINNING;

CONTAINING: **5,216,466 square feet** or **119.754 acres** of land, more or less.

LINE TABLE		
LINE	BEARING	LENGTH
L1	N 68°38'36" E	869.64'
L2	S 74°32'14" E	379.97'
L3	S 26°40'40" E	33.55'
L4	S 21°10'55" W	222.59'
L10	N 21°10'55" E	238.47'
L11	S 68°49'05" E	90.00'
L12	S 89°53'48" E	105.04'
L13	S 35°43'17" E	193.34'

LINE TABLE		
LINE	BEARING	LENGTH
L14	S 54°15'32" W	364.29'
L15	S 21°10'55" W	75.00'
L16	N 68°49'07" W	90.00'
L17	N 65°53'33" E	237.21'
L18	S 17°12'03" E	168.79'
L19	S 54°15'32" W	51.96'
L20	N 35°43'17" W	193.34'
L21	S 72°30'24" E	302.64'

LINE TABLE		
LINE	BEARING	LENGTH
L22	S 17°29'36" W	198.00'
L23	N 17°12'03" W	168.79'
L24	N 17°29'36" E	300.77'
L25	S 72°30'12" E	300.00'
L26	S 17°29'36" W	342.35'
L27	N 72°30'24" W	302.64'
L28	N 17°29'36" E	162.14'
L29	S 72°12'07" E	300.01'

LINE TABLE		
LINE	BEARING	LENGTH
L30	S 17°29'36" W	160.56'
L31	N 72°30'12" W	300.00'
L32	N 17°29'36" E	235.88'
L33	N 38°41'17" E	69.52'
L34	S 62°45'30" E	107.42'
L35	S 21°55'49" E	39.37'
L36	S 17°29'36" W	322.98'
L37	N 72°12'07" W	300.01'

LINE TABLE		
LINE	BEARING	LENGTH
L38	N 74°32'14" W	110.55'
L39	N 74°32'13" W	109.78'
L40	S 65°53'33" W	237.21'
L41	S 17°29'36" W	698.78'
L42	S 38°41'17" W	17.17'
L43	N 21°10'55" E	71.82'
L44	N 21°10'55" E	204.64'
L45	N 28°57'33" E	140.70'

LINE TABLE		
LINE	BEARING	LENGTH
L46	N 68°32'38" E	153.02'
L47	S 38°41'17" W	52.32'
L48	N 62°45'30" W	101.07'
L49	S 68°43'06" W	35.39'

SURVEYOR'S CERTIFICATE

STATE OF TEXAS

COUNTY OF TRAVIS

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

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT AUSTIN, TEXAS THIS 29TH DAY OF JULY , 2024.

Michael Jack Needham
Registered Professional Land Surveyor
No. 5183 State of Texas

STATE OF TEXAS · REGISTERED · MICHAEL JACK NEEDHAM · 5183 · LICENSED PROFESSIONAL LAND SURVEYOR

CURVE TABLE						
CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD BEARING	CHORD
C1	14°51'30"	757.01'	196.31'	98.71'	N 61°40'10" E	195.76'
C2	43°58'20"	695.50'	533.77'	280.80'	N 76°14'41" E	520.76'
C10	36°49'10"	185.00'	118.88'	61.58'	N 87°03'11" E	116.85'
C11	35°25'29"	147.72'	91.33'	47.18'	S 7°01'33" E	89.88'
C12	36°49'10"	245.00'	157.44'	81.55'	N 87°03'11" E	154.75'
C13	33°16'27"	87.77'	50.97'	26.23'	N 9°05'53" W	50.26'
C14	13°19'50"	280.01'	65.15'	32.72'	N 83°26'17" E	65.00'
C15	5°20'53"	757.01'	70.66'	35.36'	S 56°54'51" W	70.63'
C16	7°38'57"	330.00'	44.06'	22.06'	N 62°04'04" E	44.02'
C17	18°32'25"	695.50'	225.06'	113.52'	S 63°31'44" W	224.07'
C18	10°52'48"	280.01'	53.17'	26.67'	N 71°19'58" E	53.09'
C19	33°30'29"	330.00'	192.99'	99.34'	N 41°29'22" E	190.25'
C20	25°25'55"	695.50'	308.71'	156.94'	S 85°30'54" W	306.18'
C21	7°14'31"	330.00'	41.71'	20.88'	N 21°06'52" E	41.68'
C22	21°11'41"	220.00'	81.38'	41.16'	N 28°05'26" E	80.92'
C23	86°51'22"	25.00'	37.90'	23.66'	N 85°15'36" E	34.37'
C24	7°23'00"	776.84'	100.11'	50.12'	S 59°04'02" E	100.04'
C25	39°34'13"	220.00'	151.94'	79.14'	S 85°40'39" W	148.94'
C26	48°23'57"	270.00'	228.08'	121.34'	S 41°41'34" W	221.35'
C27	21°11'41"	280.00'	103.58'	52.39'	S 28°05'26" W	102.99'
C28	47°04'44"	777.00'	638.45'	338.49'	S 23°43'28" E	620.64'
C29	86°52'26"	25.00'	37.91'	23.67'	S 7°52'31" E	34.38'
C30	65°26'40"	685.28'	782.74'	440.32'	N 29°59'17" W	740.88'

AREA RESERVED FOR CITY APPROVAL STAMP

REVISED PRELIMINARY PLAT

TITAN NORTHPARK 35 TOWN CENTER

LOCATED IN THE CITY OF GEORGETOWN, TEXAS AND BEING OUT OF THE DAVID WRIGHT SURVEY, ABSTRACT NO. 13, WILLIAMSON COUNTY, TEXAS
SHEET 3 OF 3

Westwood
WESTWOOD PROFESSIONAL SERVICES, INC.
WESTWOODPS.COM
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Toll Free (888) 937-5150 Austin, TX 78759
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

DRAWN BY	CHECKED BY	SCALE	DATE	JOB NUMBER	CITY PROJECT NUMBER
LHR	MJN	NONE	JULY 2024	4670-22.680	2023-35-PP

REVISED PRELIMINARY PLAT - TITAN NORTHPARK 35 II, 119.754 ACRES, LOT 1, BLOCK B

Westwood
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Toll Free (888) 937-5150 Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

PRELIMINARY PLAT 3 OF 3

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

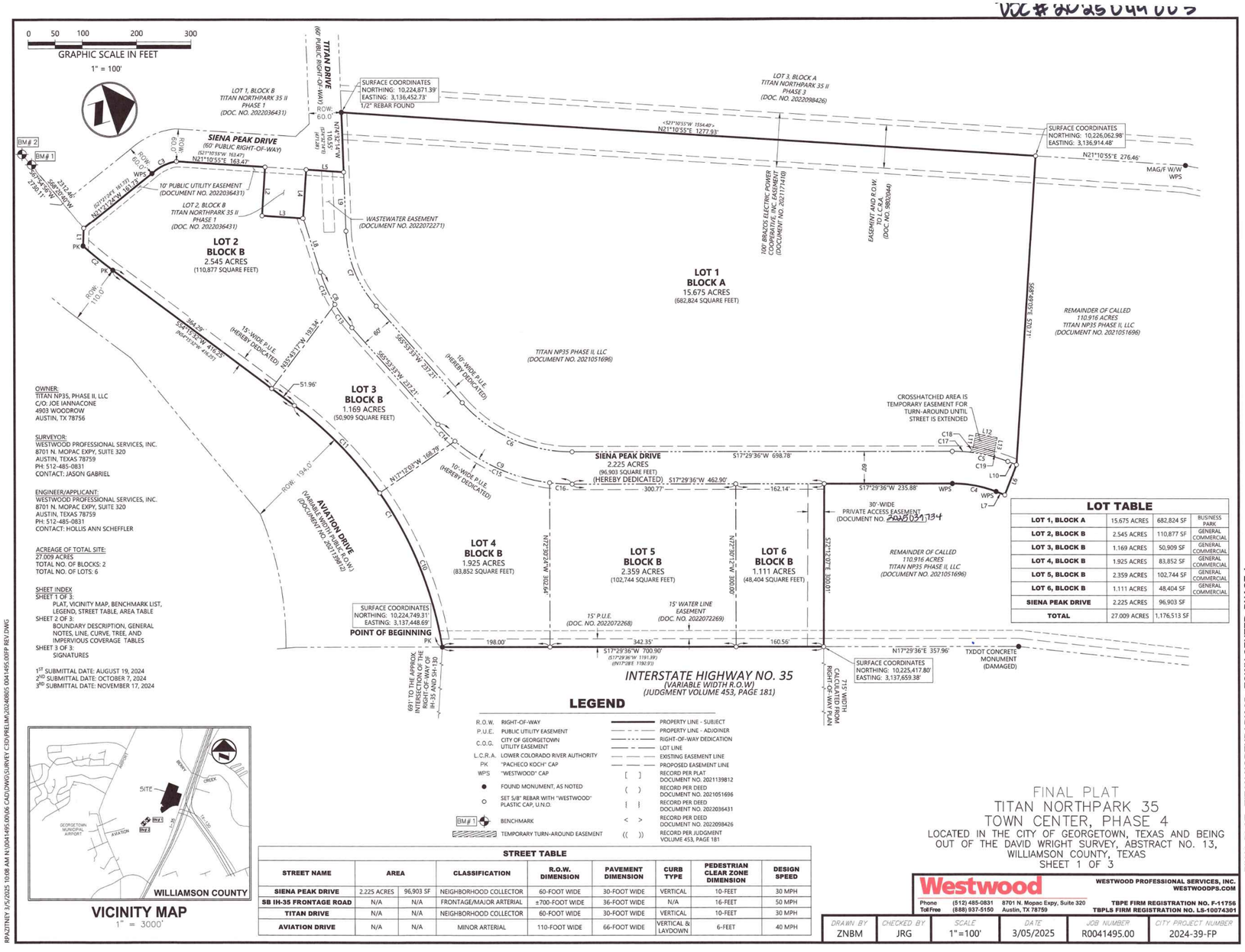
SHEET NO. 5

2024-06-CON

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FINAL PLAT : TITAN NORTHPARK 35 - TOWN CENTER, PHASE 4

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Westwood
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

FINAL PLAT 1 OF 3

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
6

2024-06-CON

DOC#20250 44003

DESCRIPTION OF PROPERTY SURVEYED

27.009 ACRES OF LAND SITUATED IN THE DAVID WRIGHT SURVEY, ABSTRACT NO. 13, WILLIAMSON COUNTY, TEXAS, SAID TRACT BEING OUT OF AND PART OF THE REMAINDER OF A CALLED 110.916 ACRE TRACT OF LAND ("TRACT I") DESCRIBED IN A DEED TO TITAN NP35 PHASE II, LLC, RECORDED IN DOCUMENT NO. 2021051696 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS ("O.P.R.W.C.T." HEREAFTER), SAID 27.009 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT THE NORTHERNMOST NORTHEAST CORNER OF AVIATION DRIVE, A VARIABLE-WIDTH PUBLIC RIGHT-OF-WAY, AS DEDICATED IN THE FINAL PLAT OF AVIATION DRIVE, A SUBDIVISION OF RECORD LOCATED IN THE CITY OF GEORGETOWN, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF, APPEARING IN DOCUMENT NO. 2021139812, O.P.R.W.C.T., SAID TERMINUS BEING MARKED BY A 1/2-INCH REBAR WITH CAP STAMPED "PACHECO KOCH" FOUND FOR THE BEGINNING OF A CURVE TO THE LEFT, SAID MONUMENT BEING LOCATED IN THE WESTERLY LINE OF INTERSTATE HIGHWAY 35, A VARIABLE-WIDTH PUBLIC RIGHT-OF-WAY;

THENCE WITH SAID NORTHWESTERLY LINE OF AVIATION DRIVE, THE FOLLOWING **THREE (3) COURSES AND DISTANCES:**

- WITH SAID CURVE TO THE LEFT, HAVING AN **ARC LENGTH** OF **533.77'**, A **RADIUS** OF **695.50'**, A **DELTA ANGLE** OF **43°58'20"**, AND A **CHORD BEARING** AND **DISTANCE** OF **S76°14'41"W 520.76'**, TO A SET STAKE MARKING THE END OF SAID CURVE,
- **S54°15'32"W 416.25'** TO THE BEGINNING OF A CURVE TO THE RIGHT, BEING MARKED BY A 1/2-INCH REBAR WITH CAP STAMPED "PACHECO KOCH",
- WITH SAID CURVE TO THE RIGHT, HAVING AN **ARC LENGTH** OF **70.66'**, A **RADIUS** OF **757.01'**, A **DELTA ANGLE** OF **05°20'53"**, AND A **CHORD BEARING** AND **DISTANCE** OF **S56°54'51"W 70.63'**, TO THE EASTERNMOST CORNER OF TITAN NORTHPARK 35 II, PHASE 1, A SUBDIVISION OF RECORD LOCATED IN THE CITY OF GEORGETOWN, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF, APPEARING IN DOCUMENT NO. 2022036431, O.P.R.W.C.T., FOR THE NORTHERLY INTERSECTION OF SAID AVIATION DRIVE AND SIENA PEAK DRIVE, A VARIABLE-WIDTH PUBLIC RIGHT-OF-WAY, AS DEDICATED IN SAID TITAN NORTHPARK 35 II, PHASE 1, BEING MARKED BY A 1/2-INCH REBAR FOUND WITH CAP STAMPED "PACHECO KOCH";

THENCE WITH SAID NORTHEASTERLY LINE OF SAID TITAN NORTHPARK 35 II, PHASE 1 AND SAID SIENA PEAK DRIVE, THE FOLLOWING **FOUR (4) COURSES AND DISTANCES:**

- **N70°24'40"W 32.77'** TO A 5/8-INCH REBAR FOUND WITH CAP STAMPED "PACHECO KOCH",
- **N21°21'24"W 161.73'** TO THE BEGINNING OF A CURVE TO THE RIGHT, BEING MARKED BY A 5/8-INCH REBAR FOUND WITH CAP STAMPED "PACHECO KOCH",
- WITH SAID CURVE TO THE RIGHT, HAVING AN **ARC LENGTH** OF **50.97'**, A **RADIUS** OF **87.72'**, A **DELTA ANGLE** OF **33°17'39"**, AND A **CHORD BEARING** AND **DISTANCE** OF **N09°05'53"W 50.26'**, TO THE END OF SAID CURVE, BEING MARKED BY A SET STAKE,
- **N21°10'55"E 163.47'** TO THE SOUTHWEST CORNER OF LOT 2, BLOCK B OF SAID TITAN NORTHPARK 35 II, PHASE 1, SAID CORNER BEING MARKED BY A SET STAKE;

THENCE, WITH THE EXTERIOR OF SAID LOT 2, BLOCK B, TITAN NORTHPARK 35 II, PHASE 1, THE FOLLOWING **THREE (3) COURSES AND DISTANCES:**

- **S68°49'07"E 90.00'** TO THE SOUTHEAST CORNER OF SAID LOT 2, BLOCK B, BEING MARKED BY A SET STAKE,
- **N21°10'48"E 75.00'** TO THE NORTHEAST CORNER OF SAID LOT 2, BLOCK B, BEING MARKED BY A SET STAKE,
- **N68°49'05"W 90.00'**, RETURNING TO THE EASTERLY LINE OF SIENA PEAK DRIVE, FOR THE NORTHWEST CORNER OF SAID LOT 2, BLOCK B, BEING MARKED BY A SET STAKE,

THENCE N21°10'55"E 69.20', WITH SAID EASTERLY LINES OF TITAN NORTHPARK 35 II, PHASE 1 AND SIENA PEAK DRIVE, TO THE NORTHEAST CORNER OF SAME;

THENCE N74°32'14"W 110.55', AT 60.00' PASSING THE NORTHEAST CORNER OF TITAN DRIVE, A VARIABLE-WIDTH PUBLIC RIGHT-OF-WAY, AS DEDICATED IN SAID TITAN NORTHPARK 35 II, PHASE 1, AND CONTINUING WITH SAID NORTHERLY LINE OF TITAN DRIVE, TO THE SOUTHEAST CORNER OF LOT 3, BLOCK A OF TITAN NORTHPARK 35 II, PHASE 3, A SUBDIVISON OF RECORD LOCATED IN THE CITY OF GEORGETOWN, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF, APPEARING IN DOCUMENT NO. 2022098426, O.P.R.W.C.T., SAID CORNER BEING MARKED BY A FOUND 1/2-INCH REBAR;

THENCE N21°10'55"E 1277.93', WITH THE EASTERLY LINE OF SAID LOT 3, BLOCK A, TO THE NORTHWEST CORNER HEREOF, SAID CORNER BEING MARKED BY A SET STAKE, FROM WHICH A MAG NAIL WITH WASHER STAMPED "WESTWOOD AUSTIN" FOUND FOR A NORTHEASTERLY CORNER OF SAID LOT 3, BLOCK A, BEARS N21°10'55"E 276.46';

THENCE TRAVERSING THROUGH SAID REMAINDER OF 110.916 ACRES, WITH THE NORTHERLY LINES HEREOF, THE FOLLOWING **SIX (6) COURSES AND DISTANCES:**

- **S68°49'05"E 570.71'** TO A SET STAKE,
- **S51°18'43"E 60.00'** TO A SET STAKE,
- **S38°41'17"W 17.17'** TO THE BEGINNING OF A CURVE TO THE LEFT, BEING MARKED BY A 5/8-INCH REBAR WITH CAP STAMPED "WESTWOOD";
- WITH SAID CURVE TO THE LEFT, HAVING AN **ARC LENGTH** OF **81.38'**, A **RADIUS** OF **220.00'**, A **DELTA ANGLE** OF **21°11'41"**, AND A **CHORD BEARING** AND **DISTANCE** OF **S28°05'26"W 80.92'**, TO A 5/8-INCH REBAR WITH CAP STAMPED "WESTWOOD" MARKING THE END OF SAID CURVE,
- **S17°29'36"W 235.88'** TO A SET STAKE,
- **S72°12'07"E 300.01'** TO SAID WESTERLY LINE OF INTERSTATE HIGHWAY 35, BEING IN THE EAST LINE OF SAID 110.916 ACRES, FOR A NORTHEAST CORNER HEREOF, SAID CORNER BEING MARKED BY A SET STAKE, AND FROM WHICH A DAMAGED TXDOT CONCRETE MONUMENT FOUND FOR CORNER IN SAID WESTERLY LINE OF INTERSTATE HIGHWAY 35 BEARS N17°29'36"E 357.96';

THENCE S17°29'36"W 700.90', CONTINUING WITH THE WESTERLY LINE OF SAID INTERSTATE HIGHWAY 35 AND THE EASTERLY LINE OF SAID 110.916 ACRE TRACT TO THE **POINT OF BEGINNING** OF THE HEREIN DESCRIBED TRACT OF LAND, CONTAINING **27.009 ACRES (1,176,513 SQUARE FEET),** MORE OR LESS. BEARINGS ARE RELATIVE TO STATE PLANE COORDINATES, NAD83 (2011), TEXAS CENTRAL ZONE. DISTANCES AND AREAS HAVE BEEN SCALED BY APPLYING A SURFACE ADJUSTMENT FACTOR OF 1.0001313201 AND THUS REPRESENT SURFACE MEASUREMENTS. SET STAKES ARE 5/8-INCH REBAR WITH CAP STAMPED "WESTWOOD".

GENERAL NOTES

1. BEARING SYSTEM FOR THIS SURVEY IS BASED ON THE STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (2011), TEXAS CENTRAL ZONE 4203. DISTANCES AND AREAS REPORTED HAVE BEEN SCALED BY APPLYING THE SURFACE ADJUSTMENT FACTOR OF 1.0001313201.
2. THE WATER, WASTEWATER, AND ELECTRIC UTILITY PROVIDER FOR THIS DEVELOPMENT IS THE CITY OF GEORGETOWN.
3. THERE ARE NO AREAS WITHIN THE BOUNDARIES OF THIS SUBDIVISION IN THE 100-YEAR FLOODPLAIN AS DEFINED BY FIRM MAP NUMBER 48491C0291F, EFFECTIVE DATE OF DECEMBER 20, 2019 AND BY FIRM MAP NUMBER 48491C0283F, EFFECTIVE DATE OF DECEMBER 20, 2019.
4. IN ORDER TO PROMOTE DRAINAGE AWAY FROM A STRUCTURE, THE SLAB ELEVATION SHOULD BE BUILT AT LEAST ONE-FOOT ABOVE THE SURROUNDING GROUND, AND THE GROUND SHOULD BE GRADED AWAY FROM THE STRUCTURE AT A SLOPE OF 1/2" PER FOOT FOR A DISTANCE OF AT LEAST 10 FEET.
5. THE MONUMENTS OF THIS PLAT HAVE BEEN ROTATED TO THE NAD 83/93 HARN - TEXAS CENTRAL ZONE AND NAVD 88.
6. ALL SEDIMENTATION, FILTRATION, DETENTION, AND/OR RETENTION BASINS AND RELATED APPURTENANCES SHOWN SHALL BE SITUATED WITHIN A DRAINAGE EASEMENT OR DRAINAGE LOT. THE OWNERS, HOA, OR ASSIGNEES OF THE TRACTS UPON WHICH ARE LOCATED SUCH EASEMENTS, APPURTENANCES, AND DETENTION FACILITIES SHALL MAINTAIN SAME AND BE RESPONSIBLE FOR THEIR MAINTENANCE, ROUTINE INSPECTION, AND UPKEEP.
7. THE LANDOWNER ASSUMES ALL RISKS ASSOCIATED WITH IMPROVEMENTS LOCATED IN THE RIGHT-OF-WAY, OR ROAD WIDENING EASEMENTS. BY PLACING ANYTHING IN THE RIGHT-OF-WAY OR ROAD WIDENING EASEMENTS, THE LANDOWNER INDEMNIFIES AND HOLDS THE CITY OF GEORGETOWN, WILLIAMSON COUNTY, THEIR OFFICERS, AGENTS AND EMPLOYEES HARMLESS FROM ANY LIABILITY OWING TO PROPERTY DEFECTS OR NEGLIGENCE NOT ATTRIBUTABLE TO THEM AND ACKNOWLEDGES THAT THE IMPROVEMENTS MAY BE REMOVED BY THE CITY AND/OR COUNTY AND THAT THE OWNER OF THE IMPROVEMENTS WILL BE RESPONSIBLE FOR THE RELOCATION AND/OR REPLACEMENT OF THE IMPROVEMENTS.
8. THE BUILDING OF ALL STREETS, ROADS, AND OTHER PUBLIC THOROUGHFARES AND ANY BRIDGES OR CULVERTS NECESSARY TO BE CONSTRUCTED OR PLACED IS THE RESPONSIBILITY OF THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY THE CITY OF GEORGETOWN AND/OR WILLIAMSON COUNTY, TEXAS. NEITHER THE CITY OF GEORGETOWN NOR WILLIAMSON COUNTY ASSUMES ANY OBLIGATION TO BUILD ANY OF THE STREETS, ROADS, OR OTHER PUBLIC THOROUGHFARES SHOWN ON THIS PLAT OR OF CONSTRUCTING ANY OF THE BRIDGES OR DRAINAGE IMPROVEMENTS IN CONNECTION THEREWITH. NEITHER THE CITY OF GEORGETOWN NOR WILLIAMSON COUNTY ASSUMES ANY RESPONSIBILITY FOR DRAINAGE WAYS OR EASEMENTS IN THE SUBDIVISION, OTHER THAN THOSE DRAINING OR PROTECTING THE ROAD SYSTEM AND STREETS IN THEIR RESPECTIVE JURISDICTIONS.
9. RIGHT-OF-WAY EASEMENTS FOR WIDENING ROADWAYS OR IMPROVING DRAINAGE SHALL BE MAINTAINED BY THE LANDOWNER UNTIL ROAD OR DRAINAGE IMPROVEMENTS ARE ACTUALLY CONSTRUCTED ON THE PROPERTY, THE CITY AND/OR COUNTY HAVE THE RIGHT AT ANY TIME TO TAKE POSSESSION OF ANY ROAD WIDENING EASEMENT FOR CONSTRUCTION, IMPROVEMENT, OR MAINTENANCE OF THE ADJACENT ROAD.
10. A 10-FOOT OR 15-FOOT PUBLIC UTILITY EASEMENT IS HEREBY DEDICATED ALONG ALL STREET FRONTAGES WITHIN THIS PLAT AS NOTED.
11. NEITHER THE CITY OF GEORGETOWN NOR WILLIAMSON COUNTY ASSUMES ANY RESPONSIBILITY FOR THE ACCURACY OF REPRESENTATIONS BY OTHER PARTIES IN THIS PLAT. FLOODPLAIN DATA, IN PARTICULAR, MAY CHANGE DEPENDING ON SUBSEQUENT DEVELOPMENT. IT IS FURTHER UNDERSTOOD THAT THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT MUST INSTALL AT THEIR OWN EXPENSE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE THAT MAY BE REQUIRED BEFORE THE STREETS IN THE SUBDIVISION HAVE FINALLY BEEN ACCEPTED FOR MAINTENANCE BY THE CITY AND / OR COUNTY.
12. THIS PLAT IS SUBJECT TO THE PROVISIONS OF THE CITY OF GEORGETOWN WATER CONSERVATION ORDINANCE.
13. THE SUBDIVISION SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN.
14. A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER QUALITY REGULATIONS, WAS COMPLETED ON DECEMBER 2, 2020. ANY SPRINGS AND STREAMS AS IDENTIFIED IN THE GEOLOGIC ASSESSMENT ARE SHOWN HEREIN.
15. THE MAXIMUM IMPERVIOUS COVERAGE PER NON-RESIDENTIAL LOT SHALL BE PURSUANT TO THE APPROVED PRELIMINARY PLAT (2023-35-PP) AND TABLE SHOWN HEREON.
16. THERE IS HEREBY GRANTED FOR THE USE AND BENEFIT OF THE PUBLIC A CONTINUING AVIGATION EASEMENT FOR THE FREE AND UNOBSTRUCTED FLIGHT OF AIRCRAFT (WHICH TERM SHALL INCLUDE ANY CONTRIVANCE NOW OR HEREAFTER USED FOR FLIGHT THROUGH THE AIR) AND THE RIGHT OF FLIGHT FOR THE PASSAGE OF AIRCRAFT IN THE AIR SPACE ABOVE THE SURFACE OF THE PROPERTY, TOGETHER WITH SUCH NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN THE OPERATION OF AIRCRAFT LANDING AT, TAKING OFF FROM, OR ENGAGED IN OTHER FLIGHT ACTIVITIES AT THE GEORGETOWN MUNICIPAL AIRPORT.
17. GRANTORS DO HEREBY GRANT AND CONVEY AN EASEMENT FOR THE HORIZONTAL ZONE, AS THAT TERM IS DEFINED IN SECTION 12.36 OF THE CITY OF GEORGETOWN CODE OF ORDINANCES AND AS SHOWN ON THIS PLAT, BEING FURTHER DESCRIBED AS AFFECTING LOT 1 OF BLOCK A (PHASE 4) AND LOTS 2-6 OF BLOCK B (PHASE 4) OF THIS PLAT.
18. THESE EASEMENTS SHALL BE PERPETUAL AND SHALL BE BINDING ON GRANTOR AND ITS ASSIGNS, HEIRS, AND SUCCESSORS.
19. UNLESS OTHERWISE NOTED HEREIN, ALL EASEMENTS DEDICATED TO THE CITY OF GEORGETOWN BY THIS PLAT SHALL BE EXCLUSIVE TO THE CITY OF GEORGETOWN, AND GRANTOR COVENANTS THAT GRANTOR AND GRANTOR'S HEIRS, SUCCESSORS, AND ASSIGNS SHALL NOT CONVEY ANY OTHER EASEMENT, LICENSE, OR CONFLICTING RIGHT TO USE IN ANY MANNER, THE AREA (OR ANY PORTION THEROF) COVERED BY THIS GRANT.
20. ALL EASEMENTS DEDICATED TO THE CITY OF GEORGETOWN BY THIS PLAT ADDITIONALLY INCLUDE THE FOLLOWING RIGHTS:
    (1) THE RIGHT OF THE CITY TO CHANGE THE SIZE OF ANY FACILITIES INSTALLED, MAINTAINED, OR OPERATED WITHIN THE EASEMENT AREA;
    (2) THE RIGHT OF THE CITY TO RELOCATE ANY FACILITIES WITHIN THE EASEMENT AREA; AND
    (3) THE RIGHT OF THE CITY TO REMOVE FROM THE EASEMENT AREA ALL TREES AND PARTS THEREOF, OR OTHER OBSTRUCTIONS, WHICH ENDANGER OR MAY INTERFERE WITH THE EFFICIENCY AND MAINTENANCE OF ANY FACILITIES WITHIN THE EASEMENT AREA.
21. SIDEWALK ALONG THE SOUTHBOUND FRONTAGE ROAD OF IH-35 WILL BE PLACED IN RIGHT-OF-WAY AS LOTS ARE DEVELOPED.
22. ANY HERITAGE TREE AS NOTED ON THIS PLAT IS SUBJECT, IN PERPETUITY, TO THE MAINTENANCE, CARE, PRUNING AND REMOVAL REQUIREMENTS OF THE CITY OF GEORGETOWN. APPROVED REMOVAL DOES NOT REQUIRE MODIFICATION OF THE PLAT.
23. ALL INDIVIDUAL LOTS CONTAINING HERITAGE TREES ARE CONFIGURED AND DESIGNED SO THAT THE LOT IS DEVELOPABLE FOR THE INTENDED PURPOSE WITHOUT REQUIRING REMOVAL OF THE HERITAGE TREES OR EXCEEDING THE PERCENTAGE OF ALLOWABLE DISTURBANCE WITHIN THE HERITAGE TREES' CRZ.

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	43°58'20"	695.50'	533.77'	S76°14'41"W	520.76'
[C1]	[43°58'20"]	[695.50']	[533.77']	[N76°14'41"E]	[520.76']
C2	05°20'53"	757.01'	70.66'	S56°54'51"W	70.63'
[C2]	[14°51'30"]	[757.01']	[196.31']	[N61°40'10"E]	[195.76']
C3	33°17'39"	87.72'	50.97'	N09°05'53"W	50.26'
(C3)	(33°17'39")	(87.72')	(50.97')	(S09°05'53"E)	(50.26')
C4	21°11'41"	220.00'	81.38'	S28°05'26"W	80.92'
C5	21°11'41"	280.00'	103.58'	S28°05'26"W	102.99'
C6	48°23'57"	270.00'	228.08'	S41°41'34"W	221.35'
C7	39°34'16"	220.00'	151.94'	S85°40'42"W	148.94'
C8	24°12'41"	280.00'	118.32'	S77°59'53"W	117.44'
C9	48°23'57"	330.00'	278.76'	S41°41'34"W	270.54'
C10	25°25'55"	695.50'	308.71'	S85°30'54"W	306.18'
C11	18°32'25"	695.50'	225.06'	S63°31'44"W	224.07'
C12	13°19'52"	280.00'	65.15'	S83°26'17"W	65.00'
C13	10°52'50"	280.00'	53.17'	S71°19'59"W	53.09'
C14	07°38'57"	330.00'	44.06'	S62°04'04"W	44.02'
C15	33°30'31"	330.00'	192.99'	S41°29'22"W	190.25'
C16	07°14'31"	330.00'	41.71'	S21°06'53"W	41.68'
C17	6°25'11"	280.00'	31.37'	N20°42'11"E	31.36'
C18	39°59'43"	18.00'	12.56'	N41°07'25"W	12.31'
C19	39°58'22"	18.00'	12.56'	S81°06'27"E	12.30'

LINE TABLE

LINE	BEARING	LENGTH	BEARING	LENGTH
L1	N70°24'40"W	32.77'	(S70°24'40"E)	(32.77')
L2	S68°49'07"E	90.00'	(N68°49'07"W)	(90.00')
L3	N21°10'48"E	75.00'	(S21°10'48"W)	(75.00')
L4	N68°49'05"W	90.00'	(S68°49'05"E)	(90.00')
L5	N21°10'55"E	69.20'	(S21°10'55"W)	(69.20')
L6	S51°18'43"E	60.00'	N/A	N/A
L7	S38°41'17"W	17.17'	N/A	N/A
L8	N89°53'47"W	105.04'	N/A	N/A
L9	N74°32'14"W	109.78'	N/A	N/A
L10	S38°41'17"W	17.17'	N/A	N/A
L11	N61°07'16"W	24.48'	N/A	N/A
L12	N28°52'44"E	40.00'	N/A	N/A
L13	S61°07'16"E	24.48'	N/A	N/A

IMPERVIOUS COVER TABLE

LOT	BLOCK	PHASE	ACREAGE AREA	IMPERVIOUS COVER AREA	IMPERVIOUS COVER PERCENTAGE
1	A	4	15.675	7.75	49.44%
2	B	4	2.545	1.20	47.15%
3	B	4	1.169	0.47	40.21%
4	B	4	1.925	0.80	41.56%
5	B	4	2.359	1.33	56.38%
6	B	4	1.111	0.55	49.50%
SIENA PEAK DRIVE			2.225	1.50	67.42%
TOTALS			27.009	13.60	50.35%

BENCHMARK LIST

BM# 1 - ⊠ * CUT SET ON THE SOUTH EDGE OF A CONCRETE SIDEWALK ±35 FEET SOUTH OF A CONCRETE HEADWALL, ±13 FEET WEST OF A BARBED WIRE FENCE, AND ±30 FEET NORTH OF A SANITARY SEWER MANHOLE.
SURFACE NORTHING=10,223,501.42
SURFACE EASTING=3,134,365.71
ELEV=796.68

BM# 2 - ⊠ * CUT SET IN CONCRETE ON THE SOUTH EDGE OF AVIATION DRIVE, ±16 FEET NORTH OF A WOOD FENCE POST, ±18 FEET SOUTH OF THE CENTERLINE OF AVIATION DRIVE, AND ±95 SOUTHWEST OF A SANITARY SEWER MANHOLE.
SURFACE NORTHING=10,223,328.33
SURFACE EASTING=3,133,985.15
ELEV=769.87

FINAL PLAT
TITAN NORTHPARK 35
TOWN CENTER, PHASE 4
LOCATED IN THE CITY OF GEORGETOWN, TEXAS AND BEING OUT OF THE DAVID WRIGHT SURVEY, ABSTRACT NO. 13, WILLIAMSON COUNTY, TEXAS
SHEET 2 OF 3

Westwood
WESTWOOD PROFESSIONAL SERVICES, INC.
WESTWOODPS.COM
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

DRAWN BY	CHECKED BY	SCALE	DATE	JOB NUMBER	CITY PROJECT NUMBER
ZNBM	JRG	N/A	3/05/2025	R0041495.00	2024-39-FP

FINAL PLAT : TITAN NORTHPARK 35 - TOWN CENTER, PHASE 4

Westwood
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

FINAL PLAT 2 OF 3

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
7

2024-06-CON

9/5/2025 10:08 AM
N:\0041495.00\06 CAD\DWG\SURVEY C3D\PRELIM\20240805 0041495.00FP REV.DWG
DSANCHEZ-GONZALEZ
6/18/2025 11:13 AM
N:\0041495.00\06 CAD\DWG\SITE DESIGN C3D\0041495.00_COVR.DWG

DOC# 2025044003

OWNER'S SIGNATURE BLOCK

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

THAT CHRISTOPHER PACHECO AS MANAGER FOR TITAN PROPERTY MANAGEMENT, LLC, AS MANAGER FOR TITAN NP35 PHASE II, LLC, OWNER OF THE 27.009-ACRE TRACT OF LAND SHOWN HEREON, SAID 27.009 ACRES BEING OUT OF THAT CERTAIN 110.916-ACRE TRACT OF LAND DESCRIBED IN A DEED RECORDED IN DOCUMENT NO. 2021051696 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS OF THE CERTAIN TRACT OF LAND, DO HEREBY CERTIFY THERE ARE NO EASEMENT HOLDERS EXCEPT AS SHOWN HEREON AND DO HEREBY SUBDIVIDE, SAID TRACT AS SHOWN HEREON; DO HEREBY COVENANT TO ALL RESTRICTIONS LISTED HEREIN, WHICH SHALL RUN WITH THE LAND; AND DO HEREBY DEDICATE TO THE CITY OF GEORGETOWN THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF GEORGETOWN MAY DEEM APPROPRIATE. I HEREBY BIND MY HEIRS, SUCCESSORS, AND ASSIGNS TO WARRANT AND FOREVER DEFEND SUCH DEDICATIONS, ALL AND SINGULAR, TO THE CITY OF GEORGETOWN AGAINST EVERY PERSON WHOMSOEVER CLAIMING OR TO CLAIM THE SAME OR ANY PART THEREOF. THIS SUBDIVISION IS TO BE KNOWN AS **TITAN NORTHPARK 35 TOWN CENTER, PHASE 4**.

TO CERTIFY WHICH, WITNESS BY MY HAND THIS 15TH DAY OF MARCH, 2025.

TITAN NP35 PHASE II, LLC, A TEXAS LIMITED LIABILITY COMPANY
6300 RIVERSIDE PLAZA LN. NW, SUITE 200
ALBUQUERQUE, NM, 87210

BY: TITAN PROPERTY MANAGEMENT, LLC, A TEXAS LIMITED LIABILITY COMPANY
6300 RIVERSIDE PLAZA LN. NW, SUITE 200
ALBUQUERQUE, NM, 87210
ITS MANAGER

CHRISTOPHER PACHECO MANAGER

STATE OF NEW MEXICO (
KNOW ALL MEN BY THESE PRESENTS
COUNTY OF BERNALILLO (

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED CHRISTOPHER PACHECO KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL THIS 13TH DAY OF MARCH, 2025.

NOTARY PUBLIC IN AND FOR THE STATE OF NEW MEXICO

STATE OF NEW MEXICO
NOTARY PUBLIC
E. AIMEE GONZALEZ E.
Commission # 1067801
My Comm. Exp. 12-19-2028

MY COMMISSION EXPIRES ON: 12-19-2028

ENGINEER'S CERTIFICATE

STATE OF TEXAS (

COUNTY OF TRAVIS (

I, HOLLIS ANN SCHEFFLER, REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS SUBDIVISION IS IN THE EDWARDS AQUIFER RECHARGE ZONE AND IS NOT ENCROACHED BY ZONE A FLOOD AREA, AS DENOTED HEREIN AND AS DEFINED BY FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, COMMUNITY PANEL NUMBER 48491C0291F, EFFECTIVE DATE DECEMBER 20, 2019 AND BY FIRM MAP NUMBER 48491C0283F, EFFECTIVE DATE OF DECEMBER 20, 2019, AND THAT EACH LOT CONFORMS TO THE CITY OF GEORGETOWN REGULATIONS.

THE FULLY DEVELOPED, CONCENTRATED STORMWATER RUNOFF RESULTING FROM THE ONE HUNDRED (100) YEAR FREQUENCY STORM IS CONTAINED WITHIN THE DRAINAGE EASEMENT SHOWN AND/OR PUBLIC RIGHTS-OF-WAY DEDICATED BY THIS PLAT.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL, THIS 5TH DAY OF March, 2025.

HOLLIS ANN SCHEFFLER
REGISTERED PROFESSIONAL ENGINEER
NO. 136049 STATE OF TEXAS

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER
3/5/2025

SURVEYOR'S CERTIFICATE

STATE OF TEXAS (

COUNTY OF TRAVIS (
KNOW ALL MEN BY THESE PRESENTS

I, JASON R. GABRIEL, A REGISTERED PROFESSIONAL LAND SURVEYOR, LICENSED BY THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE FROM AN ACTUAL SURVEY MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON, AND THAT THERE ARE NO APPARENT DISCREPANCIES, CONFLICTS, OVERLAPPING OF IMPROVEMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE, EXCEPT AS SHOWN ON THE ACCOMPANYING PLAT, AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF GEORGETOWN, TEXAS.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL, THIS 5TH DAY OF March, 2025.

JASON R. GABRIEL
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 6530 STATE OF TEXAS 3/15/2025

STATE OF TEXAS
REGISTERED
JASON R. GABRIEL
6530
PROFESSIONAL
LAND SURVEYOR

PLANNING DIRECTOR

I, SOFIA NELSON, PLANNING DIRECTOR OF THE CITY OF GEORGETOWN, TEXAS, DO HEREBY CERTIFY THIS PLAT IS APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

SOFIA NELSON, PLANNING DIRECTOR — DATE 06/5/2025

CITY BUILDING OFFICIAL

BASED UPON THE ABOVE REPRESENTATIONS OF THE ENGINEER OR SURVEYOR WHOSE SEAL IS AFFIXED HERETO, AND AFTER A REVIEW OF THE PLAT AS REPRESENTED BY THE SAID ENGINEER OR SURVEYOR, I FIND THAT THIS PLAT COMPLIES WITH THE REQUIREMENTS OF CHAPTER 15.44, FLOOD DAMAGE PREVENTION, OF THE GEORGETOWN MUNICIPAL CODE. THIS CERTIFICATION IS MADE SOLELY UPON SUCH REPRESENTATIONS AND SHOULD NOT BE RELIED UPON FOR VERIFICATIONS OF THE FACTS ALLEGED. THE CITY OF GEORGETOWN DISCLAIMS ANY RESPONSIBILITY TO ANY MEMBER OF THE PUBLIC OR INDEPENDENT VERIFICATIONS OF THE REPRESENTATION, FACTUAL OR OTHERWISE, CONTAINED IN THIS PLAT AND THE DOCUMENTS ASSOCIATED WITH IT.

GLEN HOLCOMB, BUILDING OFFICIAL — DATE 06-05-2025
CITY OF GEORGETOWN

COUNTY CLERK SIGNATURE BLOCK

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 6th DAY OF June 2025, A.D., AT 2:30 O'CLOCK P.M., AND DULY RECORDED THIS THE 6th DAY OF June 2025, A.D., AT 2:30 O'CLOCK P.M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN DOCUMENT NO. 2025044003.

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

BY: ASHLEY MARKEY DEPUTY

COUNTY COURT
WILLIAMSON COUNTY TEXAS

FINAL PLAT
TITAN NORTHPARK 35
TOWN CENTER, PHASE 4

LOCATED IN THE CITY OF GEORGETOWN, TEXAS AND BEING OUT OF THE DAVID WRIGHT SURVEY, ABSTRACT NO. 13, WILLIAMSON COUNTY, TEXAS
SHEET 3 OF 3

Westwood
WESTWOOD PROFESSIONAL SERVICES, INC.
WESTWOODPS.COM
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

DRAWN BY	CHECKED BY	SCALE	DATE	JOB NUMBER	CITY PROJECT NUMBER
ZNBM	JRG	N/A	3/05/2025	R0041495.00	2024-39-FP

FINAL PLAT : TITAN NORTHPARK 35 - TOWN CENTER, PHASE 4

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6/18/2025 11:13 AM
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REVISIONS

NO.	DATE	DESCRIPTION	BY

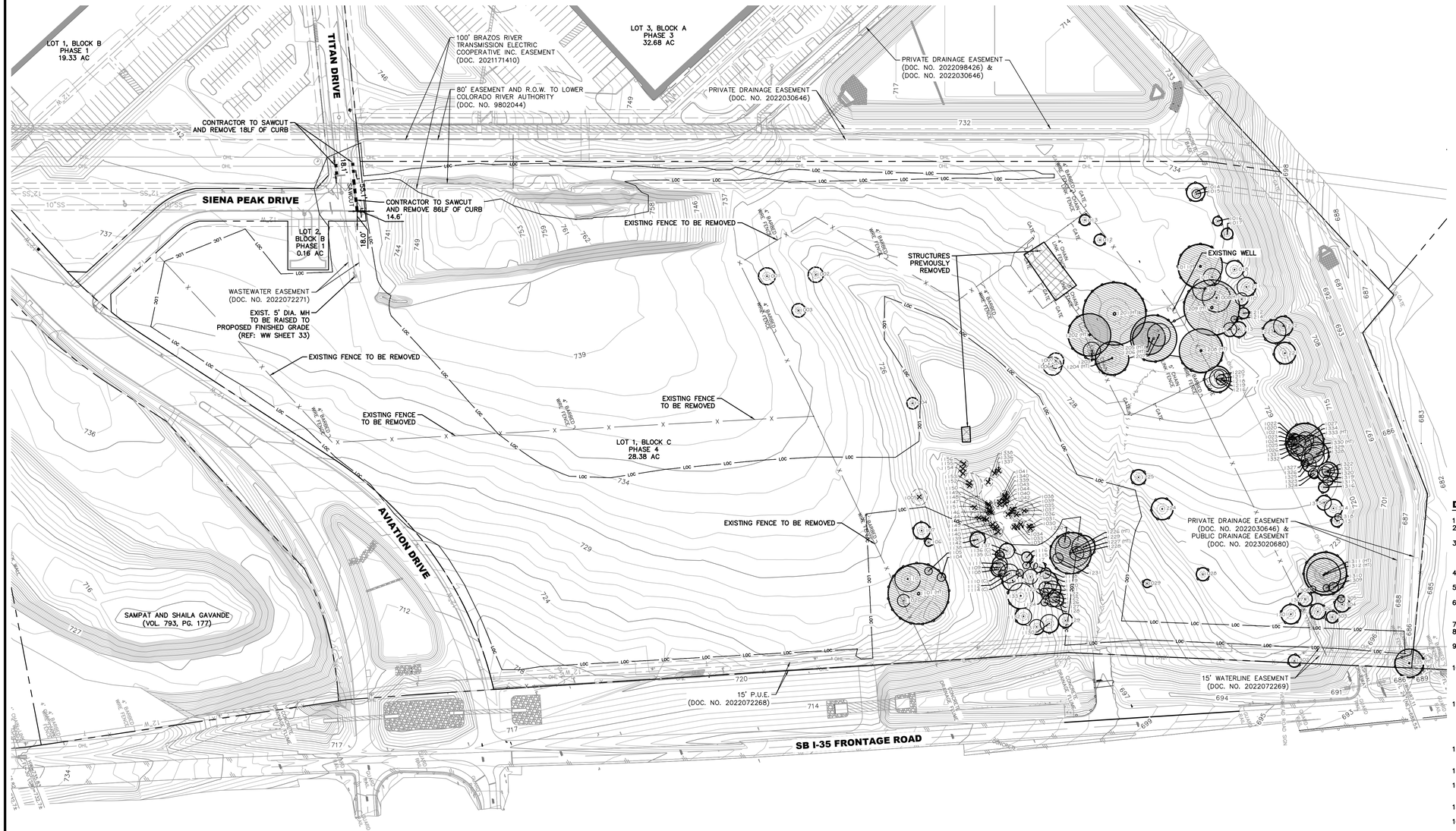
TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

FINAL PLAT 3 OF 3

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
8

2024-06-CON



0 50 100 200 300

GRAPHIC SCALE IN FEET
1"=100'

LEGEND

	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
	FLOOD LIGHT
FP	FLAG POLE
SIGN	TRAFFIC SIGN
IRS	1/2-INCH IRON ROD W/"PACHECO KOCH" CAP SET
(C.M.)	CONTROLLING MONUMENT
	PROPERTY LINE
X	FENCE
OHL	OVERHEAD UTILITY LINE
F	FIBER OPTIC LINE
30" R.C.P.	UNDERGROUND STORM LINE
E	UNDERGROUND ELECTRIC LINE
T	UNDERGROUND TELEPHONE LINE
C	UNDERGROUND CABLE LINE
6"W	UNDERGROUND WATER LINE
6"SS	UNDERGROUND SANITARY SEWER LINE
613	EXIST CONTOUR
612.39	EXIST SPOT ELEVATION
TC 612.39	EXIST TOP OF CURB ELEVATION
G 611.89	EXIST GUTTER ELEVATION
SAWCUT	LIMITS OF SAWCUT
	DEMOLITION AREA
LOC	LIMITS OF CONSTRUCTION

TREE PRESERVATION LEGEND

- HERITAGE TREE TO REMAIN — ½ CRZ
- HERITAGE TREE TO BE REMOVED — ½ CRZ
- PROTECTED TREE TO REMAIN — ½ CRZ
- PROTECTED TREE TO BE REMOVED — ½ CRZ
- TREE PROTECTION FENCE

HT - HERITAGE TREE (26"+)
C - CREDIT TREE (6"-11.99")

REFERENCE LANDSCAPE PLANS FOR TREE REMOVAL AND PROTECTION

DEMOLITION GENERAL NOTES

1. CONTRACTOR IS TO REVIEW ALL GENERAL NOTES PRIOR TO BEGINNING WORK.
2. REMOVE ALL EXISTING PAVEMENT AND STRUCTURES WITHIN THE LIMITS OF DEMOLITION UNLESS OTHERWISE NOTED.
3. SAWCUT AND REMOVE ALL EXISTING DRIVE APPROACHES (WITHIN THE LIMITS OF DEMOLITION) TWO FEET FROM BACK OF CURB. SIDEWALKS, PAVEMENT, AND UTILITIES WITHIN THE PUBLIC RIGHT-OF-WAY ARE TO REMAIN UNLESS OTHERWISE NOTED.
4. CONSULT THE DIMENSIONAL CONTROL PLAN. VERIFY THE PORTION OF EXISTING CONCRETE CURBS AND PAVEMENT WHICH ARE TO REMAIN.
5. COORDINATE WITH LOCAL POWER, TELEPHONE, CABLE, AND GAS COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITIES.
6. ALL UTILITIES SHOULD BE CUT AND PLUGGED IN ACCORDANCE WITH THEIR RESPECTIVE UTILITY COMPANY REQUIREMENTS AND PRIOR TO DEMOLITION OF THE EXISTING BUILDINGS.
7. CONTRACTOR TO PLUG ALL EXISTING EXPOSED ENDS OF ABANDONED UTILITIES.
8. CONTRACTOR TO DETERMINE SOURCE OF ALL EXPOSED UTILITIES AND, IF REQUIRED, RECONNECT TO PROPOSED UTILITIES.
9. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND LEGAL DISPOSAL OF ALL THE UNSUITABLE MATERIALS FROM THE PROJECT SITE. CONTRACTOR SHALL CONTACT ALL LOCAL AUTHORITIES TO DETERMINE DISPOSAL REQUIREMENTS.
10. ALL TREES ON THE PROPERTY SHALL BE PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS UNLESS OTHERWISE NOTED. THE TREE PROTECTION SHALL BE PLACED AROUND TREES PRIOR TO ANY DEMOLITION OR GRADING. TREE PROTECTION SHALL REMAIN UNTIL ALL WORK IS COMPLETED. REFER TO LANDSCAPE PLANS FOR TREE REMOVAL AND PROTECTION DETAILS.
11. ANY DAMAGE DONE TO EXISTING TREE CROWNS OR ROOT SYSTEMS SHALL BE REPAIRED IMMEDIATELY BY AN APPROVED TREE SURGEON AT THE OWNER'S DIRECTION. ROOTS EXPOSED AND/OR DAMAGED DURING DEMOLITION AND/OR GRADING OPERATIONS SHALL BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA. CUT SURFACES PAINTED WITH AN APPROVED TREE PAINT, AND TOPSOIL AND MULCH PLACED OVER THE EXPOSED ROOT AREA IMMEDIATELY.
12. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING EROSION CONTROL MEASURES ON THE SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS UNTIL THE SITE HAS BEEN STABILIZED.
13. CONTRACTOR IS RESPONSIBLE FOR GRADING ALL DISTURBED AREAS TO ALLOW FOR POSITIVE DRAINAGE. GRADING SLOPES ARE NOT TO EXCEED 3:1.
14. AREAS EXCAVATED FOR FOUNDATION OR UNDERGROUND STRUCTURE REMOVAL SHALL BE BACK-FILLED AND COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
15. CONTRACTOR IS RESPONSIBLE FOR SECURITY OF THE SITE DURING DEMOLITION ACTIVITIES AND UNTIL SUBSTANTIAL COMPLETION.
16. ALL WORK, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS AND CITY STANDARD CONSTRUCTION SPECIFICATIONS.
17. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITY MAINS, MANHOLES, CLEANOUTS, VALVE BOXES, AND FIRE HYDRANTS, ETC. IN THE AREA OF DEMOLITION.
18. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.
19. BARRICADING AND PROJECT SIGNS SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND LATEST UPDATES.
20. CONTRACTOR SHALL MAINTAIN EXISTING PAVEMENT AND ACCESS TO FIRE HYDRANTS ON SITE UNTIL THE BUILDINGS AND STRUCTURES IN THAT AREA HAVE BEEN DEMOLISHED AND REMOVED.
21. CONTRACTOR WILL PROVIDE ON-SITE PARKING FOR WORKERS. VEHICLE PARKING WILL NOT BE ALLOWED WITHIN THE PUBLIC RIGHT-OF-WAY.
22. CONTRACTOR WILL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING ADEQUATE DUST CONTROL MEASURES DURING DEMOLITION ACTIVITIES.
23. CONTRACTOR IS TO COORDINATE DEMOLITION ACTIVITIES WITH THE HAZARDOUS MATERIAL ABATEMENT CONTRACTORS' ACTIVITIES, IF APPLICABLE.
24. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ALL TEMPORARY UTILITY SERVICES REQUIRED TO COMPLETE THE SCOPE OF WORK.
25. CONTRACTOR IS TO START SAWCUTS OF CURB AT NEAREST JOINT

2024-06-CON

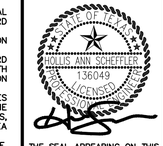
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REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

EXISTING CONDITIONS & DEMO PLAN

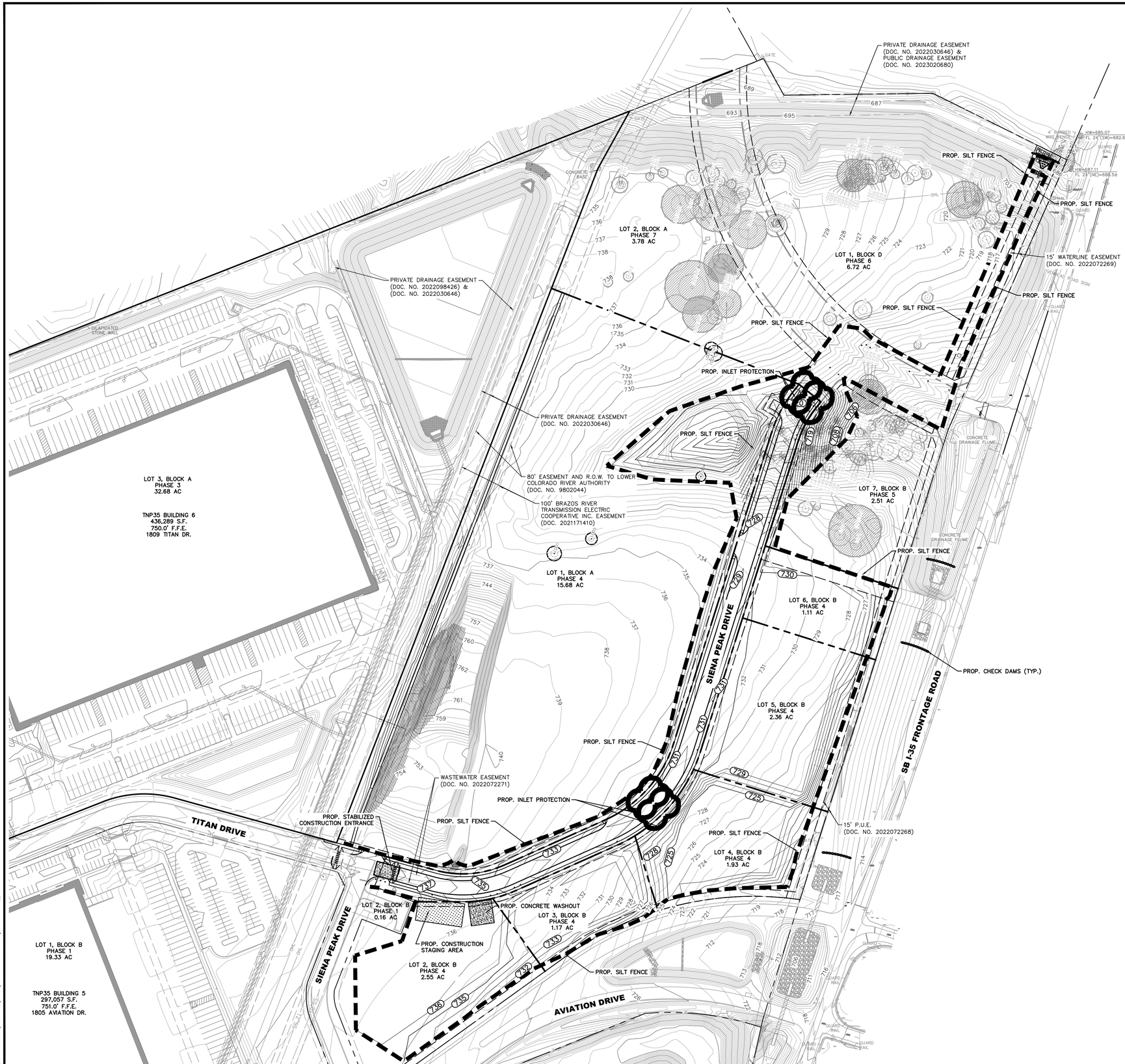


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DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

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GRAPHIC SCALE IN FEET
1"=100'

LEGEND

BL	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
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TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
FL	FLOOD LIGHT
FP	FLAG POLE
SIGN	TRAFFIC SIGN
IRS (C.M.)	1/2"-INCH IRON ROD W/"PACHECO KOCH" CAP SET CONTROLLING MONUMENT
	PROPERTY LINE
X	FENCE
OHL	OVERHEAD UTILITY LINE
613	EXIST CONTOUR
450	PROPOSED CONTOUR
	PROPOSED DRAINAGE FLOW DIRECTION
	PROPOSED CONSTRUCTION ENTRANCE
	INLET PROTECTION
	SILT FENCE (LIMITS OF DISTURBED AREA)
	CHECK DAM

TREE PRESERVATION LEGEND

HERITAGE TREE TO REMAIN	½ CRZ
HERITAGE TREE TO BE REMOVED	½ CRZ
PROTECTED TREE TO REMAIN	½ CRZ
PROTECTED TREE TO BE REMOVED	½ CRZ
TREE PROTECTION FENCE	

POLLUTION CONTROL GENERAL NOTES

1. THIS PLAN HAS BEEN PREPARED TO PROVIDE MEANS TO PREVENT OR MINIMIZE POLLUTION OF STORM WATER.
2. THE CONSTRUCTION ACTIVITY INCLUDED IN THIS PLAN WILL INCLUDE:
   - 2.A. CLEARING AND GRUBBING
   - 2.B. ROUGH GRADING
   - 2.C. FINAL GRADING
   - 2.D. UTILITY INSTALLATION
   - 2.E. PAVEMENT INSTALLATION
   - 2.F. BUILDING CONSTRUCTION
3. THE TOTAL ESTIMATED LAND AREA TO BE DISTURBED IS 16.15 ACRES.
4. THE ESTIMATED RUNOFF COEFFICIENT UPON COMPLETION OF THE PROJECT IS 0.90.
5. THE STORM WATER EXITING THE SITE IS COLLECTED IN AN EXISTING DRAINAGE SYSTEM MAINTAINED BY THE CITY OF GEORGETOWN, TEXAS.
6. THE SOILS ON THE SITE ARE GENERALLY EXPANSIVE CLAYS.
7. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION PROTECTION AROUND THE WORK AREA PERIMETER AND AT ALL INLET MOUTHS PRIOR TO COMMENCING WORK AND UNTIL THE WORK AREA HAS BEEN STABILIZED.
8. THE CONTRACTOR WILL REMOVE ALL EXCESS SOIL FROM CONSTRUCTION VEHICLES PRIOR TO EXITING THE SITE.
9. ALL DISTURBED AREAS WHICH WILL NOT BE RE-DISTURBED MUST BEGIN BEING STABILIZED IMMEDIATELY BY THE CONTRACTOR TO CONTROL EROSION. THE CONTRACTOR HAS 14 DAYS TO HAVE ALL STABILIZATION AND EROSION CONTROL DEVICES IN PLACE.
10. THE CONTRACTOR SHALL UNDERTAKE PROPER METHODS TO REDUCE DUST GENERATION FROM THE SITE.
11. THE CONTRACTOR MUST COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS REGARDING SEDIMENT AND EROSION CONTROL.
12. A COPY OF THIS PLAN, AS PART OF THE SWPPP, MUST BE KEPT AT THE CONSTRUCTION FACILITY DURING THE ENTIRE CONSTRUCTION PERIOD.
13. CONSTRUCTION SEQUENCING MUST PROVIDE FOR THE EXCAVATION OF AN ON-SITE BASIN AS A SEDIMENT COLLECTION BASIN PRIOR TO THE DISTURBANCE OF GREATER THAN 10 ACRES OF LAND.
14. ALL FINISHED GRADES ARE TO BE HYDROMULCHED, SPOT SODDED OR SEEDED AND WATERED UNTIL GROWTH IS ESTABLISHED ON AND OFF-SITE.
15. A PIT OR WASH OUT BASIN SHALL BE CONSTRUCTED ON-SITE BY THE CONTRACTOR FOR THE "WASH OUT" OF CONCRETE TRUCKS.
16. A BERM OR OTHER SPILL PROTECTION MEASURE SHALL BE USED FOR ANY TEMPORARY FUEL STORAGE TANK ON-SITE.
17. IF "SUMP" PUMPS ARE USED TO REMOVE WATER FROM EXCAVATED AREAS, FILTER THE DISCHARGE TO REMOVE SEDIMENT AND OTHER POLLUTANTS BEFORE THE WATER LEAVES THE SITE.
18. TO PREVENT DAMAGE TO VEGETATION IN DOWNSTREAM WATER COURSES, LIMIT ANY PROPOSED LIME STABILIZATION OPERATIONS TO THAT WHICH CAN BE MIXED AND COMPACTED BY THE END OF EACH WORK DAY. GEOTEXTILE FABRIC IS NOT EFFECTIVE IN FILTERING LIME SINCE THE GRAIN SIZE IS SMALLER THAN THE OPENING IN THE FABRIC.
19. VEHICLE PARKING AREAS, STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. OTHERWISE, COVERING OR ENCIRCLING THE AREAS WITH PROTECTIVE MEASURES SHALL BE NECESSARY.
20. STORE ALL TRASH AND BUILDING MATERIALS WASTE IN AN ENCLOSURE UNTIL IT CAN BE PROPERLY DISPOSED OF AT THE APPROPRIATE OFF-SITE FACILITIES.
21. TRACKING OF SEDIMENT OFF-SITE BY TRUCK TRAFFIC SHALL BE HANDLED THROUGH REGULAR CLEANING.
22. INSPECTIONS SHALL BE CONDUCTED BY THE PERMITEE ONCE EVERY TWO WEEKS AND WITHIN 24 HOURS AFTER STORM EVENT OF 0.5 INCHES OR MORE OR ONCE PER WEEK ON A SPECIFIC PRE-DEFINED DAY. THE INSPECTIONS WILL INCLUDE:
   - 22.A. DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN STABILIZED.
   - 22.B. AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
   - 22.C. STRUCTURAL CONTROL MEASURES.
   - 22.D. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
   - 22.E. IDENTIFICATIONS OF MEASURES THAT NEED TO BE MAINTAINED, MODIFIED, OR ADDED TO CORRECT PROBLEMS.
23. CONTRACTOR SHALL MINIMIZE THE EXPOSURE OF BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE TO PRECIPITATION AND TO STORMWATER.
24. PERMANENTLY STABILIZE EXPOSED SOIL, WITHIN AND ADJACENT TO THE SITE, THAT IS DISTURBED BY VEHICLES, GRADING AND OTHER CONSTRUCTION ACTIVITIES.
25. CONTAIN ALL RUNOFF FROM MATERIAL USED IN SUBGRADE STABILIZATION.
26. MATERIAL STOCKPILES SHALL BE COVERED BY PLASTIC OR SURROUNDED BY EROSION CONTROL STRUCTURES TO CONTROL SEDIMENT RELEASES.
27. CONTRACTOR SHALL PROTECT SLOPES IN EXCESS OF 15% IN ORDER TO MINIMIZE EROSION OF SOILS AND THE DISTURBANCE OF SLOPES.
28. VEGETATION TO BE PRESERVED WHERE EVER POSSIBLE TO HELP REDUCE EROSION. WHERE VEGETATION MUST BE REMOVED, PRESERVE NATIVE TOPSOIL IN ALL AREAS POSSIBLE.
29. MINIMIZE SOIL COMPACTION IN AREAS INTENDED FOR POST CONSTRUCTION PERVIOUS SURFACE.

2024-06-CON

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REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

EROSION CONTROL PLAN

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

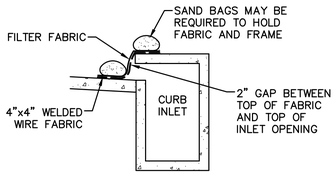
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HAS	NBB	MAR 2024

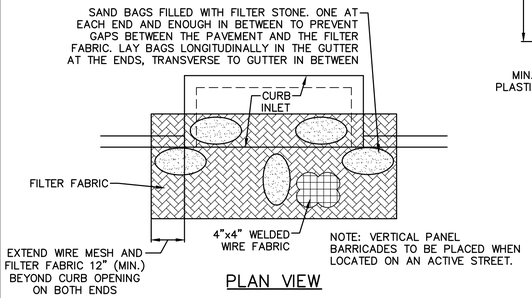
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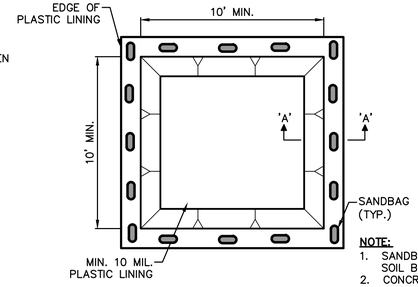
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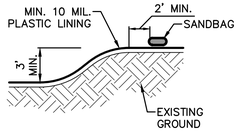
PLAN VIEW

1 CURB INLET PROTECTION

NOT TO SCALE



PLAN VIEW



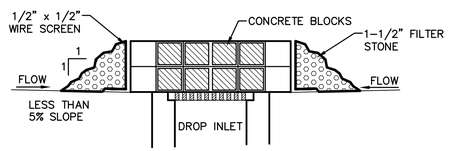
SECTION A–A

NOTE:

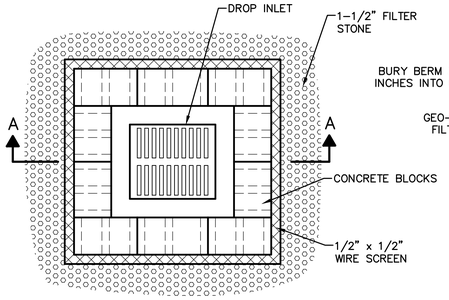
1. SANDBAGS MAY BE REPLACED BY A SOIL BERM TO ANCHOR PLASTIC LINING.
2. CONCRETE WASHOUT AREA TO BE CHECKED REGULARLY FOR REPAIRS.
3. REGULARLY REMOVE CONCRETE WASTE TO PREVENT OVERFLOWING.
4. PROVIDE MINIMUM 6 CF OF CONTAINMENT VOLUME FOR EVERY 10 CY OF CONCRETE PLACED. PROVIDE MINIMUM 1' FREEBOARD ABOVE CONTAINMENT VOLUME.

2 CONCRETE WASHOUT AREA

NOT TO SCALE



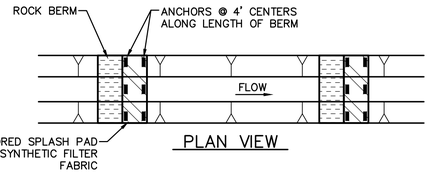
SECTION A–A



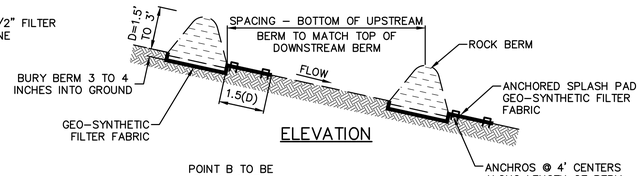
PLAN VIEW

3 DROP INLET PROTECTION

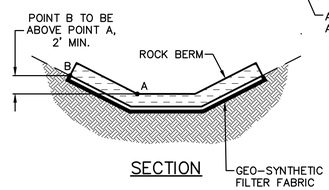
NOT TO SCALE



PLAN VIEW



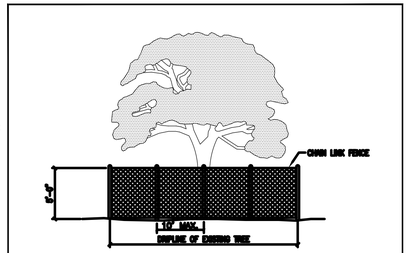
ELEVATION



SECTION

4 CHECK DAMS

NOT TO SCALE

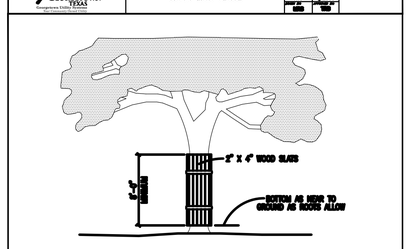


NOTES:

1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES. ALL BE LOCATED AT THE CONSTRUCTION LIMIT OF THE SITE WORK (DISTURBED ZONE), AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REQUIRED AND AUTHORIZED BY THE CITY.
   C. WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
3. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE ACCEPTABLE GRADING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PROPOSED GRADING AREA.
   B. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN SIX FEET (6'-0") TO BUILDING.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
TREE PROTECTION – CHAIN LINK FENCE	EC09



NOTES:

1. WHERE ANY ENCROACHMENT RESULTS IN A FENCE BEING CLOSER THAN FOUR FEET (4'-0") OR A TREE BEING LESS THAN THREE INCHES (3") IN CALIPER TO A PERSON'S HEAD, THAT PART OF THE FENCE OR LIMBS OF LOWER BRANCHES TO BE REMOVED TO THE NEAREST FENCE POST.
2. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE REMOVED 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 LOSS DUE TO EVAPORATION.
3. PRIOR EXCAVATION OR SPADE CUTTING WITHIN TREE DRIPLINE, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
4. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CANOPIES SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON LEAVES.
5. ANY PREVIOUSLY EXPOSED AREA FOR THE INSTALLATION OF LANDSCAPE EMERGENCY SHALL BE PLACED AS FAR FROM THE TRUNK AS POSSIBLE AS POSSIBLE.
6. NO LANDSCAPE TOPSOIL DEEPENING GREATER THE FOUR INCHES (4") SHALL BE PERMITTED WITHIN THE DRIPLINE OF A TREE. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
7. PLANNED TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
TREE PROTECTION – WOOD SLATS	EC10

SILT FENCE

GUIDELINES FOR DESIGN AND INSTALLATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS

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

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

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

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

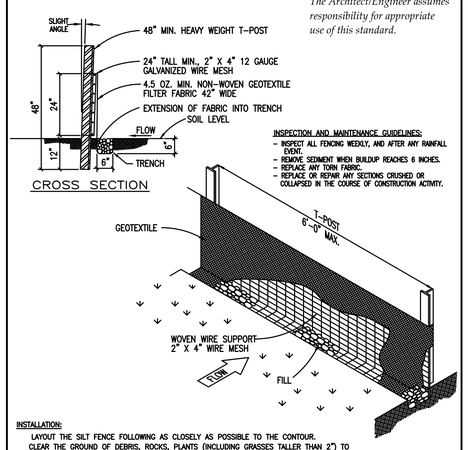
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
TEMPORARY EROSION AND SEDIMENTATION CONTROL GUIDELINES	EC01

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

1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. ALL PROJECTS WITHIN THE RECHARGE ZONE OF THE EDWARD'S AQUIFER SHALL SUBMIT A BEST MANAGEMENT PRACTICES AND WATER POLLUTION AND ABATEMENT PLAN TO THE TNRCC FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
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 (VENTURA 31) AT A RATE OF 100#/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED. ALL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE "A" RECENT CROP, REGIONALLY AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEED SHALL BE REFRIGERATED 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*, AND 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 LOSS DUE TO EVAPORATION.
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 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	ADOPTED 6/21/2006
EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES	EC01A



CROSS SECTION

INSPECTION AND MAINTENANCE GUIDELINES:

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

INSTALLATION:

LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.

CLEAR THE GROUND OF DEBRIS, ROCKS, PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON

DRIVE THE HEAVY DUTY T–POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW. ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE T–POST WITH 11 1/2 GAUGE GALVANIZED T–POST CLIPS. THE TOP OF THE WIRE TO BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND

THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1".

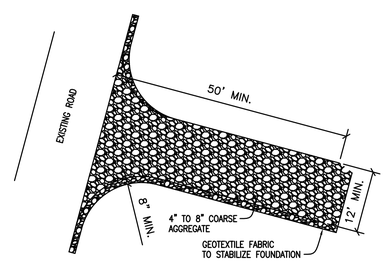
ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").

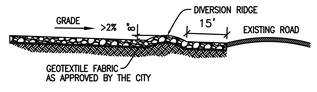
GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED

SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
SILT FENCE DETAIL	EC02





INSTALLATION:

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

INSPECTIONS AND MAINTENANCE GUIDELINES:

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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
STABILIZED CONSTRUCTION ENTRANCE	EC06

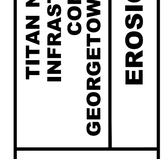
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TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

EROSION CONTROL DETAILS



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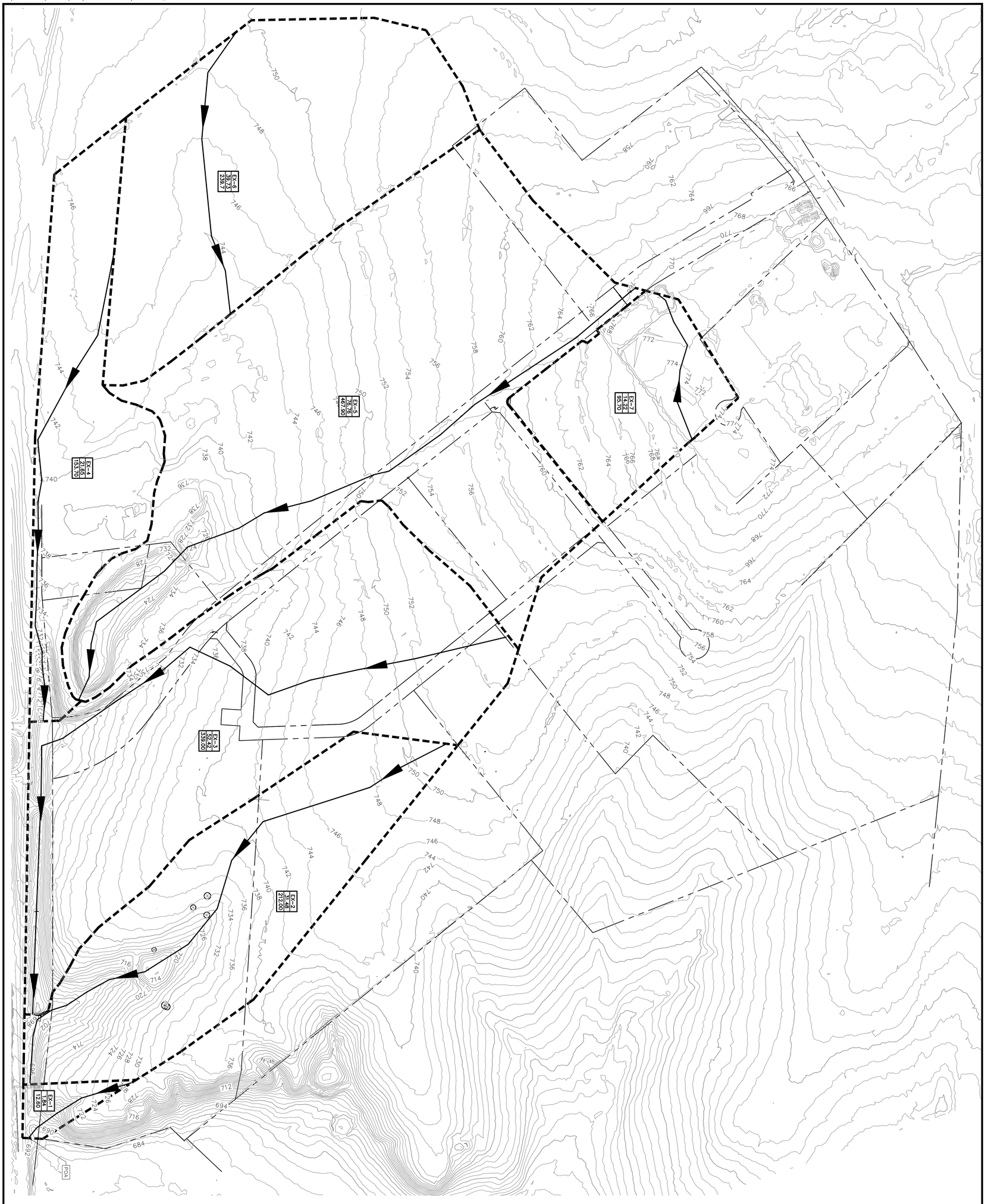
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SHEET NO. 11

2024-06-CON

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SEE SHEET 16 FOR DRAINANCE AREA CALCULATIONS

TC FLOW PATH & ARROW

EXISTING DRAINAGE AREA ID
AREA IN ACRES
Q_{100} IN CUBIC FEET PER SECOND

EX-8
1.80
7.89

DRAINAGE DIVIDE

DRAINAGE FLOW DIRECTION

EXISTING CONTOUR

FENCE

PROPERTY LINE

RIGHT-OF-WAY

FLAG POLE

FLOODLIGHT

TRAFFIC SIGNAL CONTROL BOX

TRAFFIC SIGNAL POLE

MANHOLE

FIRE HYDRANT

IRRIGATION CONTROL VALVE

WATER VALVE

WATER METER

LIGHT STANDARD

POWER POLE

ELECTRIC METER

BOLLARD

LEGEND

GRAPHIC SCALE IN FEET
1"=200'
0 100 200 400 600

2024-06-CON

PK-0041495.00_EX DAMS.DWG

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TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

EXISTING DRAINAGE AREA MAP

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0 100 200 400 600

GRAPHIC SCALE IN FEET
1"=200'

LEGEND

- BOLLARD
- ELECTRIC METER
- POWER POLE
- LIGHT STANDARD
- WATER METER
- WATER VALVE
- IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- CLEANOUT
- MANHOLE
- TRAFFIC SIGNAL CONTROL
- TRAFFIC SIGNAL POLE
- TELEPHONE BOX
- FLOOD LIGHT
- FLAG POLE
- TRAFFIC SIGN
- PROPERTY LINE
- FENCE
- 613 EXISTING CONTOUR
- DRAINAGE FLOW DIRECTION
- DRAINAGE DIVIDE
- EX 8 / 1.00 / 7.99 EXISTING DRAINAGE AREA ID, AREA IN ACRES, Q_{100} IN CUBIC FEET PER SECOND
- TC FLOW PATH & ARROW

SEE SHEET 16 FOR DRAINAGE AREA CALCULATIONS.

DRAINAGE SCHEMATIC

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TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

INTERIM DRAINAGE AREA MAP

STATE OF TEXAS
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INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

PROPOSED DRAINAGE AREA MAP

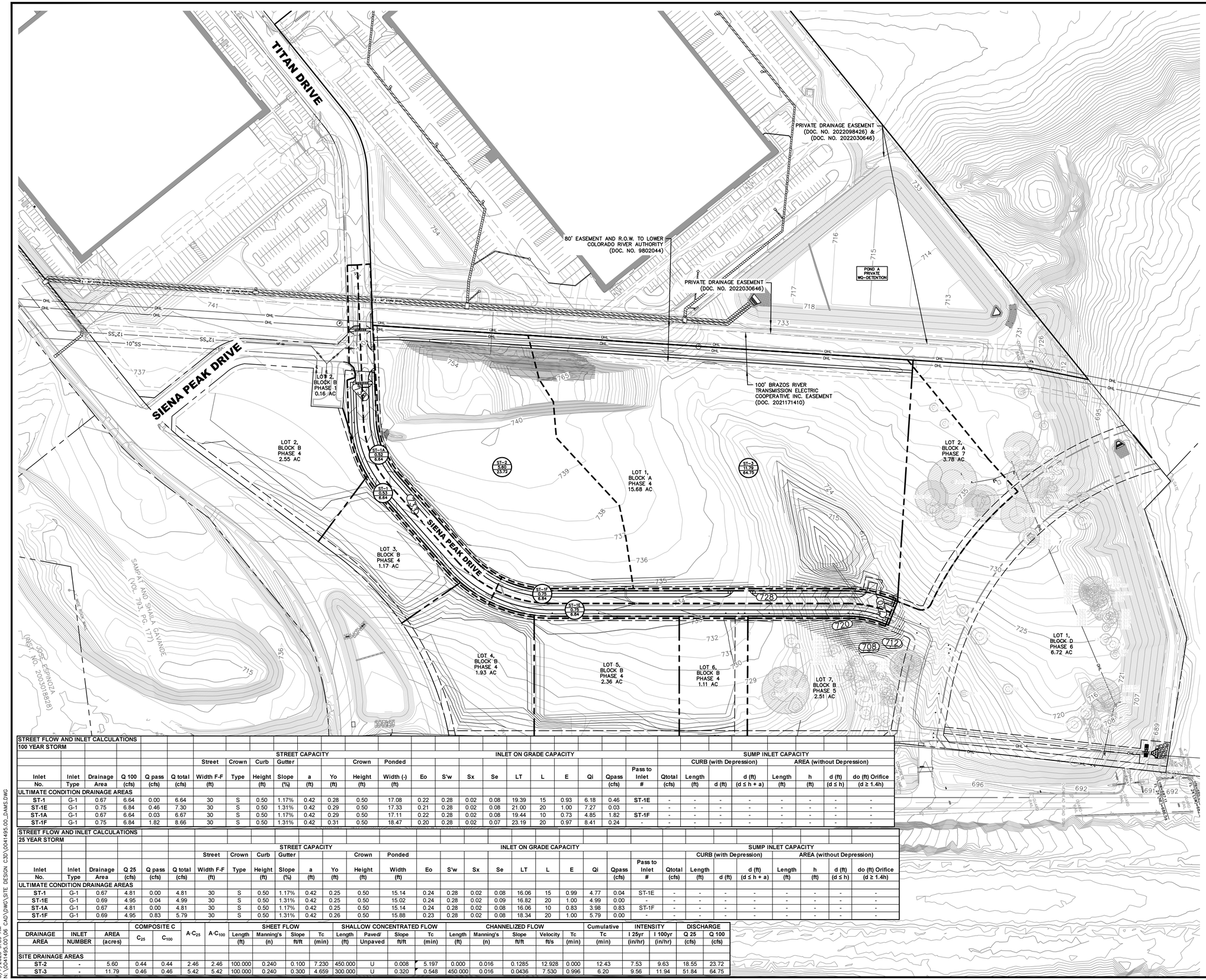
THE STATE OF TEXAS
LOIS ANN SCHEFFLER
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STREET FLOW AND INLET CALCULATIONS
100 YEAR STORM

						STREET CAPACITY								INLET ON GRADE CAPACITY									SUMP INLET CAPACITY								
						Street	Crown	Curb	Gutter			Crown	Ponded											CURB (with Depression)				AREA (without Depression)			
Inlet	Inlet	Drainage	Q 100	Q pass	Q total	Width F-F	Type	Height	Slope	a	Yo	Height	Width (-)	Eo	S'w	Sx	Se	LT	L	E	Qi	Qpass	Pass to Inlet	Qtotal	Length		d (ft)	Length	h	d (ft)	do (ft) Orifice
No.	Type	Area (cfs)	(cfs)	(cfs)	(cfs)	(ft)		(ft)	(%)	(ft)	(ft)	(ft)	(ft)									(cfs)	#	(cfs)	(ft)	d (ft)	(d ≤ h + a)	(ft)	(ft)	(d ≤ h)	(d ≥ 1.4h)
ULTIMATE CONDITION DRAINAGE AREAS																														
ST-1	G-1	0.67	6.64	0.00	6.64	30	S	0.50	1.17%	0.42	0.28	0.50	17.08	0.22	0.28	0.02	0.08	19.39	15	0.93	6.18	0.46	ST-1E	-	-	-	-	-	-	-	-
ST-1E	G-1	0.75	6.84	0.46	7.30	30	S	0.50	1.31%	0.42	0.29	0.50	17.33	0.21	0.28	0.02	0.08	21.00	20	1.00	7.27	0.03	-	-	-	-	-	-	-	-	-
ST-1A	G-1	0.67	6.64	0.03	6.67	30	S	0.50	1.17%	0.42	0.29	0.50	17.11	0.22	0.28	0.02	0.08	19.44	10	0.73	4.85	1.82	ST-1F	-	-	-	-	-	-	-	-
ST-1F	G-1	0.75	6.84	1.82	8.66	30	S	0.50	1.31%	0.42	0.31	0.50	18.47	0.20	0.28	0.02	0.07	23.19	20	0.97	8.41	0.24	-	-	-	-	-	-	-	-	-

STREET FLOW AND INLET CALCULATIONS
25 YEAR STORM

						STREET CAPACITY								INLET ON GRADE CAPACITY									SUMP INLET CAPACITY								
						Street	Crown	Curb	Gutter			Crown	Ponded											CURB (with Depression)				AREA (without Depression)			
Inlet	Inlet	Drainage	Q 25	Q pass	Q total	Width F-F	Type	Height	Slope	a	Yo	Height	Width	Eo	S'w	Sx	Se	LT	L	E	Qi	Qpass	Pass to Inlet	Qtotal	Length		d (ft)	Length	h	d (ft)	do (ft) Orifice
No.	Type	Area (cfs)	(cfs)	(cfs)	(cfs)	(ft)		(ft)	(%)	(ft)	(ft)	(ft)	(ft)									(cfs)	#	(cfs)	(ft)	d (ft)	(d ≤ h + a)	(ft)	(ft)	(d ≤ h)	(d ≥ 1.4h)
ULTIMATE CONDITION DRAINAGE AREAS																														
ST-1	G-1	0.67	4.81	0.00	4.81	30	S	0.50	1.17%	0.42	0.25	0.50	15.14	0.24	0.28	0.02	0.08	16.06	15	0.99	4.77	0.04	ST-1E	-	-	-	-	-	-	-	-
ST-1E	G-1	0.69	4.95	0.04	4.99	30	S	0.50	1.31%	0.42	0.25	0.50	15.02	0.24	0.28	0.02	0.09	16.82	20	1.00	4.99	0.00	-	-	-	-	-	-	-	-	-
ST-1A	G-1	0.67	4.81	0.00	4.81	30	S	0.50	1.17%	0.42	0.25	0.50	15.14	0.24	0.28	0.02	0.08	16.06	10	0.83	3.98	0.83	ST-1F	-	-	-	-	-	-	-	-
ST-1F	G-1	0.69	4.95	0.83	5.79	30	S	0.50	1.31%	0.42	0.26	0.50	15.88	0.23	0.28	0.02	0.08	18.34	20	1.00	5.79	0.00	-	-	-	-	-	-	-	-	-

			COMPOSITE C				SHEET FLOW				SHALLOW CONCENTRATED FLOW				CHANNELIZED FLOW						Cumulative	INTENSITY		DISCHARGE	
DRAINAGE	INLET	AREA	C_{25}	C_{100}	$A{\cdot}C_{25}$	$A{\cdot}C_{100}$	Length	Manning's	Slope	Tc	Length	Paved/	Slope	Tc	Length	Manning's	Slope	Velocity	Tc		Tc	I 25yr	I 100yr	Q 25	Q 100
AREA	NUMBER	(acres)					(ft)	(n)	ft/ft	(min)	(ft)	Unpaved	ft/ft	(min)	(ft)	(n)	ft/ft	ft/s	(min)		(min)	(in/hr)	(in/hr)	(cfs)	(cfs)
SITE DRAINAGE AREAS																									
ST-2	-	5.60	0.44	0.44	2.46	2.46	100.000	0.240	0.100	7.230	450.000	U	0.008	5.197	0.000	0.016	0.1285	12.928	0.000		12.43	7.53	9.63	18.55	23.72
ST-3	-	11.79	0.46	0.46	5.42	5.42	100.000	0.240	0.300	4.659	300.000	U	0.320	0.548	450.000	0.016	0.0436	7.530	0.996		6.20	9.56	11.94	51.84	64.75

2024-06-CON

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Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

SITE DRAINAGE AREA MAP

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISOR OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO. 15

SFORERO
5/7/2025 9:59 AM
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EXISTING DRAINAGE AREA MAP CALCULATIONS

HEC-HMS SUMMARY: EXISTING CONDITONS														
							2 YEAR STORM		10 YEAR STORM		25 YEAR STORM		100 YEAR STORM	
Drainage Area Basin Designation	Point of Analysis	Drainage Area (ac)	Base Curve Number CN	Lag Time (min)	Cumulative Area (ac)	Impervious Cover %	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)
EX 1		1.84	84	8.29		0.00%	3.80		7.20		9.30		12.60	
EX 2		31.48	84	11.23		0.00%	72.10		126.40		160.20		212.00	
EX 3		52.42	84	12.81		0.00%	113.30		201.70		25.40		339.00	
EX 4		21.65	84	10.77		0.00%	52.90		92.00		116.20		153.70	
EX 5		76.76	84	12.84		0.00%	156.70		278.30		353.60		467.90	
EX 6		39.73	84	15.29		0.00%	77.70		141.40		180.90		239.70	
EX 7		14.22	84	12.31		0.00%	32.50		57.10		72.30		95.70	
	POA							402.20		762.70		1002.60		1362.50

Basin ID	Flowpath Length (ft)	Overland Flow: Length (ft)	Slope (ft/ft)	Surface Cover	Velocity (ft/s)	*Manning's n	T_0 (min)	Shallow Concentrated Flow: Length (ft)	Slope (ft/ft)	Surface Type	Velocity (ft/s)	*K	T_S (min)	Channel Flow: Length (ft)	Slope (ft/ft)	Type	*K (ft)	Velocity (ft/s)	T_h (min)	T_C (min)	T_{design} (min)	T_L (min)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
EX-1	559	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	409	0.010	24" RCP		72.01	7.20	0.95	13.92	13.92	8.35
EX-2	2734	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	2684	0.010	24" RCP		72.01	7.20	6.21	19.19	19.19	11.51
EX-3	3698	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	3448	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3;		68.56	6.86	8.38	21.36	21.36	12.81
EX-4	2299	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	2049	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3;		68.56	6.86	4.98	17.96	17.96	10.77
EX-5	3399	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	3249	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3;		68.56	6.86	7.90	20.87	20.87	12.52
EX-6	1458	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	1358	0.010	UNPAVED	1.61	16.1	14.06							25.48	25.48	15.29
EX-7	752	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	752	0.010	UNPAVED	1.61	16.1	7.78							19.21	19.21	11.52

INTERIM DRAINAGE AREA MAP CALCULATIONS

HEC-HMS SUMMARY: INTERIM CONDITONS							2 YEAR STORM		10 YEAR STORM		25 YEAR STORM		100 YEAR STORM	
Drainage Area Basin Designation	Point of Analysis	Drainage Area (ac)	Base Curve Number CN	Lag Time (min)	Cumulative Area (ac)	Impervious Cover %	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)
A-1		8.86	80	12.37		51.18%	26.80		39.40		48.30		61.70	
A-2		9.73	84	3.00		85.40%	71.60		73.50		86.60		104.10	
A-3		8.61	84	3.00		78.70%	60.90		63.70		75.40		91.00	
A-4		9.26	84	6.72		70.00%	45.80		56.40		67.00		82.80	
A-5		12.79	80	3.00		91.81%	96.60		97.70		114.70		137.50	
A-6		10.74	80	3.52		87.32%	75.00		78.50		92.00		111.50	
A-10		5.87	80	12.70		0.00%	10.00		19.70		25.70		35.10	
A-13		2.68	93	3.00		90.20%	21.00		21.00		24.50		29.30	
A-14		1.00	80	3.00		0.00%	3.00		4.90		6.40		8.40	
POND-A								50.20		95.80		119.10		142.20
A-7		12.76	80	8.31		13.90%	32.00		54.30		68.60		91.20	
A-8		10.40	80	8.51		0.00%	21.50		40.60		52.30		71.10	
A-9		18.96	80	8.48		0.00%	39.30		74.10		95.50		129.70	
A-11		6.72	80	8.62		0.00%	13.80		26.10		33.70		45.80	
A-12		4.36	80	14.12		7.80%	7.80		14.70		19.00		25.60	
OS-1		106.13	84	22.93		0.00%	161.20		307.20		398.90		530.90	
	POA							258.90		508.30		663.70		873.00

Basin ID	Flowpath Length (ft)	Overland Flow: Length (ft)	Slope (ft/ft)	Surface Cover	Velocity (ft/s)	*Manning's n	T_0 (min)	Shallow Concentrated Flow: Length (ft)	Slope (ft/ft)	Surface Type	Velocity (ft/s)	*K	T_S (min)	Channel Flow: Length (ft)	Slope (ft/ft)	Type	*K (ft)	Velocity (ft/s)	T_h (min)	T_C (min)	T_{design} (min)	T_L (min)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
A 1	2480	100	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.558	0.01	1.07	2380	0.010	PAVED	2.03	20.3	19.54							20.61	20.61	12.37
A 2	1173	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	45	0.010	PAVED	2.03	20.3	0.37	1078	0.005	48" RCP		114.31	8.1	2.22	3.39	5.00	3.00
A 3	1200	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	295	0.010	PAVED	2.03	20.3	2.42	855	0.005	48" RCP		114.31	8.1	1.76	4.99	5.00	3.00
A 4	1128	50	0.010	SHORT GRASS PRAIRIE	0.129	0.15	6.48	250	0.010	PAVED	2.03	20.3	2.05	828	0.003	36" RCP		94.36	5.2	2.67	11.20	11.20	6.72
A 5	383	100	0.007	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.035	0.01	1.61	254	0.006	PAVED	1.57	20.3	2.70	178	0.024	18" RCP		59.44	9.2	0.32			
														174	0.007	24" RCP		72.01	6.0	0.48			
														174	0.005	30" RCP		83.56	5.9	0.49			
														474	0.006	36" RCP		94.36	7.4	1.07	4.63	5.00	3.00
														234	0.007	42" RCP		104.57	8.6	0.45			
														22	0.036	48" RCP		114.31	21.8	0.02			
														28	0.086	60" RCP		132.64	38.8	0.01			
A 6	637	100	0.044	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	2.158	0.01	0.77	239	0.017	PAVED	2.62	20.3	1.52	299	0.004	18" RCP		59.44	3.7	1.33			
														351	0.008	24" RCP		72.01	6.4	0.92			
														174	0.012	30" RCP		83.56	9.1	0.32			
														174	0.010	36" RCP		94.36	9.2	0.31	5.87	5.87	3.52
														153	0.005	42" RCP		104.57	7.1	0.36			
														137	0.003	48" RCP		114.31	6.7	0.34			
A 7	1035	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	785	0.010	6X6 RCB		149.79	14.98	0.87	13.85	13.85	8.31
A 8	1249	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	999	0.010	8X4 RCB		138.47	13.85	1.20	14.18	14.18	8.51
A 9	1540	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	1290	0.010	10X7 RCB		184.99	18.50	1.16	14.14	14.14	8.48
A 10	1041	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	941	0.010	UNPAVED	1.61	16.1	9.74							21.16	21.16	12.70
A 11	851	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	601	0.010	24" RCP		72.01	7.20	1.39	14.37	14.37	8.62
A 12	1985	80	0.010	DENSE GRASS	0.096	0.24	13.92	25	0.010	UNPAVED	1.61	16.10	0.26	1055	0.010	PARABOLIC SWALE, 1' DEEP, 10' SPREAD		27.68	2.77	6.35			
														275	0.010	24" RCP		72.01	7.20	0.64			
														100	0.010	10X7 RCB		184.99	18.50	0.09	23.53	23.53	14.12
														325	0.010	48" RCP		114.31	11.43	0.47			
														500	0.005	CONCRETE TRAP CHANNEL, B=0, Y= 2, SS=1:1		65.52	4.63	1.80			
A 13	371	160	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.731	0.01	1.54	1	0.005	PAVED	1.44	20.3	0.01	210	0.010	24" RCP		72.01	7.2	0.49	2.04	5.00	3.00
A 14	166	15	0.005	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	0.619	0.01	0.40	1	0.005	PAVED	1.44	20.3	0.01	150	0.010	18" RCP		59.44	5.9	0.42	0.84	5.00	3.00
OS-1	3300	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	2400	0.010	UNPAVED	1.61	16.1	24.84	800	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3:1		68.56	6.86	1.94	38.21	38.21	22.93

PROPOSED DRAINAGE AREA MAP CALCULATIONS

HEC-HMS SUMMARY: DEVELOPED CONDITONS							2 YEAR STORM		10 YEAR STORM		25 YEAR STORM		100 YEAR STORM	
Drainage Area Basin Designation	Point of Analysis	Drainage Area (ac)	Base Curve Number CN	Lag Time (min)	Cumulative Area (ac)	Impervious Cover %	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)
DA-1		8.86	80	12.37		51.18%	26.80		39.40		48.30		61.70	
DA-2		9.73	84	3.00		85.40%	71.60		73.50		86.60		104.10	
DA-3		8.61	84	3.00		78.70%	60.90		63.70		75.40		91.00	
DA-4		9.26	84	6.72		70.00%	45.80		56.40		67.00		82.80	
DA-5		12.79	80	3.00		91.81%	96.60		97.70		114.70		137.50	
DA-6		10.74	80	3.52		87.32%	75.00		78.50		92.00		111.50	
DA-9		21.90	80	13.08		7.12%	40.30		75.80		98.00		132.40	
DA-10		5.87	80	12.70		0.00%	10.00		19.70		25.70		35.10	
DA-11		8.75	80	8.57		0.00%	18.00		34.10		43.90		59.70	
DA-13		2.68	93	3.00		90.20%	21.00		21.00		24.50		29.30	
DA-14		1.00	80	3.00		0.00%	3.00		4.90		6.40		8.40	
POND-A								50.20		95.80		119.10		142.20
DA-7		9.76	80	8.30		13.90%	24.50		41.50		52.50		69.80	
DA-8		8.39	80	8.34		0.00%	17.50		33.00		42.50		57.60	
DA-12		4.36	80	14.12		0.00%	7.00		14.00		18.30		25.00	
OS-1		106.13	84	22.93		0.00%	161.20		307.20		398.90		530.90	
	POA							265.20		519.90		677.40		890.90

Basin ID	Flowpath Length (ft)	Overland Flow: Length (ft)	Slope (ft/ft)	Surface Cover	Velocity (ft/s)	*Manning's n	T_0 (min)	Shallow Concentrated Flow: Length (ft)	Slope (ft/ft)	Surface Type	Velocity (ft/s)	*K	T_S (min)	Channel Flow: Length (ft)	Slope (ft/ft)	Type	*K (ft)	Velocity (ft/s)	T_h (min)	T_C (min)	T_{design} (min)	T_L (min)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
DA 1	2480	100	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.557	0.01	1.07	2380	0.010	PAVED	2.03	20.3	19.54							20.61	20.61	12.37
DA 2	1173	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	45	0.010	PAVED	2.03	20.3	0.37	1078	0.005	48" RCP		114.31	8.1	2.22	3.39	5.00	3.00
DA 3	1200	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	295	0.010	PAVED	2.03	20.3	2.42	855	0.005	48" RCP		114.31	8.1	1.76	4.99	5.00	3.00
DA 4	1128	50	0.010	SHORT GRASS PRAIRIE	0.129	0.15	6.48	250	0.010	PAVED	2.03	20.3	2.05	828	0.003	36" RCP		94.36	5.2	2.67	11.20	11.20	6.72
DA 5	383	100	0.007	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.035	0.01	1.61	254	0.01	PAVED	1.57	20.30	2.70	178	0.024	18" RCP		59.44	9.2	0.32			
														174	0.007	24" RCP		72.01	6.0	0.48			
														174	0.005	30" RCP		83.56	5.9	0.49			
														474	0.006	36" RCP		94.36	7.4	1.07	4.63	5.00	3.00
														234	0.007	42" RCP		104.57	8.6	0.45			
														22	0.036	48" RCP		114.31	21.8	0.02			
														28	0.086	60" RCP		132.64	38.8	0.01			
DA 6	637	100	0.044	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	2.158	0.01	0.77	239	0.02	PAVED	2.62	20.30	1.52	299	0.004	18" RCP		59.44	3.7	1.33			
														351	0.008	24" RCP		72.01	6.4	0.92			
														174	0.012	30" RCP		83.56	9.1	0.32			
														174	0.010	36" RCP		94.36	9.2	0.31	5.87	5.87	3.52
														153	0.005	42" RCP		104.57	7.1	0.36			
														137	0.003	48" RCP		114.31	6.7	0.34			
DA 7	1035	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	785	0.010	6X6 RCB		149.79	15.0	0.87	13.85	13.85	8.31
DA 8	1249	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	999	0.010	8X4 RCB		138.47	13.8	1.20	14.18	14.18	8.51
DA 9	1540	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	1290	0.010	10X7 RCB		184.99	18.5	1.16	14.14	14.14	8.48
DA 10	1041	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	941	0.010	UNPAVED	1.61	16.1	9.74							21.16	21.16	12.70
DA 11	851	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	601	0.010	24" RCP		72.01	7.2	1.39	14.37	14.37	8.62
DA 12	1985	80	0.010	DENSE GRASS	0.096	0.24	13.92	25	0.010	UNPAVED	1.61	16.10	0.26	1055	0.010	PARABOLIC SWALE, 1' DEEP, 10' SPREAD		27.68	2.77	6.35			
														275	0.010	24" RCP		72.01	7.20	0.64			
														100	0.010	10X7 RCB		184.99	18.50	0.09	23.53	23.53	14.12
														325	0.010	48" RCP		114.31	11.43	0.47			
														500	0.005	CONCRETE TRAP CHANNEL, B=0, Y= 2, SS=1:1		65.52	4.63	1.80			
DA 13	371	160	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.731	0.01	1.54	1	0.005	PAVED	1.44	20.3	0.01	210	0.010	24" RCP		72.01	7.2	0.49	2.04	5.00	3.00
DA 14	166	15	0.005	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	0.619	0.01	0.40	1	0.005	PAVED	1.44	20.3	0.01	150	0.010	18" RCP		59.44	5.9	0.42	0.84	5.00	3.00
OS-1	3300	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	2400	0.010	UNPAVED	1.61	16.1	24.84	800	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3:1		68.56	6.86	1.94	38.21	38.21	22.93

POA COMPARISON

FLOW COMPARISON: EXISTING VS. INTERIM VS. PROPOSED												
	2 YEAR STORM			10 YEAR STORM			25 YEAR STORM			100 YEAR STORM		
Point of Analysis	Existing (cfs)	Interim (cfs)	Proposed (cfs)	Existing (cfs)	Interim (cfs)	Proposed (cfs)	Existing (cfs)	Interim (cfs)	Proposed (cfs)	Existing (cfs)	Interim (cfs)	Proposed (cfs)
POA	402.20	258.90	265.20	762.70	508.30	519.90	1002.60	663.70	677.40	1362.50	873.00	890.90

NOTE: DETENTION FOR THIS SITE IS BEING PROVIDED WITH 2020-55-CON, POND A
NOTE: THIS HAS BEEN CALCULATED WITH SCS METHOD-TIME OF CONCENTRATION CALCS.

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REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

DRAINAGE AREA CALCULATIONS

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

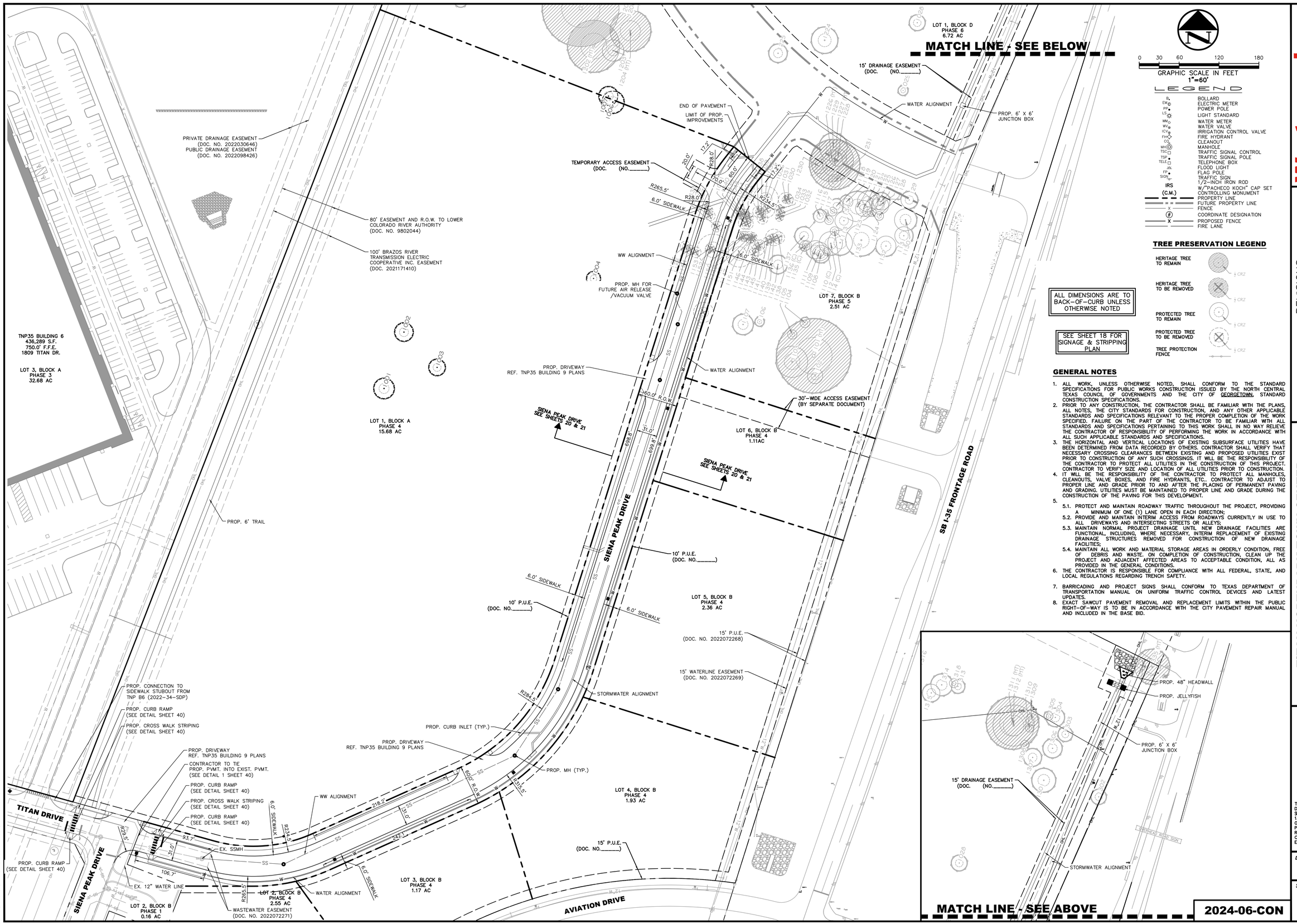
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DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO. 16

2024-06-CON

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GRAPHIC SCALE IN FEET
1"=60'

LEGEND

	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
FF	FLOOD LIGHT
SIGN	FLAG POLE
	TRAFFIC SIGN
IRS	1/2-INCH IRON ROD
(C.M.)	W/"PACHECO KOCH" CAP SET
	CONTROLLING MONUMENT
	PROPERTY LINE
	FUTURE PROPERTY LINE
X	FENCE
#	COORDINATE DESIGNATION
X	PROPOSED FENCE
	FIRE LANE

TREE PRESERVATION LEGEND

- HERITAGE TREE TO REMAIN — ½ CRZ
- HERITAGE TREE TO BE REMOVED — ½ CRZ
- PROTECTED TREE TO REMAIN — ½ CRZ
- PROTECTED TREE TO BE REMOVED — ½ CRZ
- TREE PROTECTION FENCE

ALL DIMENSIONS ARE TO BACK-OF-CURB UNLESS OTHERWISE NOTED

SEE SHEET 18 FOR SIGNAGE & STRIPPING PLAN

GENERAL NOTES

1. ALL WORK, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS AND THE CITY OF GEORGETOWN, STANDARD CONSTRUCTION SPECIFICATIONS.
2. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL BE FAMILIAR WITH THE PLANS, ALL NOTES, THE CITY STANDARDS FOR CONSTRUCTION, AND ANY OTHER APPLICABLE STANDARDS AND SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO BE FAMILIAR WITH ALL STANDARDS AND SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY OF PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.
3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. CONTRACTOR SHALL VERIFY THAT NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSINGS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEANOUTS, VALVE BOXES, AND FIRE HYDRANTS, ETC., CONTRACTOR TO ADJUST TO PROPER LINE AND GRADE PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING THE CONSTRUCTION OF THE PAVING FOR THIS DEVELOPMENT.
5.
   - 5.1. PROTECT AND MAINTAIN ROADWAY TRAFFIC THROUGHOUT THE PROJECT, PROVIDING A MINIMUM OF ONE (1) LANE OPEN IN EACH DIRECTION;
   - 5.2. PROVIDE AND MAINTAIN INTERIM ACCESS FROM ROADWAYS CURRENTLY IN USE TO ALL DRIVEWAYS AND INTERSECTING STREETS OR ALLEYS;
   - 5.3. MAINTAIN NORMAL PROJECT DRAINAGE UNTIL NEW DRAINAGE FACILITIES ARE FUNCTIONAL, INCLUDING, WHERE NECESSARY, INTERIM REPLACEMENT OF EXISTING DRAINAGE STRUCTURES REMOVED FOR CONSTRUCTION OF NEW DRAINAGE FACILITIES;
   - 5.4. MAINTAIN ALL WORK AND MATERIAL STORAGE AREAS IN ORDERLY CONDITION, FREE OF DEBRIS AND WASTE. ON COMPLETION OF CONSTRUCTION, CLEAN UP THE PROJECT AND ADJACENT AFFECTED AREAS TO ACCEPTABLE CONDITION, ALL AS PROVIDED IN THE GENERAL CONDITIONS.
6. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.
7. BARRICADING AND PROJECT SIGNS SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND LATEST UPDATES.
8. EXACT SAWCUT PAVEMENT REMOVAL AND REPLACEMENT LIMITS WITHIN THE PUBLIC RIGHT-OF-WAY IS TO BE IN ACCORDANCE WITH THE CITY PAVEMENT REPAIR MANUAL AND INCLUDED IN THE BASE BID.

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REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

SITE PLAN

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

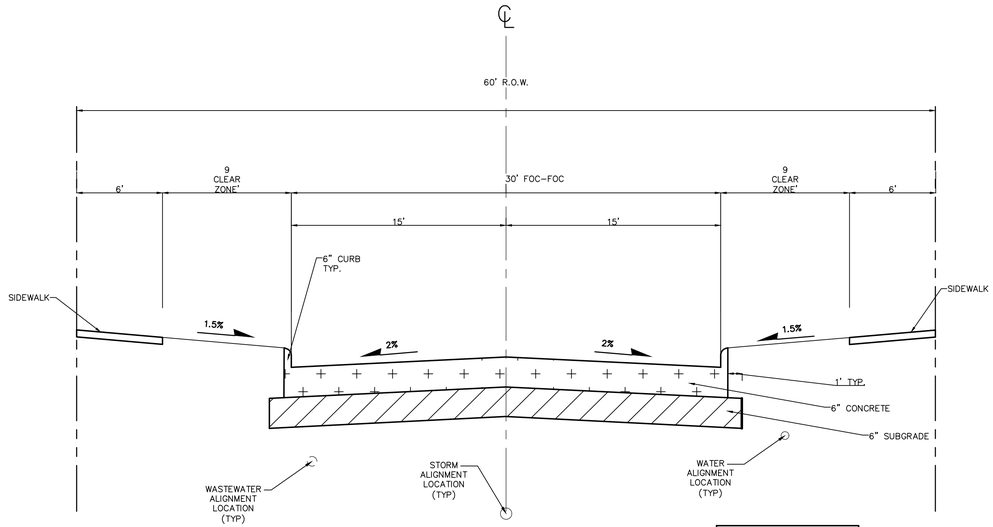
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HAS	NBB	MAR 2024

SHEET NO. 17

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SIENA PEAK DRIVE
STA 0+77.13 TO STA 16+49.95

1

1"=10'

NOTE: TYPICAL SECTION FOR INFORMATIONAL PURPOSES. REFERENCE SECTIONS ON SHEET 41

0 20 40 80 120
GRAPHIC SCALE IN FEET
1"=40'

0 5 10 15
VERTICAL SCALE IN FEET
V: 1"=5'

2024-06-CON

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NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

ROADWAY TYPICAL SECTIONS

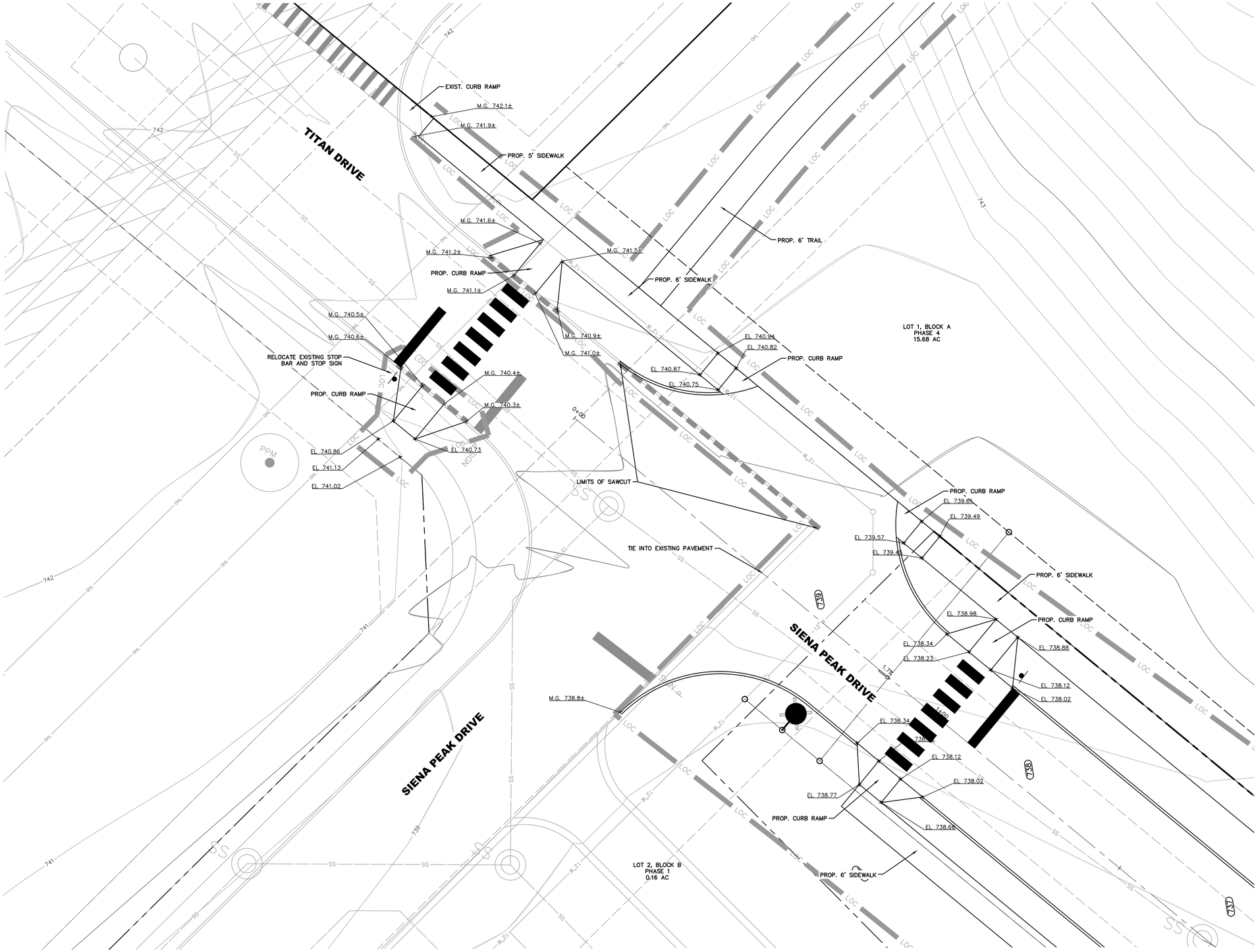
STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED PROFESSIONAL ENGINEER

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DESIGN	DRAWN	DATE
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SHEET NO.
19

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GRAPHIC SCALE IN FEET
1"=20'

LEGEND

BOLLARD	
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
	FLOOD LIGHT
FP	FLAG POLE
SIGN	TRAFFIC SIGN
IRS	1/2-INCH IRON ROD
(C.M.)	W/"PACHECO KOCH" CAP SET CONTROLLING MONUMENT
	PROPERTY LINE
X	FENCE
OHL	OVERHEAD UTILITY LINE
T	UNDERGROUND ELECTRIC LINE
	UNDERGROUND TELEPHONE LINE
6"W	UNDERGROUND CABLE LINE
6"SS	UNDERGROUND WATER LINE
LOC	UNDERGROUND SANITARY SEWER LINE
	LIMITS OF CONSTRUCTION

SEE SHEET 18 FOR SIGNAGE & STRIPPING PLAN

1 SIENA PEAK DRIVE & TITAN DRIVE

1"=20'

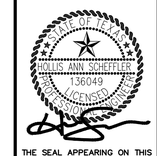
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NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

INTERSECTION BLOWUPS



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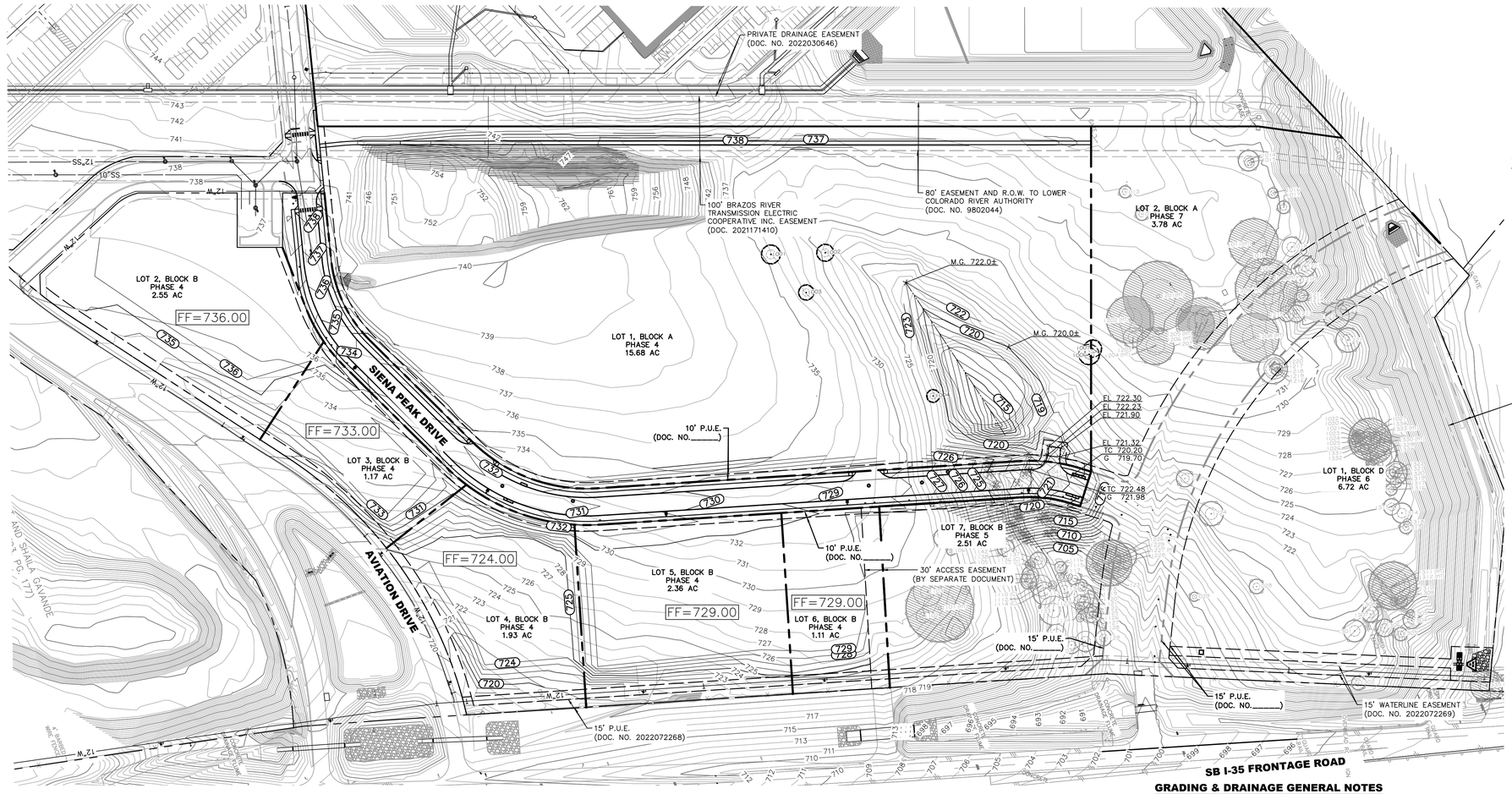
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GRAPHIC SCALE IN FEET
1"=100'

LEGEND

BL	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LT	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
FL	FLOOD LIGHT
FP	FLAG POLE
SIGN	TRAFFIC SIGN
IRS	1/2-INCH IRON ROD
(C.M.)	W/"PACHECO KOCH" CAP SET CONTROLLING MONUMENT
	PROPERTY LINE
X	FENCE
OHL	OVERHEAD UTILITY LINE
613	EXIST CONTOUR
612.39	EXIST SPOT ELEVATION
TC 612.39 G 611.89	EXIST TOP OF CURB ELEVATION EXIST GUTTER ELEVATION
400	PROPOSED CONTOUR
TC 614.50 G 614.00	PROPOSED TOP OF CURB ELEVATION PROPOSED GUTTER ELEVATION
EL 614.25	PROPOSED SPOT ELEVATION
TW 620.50 EL 614.00	PROPOSED TOP OF WALL ELEVATION PROPOSED GROUND ELEVATION AT BOTTOM OF WALL
M.G.	MATCH EXISTING GRADE
	PROPOSED SWALE
	PROPOSED GRADE BREAK
	PROPOSED DRAINAGE FLOW DIRECTION

TREE PRESERVATION LEGEND

HERITAGE TREEREE TO REMAIN ± CRZ

HERITAGE TREE E TO BE REMOVED ED ± CRZ

PROTECTED TREE :E TO REMAIN ± CRZ

PROTECTED TREE :E TO BE REMOVED) ± CRZ

TREE PROTECTION FENCE

FOR ROADWAY PLAN & PROFILES SEE SHEETS 20 TO 22

PRIVATE DRAINAGE EASEMENT (DOC. NO. 2022030646) & PUBLIC DRAINAGE EASEMENT (DOC. NO. 2023020680)

GRADING & DRAINAGE GENERAL NOTES

1. REFER TO GEOTECHNICAL REPORT FOR REQUIREMENTS REGARDING FILL COMPACTION AND MOISTURE CONTENT.
2. UNLESS NOTED, ALL FILL IS TO BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY WITHIN 3% OF OPTIMUM MOISTURE CONTENT. FILL TO BE PLACED IN MAXIMUM LIFTS OF 6 INCHES.
3. SIDEWALKS AND ACCESSIBLE ROUTES SHALL HAVE A RUNNING SLOPE NO GREATER THAN 5% (UNLESS OTHERWISE NOTED) AND A CROSS SLOPE NO GREATER THAN 2%.
4. GRADING OF ALL HANDICAPPED SPACES AND ROUTES TO CONFORM TO FEDERAL, STATE, AND LOCAL GUIDELINES.
5. ALL PROPOSED AND EXISTING GRADES IN NON-PAVED AREAS ARE "FINISHED GRADE" (i.e. IN LANDSCAPE BEDS, TOP OF MULCH/BEDDING MATERIAL).
6. UNLESS NOTED, STORM DRAIN LINES SHALL BE OF THE FOLLOWING MATERIALS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS:
   - 6.A. RCP C-76, CLASS III
   - 6.B. ADS N-12
   - 6.C. HANCOR Hi-Q
   - 6.D. CONTECH ALUMINIZED ULTRA FLOW
   - 6.E. LANE HD 100
7. UNLESS NOTED, GRATE INLETS TO BE "FORTERRA PIPE AND PRECAST" CATCH BASIN SIZED AS SHOWN, OR APPROVED EQUAL.
8. FINAL PAVING, CURB, AND SIDEWALK ELEVATIONS WILL BE PLACED AT PLUS OR MINUS 0.03 FOOT.
9. REFER TO LANDSCAPE SPECIFICATIONS FOR SEEDING AND SODDING REQUIREMENTS.
10. ANY CONCRETE, ROCK, OR MATERIAL DEEMED BY THE ENGINEER TO BE UNSUITABLE FOR SUBGRADE SHALL BE DISPOSED OF OFFSITE AT CONTRACTOR'S EXPENSE.
11. TRENCH BACKFILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
12. EMBEDMENT SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
13. A ROUND MANHOLE COVER MEETING CITY SPECIFICATIONS SHALL BE PLACED IN ALL INLET TOPS NEAR THE OUTLET PIPE.
14. CRUSHED STONE BEDDING OR APPROVED EQUAL SHALL BE PROVIDED BY THE CONTRACTOR WHEN ROCK IS ENCOUNTERED IN TRENCHES. THERE SHALL BE NO ADDITIONAL PAY ITEM FOR CRUSHED STONE BEDDING.
15. IF REQUIRED DUE TO CONSTRUCTION, POWER POLES TO BE BRACED OR RELOCATED AT CONTRACTOR'S EXPENSE.

2024-06-CON

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REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

MASS GRADING

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

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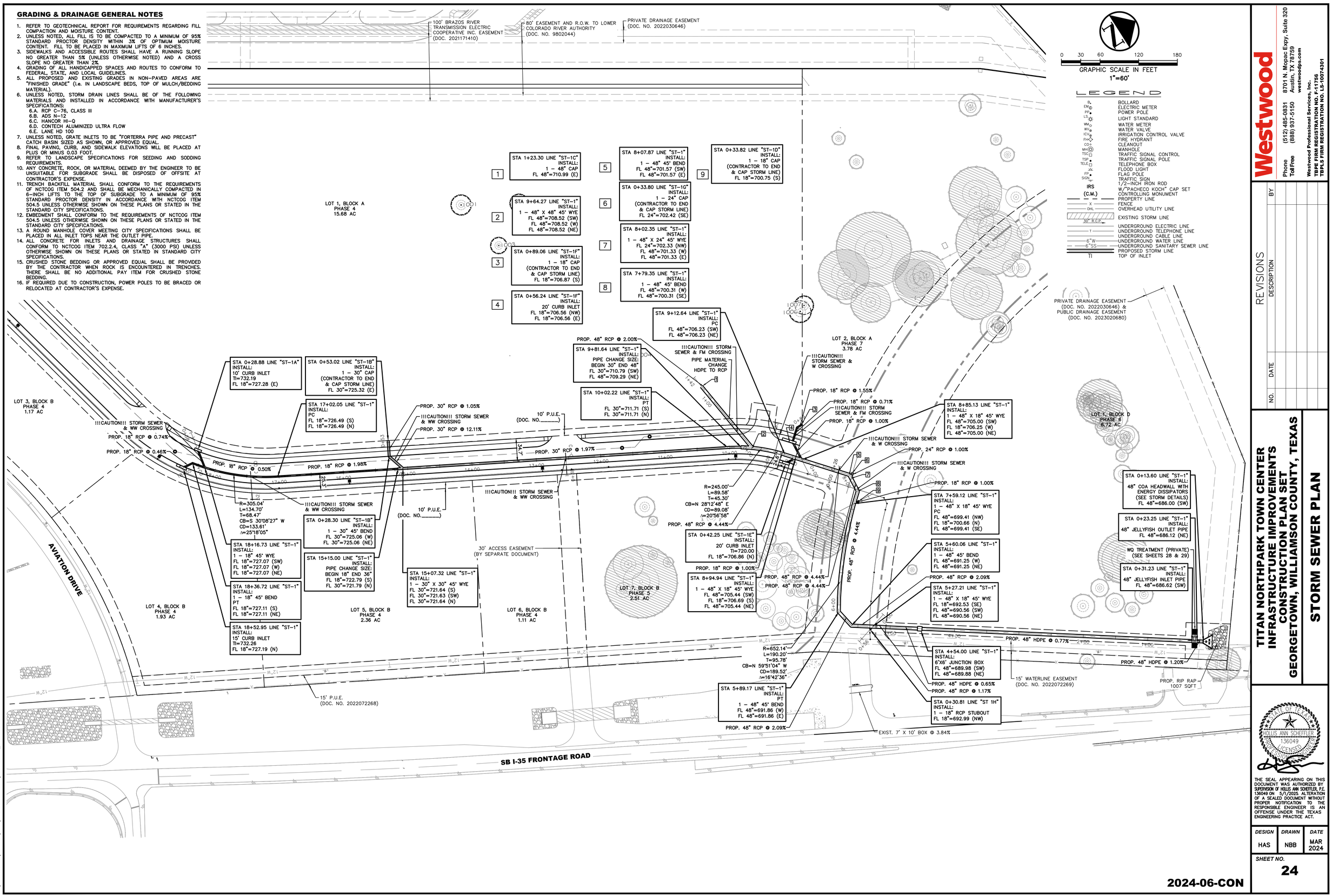
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GRADING & DRAINAGE GENERAL NOTES

1. REFER TO GEOTECHNICAL REPORT FOR REQUIREMENTS REGARDING FILL COMPACTION AND MOISTURE CONTENT.
2. UNLESS NOTED, ALL FILL IS TO BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY WITHIN 3% OF OPTIMUM MOISTURE CONTENT. FILL TO BE PLACED IN MAXIMUM LIFTS OF 6 INCHES.
3. SIDEWALKS AND ACCESSIBLE ROUTES SHALL HAVE A RUNNING SLOPE NO GREATER THAN 5% (UNLESS OTHERWISE NOTED) AND A CROSS SLOPE NO GREATER THAN 2%.
4. GRADING OF ALL HANDICAPPED SPACES AND ROUTES TO CONFORM TO FEDERAL, STATE, AND LOCAL GUIDELINES.
5. ALL PROPOSED AND EXISTING GRADES IN NON-PAVED AREAS ARE "FINISHED GRADE" (i.e. IN LANDSCAPE BEDS, TOP OF MULCH/BEDDING MATERIAL).
6. UNLESS NOTED, STORM DRAIN LINES SHALL BE OF THE FOLLOWING MATERIALS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS:
   - 6.A. RCP C-76, CLASS III
   - 6.B. ADS N-12
   - 6.C. HANCOR Hi-Q
   - 6.D. CONTECH ALUMINIZED ULTRA FLOW
   - 6.E. LANE HD 100
7. UNLESS NOTED, GRATE INLETS TO BE "FORTERRA PIPE AND PRECAST" CATCH BASIN SIZED AS SHOWN, OR APPROVED EQUAL.
8. FINAL PAVING, CURB, AND SIDEWALK ELEVATIONS WILL BE PLACED AT PLUS OR MINUS 0.03 FOOT.
9. REFER TO LANDSCAPE SPECIFICATIONS FOR SEEDING AND SODDING REQUIREMENTS.
10. ANY CONCRETE, ROCK, OR MATERIAL DEEMED BY THE ENGINEER TO BE UNSUITABLE FOR SUBGRADE SHALL BE DISPOSED OF OFFSITE AT CONTRACTOR'S EXPENSE.
11. TRENCH BACKFILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 504.2 AND SHALL BE MECHANICALLY COMPACTED IN 6-INCH LIFTS TO THE TOP OF SUBGRADE TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY IN ACCORDANCE WITH NCTCOG ITEM 504.5 UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
12. EMBEDMENT SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 504.5 UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
13. A ROUND MANHOLE COVER MEETING CITY SPECIFICATIONS SHALL BE PLACED IN ALL INLET TOPS NEAR THE OUTLET PIPE.
14. ALL CONCRETE FOR INLETS AND DRAINAGE STRUCTURES SHALL CONFORM TO NCTCOG ITEM 702.2.4, CLASS "A" (3000 PSI) UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN STANDARD CITY SPECIFICATIONS.
15. CRUSHED STONE BEDDING OR APPROVED EQUAL SHALL BE PROVIDED BY THE CONTRACTOR WHEN ROCK IS ENCOUNTERED IN TRENCHES. THERE SHALL BE NO ADDITIONAL PAY ITEM FOR CRUSHED STONE BEDDING.
16. IF REQUIRED DUE TO CONSTRUCTION, POWER POLES TO BE BRACED OR RELOCATED AT CONTRACTOR'S EXPENSE.



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TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

STORM SEWER PLAN

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISOR OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

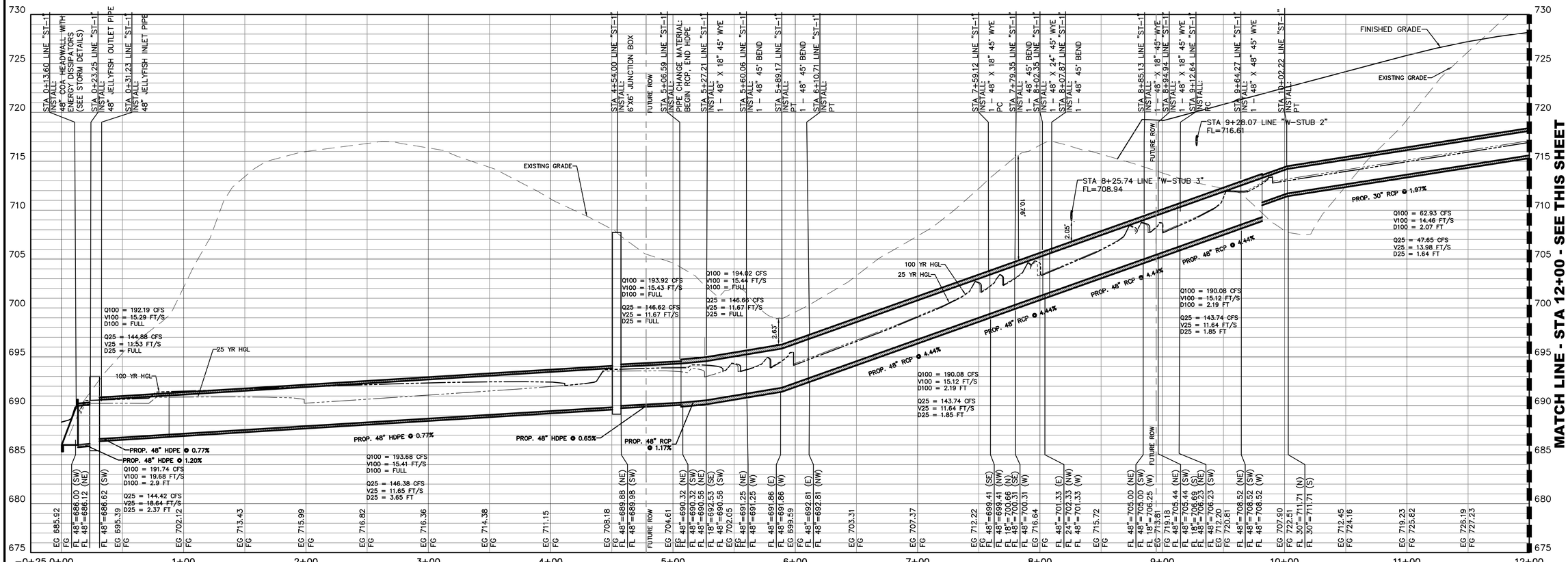
DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO. 24

2024-06-CON

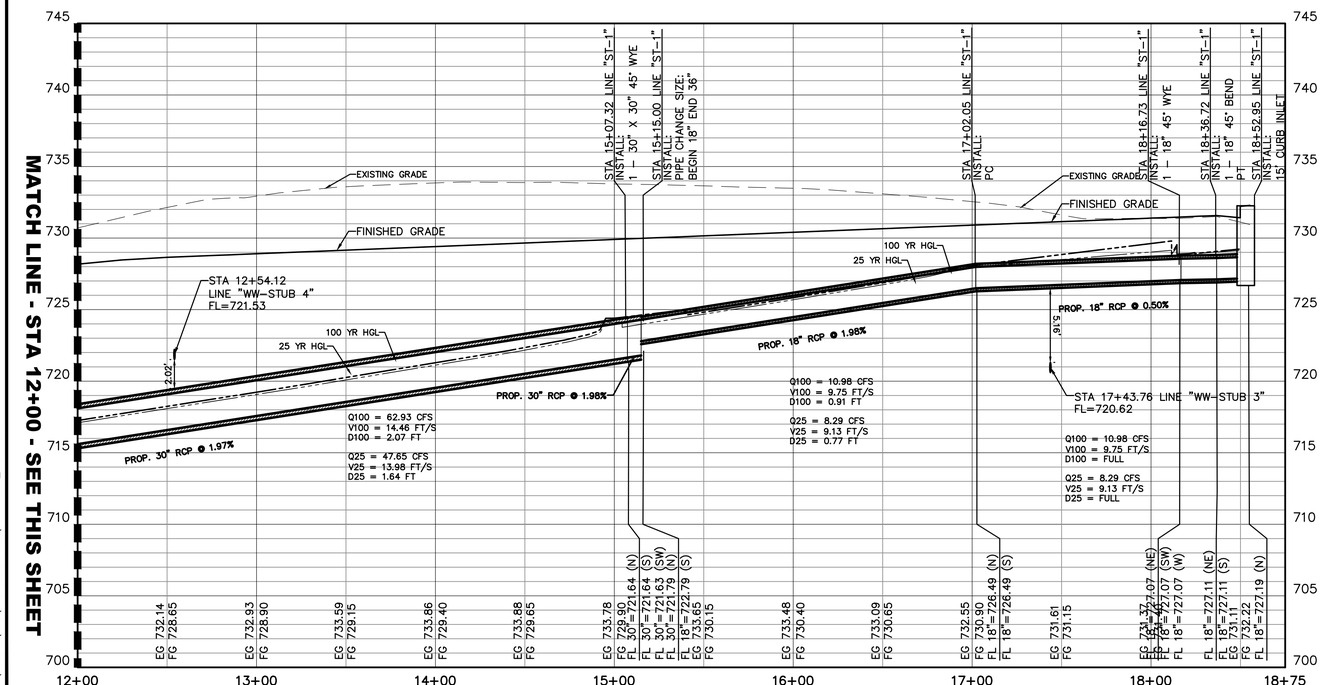
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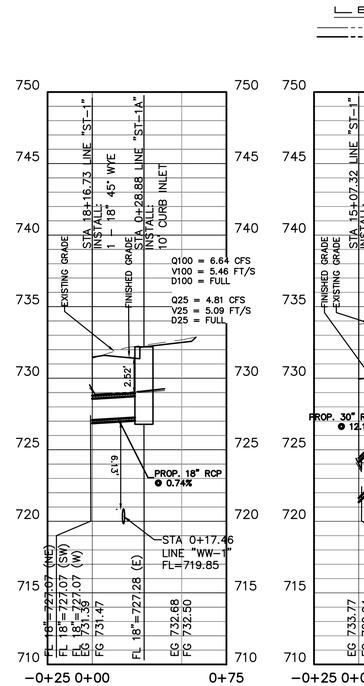


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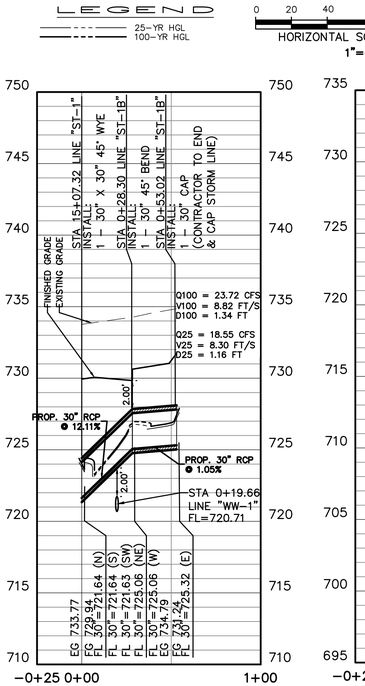
MATCH LINE - STA 12+00 - SEE THIS SHEET



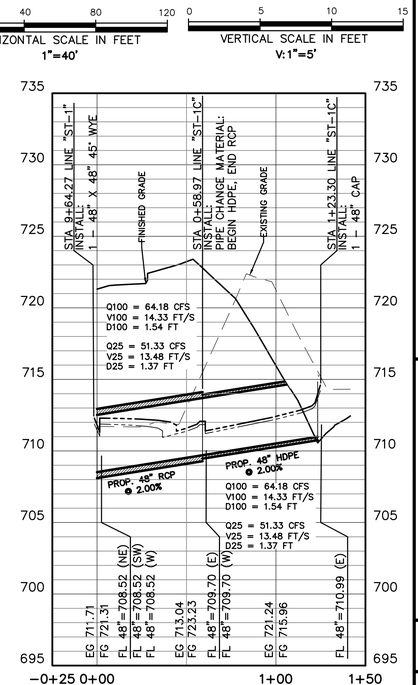
PROFILE: ST-1



PROFILE: ST-1A



PROFILE: ST-1B



PROFILE: ST-1C

LEGEND
25-YR HGL
100-YR HGL

HORIZONTAL SCALE IN FEET
0 20 40 80 120
1"=40'

VERTICAL SCALE IN FEET
0 5 10 15
V:1"=5'

2024-06-CON

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Westwood
Phone (512) 485-0831
TollFree (888) 937-5150
8701 N. Mopac Expy, Suite 320
Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

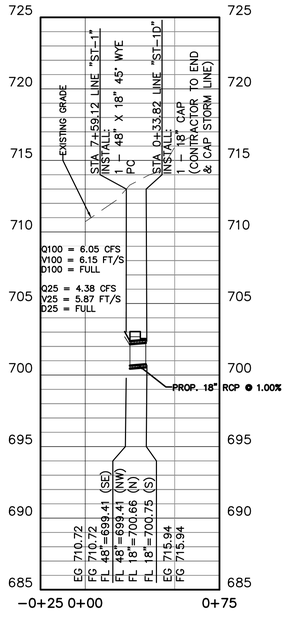
STORM SEWER PROFILE SHEET 1 OF 2

HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

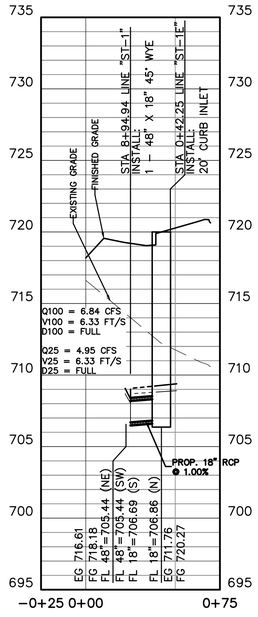
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DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

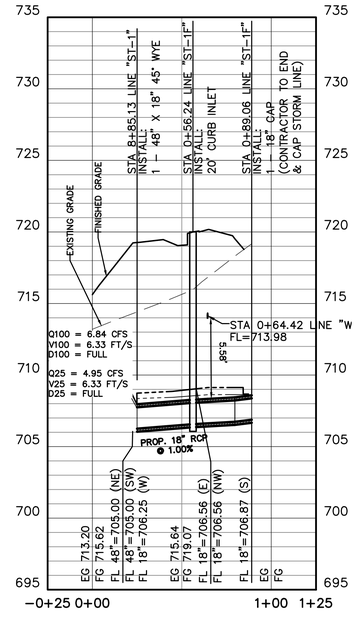
SHEET NO.
25



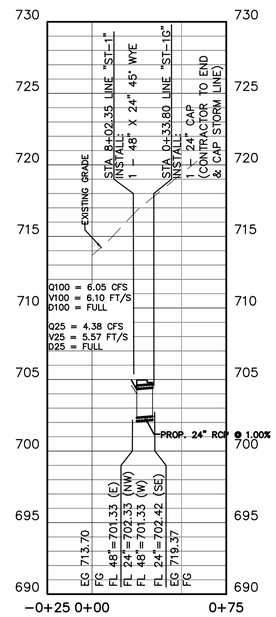
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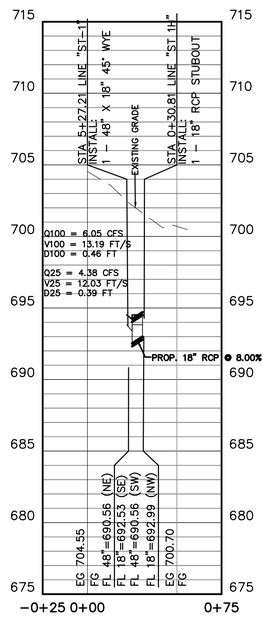
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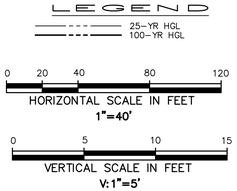
PROFILE: ST-1F



PROFILE: ST-1G



PROFILE: ST 1H



2024-06-CON

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Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

STORM SEWER PROFILE SHEET 2 OF 2

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

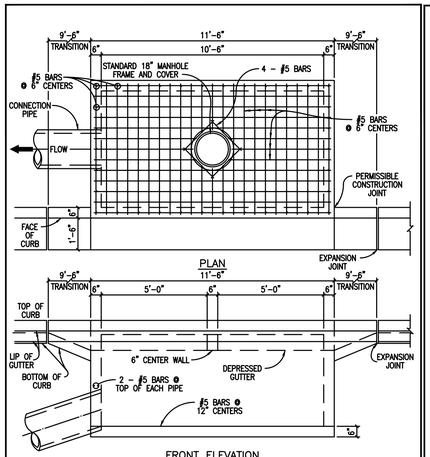
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HAS	NBB	MAR 2024

SHEET NO.
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FRONT ELEVATION

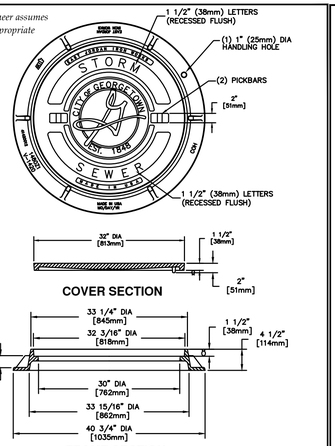
NOTES:
1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI CONCRETE.
2. STORM SEWER PIPE MATERIAL TO BE R.C.P. (CLASS III) UNLESS OTHERWISE APPROVED BY THE CITY OF GEORGETOWN.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CURB INLET DETAIL
SD09
NTS | 1/2003

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



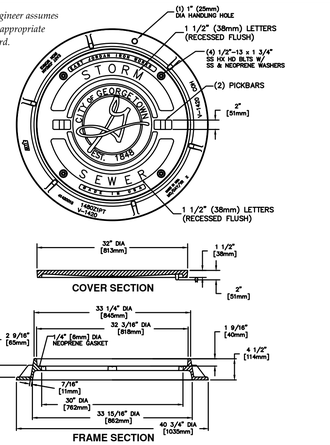
NOTES:
1. STANDARD STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V-1420\1480Z1, COVER TO BE STAMPED WITH "STORM SEWER".
2. STANDARD STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148391.
4. FOR BOLTED STORM SEWER MANHOLE SET REFER TO DETAIL SD11A.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD STORM SEWER MANHOLE SET
SD11
NTS | 1/2003

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

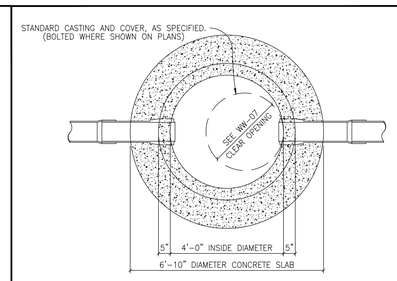


NOTES:
1. BOLTED STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480APT V-1420\1480Z1PT. COVER TO BE STAMPED WITH "STORM SEWER"
2. BOLTED STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 00148393 41420015.
4. FOR STANDARD STORM SEWER MANHOLE SET REFER TO DETAIL SD11.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
BOLTED STORM SEWER MANHOLE SET
SD11A
NTS | 1/2006



MANHOLE PLAN

CITY OF GEORGETOWN NOTES:

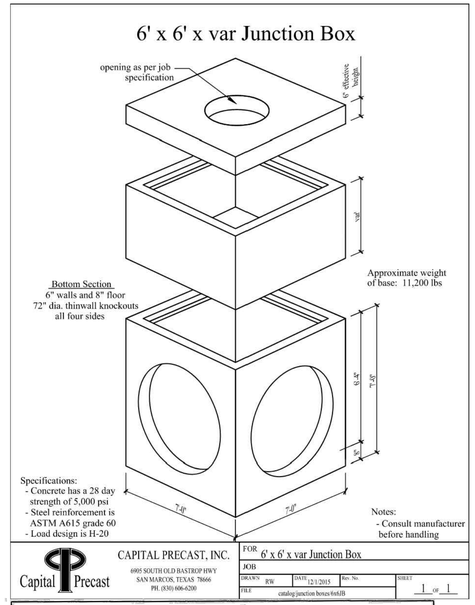
MANHOLE DETAILS SHALL REFLECT THE CITY'S MINIMUM SPECIFICATIONS, AS STATED BELOW:

A. ALL MANHOLES SHALL BE 48" I.D., R.C.P., CLASS III, WITH RUBBER O-RING GASKET JOINTS CONFORMING TO ASTM C478, C433 AND C76.
B. ALL MANHOLES SHALL HAVE FRAME AND COVER, AS MANUFACTURED BY EAST JORDAN IRON WORKS (AS PER DETAIL # WW-07) OR APPROVED EQUIVALENT.
C. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON FRAME AND COVER.
D. ALL MANHOLES SHALL HAVE AN ECCENTRIC CONE.
E. MANHOLES MAY HAVE A FLAT LID, IF APPROVED BY CITY OF GEORGETOWN, BEING 12" THICK WITH A MINIMUM 30" OPENING, AS MANUFACTURED BY CALVERT CONCRETE OR APPROVED EQUAL M.F.G. CONFORMING TO ASTM C478, 5000 P.S.I. CONCRETE, TRAFFIC BEARING, AND O-RING JOINT CONFORMING TO ASTM C443.
F. INVERTS AND FLEXIBLE SEAL BOOTS, PER ASTM C-923, SHALL BE CAST INTO BASE SECTION.
G. MINIMUM DROP BETWEEN INVERTS SHALL BE ONE-TENTH OF A FOOT (0.1').
H. GRADE RINGS WITH AN I.D. TO MATCH FRAMES CLEAR OPENING WITH A MAXIMUM OF FIVE (5) GRADE RINGS ARE ALLOWED.

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

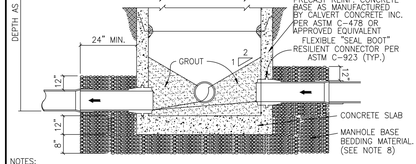
ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD STORM SEWER MANHOLE PLAN
SD12
NTS | 1/2003



CAPITAL PRECAST, INC.
6005 SOUTH OLD BASTROP HWY
SAN MARCOS, TEXAS 78666
PH. (830) 606-6200

FOR: 6' x 6' x var Junction Box
JOB
DRAWN: RW | DATE: 12/1/2015 | Rev. No. | SHEET: 1 OF 1
TITLE: catalog junction boxes/6x6JB

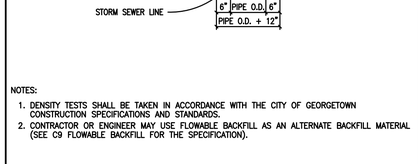


NOTES:
1. MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET – SINGLE OFF-SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
4. AN 80 MIL COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH STORM SEWER MANHOLE AND UNDERSIDE OF FLAT TOPS.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETTED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
6. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
7. MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS-20 TRAFFIC LOADS.
8. GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
8. MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL: SIEVE SIZE 2", PERCENT (%) RETAINED 0 SIEVE SIZE 1 1/2", % RETAINED 0–10 SIEVE SIZE 1", % RETAINED 45–80 SIEVE SIZE 3/4", % RETAINED 85–100 SIEVE SIZE 3/8", % RETAINED 95–100

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD STORM SEWER MANHOLE – SECTION
SD13
NTS | 1/2003



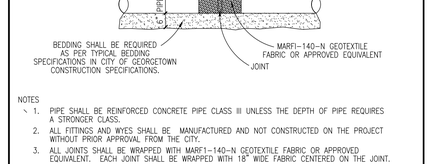
NOTES:
1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

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

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY FOR STORM SEWER
SD41
NTS | 1/2003

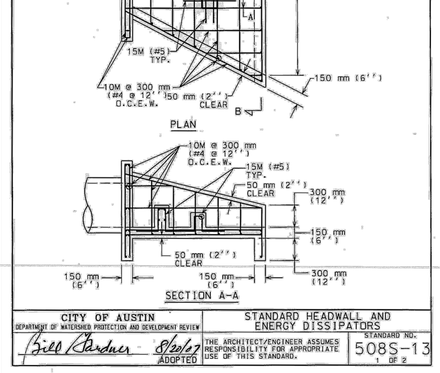


NOTES
1. PIPE SHALL BE REINFORCED CONCRETE PIPE CLASS III UNLESS THE DEPTH OF PIPE REQUIRES A STRONGER CLASS.
2. ALL FITTINGS AND WYES SHALL BE MANUFACTURED AND NOT CONSTRUCTED ON THE PROJECT WITHOUT PRIOR APPROVAL FROM THE CITY.
3. ALL JOINTS SHALL BE WRAPPED WITH MARFI-140-N GEOTEXTILE FABRIC OR APPROVED EQUIVALENT. EACH JOINT SHALL BE WRAPPED WITH 18" WIDE FABRIC CENTERED ON THE JOINT.

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

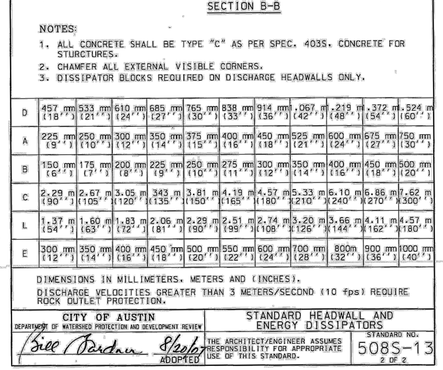
ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL (PROFILE) FOR STORM SEWER
SD42
NTS | 1/2003



CITY OF AUSTIN
DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW
Bill Bardin 8/26/97 ADOPTED

STANDARD HEADWALL AND ENERGY DISSIPATORS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-13 1 OF 2



NOTES:
1. ALL CONCRETE SHALL BE TYPE "C" AS PER SPEC. 403S. CONCRETE FOR STURCTURES.
2. CHAMFER ALL EXTERNAL VISIBLE CORNERS.
3. DISSIPATOR BLOCKS REQUIRED ON DISCHARGE HEADWALLS ONLY.

D	457 mm (18")	533 mm (21")	610 mm (24")	685 mm (27")	765 mm (30")	838 mm (33")	914 mm (36")	067 m (42")	219 m (48")	372 m (54")	524 m (60")	
A	225 mm (9")	250 mm (10")	300 mm (12")	350 mm (14")	375 mm (15")	400 mm (16")	450 mm (18")	525 mm (21")	600 mm (24")	675 mm (27")	750 mm (30")	
B	150 mm (6")	175 mm (7")	200 mm (8")	225 mm (9")	250 mm (10")	275 mm (11")	300 mm (12")	350 mm (14")	400 mm (16")	450 mm (18")	500 mm (20")	
C	2.29 m (90")	2.67 m (105")	3.05 m (120")	343 m (135")	3.81 m (150")	4.19 m (165")	4.57 m (180")	5.33 m (210")	6.10 m (240")	6.86 m (270")	7.62 m (300")	
L	1.37 m (54")	1.60 m (63")	1.83 m (72")	2.06 m (81")	2.29 m (90")	2.51 m (99")	2.74 m (108")	3.20 m (126")	3.66 m (144")	4.11 m (162")	4.57 m (180")	
E	300 mm (12")	350 mm (14")	400 mm (16")	450 mm (18")	500 mm (20")	550 mm (22")	600 mm (24")	700 mm (28")	800m (32")	900 mm (36")	1000 mm (40")	

DIMENSIONS IN MILLIMETERS. METERS AND (INCHES).
DISCHARGE VELOCITIES GREATER THAN 3 METERS/SECOND (10 fps) REQUIRE ROCK OUTLET PROTECTION.

CITY OF AUSTIN
DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW
Bill Bardin 8/26/97 ADOPTED

STANDARD HEADWALL AND ENERGY DISSIPATORS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-13 2 OF 2

Westwood
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

STORM SEWER DETAILS

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISION OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

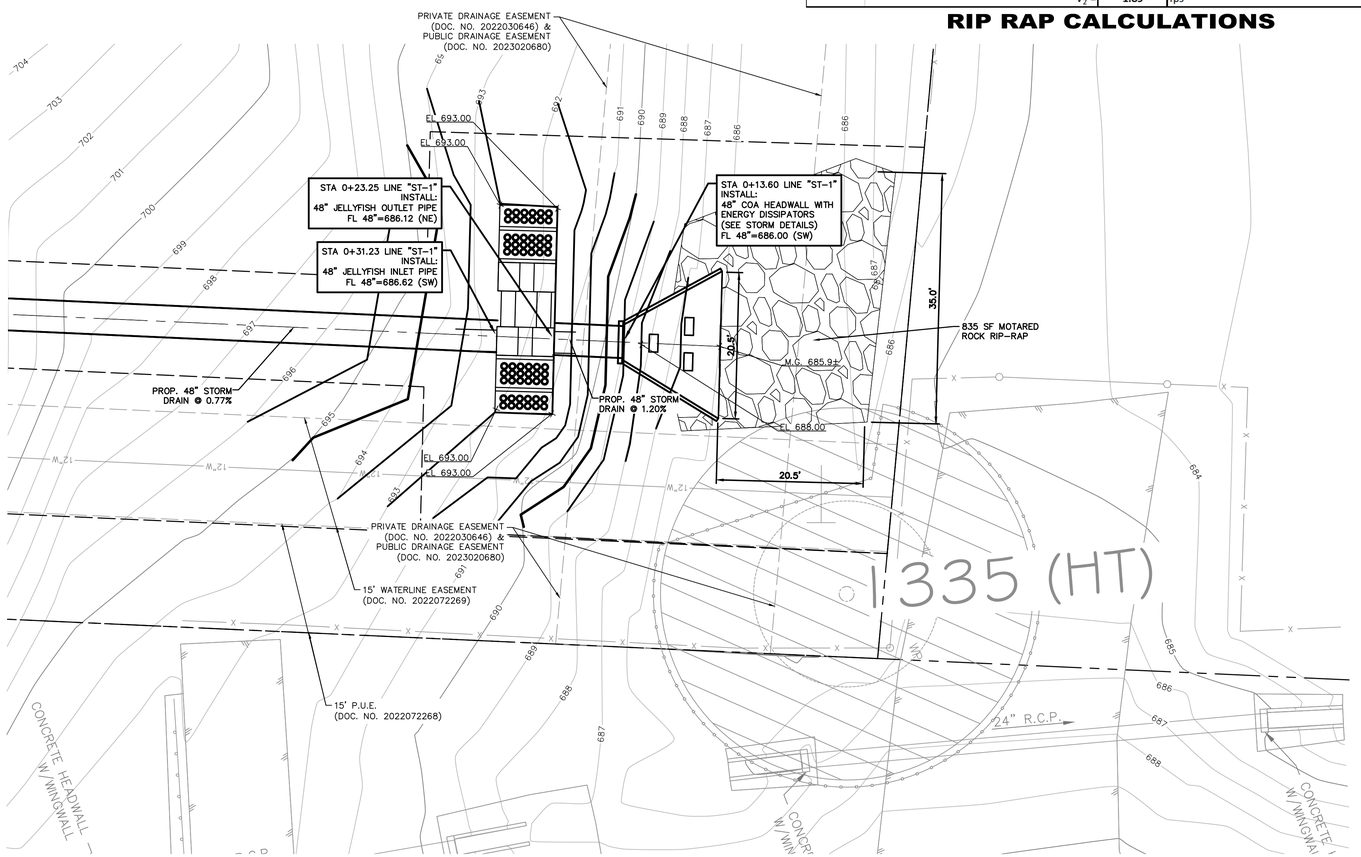
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2024-06-CON

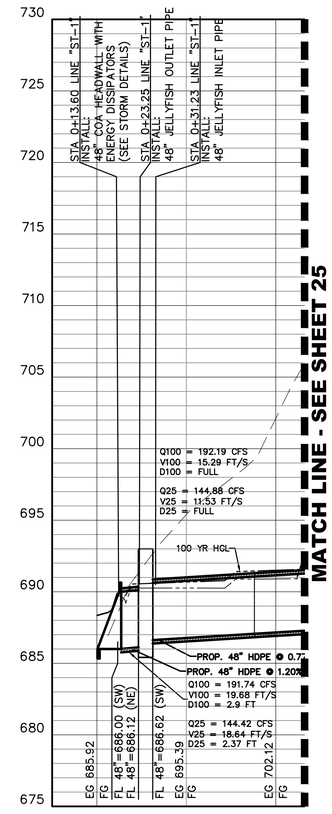
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5/7/2025 10:04 AM
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PK–0041495.00_STORM.DWG

Project:	NorthPark Town Center		
	Pipe Diameter (ft) =	4.0	
Q =	191.74	cfs	
V_o =	19.68	fps	Outlet Velocity - (Supercritical Flow $V_o = V_n$)
TW =	4	ft	Tail Water Depth
		4.00	
	TW =	4.00	(ft)
Calculate Rip Rap Size			
	Rip-Rap Size (D_{50})=	**0.86**	median rock size by weight (ft)
		10.3	**D_{50} (in)**
Calculate Rip Rap Class			
	Class	3	
Estimate Apron Dimensions			
L =	5D	**20.00**	**length of Apron(ft)**
H =	2.4D50	**2.06**	**Depth of Apron (ft)**
W_{start} =	3D	**12.00**	**Width at Apron start(Culvert Exit) (ft)**
W_{end} =	3D + 2(L/3)	**25.33**	**Width at Apron End (ft)**
Determine Exit Velocity			
	Q =	191.74	
	A_2 =	101.3	(ft^2)
	V_2 =	**1.89**	fps

RIP RAP CALCULATIONS



0 5 10 20 30
GRAPHIC SCALE IN FEET
1"=10'



0 20 40 80 120
HORIZONTAL SCALE IN FEET
1"=40'

0 5 10 15
VERTICAL SCALE IN FEET
V: 1"=5'

LEGEND

	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LP	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
FL	FLOOD LIGHT
FP	FLAG POLE
SIGN	TRAFFIC SIGN
IRS (C.M.)	1/2-INCH IRON ROD W/"PACHECO KOCH" CAP SET CONTROLLING MONUMENT
	PROPERTY LINE
X	FENCE
OHL	OVERHEAD UTILITY LINE
30" R.C.P.	EXISTING STORM LINE
	UNDERGROUND ELECTRIC LINE
T	UNDERGROUND TELEPHONE LINE
	UNDERGROUND CABLE LINE
6"W	UNDERGROUND WATER LINE
6"SS	UNDERGROUND SANITARY SEWER LINE
	PROPOSED STORM LINE
TI	TOP OF INLET

NOTE: DETENTION FOR THIS SITE IS BEING PROVIDED WITH 2020-55-CON "POND-A"

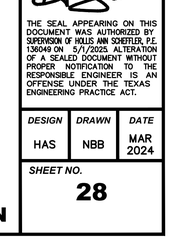
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westwoodps.com
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TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

WATER QUALITY TREATMENT PLAN



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISON OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO. 28

2024-06-CON

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Contech Engineered Solutions Calculations for Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: Titan Northpark Town Center
Date Prepared: 11/14/2024

1. The Required Load Reduction for the total project:

Calculations from RG-348 — Page 3-29 Equation 3.3: $L_M = 28.5(A_N \times P)$
Pages 3-27 to 3-30

$L_{M\ TOTAL\ PROJECT}$ = 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

County =	Williamson	
Total project area included in plan * =	8.73	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	6.13	acres
Total post-development impervious cover fraction * =	0.70	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	5664	lbs.

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

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

Drainage Basin/Outfall Area No. = JellyFish

Total drainage basin/outfall area =	8.73	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	6.13	acres
Post-development impervious fraction within drainage basin/outfall area =	0.70	
$L_{M\ THIS\ BASIN}$ =	5664	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	JF	abbreviation
Removal efficiency =	86.0	percent

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

RG-348 Page 3-33 Equation 3.7:
L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	8.73	acres
A_I =	6.13	acres
A_P =	2.63	acres
L_R =	3871	lbs.

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

desired $L_{M\ THIS\ BASIN}$ =	5664	lbs.
F =	0.95	

6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.

Offsite area draining to BMP =	0.00	acres
Offsite impervious cover draining to BMP =	0.00	acres

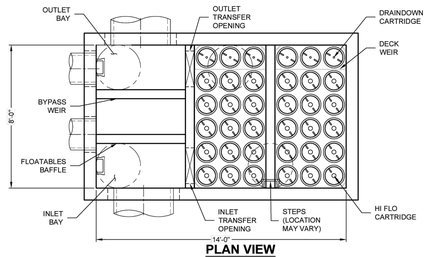
Calculations from RG-348
Pages Section 3.2.22

Rainfall Intensity =	1.80	inches per hour
Effective Area =	5.59	acres
Cartridge Length =	54	inches
Peak Treatment Flow Required =	10.15	cubic feet per second

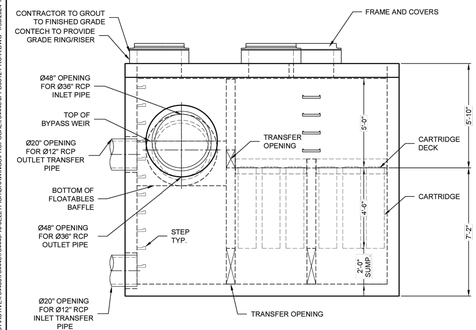
7. Jellyfish
Designed as Required in RG-348
Section 3.2.22

Flow Through Jellyfish Size — VIDEO

Jellyfish Size for Flow-Based Configuration =	2ea JFPDo812-26-6
Jellyfish Treatment Flow Rate =	10.34 cfs



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)



RIM
ELEV. = 693.00 '

TOP OF STRUCTURE
ELEV. = 691.82 '

WEIR ELEV. = 687.65 '
INLET INV. ELEV. = 686.65 '

OUTLET INV. ELEV. = 686.15 '

STRUCTURE INV.
ELEV. = 679.65 '

BOTTOM OF STRUCTURE
ELEV. = 678.98 '

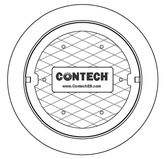
ELEVATION VIEW

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

CARTRIDGE SELECTION

CARTRIDGE LENGTH	54"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"
FLOW RATE HIGH-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089
MAX. TREATMENT (CFS)	5.88
DECK TO INSIDE TOP (MIN) (B)	5.00



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WQU
WATER QUALITY FLOW RATE (cfs)	11.73
PEAK FLOW RATE (cfs)	*
RETURN PERIOD OF PEAK FLOW (yrs)	RCP
# OF CARTRIDGES REQUIRED (HF / DD)	30/6
CARTRIDGE LENGTH	54

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	686.65	RCP	36	*	*
INLET #2	*	*	*	*	*
OUTLET	686.15	RCP	36	*	*

SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

RIM ELEVATION	693.00

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:
VAULT INLINE UPSIZED TO 8'X14' VAULT FOR 36" PIPE
* PER ENGINEER OF RECORD

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

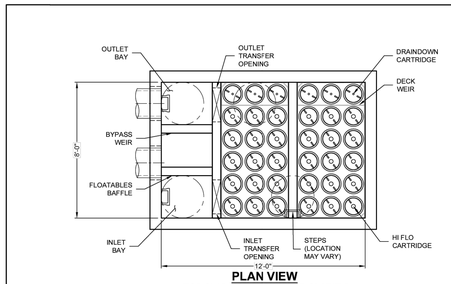
INSTALLATION NOTES
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B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

Jellyfish® Filter
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENT NO. 8,287,726; 8,221,618; US 8,123,935; OTHER INTERNATIONAL PATENTS PENDING

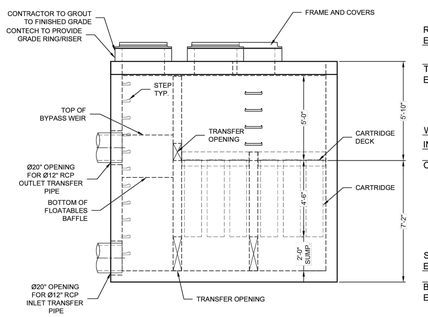
CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9100 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

8' x 12' JELLYFISH - 784446 - 010
TITAN NORTHPARK TOWN CENTER
GEORGETOWN, TX
SITE DESIGNATION: WQU

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PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)



RIM
ELEV. = 693.00 '

TOP OF STRUCTURE
ELEV. = 691.82 '

WEIR ELEV. = 687.65 '
INLET INV. ELEV. = 679.65 '

OUTLET INV. ELEV. = 686.15 '

STRUCTURE INV.
ELEV. = 679.65 '

BOTTOM OF STRUCTURE
ELEV. = 678.98 '

ELEVATION VIEW

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CARTRIDGE SELECTION

CARTRIDGE LENGTH	54"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"
FLOW RATE HIGH-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089
MAX. TREATMENT (CFS)	5.88
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FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WQU
WATER QUALITY FLOW RATE (cfs)	11.73
PEAK FLOW RATE (cfs)	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
# OF CARTRIDGES REQUIRED (HF / DD)	30/6
CARTRIDGE LENGTH	54

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	679.65	RCP	12	*	*
INLET #2	*	*	*	*	*
OUTLET	686.15	RCP	12	*	*

SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

RIM ELEVATION	693.00

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:
INLET AND OUTLET PIPES FOR SYSTEM EQUILIZATION
* PER ENGINEER OF RECORD

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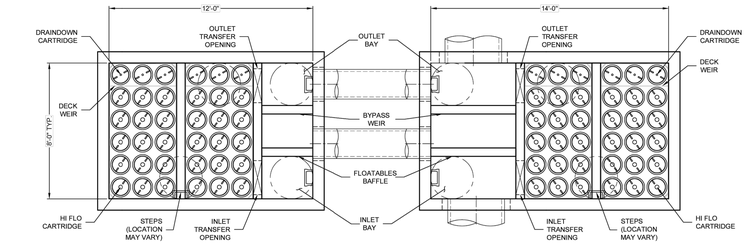
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Jellyfish® Filter
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENT NO. 8,287,726; 8,221,618; US 8,123,935; OTHER INTERNATIONAL PATENTS PENDING

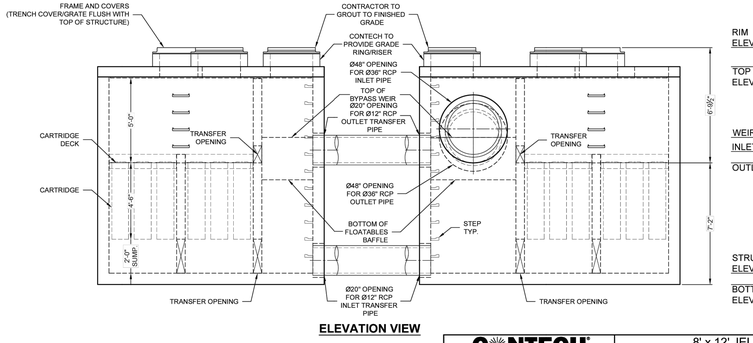
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GEORGETOWN, TX
SITE DESIGNATION: WQU

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(TOP SLAB NOT SHOWN FOR CLARITY)



RIM
ELEV. = 693.00

TOP OF STRUCTURE
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ELEVATION VIEW

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westwoodps.com

Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

WATER QUALITY TREATMENT PLAN



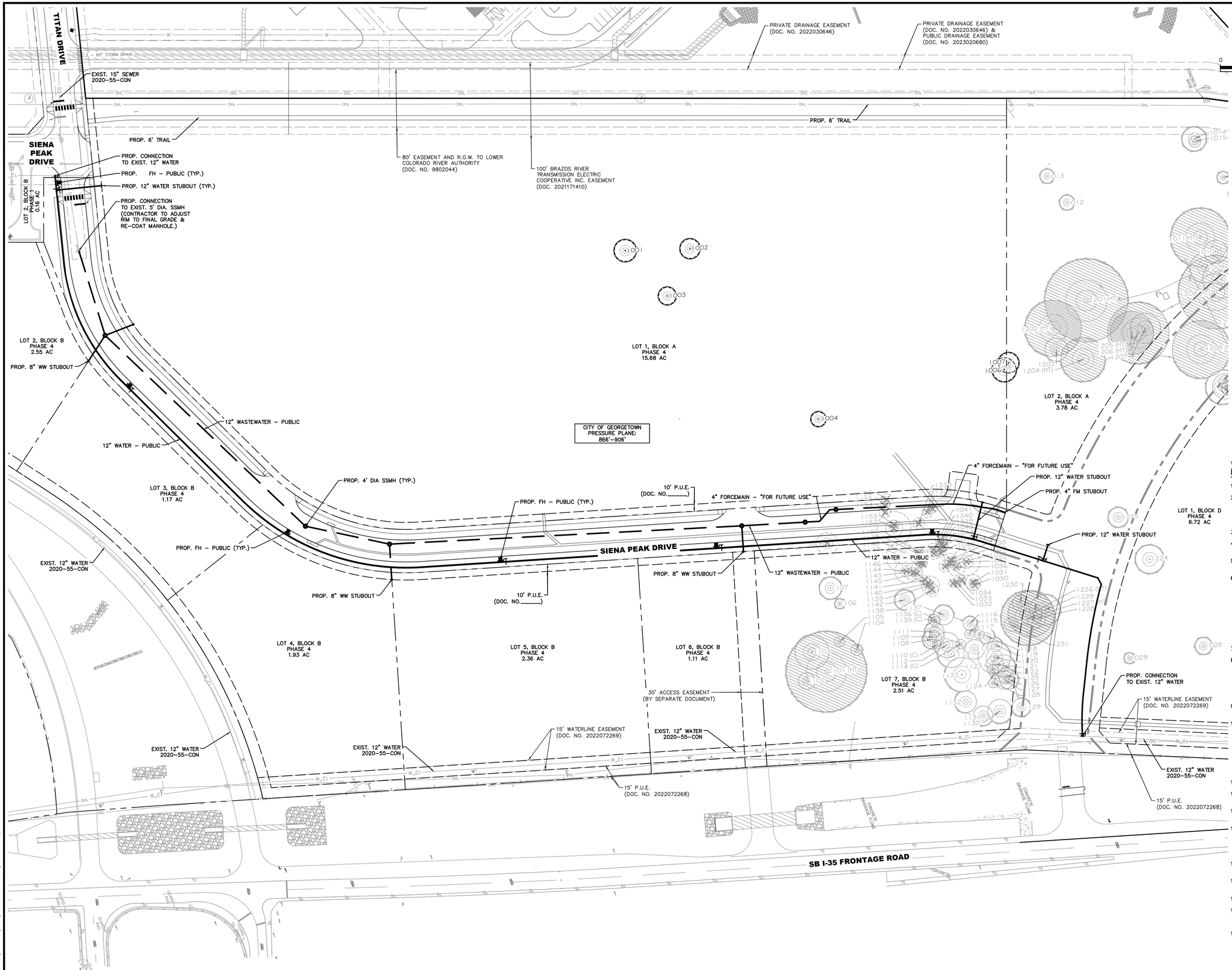
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DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
29

SFORERO
5/7/2025 10:05 AM
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LEGEND

B	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
JX	FLOOD LIGHT
FP	FLAG POLE
SIGN	TRAFFIC SIGN
IRS (C.M.)	1/2"-INCH IRON ROD W/"PACHECO KOCH" CAP SET CONTROLLING MONUMENT
	PROPERTY LINE
X	FENCE
OHL	OVERHEAD UTILITY LINE
	UNDERGROUND ELECTRIC LINE
T	UNDERGROUND TELEPHONE LINE
	UNDERGROUND CABLE LINE
6"W	UNDERGROUND WATER LINE
8"SS	UNDERGROUND SANITARY SEWER LINE
	PROP FDC LOCATION
	PROP WATER VALVE
	PROP FIRE HYDRANT
	PROP WATER LINE W/ BEND
	PROP SANITARY SEWER LINE
	PROP SANITARY SEWER MANHOLE
	PROP SANITARY SEWER CLEANOUT

TREE PRESERVATION LEGEND

HERITAGE TREE TO REMAIN	½ CRZ
HERITAGE TREE TO BE REMOVED	½ CRZ
PROTECTED TREE TO REMAIN	½ CRZ
PROTECTED TREE TO BE REMOVED	½ CRZ
TREE PROTECTION FENCE	½ CRZ

WATER & SANITARY SEWER GENERAL NOTES

1. ALL CONCRETE SHALL BE CLASS "A" (3000 PSI), UNLESS OTHERWISE NOTED.
2. ALL WATER MAINS SHALL BE PVC C900, DR 18, CLASS 235. FIRE PROTECTION SERVICES SHALL BE PVC C900, DR 14, CLASS 305 AND INSTALLED IN ACCORDANCE WITH THE DESIGN AND SPECIFICATIONS OF THE FIRE PROTECTION PLANS TO BE PREPARED BY A LICENSED FIRE PROTECTION CONTRACTOR.
3. WATER AND SANITARY SEWER SERVICES SHALL MEET PLUMBING CODE REQUIREMENTS.
4. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 48 INCHES BELOW IMPROVED FINISHED GRADE, UNLESS OTHERWISE NOTED.
5. SANITARY SEWER GRAVITY PIPE SHALL BE PVC SDR-26. SANITARY SEWER FORCE MAIN PIPE SHALL BE HDPE c900 DR17
6. WHEN WATER AND SANITARY SEWER MAINS, SERVICES, AND LATERALS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER TO EACH OTHER THAN NINE FEET IN ALL DIRECTIONS AND PARALLEL LINES MUST BE INSTALLED IN SEPARATE TRENCHES. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING TCEQ CHAPTERS SHALL APPLY:
   - 6.A. TCEQ CHAPTER 217.53 PIPE DESIGN, SECTION (d) SEPARATION DISTANCES.
   - 6.B. TCEQ CHAPTER 290.44 WATER DISTRIBUTION, SECTION (e) LOCATION OF WATERLINES.
7. CONTRACTOR TO VERIFY ALL EXISTING SEWER FLOW LINES BEFORE BEGINNING CONSTRUCTION.
8. CONTRACTOR SHALL TIE A ONE INCH WIDE PIECE OF RED PLASTIC FLAGGING TO THE END OF SEWER SERVICE AND SHALL LEAVE A MINIMUM OF 36 INCHES OF FLAGGING EXPOSED AFTER BACKFILL. AFTER CURB AND PAVING IS COMPLETED, CONTRACTOR SHALL MARK THE LOCATION OF THE SEWER SERVICE ON THE CURB OR ALLEY IN ACCORDANCE WITH THE STANDARD CITY SPECIFICATIONS.
9. ALL SANITARY SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE STANDARD CITY SPECIFICATIONS.
10. THE UTILITY CONTRACTOR SHALL INSTALL THE WATER SERVICES TO A POINT TWO FEET BACK OF THE CURB LINE AT A DEPTH OF 12 INCHES. THE METER BOX SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AFTER THE PAVING CONTRACTOR HAS COMPLETED THE FINE GRADING BEHIND THE BACK OF THE CURB. EACH SERVICE LOCATION SHALL BE MARKED ON THE CURB WITH A BLUE LETTER "W" BY THE UTILITY CONTRACTOR AND TIED TO PROPERTY CORNERS ON THE "RECORD DRAWINGS."
11. ALL METER BOXES SHALL BE LOCATED IN NON-TRAFFIC AREAS.
12. TRENCH BACKFILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
13. EMBEDMENT SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
14. VALVE BOXES SHALL BE FURNISHED AND SET ON EACH GATE VALVE. AFTER THE FINAL CLEAN-UP AND ALIGNMENT HAS BEEN COMPLETED, THE UTILITY CONTRACTOR SHALL POUR A 24"X24"X6" CONCRETE BLOCK AROUND ALL VALVE BOX TOPS LEVEL WITH THE FINISHED GRADE.
15. CONTRACTOR SHALL RECONNECT ALL EXISTING SERVICES AND MAINTAIN EXISTING SERVICES THROUGHOUT CONSTRUCTION.
16. IF REQUIRED DUE TO CONSTRUCTION, POWER POLES TO BE BRACED OR RELOCATED AT CONTRACTOR'S EXPENSE.
17. ALL MECHANICAL JOINTS SHALL HAVE MEGA LUG THRUSTS RETAINTS.
18. ALL RISER PIPING AND FORCE MAIN HEADER PIPING SHALL BE DUCTILE IRON, CLASS 53 WITH A MINIMUM WORKING PRESSURE OF 150 PSI PLUS A SURGE PRESSURE OF 100 PSI AND PRESSURE TYPE JOINTS.
19. ALL PVC SHALL CONFORM TO AWWA C-C900. PROVIDE DR-18 FOR FORCE MAIN AND SHALL HAVE RUBBER GASKET EQUIPPED BELL AND SPIGOT JOINTS CONFORMING TO LATEST ASTM STANDARDS. THE GASKET MATERIAL SHALL CONFORM TO LATEST ASTM STANDARDS.

2024-06-CON

Westwood
Phone (512) 485-0831
Toll Free (888) 937-5150
8701 N. Mopac Expy, Suite 320
Austin, TX 78759
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Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

OVERALL WATER & WASTEWATER PLAN

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISION OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO. 30

SFORERO
5/7/2025 10:05 AM
N:\0041495.00\06 CAD\DWG\SITE DESIGN C3D\0041495.00_UTILITY.DWG

PK-0041495.00_UTILITY.DWG

MATCH LINE - STA 8+50 - SEE SHEET 32

GRAPHIC SCALE IN FEET
0 20 40 80 120
1"=40'

VERTICAL SCALE IN FEET
0 5 10 15
V:1"=5'

LEGEND

BL	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FHC	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
FL	FLOOD LIGHT
FP	FLAG POLE
SGN	TRAFFIC SIGN
IRS (C.M.)	1/2-INCH IRON ROD W/"PACHECO KOCH" CAP SET CONTROLLING MONUMENT
	PROPERTY LINE
X	FENCE
OHL	OVERHEAD UTILITY LINE
	UNDERGROUND ELECTRIC LINE
T	UNDERGROUND TELEPHONE LINE
	UNDERGROUND CABLE LINE
6"W	UNDERGROUND WATER LINE
6"SS	UNDERGROUND SANITARY SEWER LINE
	PROP FDC LOCATION
	PROP WATER VALVE
	PROP FIRE HYDRANT
	PROP WATER LINE W/ BEND
	PROP SANITARY SEWER LINE
	PROP SANITARY SEWER MANHOLE
	PROP SANITARY SEWER CLEANOUT

LOT 1, BLOCK A
PHASE 1
15.68 AC

LOT 5, BLOCK B
PHASE 4
2.36 AC

LOT 4, BLOCK B
PHASE 4
1.92 AC

LOT 3, BLOCK B
PHASE 4
1.17 AC

LOT 2, BLOCK B
PHASE 1
0.16 AC

LOT 2, BLOCK B
PHASE 4
2.55 AC

TITAN DRIVE

SIENA PEAK DRIVE

SIENA PEAK DRIVE

AVIATION DRIVE

STA 0+00.00 LINE "W-1"
1 – 12" GATE VALVE
1 – FULL BODY TAPING SLEEVE
CONTRACTOR TO TIE INTO
EXIST. 12" WATER LINE
(IN-LINE CONNECTION)
N: 10224793.01
E: 3136537.24

STA 0+63.01 LINE "W-STUB 1"
8" WATER STUBOUT
N: 10224848.25
E: 3136573.89

STA 0+10.30 LINE "W-1"
1 – 12" X 6" TEE
1 – 12" GATE VALVE
1 – 6" GATE VALVE
1 – FIRE HYDRANT ASSEMBLY
4 LF 6" D.I. FIRE
N: 10224790.27
E: 3136547.16

STA 0+20.60 LINE "W-1"
1 – 12" X 8" TEE
1 – 12" GATE VALVE
1 – 8" GATE VALVE
1 – 8" CAP
63 LF 8" WATER STUBOUT
N: 10224787.52
E: 3136557.09

STA 1+23.11 LINE"WW-1"=
STA 0+00.00 LINE "WW-STUB 1"
STA 0+00.00 LINE "WW-STUB 2"
INSTALL:
5' DIA. SSMH
2 – 8" CLEANOUT
84 LF 8" WW STUBOUT
FL 12"=718.69 (NE)
FL 8"=719.02 (SE)
FL 8"=719.02 (N)
FL 12"=718.59 (W)

STA 1+25.57 LINE "W-1"
PC
N: 10224759.63
E: 3136658.29

PROP. 12" WATER – PUBLIC

!!!CAUTION!!!
W & WW CROSSING

R=272.61'
L=179.65'
T=93.22'
CB=N 84°55'03" E
CD=176.42'
Δ=37°45'28"

STA 3+06.22 LINE "W-1"
PT
N: 10224775.35
E: 3136834.95

STA 3+20.58 LINE "W-1"
1 – 12" X 6" TEE
1 – 12" GATE VALVE
1 – 6" GATE VALVE
1 – FIRE HYDRANT ASSEMBLY
4 LF 6" D.I. FIRE
N: 10224781.22
E: 3136848.06

10' P.U.E.
(DOC. NO._____)

!!!CAUTION!!!
WW & STORM SEWER
CROSSING

STA 8+17.77 LINE "W-1"
PT
N: 10225071.22
E: 3137228.26

!!!CAUTION!!!
W & WW CROSSING

R=323.01'
L=269.21'
T=142.98'
CB=N 41°15'08" E
CD=261.48'
Δ=47°45'05"

STA 6+21.18 LINE "W-1"
1 – 12" X 6" TEE
1 – 12" GATE VALVE
1 – 6" GATE VALVE
1 – FIRE HYDRANT ASSEMBLY
4 LF 6" D.I. FIRE
N: 10224912.12
E: 3137118.00

10' P.U.E.
(DOC. NO._____)

STA 5+48.07 LINE "W-1"
PC
N: 10224874.16
E: 3137055.70

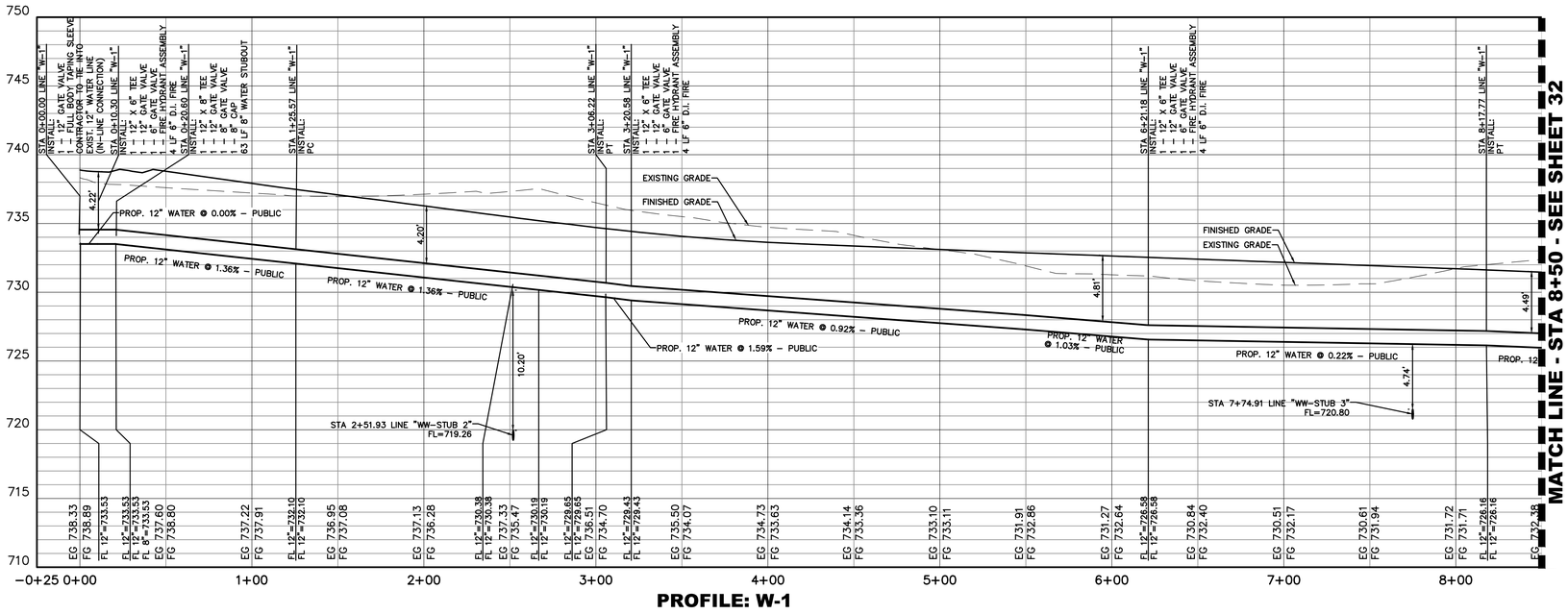
EXIST. 12" WATER
2020-55-CON

15' WATERLINE EASEMENT
(DOC. NO. 2022072269)

15' P.U.E.
(DOC. NO._____)

EXIST. 12" WATER
2020-55-CON

15' P.U.E.
(DOC. NO. 2022072268)



PROFILE: W-1

2024-06-CON

Westwood
Phone (512) 485-0831
Toll Free (888) 937-5150
8701 N. Mopac Expy, Suite 320
Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

WATER PLAN & PROFILE 1 OF 2

HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL
ENGINEER

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DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
31

SFORERO
5/7/2025 10:06 AM
N:\0041495.00\06 CAD\DWG\SITE DESIGN C3D\0041495.00_UTILITY.DWG

PK–0041495.00_UTILITY.DWG

MATCH LINE - STA 8+50 - SEE SHEET 31

LOT 1, BLOCK A
PHASE 4
15.68 AC

10' P.U.E.
(DOC. NO._____)

!!!CAUTION!!!
WW & STORM SEWER CROSSING

!!!CAUTION!!!
WW & STORM SEWER CROSSING

SIENA PEAK DRIVE

!!!CAUTION!!!
W & WW CROSSING

PROP. 12" WATER – PUBLIC

9+00 10+00 11+00 12+00 13+00 14+00 15+00

STA 9+27.36 LINE "W-1"
1 – 12" X 6" TEE
1 – 12" GATE VALVE
1 – 6" GATE VALVE
1 – FIRE HYDRANT ASSEMBLY
4 LF 6" D.I. FIRE
N: 10225175.74
E: 3137261.20

STA 12+27.36 LINE "W-1"
1 – 12" X 6" TEE
1 – 12" GATE VALVE
1 – 6" GATE VALVE
1 – FIRE HYDRANT ASSEMBLY
4 LF 6" D.I. FIRE
N: 10225461.86
E: 3137351.38

10' P.U.E.
(DOC. NO._____)

STA 15+16.39 LINE "W-1"
PC
N: 10225737.53
E: 3137438.26

STA 15+27.35 LINE "W-1"
1 – 12" X 6" TEE
1 – 12" GATE VALVE
1 – 6" GATE VALVE
1 – FIRE HYDRANT ASSEMBLY
4 LF 6" D.I. FIRE
N: 10225747.88
E: 3137441.85

R=227.00'
L=82.46'
T=41.69'
CB=S 28°16'52" W
CD=82.01'
Δ=20°48'50"

STA 15+85.06 LINE "W-1"
1 – 12" X 12" TEE
2 – 12" GATE VALVES
1 – 12" CAP
41.5 LF 12" WATER STUBOUT
N: 10225798.80
E: 3137468.70

LOT 2, BLOCK A
PHASE 4
3.78 AC

STA 0+53.00 LINE "W-STUB 2"
1 – 12" W STUBOUT CAP
N: 10225829.27
E: 3137425.33

!!!CAUTION!!!
WW & STORM SEWER CROSSING

END OF PROPOSED PAVING

STA 0+23.38 LINE "W-STUB 3"
1 – 12" W STUBOUT CAP
N: 10225892.77
E: 3137513.27

!!!CAUTION!!!
W & STORM SEWER CROSSING

PROP. 12" WATER – PUBLIC

STA 16+86.18 LINE "W-1"
1 – 12" X 12" TEE
2 – 12" GATE VALVES
1 – 12" CAP
17 LF 12" WATER STUBOUT
N: 10225878.07
E: 3137531.46

STA 15+99.36 LINE "W-1"
PT
N: 10225810.23
E: 3137477.27

STA 18+85.02 LINE "W-1"
PT
N: 10225884.45
E: 3137683.78

STA 17+66.16 LINE "W-1"
1 – 12" 45° BEND
N: 10225940.56
E: 3137581.37

STA 17+76.18 LINE "W-1"
1 – 12" 45° BEND
N: 10225941.68
E: 3137591.33

STA 17+86.15 LINE "W-1"
PC
N: 10225935.81
E: 3137599.39

LOT 1, BLOCK D
PHASE 5
6.72 AC

R=713.94'
L=99.45'
T=49.81'
CB=S 58°40'47" E
CD=99.37'
Δ=7°58'52"

STA 19+30.14 LINE "W-1"
PC
N: 10225863.79
E: 3137723.90

STA 19+79.20 LINE "W-1"
PT
N: 10225844.51
E: 3137768.96

LOT 5, BLOCK B
PHASE 4
2.36 AC

LOT 6, BLOCK B
PHASE 4
1.01 AC

LOT 7, BLOCK B
PHASE 4
2.81 AC

15' WATERLINE EASEMENT
(DOC. NO. 2022072269)

EXIST. 12" WATER
2020-55-CON

EXIST. 12" WATER
2020-55-CON

R=345.00'
L=49.06'
T=24.57'
CB=N 66°49'55" W
CD=49.02'
Δ=8°08'50"

STA 19+89.20 LINE "W-1"
1 – 12" X 12" FULL BODIED TAPPING SLEEVE
1 – 12" GATE VALVE
CONTRACTOR TO TIE
INTO EXIST. 12" WATER
(HOT-TAP CONNECTION)
N: 10225841.37
E: 3137778.46

EXIST. 12" WATER
2020-55-CON

15' P.U.E.
(DOC. NO. 2022072268)

0 20 40 80 120
GRAPHIC SCALE IN FEET
1"=40'

0 5 10 15
VERTICAL SCALE IN FEET
V:1"=5'

LEGEND

B	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
FL	FLOOD LIGHT
FP	FLAG POLE
SIGN	TRAFFIC SIGN
IRS	1/2-INCH IRON ROD W/"PACHECO KOCH" CAP SET
(C.M.)	CONTROLLING MONUMENT
	PROPERTY LINE
X	FENCE
OHL	OVERHEAD UTILITY LINE
	UNDERGROUND ELECTRIC LINE
T	UNDERGROUND TELEPHONE LINE
	UNDERGROUND CABLE LINE
6"W	UNDERGROUND WATER LINE
6"SS	UNDERGROUND SANITARY SEWER LINE
	PROP FDC LOCATION
	PROP WATER VALVE
	PROP FIRE HYDRANT
	PROP WATER LINE W/ BEND
	PROP SANITARY SEWER LINE
	PROP SANITARY SEWER MANHOLE
	PROP SANITARY SEWER CLEANOUT

MATCH LINE - STA 8+00 - SEE SHEET 31

STA 8+27.36 LINE "W-1"
INSTALL:
1 – 12" X 6" TEE
1 – 12" GATE VALVE
1 – 6" GATE VALVE
1 – FIRE HYDRANT ASSEMBLY
4 LF 6" D.I. FIRE

STA 12+27.36 LINE "W-1"
INSTALL:
1 – 12" X 6" TEE
1 – 12" GATE VALVE
1 – 6" GATE VALVE
1 – FIRE HYDRANT ASSEMBLY
4 LF 6" D.I. FIRE

STA 12+57.02 LINE "W-1"
INSTALL:
1 – 12" X 12" TEE
1 – 12" GATE VALVE
1 – 12" CAP
17 LF 12" WATER STUBOUT

STA 12+72.27 LINE "W-1"
INSTALL:
1 – 12" X 12" TEE
1 – 12" GATE VALVE
1 – 12" CAP
17 LF 12" WATER STUBOUT

STA 13+29.84 LINE "W-1"
1" AUTOMATIC AIR RELEASE VALVE W/ RING (SEE C.O.G. DETAILS W-12 & W-13)

EXISTING GRADE

FINISHED GRADE

4.32'

PROP. 12" WATER @ 1.31% – PUBLIC

4.08'

WATER @ 0.54% – PUBLIC

PROP. 12" WATER @ 0.38% – PUBLIC

PROP. 12" WATER @ 0.01% – PUBLIC

PROP. 12" WATER @ 0.54% – PUBLIC

2.06'

STA 12+64.53 LINE "WW-STUB 4"
FL=721.62

PROP. 12" WATER @ 2.65% – PUBLIC

FG 731.46	EG 732.87 FG 731.21	FL 12"=728.56 FL 12"=728.56	EG 733.09 FG 730.96	EG 733.24 FG 730.71	EG 733.43 FG 730.46	EG 733.52 FG 730.21	EG 733.40 FG 729.96	EG 732.97 FG 728.71	FL 12"=724.44 FL 12"=724.44	EG 732.47 FG 729.44	FL 12"=724.44 FL 12"=724.44	FL 12"=724.35 FL 12"=724.35	EG 731.12 FG 729.11	FL 12"=723.60 FL 12"=723.60	EG 728.09 FG 728.27								

9+00 10+00 11+00 12+00 13+00 14+00

PROFILE: W-1

MATCH LINE - STA 14+00 - THIS SHEET

735 730 725 720 715 710 705 700 695 690 685 680

STA 15+16.39 LINE "W-1"
INSTALL:
PC

STA 15+85.06 LINE "W-1"
INSTALL:
1 – 12" X 12" TEE
2 – 12" GATE VALVES
1 – 12" CAP
41.5 LF 12" WATER STUBOUT

STA 15+99.36 LINE "W-1"
INSTALL:
PT

STA 16+86.18 LINE "W-1"
INSTALL:
1 – 12" X 12" TEE
2 – 12" GATE VALVES
1 – 12" CAP
17 LF 12" WATER STUBOUT

STA 17+66.16 LINE "W-1"
INSTALL:
1 – 12" 45° BEND

STA 17+76.18 LINE "W-1"
INSTALL:
1 – 12" 45° BEND

STA 17+86.15 LINE "W-1"
INSTALL:
PC

STA 18+85.02 LINE "W-1"
INSTALL:
PT

STA 19+79.20 LINE "W-1"
INSTALL:
PT

STA 19+89.20 LINE "W-1"
INSTALL:
1 – 12" X 12" FULL BODIED TAPPING SLEEVE
1 – 12" GATE VALVE
CONTRACTOR TO TIE
INTO EXIST. 12" WATER
(HOT-TAP CONNECTION)

FINISHED GRADE

4.00'

4.66'

PROP. 12" WATER @ 4.59% – PUBLIC

PROP. 12" WATER @ 2.65% – PUBLIC

4.66'

3.04'

EXISTING GRADE

2.19'

STA 17+21.98
LINE "ST-1"
FL=700.45

PROP. 12" WATER @ 5.07% – PUBLIC

PROP. 12" WATER @ 4.46% – PUBLIC

PROP. 12" WATER @ 6.93% – PUBLIC

STA 19+69.25 LINE "ST-1"
FL=690.65

EG 715.54 FG 725.49		FL 12"=717.99 FL 12"=717.99	EG 707.32 FG 723.84	EG 710.03 FG 721.65	FL 12"=713.79 FL 12"=713.79	EG 711.74 FG 720.26	EG 713.38 FG 714.50	FL 12"=707.37 FL 12"=707.37 FL 12"=707.37	EG 714.70 FG	EG 716.33 FG	FL 12"=706.70 FL 12"=706.70	FL 12"=706.44 FL 12"=706.44	EG 712.17 FG	FL 12"=706.17 FL 12"=706.17	EG 708.12 FG	FL 12"=701.15	EG 705.03 FG	EG 702.45 FG	FL 12"=696.48 FL 12"=696.48 FL 12"=695.77				

735 730 725 720 715 710 705 700 695 690 685 680

14+00 15+00 16+00 17+00 18+00 19+00 20+00

PROFILE: W-1

2024-06-CON

Westwood

Phone (512) 485-0831
Toll Free (888) 937-5150

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Austin, TX 78759
westwoodps.com

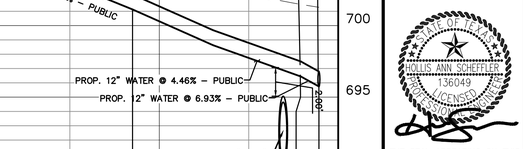
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

WATER PLAN & PROFILE 2 OF 2



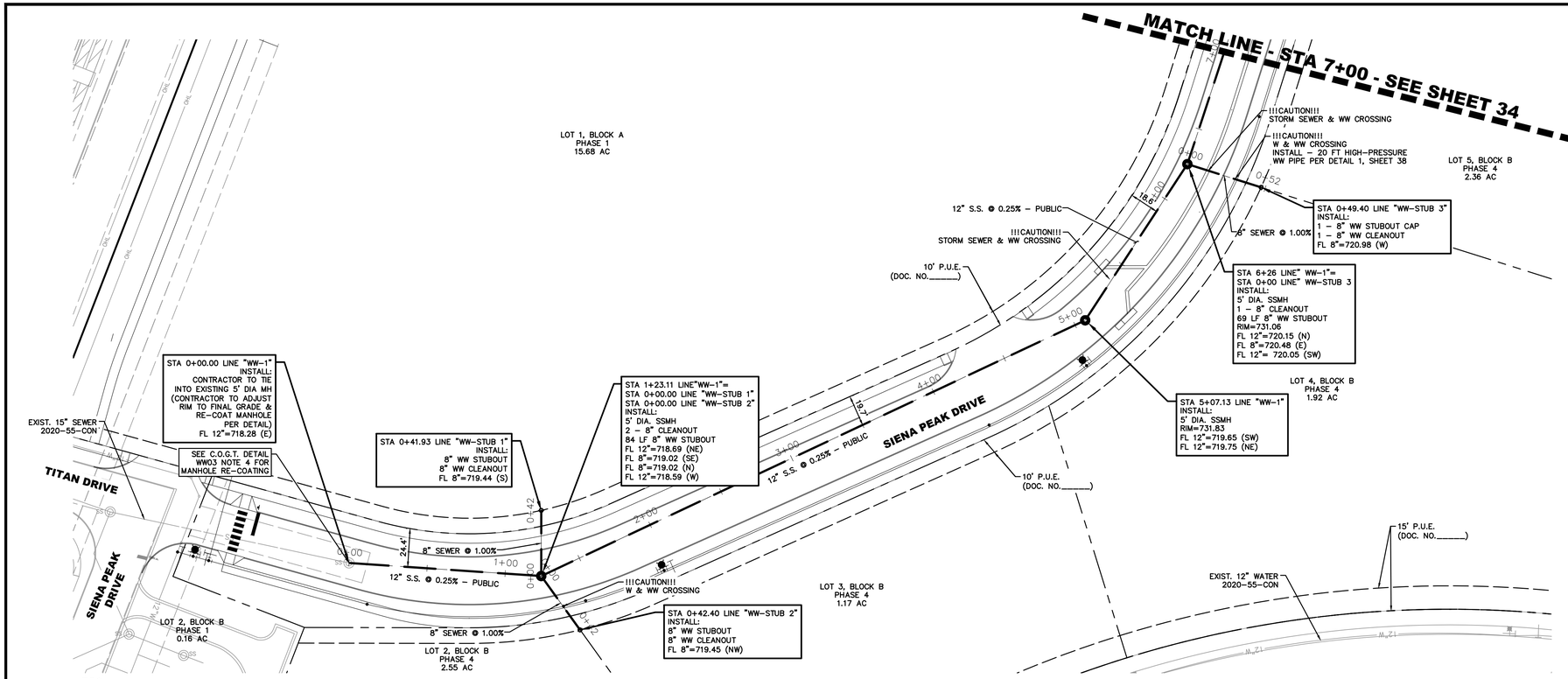
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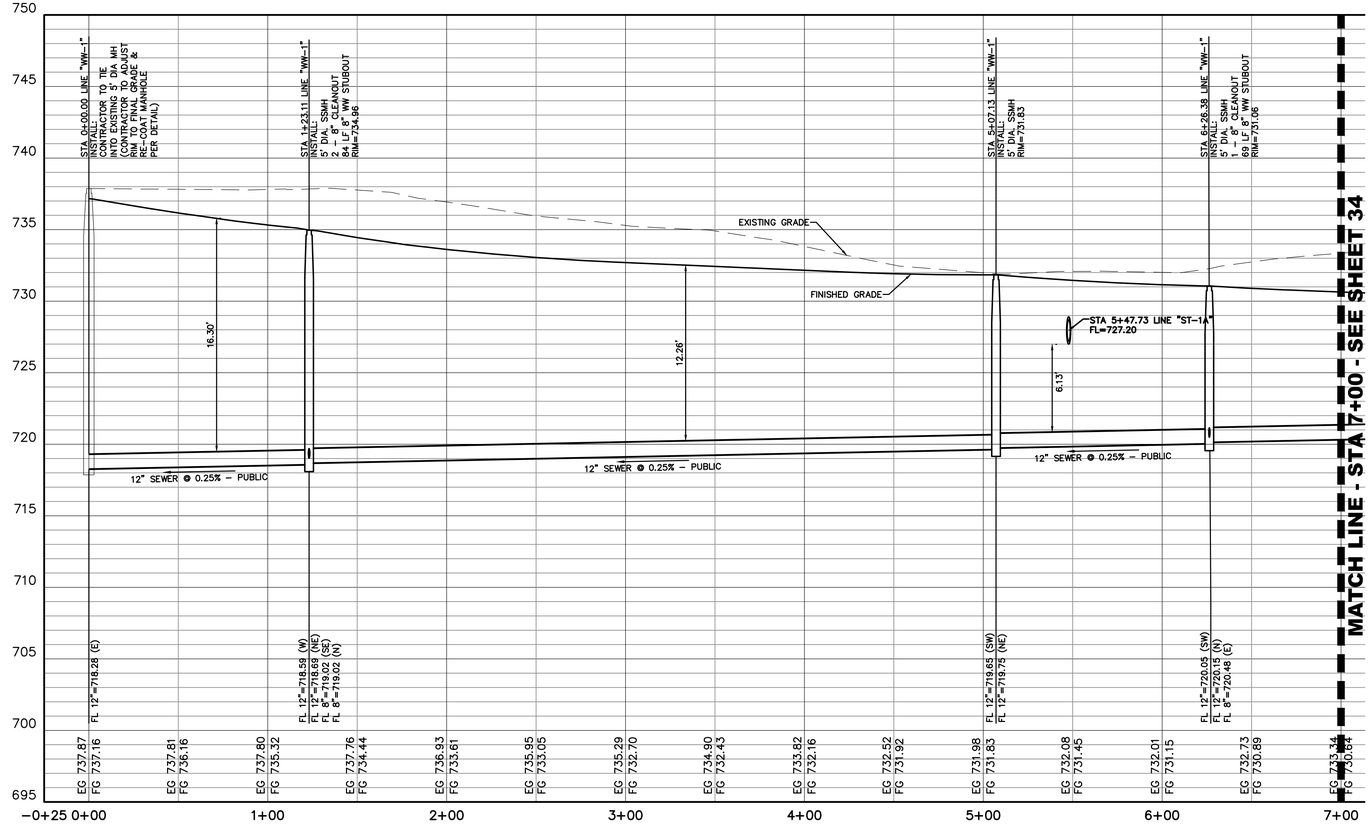
DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
32

SFORERO
5/7/2025 10:06 AM
N:\0041495.00\06 CAD\DWG\SITE DESIGN C3D\0041495.00_UTILITY.DWG

PK–0041495.00_UTILITY.DWG





PROFILE: WW-1

0 20 40 80 120
GRAPHIC SCALE IN FEET
1"=40'

0 5 10 15
VERTICAL SCALE IN FEET
V:1"=5'

LEGEND

	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
FL	FLOOD LIGHT
FP	FLAG POLE
SIGN	TRAFFIC SIGN
IRS	1/2-INCH IRON ROD
(C.M.)	W/"PADHECO KOCH" CAP SET
	CONTROLLING MONUMENT
	PROPERTY LINE
X	FENCE
OHL	OVERHEAD UTILITY LINE
	UNDERGROUND ELECTRIC LINE
T	UNDERGROUND TELEPHONE LINE
	UNDERGROUND CABLE LINE
6"W	UNDERGROUND WATER LINE
6"SS	UNDERGROUND SANITARY SEWER LINE
	PROP FDC LOCATION
	PROP WATER VALVE
	PROP FIRE HYDRANT
	PROP WATER LINE W/ BEND
	PROP SANITARY SEWER LINE
	PROP SANITARY SEWER MANHOLE
	PROP SANITARY SEWER CLEANOUT

2024-06-CON

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Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

WASTEWATER PLAN & PROFILE 1 OF 2

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

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DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
33

SFORERO
5/7/2025 10:06 AM
N:\0041495.00\06 CAD\DWG\SITE DESIGN C3D\0041495.00_UTILITY.DWG

PK–0041495.00_UTILITY.DWG

MATCH LINE - STA 7+00 - SEE SHEET 33

LOT 1, BLOCK A
PHASE 4
15.68 AC

STA 12+19.01 LINE "WW-1"
INSTALL:
1 – 8" X 4" REDUCER
FL 8"=722.11 (S)
FL 4"=722.44 (N)

STA 12+04.01 LINE "WW-1"
INSTALL:
5' DIA. SSMH
CONNECT FM TO MH
RIM=727.57
FL 12"=721.70 (S)
FL 8"=722.03 (N)

STA 11+16 LINE "WW-1"=
STA 0+00 LINE "WW-STUB 4
INSTALL:
5' DIA. SSMH
1 – 8" CLEANOUT
35 LF 8" WW STUBOUT
RIM=728.66
FL 8"=721.48 (E)
FL 12"=721.48 (N)
FL 12"= 721.38 (S)

!!!CAUTION!!!
STORM SEWER &
WW CROSSING

10' P.U.E.
(DOC. NO._____)

STA 12+24.01 LINE "WW-1"
INSTALL:
1 – 4" 45° BEND
FL 4"=722.47 (S)
FL 4"=722.47 (NW)

STA 12+45.20 LINE "WW-1"
INSTALL:
1 – 4" 45° BEND
FL 4"=722.63 (SE)
FL 4"=722.63 (N)

STA 12+54.05 LINE "WW-1"
INSTALL:
4' DIA. SSMH
FOR FUTURE AIR RELEASE VALVE
SIZING TO BE DETERMINED WITH
FINAL DESIGN OF FUTURE 4" FORCE MAIN
RIM=727.19
FL 4"=722.68 (S)
FL 4"=723.28 (N)

!!!CAUTION!!!
STORM SEWER &
WW CROSSING

STA 14+02.82 LINE "WW-1"
INSTALL:
PC
FL 4"=717.19 (S)
FL 4"=717.19 (N)

STA 14+42.56 LINE "WW-1"
INSTALL:
PT
FL 4"=715.70 (SW)
FL 4"=715.70 (NE)

LOT 2, BLOCK A
PHASE 4
3.78 AC

15' P.U.E.
(DOC. NO._____)

4" F.M. @ –4.00% – PUBLIC

4" F.M. @ 0.50% – PUBLIC

4" F.M. @ –3.75% – PUBLIC

4" F.M. @ –4.71% – PUBLIC

4" F.M. @ –4.64% – PUBLIC

!!!CAUTION!!!
W & WW CROSSING

!!!CAUTION!!!
STORM SEWER &
WW CROSSING

END OF PROPOSED WW FORCEMAIN

END OF PROPOSED PAVING

SIENA PEAK DRIVE

12" S.S. @ 0.25% – PUBLIC

8" F.M. @ 0.50% – PUBLIC

!!!CAUTION!!!
STORM SEWER & W CROSSING

6" SEWER @ 0.50%

!!!CAUTION!!!
W & WW CROSSING
INSTALL – 20 FT HIGH–PRESSURE
WW PIPE PER DETAIL 1, SHEET 38

10' P.U.E.
(DOC. NO._____)

STA 0+35.84 LINE "WW-STUB 4"
INSTALL:
1 – 8" WW STUBOUT CAP
1 – 8" WW CLEANOUT
FL 8"=721.66 (W)

LOT 5, BLOCK B
PHASE 4
2.36 AC

LOT 6, BLOCK B
PHASE 4
1.11 AC

30'–WIDE ACCESS EASEMENT
(BY SEPARATE DOCUMENT)

LOT 7, BLOCK B
PHASE 4
2.51 AC

LOT 1, BLOCK D
PHASE 5
6.72 AC

0 20 40 80 120
GRAPHIC SCALE IN FEET
1"=40'

0 5 10 15
VERTICAL SCALE IN FEET
V:1"=5'

LEGEND

BOLLARD	
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
FL	FLOOD LIGHT
FP	FLAG POLE
SIGN	TRAFFIC SIGN
IRS (C.M.)	1/2–INCH IRON ROD W/"PACHECO KOCH" CAP SET CONTROLLING MONUMENT
— P —	PROPERTY LINE
— X —	FENCE
— OHL —	OVERHEAD UTILITY LINE
— E —	UNDERGROUND ELECTRIC LINE
— T —	UNDERGROUND TELEPHONE LINE
— C —	UNDERGROUND CABLE LINE
— 6"W —	UNDERGROUND WATER LINE
— 6"SS —	UNDERGROUND SANITARY SEWER LINE
	PROP FDC LOCATION
	PROP WATER VALVE
	PROP FIRE HYDRANT
	PROP WATER LINE W/ BEND
	PROP SANITARY SEWER LINE
	PROP SANITARY SEWER MANHOLE
	PROP SANITARY SEWER CLEANOUT

MATCH LINE - STA 7+00 - SEE SHEET 33

EXISTING GRADE

FINISHED GRADE

STA 8+48.80 LINE "ST–1B"
FL=724.01

8.91'

2.00'

6.95'

12" SEWER @ 0.25% – PUBLIC

STA 11+15.92 LINE "WW–1"
INSTALL:
5' DIA. SSMH
1 – 8" WW STUBOUT
35 LF 8" WW STUBOUT
RIM=728.66

12" SEWER @ 0.25% – PUBLIC

8" FORCEMAIN @ 0.50% – PUBLIC

STA 12+24.01 LINE "WW–1"
INSTALL:
5' DIA. SSMH
CONNECT FM TO MH
RIM=727.57

STA 12+19.01 LINE "WW–1"
INSTALL:
1 – 8" X 4" REDUCER

STA 12+24.01 LINE "WW–1"
INSTALL:
1 – 4" 45° BEND

STA 12+45.20 LINE "WW–1"
INSTALL:
1 – 4" 45° BEND

STA 12+54.05 LINE "WW–1"
INSTALL:
4' DIA. SSMH
FOR FUTURE AIR RELEASE VALVE
SIZING TO BE DETERMINED WITH
FINAL DESIGN OF FUTURE 4" FORCE
RIM=727.19

4.04'

4" FORCEMAIN @ 0.78% – PUBLIC

4" FORCEMAIN @ 0.50% – PUBLIC

4" FORCEMAIN @ –4.00% – PUBLIC

STA 13+93.27
LINE "ST–1"
FL=709.16

STA 14+02.82 LINE "WW–1"
INSTALL:
PC
1 – 45° VERTICAL BEND
W/ FULLY RESTRAINED JOINTS

STA 14+42.56 LINE "WW–1"
INSTALL:
PT

STA 14+48.35 LINE "WW–1"
INSTALL:
1 – 45° VERTICAL BEND
W/ FULLY RESTRAINED JOINTS

STA 14+51.11 LINE "WW–1"
INSTALL:
1 – 45° VERTICAL BEND
W/ FULLY RESTRAINED JOINTS

STA 14+61.30 LINE "WW–1"
INSTALL:
1 – 45° VERTICAL BEND
W/ FULLY RESTRAINED JOINTS

STA 14+63.34 LINE "WW–1"
INSTALL:
1 – 45° VERTICAL BEND
W/ FULLY RESTRAINED JOINTS

STA 14+90.75 LINE "WW–1"
INSTALL:
1 – 4" WW STUBOUT CAP
RIM=713.81

4.00'

12.01'

5.61'

STA 14+56.17 LINE "W–1"
FL=714.83

END OF PROPOSED WW FORCEMAIN

STA 14+79.03
LINE "ST–1"
FL=706.62

4" FORCEMAIN @ –3.75% – PUBLIC

FUTURE 4" FORCEMAIN @ –4.71% – PUBLIC

FUTURE 4" FORCEMAIN @ –4.64% – PUBLIC

FL 12"=721.38 (S)
FL 8"=721.48 (E)
FL 12"=721.48 (N)

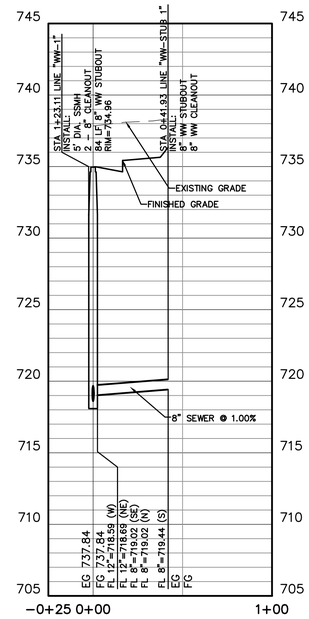
FL 12"=721.70 (S)
FL 8"=722.03 (N)
FL 4"=722.11 (S)
FL 4"=722.44 (N)
FL 4"=722.47 (S)
FL 4"=722.47 (NW)
FL 4"=722.63 (SE)
FL 4"=722.63 (N)
FL 4"=722.68 (S)
FL 4"=723.28 (N)

FL 4"=717.19 (S)
FL 4"=717.19 (N)

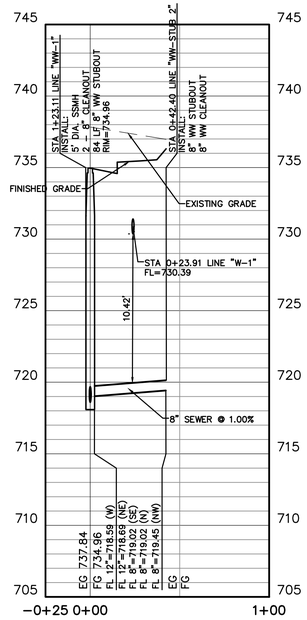
FL 4"=715.70 (SW)
FL 4"=715.70 (NE)

FL 4"=713.44 (SW)

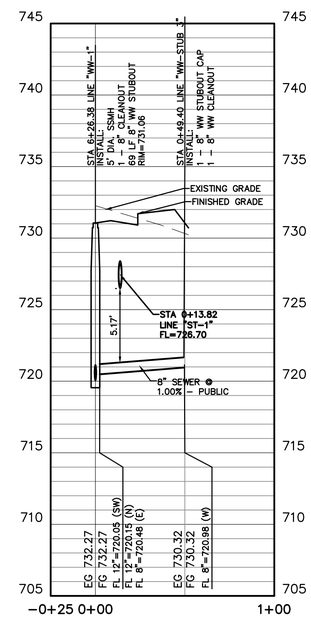
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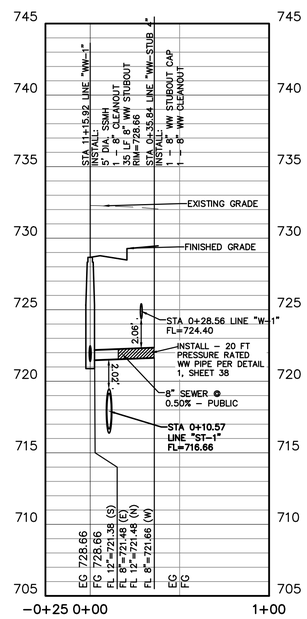
PROFILE: WW-STUB 1



PROFILE: WW-STUB 2



PROFILE: WW-STUB 3

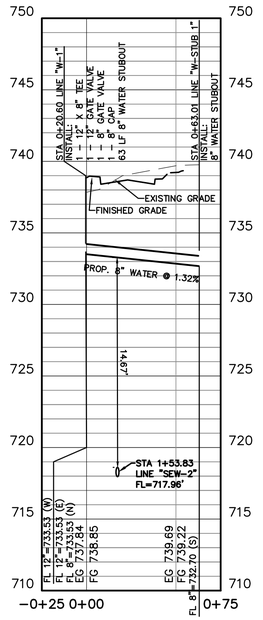


PROFILE: WW-STUB 4

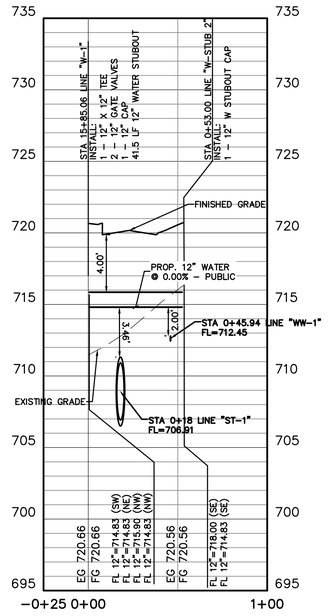


LEGEND

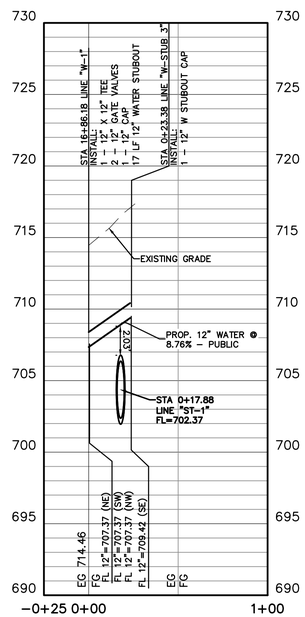
BL	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LP	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
CO	CLEANOUT
MH	MANHOLE
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TELE	TELEPHONE BOX
FL	FLOOD LIGHT
FP	FLAG POLE
SIGN	TRAFFIC SIGN
IRS (C.M.)	1/2-INCH IRON ROD W/"PACHECO KOCH" CAP SET CONTROLLING MONUMENT
	PROPERTY LINE
X	FENCE
OHL	OVERHEAD UTILITY LINE
	UNDERGROUND ELECTRIC LINE
T	UNDERGROUND TELEPHONE LINE
	UNDERGROUND CABLE LINE
6"W	UNDERGROUND WATER LINE
6"SS	UNDERGROUND SANITARY SEWER LINE
	PROP FDC LOCATION
	PROP WATER VALVE
	PROP FIRE HYDRANT
	PROP WATER LINE W/ BEND
	PROP SANITARY SEWER LINE
	PROP SANITARY SEWER MANHOLE
	PROP SANITARY SEWER CLEANOUT



PROFILE: W-STUB 1



PROFILE: W-STUB 2



PROFILE: W-STUB 3

2024-06-CON

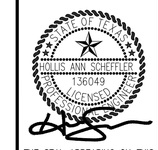
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TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

UTILITY STUBOUT PROFILES



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISON OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
35

SFORERO
5/7/2025 10:06 AM
N:\0041495.00\06 CAD\DWG\SITE DESIGN C3D\0041495.00_UTILITY.DWG

PK–0041495.00_UTILITY.DWG

Project Name: TITAN NORTHPARK TOWN CENTER

Project Notes:

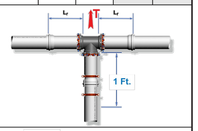
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RESTRAINT LENGTH VALUES

Fitting Type	Pipe Material	Soil Type	Safety Factor	Trench Type	Depth of Bury	Test Pressure	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length	Restraint Length 2
Tee	PVC	SC	1.5	5	4 Ft.	200 PSI	12 In.		6 In.	10 Ft.			1 Ft.	

Site Name: W-1, 0+10.30

Site Notes:



ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED
IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

Defined Variables

H =	4	Depth of Bury
S_f =	1.5	Safety Factor
P =	200	Internal Pressure

Pipe Derived Variables

A =	136.85	Cross Sec. Area (Main)
A_b =	37.39	Cross Sec. Area (Branch)
D =	1.10	Outside Pipe Diameter
D_b =	0.58	Outside Diameter Branch
W_p =	3.31	Weight of Pipe
W_w =	13.81	Weight of Water in Pipe
L_r =	10	Min. restrained Length either side of Tee

Defined Variables

f_c =	0.20	Cohesion Modifier Coefficient
c =	225	Cohesion of Soil
f_a =	0.60	Friction Angle Modifier
Φ =	25	Internal Friction Angle of Soil
γ =	100	Soil Density

Calculations for Tee

$W_f = \gamma \cdot D \cdot H =$	232.000	Normal Force Due to Soil
$W = 2W_f + W_p + W_w =$	481.120	Normal Force Acting on Pipeline
$K_p = \tan^2(\pi/180) \cdot (45 + (\Phi/2)) =$	2.464	Rankin Passive Pressure Coeff.
$H_c = H + (D/2) =$	4.550	Depth From Surface to Pipe Center
$\sigma_1 = \gamma \cdot H_c \cdot K_p + 2c\sqrt{K_p} =$	1827.491	Horizontal Passive Soil Pressure
$A_p = \pi \cdot (D/2) =$	1.728	Area Based on Half of Circumference
$(A_b)_r = \pi \cdot D_b =$	1.822	Area Based on Full Branch Circumference
$R_b = K_b \cdot \sigma_1 \cdot D =$	2010.240	Bearing Resistance of Pipelines
$F_{ar} = (A_b)_r \cdot f_c \cdot c + W \cdot \tan(\pi/180) \cdot f_a \cdot \Phi) =$	210.906	Frictional Resistance
$L_r = S_f(P \cdot A_r - R_b \cdot L_r)/F_{ar} =$	-89.787	Minimum Restrained Length Branch

Created by EBAA Iron's Restraint Length Calculator v7.1.3 on April 3, 2025

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Project Name: TITAN NORTHPARK TOWN CENTER

Project Notes:

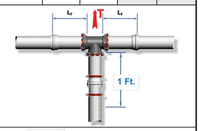
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RESTRAINT LENGTH VALUES

Fitting Type	Pipe Material	Soil Type	Safety Factor	Trench Type	Depth of Bury	Test Pressure	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length	Restraint Length 2
Tee	PVC	SC	1.5	5	4 Ft.	200 PSI	12 In.		8 In.	20 Ft.			1 Ft.	

Site Name: W-1, 0+20.60

Site Notes:



ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED
IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

Defined Variables

H =	4	Depth of Bury
S_f =	1.5	Safety Factor
P =	200	Internal Pressure

Pipe Derived Variables

A =	136.85	Cross Sec. Area (Main)
A_b =	64.33	Cross Sec. Area (Branch)
D =	1.10	Outside Pipe Diameter
D_b =	0.75	Outside Diameter Branch
W_p =	5.72	Weight of Pipe
W_w =	23.75	Weight of Water in Pipe
L_r =	20	Min. restrained Length either side of Tee

Defined Variables

f_c =	0.20	Cohesion Modifier Coefficient
c =	225	Cohesion of Soil
f_a =	0.60	Friction Angle Modifier
Φ =	25	Internal Friction Angle of Soil
γ =	100	Soil Density

Calculations for Tee

$W_f = \gamma \cdot D \cdot H =$	300.000	Normal Force Due to Soil
$W = 2W_f + W_p + W_w =$	629.470	Normal Force Acting on Pipeline
$K_p = \tan^2(\pi/180) \cdot (45 + (\Phi/2)) =$	2.464	Rankin Passive Pressure Coeff.
$H_c = H + (D/2) =$	4.550	Depth From Surface to Pipe Center
$\sigma_1 = \gamma \cdot H_c \cdot K_p + 2c\sqrt{K_p} =$	1827.491	Horizontal Passive Soil Pressure
$A_p = \pi \cdot (D/2) =$	1.728	Area Based on Half of Circumference
$(A_b)_r = \pi \cdot D_b =$	2.356	Area Based on Full Branch Circumference
$R_b = K_b \cdot \sigma_1 \cdot D =$	2010.240	Bearing Resistance of Pipelines
$F_{ar} = (A_b)_r \cdot f_c \cdot c + W \cdot \tan(\pi/180) \cdot f_a \cdot \Phi) =$	274.686	Frictional Resistance
$L_r = S_f(P \cdot A_r - R_b \cdot L_r)/F_{ar} =$	-149.291	Minimum Restrained Length Branch

Created by EBAA Iron's Restraint Length Calculator v7.1.3 on April 3, 2025

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Project Name: TITAN NORTHPARK TOWN CENTER

Project Notes:

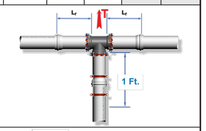
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RESTRAINT LENGTH VALUES

Fitting Type	Pipe Material	Soil Type	Safety Factor	Trench Type	Depth of Bury	Test Pressure	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length	Restraint Length 2
Tee	PVC	SC	1.5	5	4 Ft.	200 PSI	12 In.		6 In.	20 Ft.			1 Ft.	

Site Name: W-1, 3+20.58

Site Notes:



ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED
IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

Defined Variables

H =	4	Depth of Bury
S_f =	1.5	Safety Factor
P =	200	Internal Pressure

Pipe Derived Variables

A =	136.85	Cross Sec. Area (Main)
A_b =	37.39	Cross Sec. Area (Branch)
D =	1.10	Outside Pipe Diameter
D_b =	0.58	Outside Diameter Branch
W_p =	3.31	Weight of Pipe
W_w =	13.81	Weight of Water in Pipe
L_r =	20	Min. restrained Length either side of Tee

Defined Variables

f_c =	0.20	Cohesion Modifier Coefficient
c =	225	Cohesion of Soil
f_a =	0.60	Friction Angle Modifier
Φ =	25	Internal Friction Angle of Soil
γ =	100	Soil Density

Calculations for Tee

$W_f = \gamma \cdot D \cdot H =$	232.000	Normal Force Due to Soil
$W = 2W_f + W_p + W_w =$	481.120	Normal Force Acting on Pipeline
$K_p = \tan^2(\pi/180) \cdot (45 + (\Phi/2)) =$	2.464	Rankin Passive Pressure Coeff.
$H_c = H + (D/2) =$	4.550	Depth From Surface to Pipe Center
$\sigma_1 = \gamma \cdot H_c \cdot K_p + 2c\sqrt{K_p} =$	1827.491	Horizontal Passive Soil Pressure
$A_p = \pi \cdot (D/2) =$	1.728	Area Based on Half of Circumference
$(A_b)_r = \pi \cdot D_b =$	1.822	Area Based on Full Branch Circumference
$R_b = K_b \cdot \sigma_1 \cdot D =$	2010.240	Bearing Resistance of Pipelines
$F_{ar} = (A_b)_r \cdot f_c \cdot c + W \cdot \tan(\pi/180) \cdot f_a \cdot \Phi) =$	210.906	Frictional Resistance
$L_r = S_f(P \cdot A_r - R_b \cdot L_r)/F_{ar} =$	-232.759	Minimum Restrained Length Branch

Created by EBAA Iron's Restraint Length Calculator v7.1.3 on April 3, 2025

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Project Name: TITAN NORTHPARK TOWN CENTER

Project Notes:

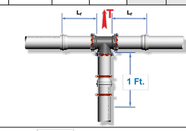
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RESTRAINT LENGTH VALUES

Fitting Type	Pipe Material	Soil Type	Safety Factor	Trench Type	Depth of Bury	Test Pressure	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length	Restraint Length 2
Tee	PVC	SC	1.5	5	4 Ft.	200 PSI	12 In.		6 In.	20 Ft.			1 Ft.	

Site Name: W-1, 6+21.18

Site Notes:



ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED
IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

Defined Variables

H =	4	Depth of Bury
S_f =	1.5	Safety Factor
P =	200	Internal Pressure

Pipe Derived Variables

A =	136.85	Cross Sec. Area (Main)
A_b =	37.39	Cross Sec. Area (Branch)
D =	1.10	Outside Pipe Diameter
D_b =	0.58	Outside Diameter Branch
W_p =	3.31	Weight of Pipe
W_w =	13.81	Weight of Water in Pipe
L_r =	20	Min. restrained Length either side of Tee

Defined Variables

f_c =	0.20	Cohesion Modifier Coefficient
c =	225	Cohesion of Soil
f_a =	0.60	Friction Angle Modifier
Φ =	25	Internal Friction Angle of Soil
γ =	100	Soil Density

Calculations for Tee

$W_f = \gamma \cdot D \cdot H =$	232.000	Normal Force Due to Soil
$W = 2W_f + W_p + W_w =$	481.120	Normal Force Acting on Pipeline
$K_p = \tan^2(\pi/180) \cdot (45 + (\Phi/2)) =$	2.464	Rankin Passive Pressure Coeff.
$H_c = H + (D/2) =$	4.550	Depth From Surface to Pipe Center
$\sigma_1 = \gamma \cdot H_c \cdot K_p + 2c\sqrt{K_p} =$	1827.491	Horizontal Passive Soil Pressure
$A_p = \pi \cdot (D/2) =$	1.728	Area Based on Half of Circumference
$(A_b)_r = \pi \cdot D_b =$	1.822	Area Based on Full Branch Circumference
$R_b = K_b \cdot \sigma_1 \cdot D =$	2010.240	Bearing Resistance of Pipelines
$F_{ar} = (A_b)_r \cdot f_c \cdot c + W \cdot \tan(\pi/180) \cdot f_a \cdot \Phi) =$	210.906	Frictional Resistance
$L_r = S_f(P \cdot A_r - R_b \cdot L_r)/F_{ar} =$	-232.759	Minimum Restrained Length Branch

Created by EBAA Iron's Restraint Length Calculator v7.1.3 on April 3, 2025

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Project Name: TITAN NORTHPARK TOWN CENTER

Project Notes:

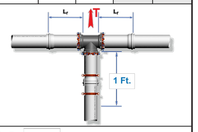
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RESTRAINT LENGTH VALUES

Fitting Type	Pipe Material	Soil Type	Safety Factor	Trench Type	Depth of Bury	Test Pressure	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length	Restraint Length 2
Tee	PVC	SC	1.5	5	4 Ft.	200 PSI	12 In.		6 In.	20 Ft.			1 Ft.	

Site Name: W-1, 9+27.36

Site Notes:



ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED
IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

Defined Variables

H =	4	Depth of Bury
S_f =	1.5	Safety Factor
P =	200	Internal Pressure

Pipe Derived Variables

A =	136.85	Cross Sec. Area (Main)
A_b =	37.39	Cross Sec. Area (Branch)
D =	1.10	Outside Pipe Diameter
D_b =	0.58	Outside Diameter Branch
W_p =	3.31	Weight of Pipe
W_w =	13.81	Weight of Water in Pipe
L_r =	20	Min. restrained Length either side of Tee

Defined Variables

f_c =	0.20	Cohesion Modifier Coefficient
c =	225	Cohesion of Soil
f_a =	0.60	Friction Angle Modifier
Φ =	25	Internal Friction Angle of Soil
γ =	100	Soil Density

Calculations for Tee

$W_f = \gamma \cdot D \cdot H =$	232.000	Normal Force Due to Soil
$W = 2W_f + W_p + W_w =$	481.120	Normal Force Acting on Pipeline
$K_p = \tan^2(\pi/180) \cdot (45 + (\Phi/2)) =$	2.464	Rankin Passive Pressure Coeff.
$H_c = H + (D/2) =$	4.550	Depth From Surface to Pipe Center
$\sigma_1 = \gamma \cdot H_c \cdot K_p + 2c\sqrt{K_p} =$	1827.491	Horizontal Passive Soil Pressure
$A_p = \pi \cdot (D/2) =$	1.728	Area Based on Half of Circumference
$(A_b)_r = \pi \cdot D_b =$	1.822	Area Based on Full Branch Circumference
$R_b = K_b \cdot \sigma_1 \cdot D =$	2010.240	Bearing Resistance of Pipelines
$F_{ar} = (A_b)_r \cdot f_c \cdot c + W \cdot \tan(\pi/180) \cdot f_a \cdot \Phi) =$	210.906	Frictional Resistance
$L_r = S_f(P \cdot A_r - R_b \cdot L_r)/F_{ar} =$	-232.759	Minimum Restrained Length Branch

Created by EBAA Iron's Restraint Length Calculator v7.1.3 on April 3, 2025

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Project Name: TITAN NORTHPARK TOWN CENTER

Project Notes:

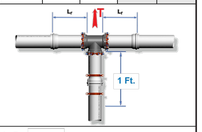
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RESTRAINT LENGTH VALUES

Fitting Type	Pipe Material	Soil Type	Safety Factor	Trench Type	Depth of Bury	Test Pressure	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length	Restraint Length 2
Tee	PVC	SC	1.5	5	4 Ft.	200 PSI	12 In.		6 In.	20 Ft.			1 Ft.	

Site Name: W-1, 12+27.36

Site Notes:



ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED
IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

Defined Variables

H =	4	Depth of Bury
S_f =	1.5	Safety Factor
P =	200	Internal Pressure

Pipe Derived Variables

A =	136.85	Cross Sec. Area (Main)
A_b =	37.39	Cross Sec. Area (Branch)
D =	1.10	Outside Pipe Diameter
D_b =	0.58	Outside Diameter Branch
W_p =	3.31	Weight of Pipe
W_w =	13.81	Weight of Water in Pipe
L_r =	20	Min. restrained Length either side of Tee

Defined Variables

f_c =	0.20	Cohesion Modifier Coefficient
c =	225	Cohesion of Soil
f_a =	0.60	Friction Angle Modifier
Φ =	25	Internal Friction Angle of Soil
γ =	100	Soil Density

Calculations for Tee

$W_f = \gamma \cdot D \cdot H =$	232.000	Normal Force Due to Soil
$W = 2W_f + W_p + W_w =$	481.120	Normal Force Acting on Pipeline
$K_p = \tan^2(\pi/180) \cdot (45 + (\Phi/2)) =$	2.464	Rankin Passive Pressure Coeff.
$H_c = H + (D/2) =$	4.550	Depth From Surface to Pipe Center
$\sigma_1 = \gamma \cdot H_c \cdot K_p + 2c\sqrt{K_p} =$	1827.491	Horizontal Passive Soil Pressure
$A_p = \pi \cdot (D/2) =$	1.728	Area Based on Half of Circumference
$(A_b)_r = \pi \cdot D_b =$	1.822	Area Based on Full Branch Circumference
$R_b = K_b \cdot \sigma_1 \cdot D =$	2010.240	Bearing Resistance of Pipelines
$F_{ar} = (A_b)_r \cdot f_c \cdot c + W \cdot \tan(\pi/180) \cdot f_a \cdot \Phi) =$	210.906	Frictional Resistance
$L_r = S_f(P \cdot A_r - R_b \cdot L_r)/F_{ar} =$	-232.759	Minimum Restrained Length Branch

Created by EBAA Iron's Restraint Length Calculator v7.1.3 on April 3, 2025

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Project Name: TITAN NORTHPARK TOWN CENTER

Project Notes:

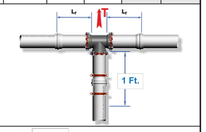
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RESTRAINT LENGTH VALUES

Fitting Type	Pipe Material	Soil Type	Safety Factor	Trench Type	Depth of Bury	Test Pressure	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length	Restraint Length 2
Tee	PVC	SC	1.5	5	4 Ft.	200 PSI	12 In.		6 In.	20 Ft.			1 Ft.	

Site Name: W-1, 15+27.35

Site Notes:



ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED
IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

Defined Variables

H =	4	Depth of Bury
S_f =	1.5	Safety Factor
P =	200	Internal Pressure

Pipe Derived Variables

A =	136.85	Cross Sec. Area (Main)
A_b =	37.39	Cross Sec. Area (Branch)
D =	1.10	Outside Pipe Diameter
D_b =	0.58	Outside Diameter Branch
W_p =	3.31	Weight of Pipe
W_w =	13.81	Weight of Water in Pipe
L_r =	20	Min. restrained Length either side of Tee

Defined Variables

f_c =	0.20	Cohesion Modifier Coefficient
c =	225	Cohesion of Soil
f_a =	0.60	Friction Angle Modifier
Φ =	25	Internal Friction Angle of Soil
γ =	100	Soil Density

Calculations for Tee

$W_f = \gamma \cdot D \cdot H =$	232.000	Normal Force Due to Soil
$W = 2W_f + W_p + W_w =$	481.120	Normal Force Acting on Pipeline
$K_p = \tan^2(\pi/180) \cdot (45 + (\Phi/2)) =$	2.464	Rankin Passive Pressure Coeff.
$H_c = H + (D/2) =$	4.550	Depth From Surface to Pipe Center
$\sigma_1 = \gamma \cdot H_c \cdot K_p + 2c\sqrt{K_p} =$	1827.491	Horizontal Passive Soil Pressure
$A_p = \pi \cdot (D/2) =$	1.728	Area Based on Half of Circumference
$(A_b)_r = \pi \cdot D_b =$	1.822	Area Based on Full Branch Circumference
$R_b = K_b \cdot \sigma_1 \cdot D =$	2010.240	Bearing Resistance of Pipelines
$F_{ar} = (A_b)_r \cdot f_c \cdot c + W \cdot \tan(\pi/180) \cdot f_a \cdot \Phi) =$	210.906	Frictional Resistance
$L_r = S_f(P \cdot A_r - R_b \cdot L_r)/F_{ar} =$	-232.759	Minimum Restrained Length Branch

Created by EBAA Iron's Restraint Length Calculator v7.1.3 on April 3, 2025

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Project Name: TITAN NORTHPARK TOWN CENTER

Project Notes:

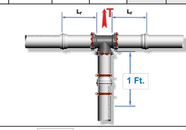
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RESTRAINT LENGTH VALUES

Fitting Type	Pipe Material	Soil Type	Safety Factor	Trench Type	Depth of Bury	Test Pressure	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length	Restraint Length 2
Tee	PVC	SC	1.5	5	4 Ft.	200 PSI	12 In.		12 In.	20 Ft.			1 Ft.	

Site Name: W-1, 15+85.06

Site Notes:



ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED
IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

Defined Variables

H =	4	Depth of Bury
S_f =	1.5	Safety Factor
P =	200	Internal Pressure

Pipe Derived Variables

A =	136.85	Cross Sec. Area (Main)
A_b =	136.85	Cross Sec. Area (Branch)
D =	1.10	Outside Pipe Diameter
D_b =	1.10	Outside Diameter Branch
W_p =	12.17	Weight of Pipe
W_w =	50.53	Weight of Water in Pipe
L_r =	20	Min. restrained Length either side of Tee

Defined Variables

f_c =	0.20	Cohesion Modifier Coefficient
c =	225	Cohesion of Soil
f_a =	0.60	Friction Angle Modifier
Φ =	25	Internal Friction Angle of Soil
γ =	100	Soil Density

Calculations for Tee

$W_f = \gamma \cdot D \cdot H =$	440.000	Normal Force Due to Soil
$W = 2W_f + W_p + W_w =$	942.700	Normal Force Acting on Pipeline
$K_p = \tan^2(\pi/180) \cdot (45 + (\Phi/2)) =$	2.464	Rankin Passive Pressure Coeff.
$H_c = H + (D/2) =$	4.550	Depth From Surface to Pipe Center
$\sigma_1 = \gamma \cdot H_c \cdot K_p + 2c\sqrt{K_p} =$	1827.491	Horizontal Passive Soil Pressure
$A_p = \pi \cdot (D/2) =$	1.728	Area Based on Half of Circumference
$(A_b)_r = \pi \cdot D_b =$	3.456	Area Based on Full Branch Circumference
$R_b = K_b \cdot \sigma_1 \cdot D =$	2010.240	Bearing Resistance of Pipelines
$F_{ar} = (A_b)_r \cdot f_c \cdot c + W \cdot \tan(\pi/180) \cdot f_a \cdot \Phi) =$	408.116	Frictional Resistance
$L_r = S_f(P \cdot A_r - R_b \cdot L_r)/F_{ar} =$	-47.173	Minimum Restrained Length Branch

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Project Name: TITAN NORTHPARK TOWN CENTER

Project Notes:

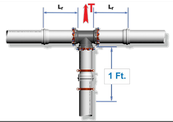
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RESTRAINT LENGTH VALUES

Fitting Type	Pipe Material	Soil Type	Safety Factor	Trench Type	Depth of Bury	Test Pressure	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length	Restraint Length 2
Horizontal Bend	PVC	SC	1.5	5	8 Ft.	200 PSI	12 In.	45°					9 Ft.	

Site Name: W-1, 16+86.18

Site Notes:



ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED
IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

Defined Variables

H =	8	Depth of Bury
S_f =	1.5	Safety Factor
P =	200	Internal Pressure

Pipe Derived Variables

A =	136.85	Cross Sec. Area (Main)
A_b =	136.85	Cross Sec. Area (Branch)
D =	1.10	Outside Pipe Diameter
D_b =	1.10	Outside Diameter Branch
W_p =	12.17	Weight of Pipe
W_w =	50.53	Weight of Water in Pipe
L_r =	20	Min. restrained Length either side of Tee

Defined Variables

f_c =	0.20	Cohesion Modifier Coefficient
c =	225	Cohesion of Soil
f_a =	0.60	Friction Angle Modifier
Φ =	25	Internal Friction Angle of Soil
γ =	100	Soil Density

Calculations for Tee

$W_f = \gamma \cdot D \cdot H =$	660.000	Normal Force Due to Soil
$W = 2W_f + W_p + W_w =$	1382.700	Normal Force Acting on Pipeline
$K_p = \tan^2(\pi/180) \cdot (45 + (\Phi/2)) =$	2.464	Rankin Passive Pressure Coeff.
$H_c = H + (D/2) =$	8.550	Depth From Surface to Pipe Center
$\sigma_1 = \gamma \cdot H_c \cdot K_p + 2c\sqrt{K_p} =$	2320.291	Horizontal Passive Soil Pressure
$A_p = \pi \cdot (D/2) =$	1.728	Area Based on Half of Circumference
$R_b = K_b \cdot \sigma_1 \cdot D =$	3094.400	Bearing Resistance of Pipelines
$F_{ar} = A_p \cdot f_c \cdot c + W \cdot \tan(\pi/180) \cdot f_a \cdot \Phi) =$	566.151	Frictional Resistance
$L = (S_f \cdot P \cdot A \cdot \tan((\pi/180) \cdot (\Phi/2)))/(F_{ar} + (R_b/2)) =$	8.047	Minimum Restrained Length

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Project Name: TITAN NORTHPARK TOWN CENTER

Project Notes:

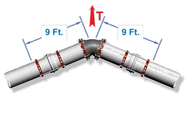
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RESTRAINT LENGTH VALUES

Fitting Type	Pipe Material	Soil Type	Safety Factor	Trench Type	Depth of Bury	Test Pressure	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length	Restraint Length 2
Horizontal Bend	PVC	SC	1.5	5	8 Ft.	200 PSI	12 In.	45°					9 Ft.	

Site Name: W-1, 17+66.16

Site Notes:



ALL JOINTS WITHIN THE CALCULATED LENGTH MUST BE RESTRAINED
IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

Defined Variables

H =	8	Depth of Bury
S_f =	1.5	Safety Factor
P =	200	Internal Pressure
θ =	45	Bend Angle

Pipe Derived Variables

A =	136.85	Cross Sec. Area of Pipe
D =	1.10	Outside Pipe Diameter
W_p =	12.17	Weight of Pipe
W_w =	50.53	Weight of Water in Pipe

Defined Variables

f_c =	0.20	Cohesion Modifier Coefficient
c =	225	Cohesion of Soil
f_a =	0.60	Friction Angle Modifier
Φ =	25	Internal Friction Angle of Soil
γ =	100	Soil Density
K_m =	1.00	Trench Compaction Modifier

Calculations for Horizontal Bend

$W_f = \gamma \cdot D \cdot H =$	880.000	Normal Force Due to Soil
$W = 2W_f + W_p + W_w =$	1822.700	Normal Force Acting on Pipeline
$K_p = \tan^2(\pi/180) \cdot (45 + (\Phi/2)) =$	2.464	Rankin Passive Pressure Coeff.
$H_c = H + (D/2) =$	8.550	Depth From Surface to Pipe Center
$\sigma_1 = \gamma \cdot H_c \cdot K_p + 2c\sqrt{K_p} =$	2813.091	Horizontal Passive Soil Pressure
$A_p = \pi \cdot (D/2) =$	1.728	Area Based on Half of Circumference
$R_b = K_b \cdot \sigma_1 \cdot D =$	3094.400	Bearing Resistance of Pipelines
$F_a = A_p \cdot f_c \cdot c + W \cdot \tan(\pi/180) \cdot f_a \cdot \Phi) =$	566.151	Frictional Resistance
$L = (S_f \cdot P \cdot A \cdot \tan((\pi/180) \cdot (\Phi/2)))/(F_a + (R_b/2)) =$	8.047	Minimum Restrained Length

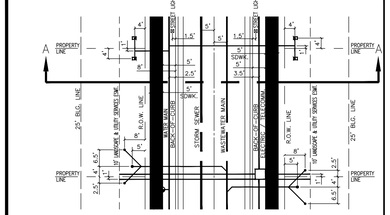
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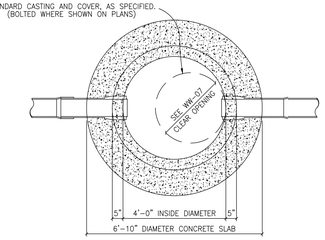
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PROPERTY LINE
4' SIDEWALK
5' SDWK
2.5' SDWK
3.5' SDWK
2% SLOPE
2% SLOPE
STREET LIGHT
STREET LIGHT
2% SLOPE
2% SLOPE
2% SLOPE



SEE DETAIL WW-03

MANHOLE PLAN

CITY OF GEORGETOWN NOTES:

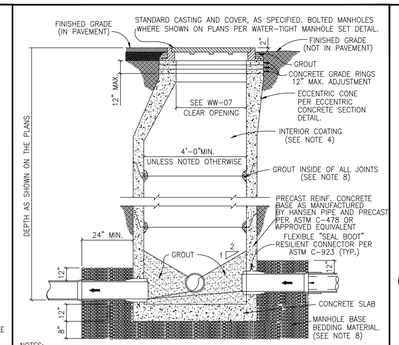
MANHOLE DETAILS SHALL REFLECT THE CITY'S MINIMUM SPECIFICATIONS, AS STATED BELOW:

A. ALL MANHOLES SHALL BE 48" I.D., R.C.P., CLASS III, WITH RUBBER PROFILE GASKET – SINGLE OFF–SET JOINT CONFORMING TO ASTM C478, C433 AND C76.
B. ALL MANHOLES SHALL HAVE FRAME AND COVER, AS MANUFACTURED BY EAST JORDAN IRON WORKS (AS PER DETAIL # WW–07) OR APPROVED EQUIVALENT.
C. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON FRAME AND COVER.
D. ALL MANHOLES SHALL HAVE AN ECCENTRIC CONE.
E. MANHOLES MAY HAVE A FLAT LID, IF APPROVED BY CITY OF GEORGETOWN, BEING 12" THICK WITH A MINIMUM 30" OPENING, AS MANUFACTURED BY HANSEN PIPE AND PRECAST OR APPROVED EQUAL M.F.G. CONFORMING TO ASTM C478, 5000 P.S.I. CONCRETE, TRAFFIC BEARING AND WITH PROFILE GASKET – SINGLE OFF–SET JOINT CONFORMING TO ASTM C443.
F. INVERTS AND FLEXIBLE SEAL BOOTS, PER ASTM C–923, SHALL BE CAST INTO BASE SECTION.
G. MINIMUM DROP BETWEEN INVERTS SHALL BE ONE–TENTH OF A FOOT (0.1').
H. GRADE RINGS WITH AN I.D. TO MATCH FRAMES CLEAR OPENING WITH A MAXIMUM ADJUSTMENT OF 12" ARE ALLOWED.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD MANHOLE – PLAN
WW02
NTS | 1/2003 | MRS | TRB



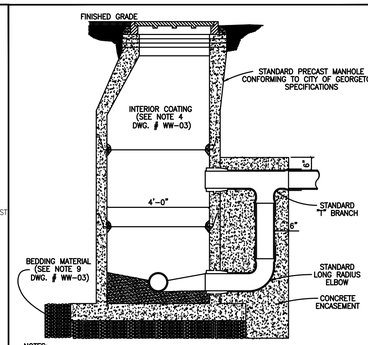
NOTES:

1. MANHOLES SHALL BE PRECAST ASTM C–478 BELL AND SPIGOT WITH PROFILE GASKET – SINGLE OFF–SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
4. AN 80 MIL. COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH WASTEWATER MANHOLE AND UNDERSIDE OF FLAT TOPS.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETTED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
6. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
7. MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS–20 TRAFFIC LOADS.
8. GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
9. MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL:
   SIEVE SIZE 2", PERCENT (%) RETAINED 0
   SIEVE SIZE 1 1/2", % RETAINED 0–10
   SIEVE SIZE 1", % RETAINED 45–80
   SIEVE SIZE 3/4", % RETAINED 85–100
   SIEVE SIZE 3/8", % RETAINED 95–100

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD MANHOLE – SECTION
WW03
NTS | 1/2003 | MRS | TRB



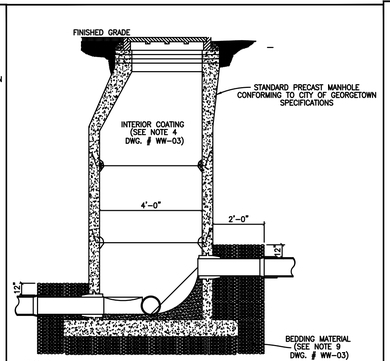
NOTES:

1. CONCRETE ENCASEMENT FOR DROP CONNECTION TO BE POURED INTEGRALLY WITH BOTH MANHOLE SLAB AND WALL.
2. DROP CONNECTIONS SHALL BE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED TWO FEET (2') OR MORE ABOVE THE MAIN INVERT CHANNEL.
3. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
4. WHEN P.V.C. IS USED IN SANITARY SEWER LINES, SOLVENT TYPE JOINT P.V.C. FITTINGS MAY BE UTILIZED IN THE DROP ASSEMBLY ONLY.
5. MINIMUM PIPE SIZE FOR DROP IS EIGHT INCHES (8").
6. SEE STANDARD MANHOLE DETAIL (DWG. # WW–03) FOR ADDITIONAL REQUIREMENTS.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
DROP CONNECTION–PRECAST MANHOLE TYPE "A"
WW04
NTS | 1/2003 | MRS | TRB



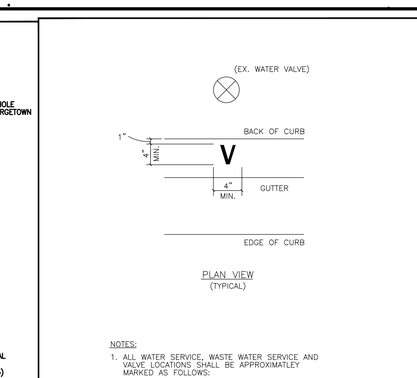
NOTES:

1. TO BE USED WHERE DROP IS SIX INCHES (6") TO TWO FEET (2'–0").
2. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
3. CONSTRUCTION OF DROP SHALL PROVIDE AN OVERSIZED SLAB TO EXTEND UNDER THE DROP CONNECTION.
4. MINIMUM PIPE SIZE FOR DROP IS EIGHT INCHES (8").
5. SEE STANDARD MANHOLE DETAIL (DWG. # WW–03) FOR ADDITIONAL REQUIREMENTS.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
DROP CONNECTION–PRECAST MANHOLE TYPE "B"
WW05
NTS | 1/2003 | MRS | TRB



PLAN VIEW
(TYPICAL)

NOTES:

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

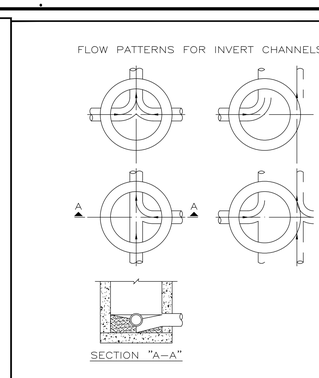
WATER SERVICE	"W"	TOP OF CURB
WASTE WATER SERVICE	"S"	TOP OF CURB
VALVE	"V"	TOP OF CURB

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

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CURB STAMP DETAIL
SD05
NTS | 1/2003 | MRS | TRB



SECTION "A–A"

NOTES:

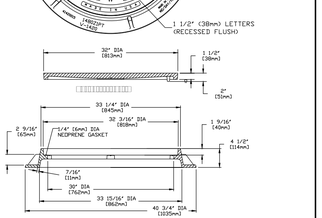
1. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
2. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOW.
3. CHANNELS FOR FUTURE CONSTRUCTIONS (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND, AND COVERED WITH 1" OF MORTAR.
4. SLOPE MANHOLE ITSELF WITH A 1:2 SLOPE FROM MANHOLE WALL TO CHANNEL.
5. INVERT SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR 4" DEEP.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
FLOW PATTERNS FOR INVERT CHANNELS
WW06
NTS | 1/2003 | MRS | TRB

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



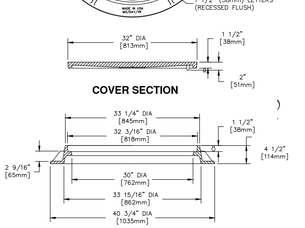
NOTES:

1. BOLTED WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480APT V–1420/148021PT, COVER TO BE STAMPED WITH "SANITARY SEWER".
2. BOLTED WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 00148392 41420015.
4. FOR STANDARD WASTEWATER MANHOLE SET REFER TO DETAIL WW07.

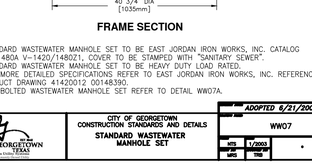
ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
BOLTED WASTEWATER MANHOLE SET
WW07A
NTS | 1/2006 | MRS | TRB

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



COVER SECTION



FRAME SECTION

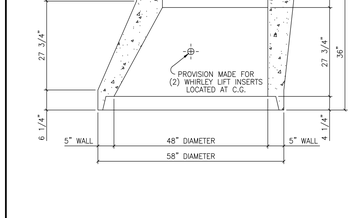
NOTES:

1. STANDARD WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V–1420/148021, COVER TO BE STAMPED WITH "SANITARY SEWER".
2. STANDARD WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148390.
4. FOR BOLTED WASTEWATER MANHOLE SET REFER TO DETAIL WW07A.

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

ADOPTED 6/21/2006

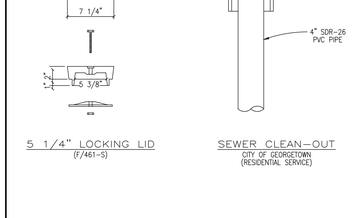
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD WASTEWATER MANHOLE SET
WW07
NTS | 1/2003 | MRS | TRB



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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
48"X5" TO 33"X8"X36" TALL ECCENTRIC CONCRETE SECTION
WW08
NTS | 1/2003 | MRS | TRB



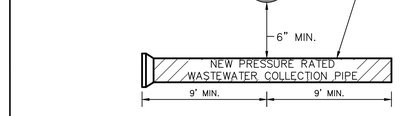
5 1/4" LOCKING LID
(F/461–S)

SEWER CLEAN–OUT
CITY OF GEORGETOWN
(RESIDENTIAL SERVICE)

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
SEWER CLEAN–OUT DETAIL
WW12
NTS | 1/2003 | MRS | TRB



NEW WASTEWATER COLLECTION SYSTEM PIPE (PRESSURE–RATED) BELOW AND CROSSING A WATER SUPPLY PIPE

1

REFER NOTE: 7.A

7. IF A COLLECTION SYSTEM PIPE CROSSES BELOW A WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH 7.A OF THIS PARAGRAPH, OR MUST BE ENCASED IN CEMENT–STABILIZED SAND ACCORDING TO SUBPARAGRAPH 7.B OF THIS PARAGRAPH , OR MUST BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH 7.C OF THIS PARAGRAPH.
   7.A A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS, CORROSION–RESISTANT, NON–BRITTLE PIPE MUST:
      7.A.1 HAVE AT LEAST SIX INCHES OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES;
      7.A.2 BE CENTERED ON THE CROSSING;
      7.A.3 BE AT LEAST 18 FEET LONG; AND
      7.A.4 TERMINATE AT JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.

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

SECTION

PLAN

NOTES:

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

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
SEWER SERVICE CONNECTIONS
WW13
NTS | 1/2003 | MRS | TRB

PLAN

SECTION "X–X"

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD AIR RELEASE VALVE FOR FORCE MAIN
WW14
NTS | 1/2003 | MRS | TRB

PLAN

SECTION "Y–Y"

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD AIR RELEASE VALVE FOR FORCE MAIN
WW15
NTS | 1/2003 | MRS | TRB

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

NOTES:

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

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY
WW18
NTS | 1/2003 | MRS | TRB

FRONT VIEW

GO, NO GO DEFLECTION TESTING MANDREL

SIDE OR TOP VIEW

2 **DEFLECTION TESTING MANDREL**

NOT TO SCALE

2024-06-CON

Westwood
Phone (512) 485-0831
Toll Free (888) 937-5150
8701 N. Mopac Expy, Suite 320
Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DESCRIPTION	DATE	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

UTILITY DETAILS 2 OF 2

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

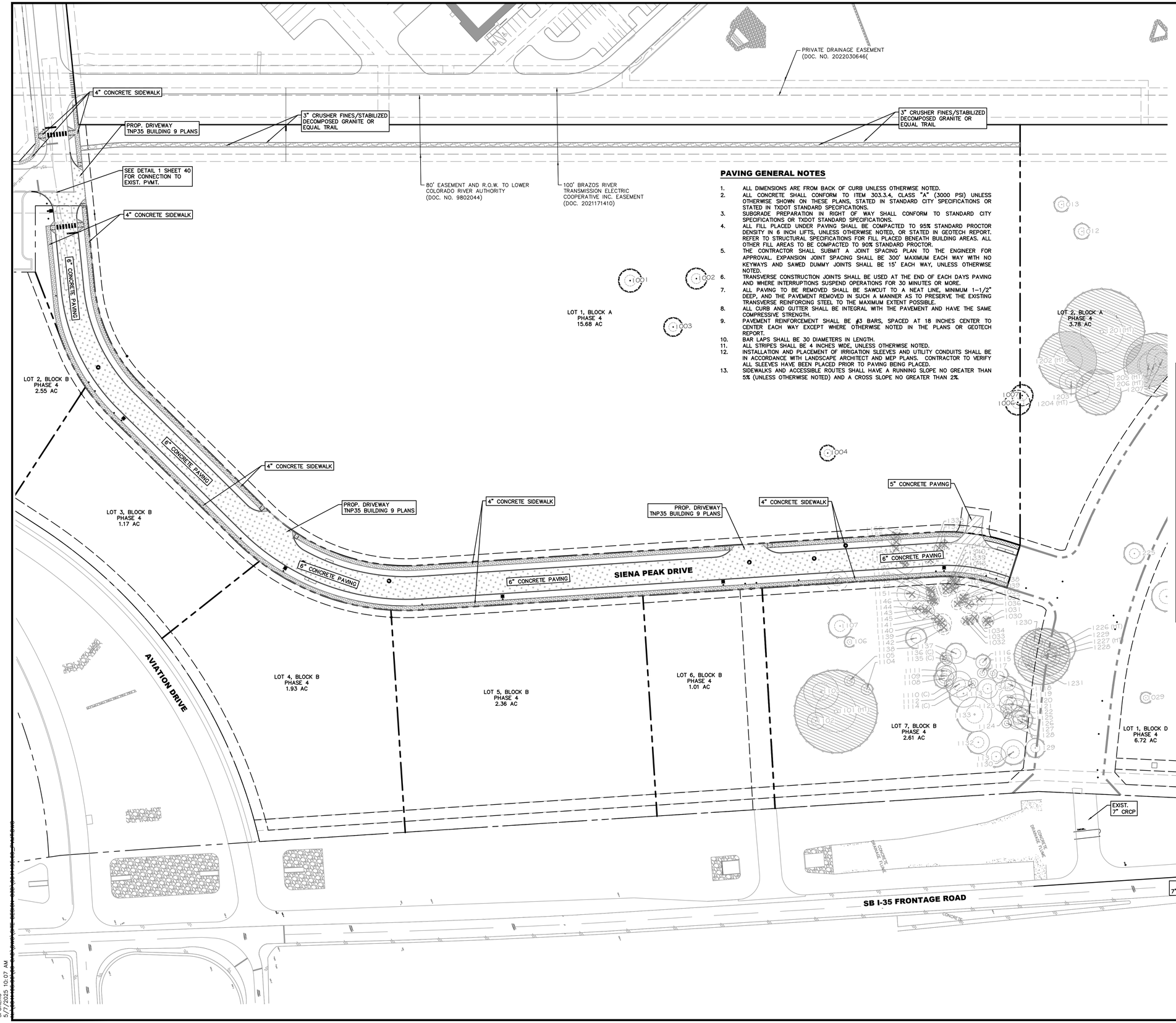
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DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO. **38**

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PAVING GENERAL NOTES

1. ALL DIMENSIONS ARE FROM BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CONCRETE SHALL CONFORM TO ITEM 303.3.4, CLASS "A" (3000 PSI) UNLESS OTHERWISE SHOWN ON THESE PLANS, STATED IN STANDARD CITY SPECIFICATIONS OR STATED IN TXDOT STANDARD SPECIFICATIONS.
3. SUBGRADE PREPARATION IN RIGHT OF WAY SHALL CONFORM TO STANDARD CITY SPECIFICATIONS OR TXDOT STANDARD SPECIFICATIONS.
4. ALL FILL PLACED UNDER PAVING SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6 INCH LIFTS, UNLESS OTHERWISE NOTED, OR STATED IN GEOTECH REPORT. REFER TO STRUCTURAL SPECIFICATIONS FOR FILL PLACED BENEATH BUILDING AREAS. ALL OTHER FILL AREAS TO BE COMPACTED TO 90% STANDARD PROCTOR.
5. THE CONTRACTOR SHALL SUBMIT A JOINT SPACING PLAN TO THE ENGINEER FOR APPROVAL. EXPANSION JOINT SPACING SHALL BE 300' MAXIMUM EACH WAY WITH NO KEYWAYS AND SAWED DUMMY JOINTS SHALL BE 15' EACH WAY, UNLESS OTHERWISE NOTED.
6. TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED AT THE END OF EACH DAYS PAVING AND WHERE INTERRUPTIONS SUSPEND OPERATIONS FOR 30 MINUTES OR MORE.
7. ALL PAVING TO BE REMOVED SHALL BE SAWCUT TO A NEAT LINE, MINIMUM 1-1/2" DEEP, AND THE PAVEMENT REMOVED IN SUCH A MANNER AS TO PRESERVE THE EXISTING TRANSVERSE REINFORCING STEEL TO THE MAXIMUM EXTENT POSSIBLE.
8. ALL CURB AND GUTTER SHALL BE INTEGRAL WITH THE PAVEMENT AND HAVE THE SAME COMPRESSIVE STRENGTH.
9. PAVEMENT REINFORCEMENT SHALL BE #3 BARS, SPACED AT 18 INCHES CENTER TO CENTER EACH WAY EXCEPT WHERE OTHERWISE NOTED IN THE PLANS OR GEOTECH REPORT.
10. BAR LAPS SHALL BE 30 DIAMETERS IN LENGTH.
11. ALL STRIPES SHALL BE 4 INCHES WIDE, UNLESS OTHERWISE NOTED.
12. INSTALLATION AND PLACEMENT OF IRRIGATION SLEEVES AND UTILITY CONDUITS SHALL BE IN ACCORDANCE WITH LANDSCAPE ARCHITECT AND MEP PLANS. CONTRACTOR TO VERIFY ALL SLEEVES HAVE BEEN PLACED PRIOR TO PAVING BEING PLACED.
13. SIDEWALKS AND ACCESSIBLE ROUTES SHALL HAVE A RUNNING SLOPE NO GREATER THAN 5% (UNLESS OTHERWISE NOTED) AND A CROSS SLOPE NO GREATER THAN 2%.

0 30 60 120 180

GRAPHIC SCALE IN FEET
1"=60'

LEGEND

- BOLLARD
- ELECTRIC METER
- POWER POLE
- LIGHT STANDARD
- WATER METER
- WATER VALVE
- IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- CLEANOUT
- MANHOLE
- TRAFFIC SIGNAL CONTROL
- TRAFFIC SIGNAL POLE
- TELEPHONE BOX
- FLOOD LIGHT
- FLAG POLE
- TRAFFIC SIGN
- IRS — 1/2-INCH IRON ROD W/"PACHECO KOCH" CAP SET
- (C.M.) — CONTROLLING MONUMENT
- PROPERTY LINE
- FENCE
- FIRE LANE
- 4" REINFORCED CONCRETE SIDEWALK (3000 PSI) REF: C.O.G.T. DETAIL SD-14 FOR SUBGRADE INFO
- HAMMERHEAD AREA, 5" REINFORCED CONCRETE PVMT (CLASS "C", 3600 PSI), 6" SUBGRADE
- TRAIL SURFACE, 3" STABILIZED DECOMPOSED GRANITE

SIENA PEAK DRIVE

CONCRETE PAVING

6" CONCRETE W/ NO. 4 BARS AT 18" (4,000 PSI), OVER

6" SUBGRADE, LIME-STABILIZED WITH A MINIMUM 4% HYDRATED LIME (BY DRY WEIGHT) (18 LBS/SY) COMPACTED TO A MIN. 95% MODIFIED PROCTOR DENSITY (ASTM D1557), AT OR ABOVE OPTIMUM MOISTURE.

EXPANSION JOINTS LOCATED AT MAX 300' INTERVALS AND ENDS OF PLACEMENTS.

(ALTERNATIVE) FLEXIBLE PAVEMENT, FULL-DEPTH ASPHALT

1-1/2" HMAC, TXDOT ITEM 340, TYPE "D", FINE-GRADED SURFACE COURSE, OVER

3-1/2" HMAC, TXDOT ITEM 340, TYPE "A", COARSE-GRADED BASE COURSE, OVER

6" LIME-STABALIZED SUBGRADE, 4 PERCENT HYDRATED LIME (18 POUNDS PER SQUARE YARD), COMPACTED TO A MINIMUM OF 95 PERCENT MODIFIED PROCTOR, ASTM D1557, AT OR ABOVE OPTIMUM MOISTURE.

CAPE ARCHITECT AND MEP PLANS. CONTRACTOR TO VERIFY ALL SLEEVES HAVE BEEN PLACED PRIOR TO PAVING BEING PLACED.

REFER TO GEOTECHNICAL REPORT AND SUPPLEMENTARY PAVEMENT SECTION LETTER CREATED BY REED ENGINEERING GROUP, LTD. DATED 8/5/2020, 8/11/2020 & 01/29/2024 RESPECTIVELY.

TREE PRESERVATION LEGEND

- HERITAGE TREE TO REMAIN — ½ CRZ
- HERITAGE TREE TO BE REMOVED — ½ CRZ
- PROTECTED TREE TO REMAIN — ½ CRZ
- PROTECTED TREE TO BE REMOVED
- TREE PROTECTION FENCE — ½ CRZ

2024-06-CON

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Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

PAVING PLAN

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED PROFESSIONAL ENGINEER

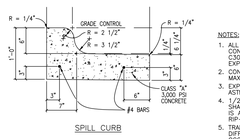
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISION OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

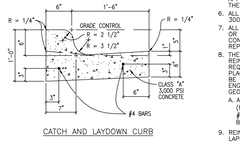
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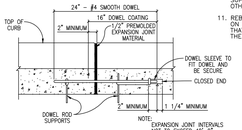
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SPILL CURB



CATCH AND LAYDOWN CURB



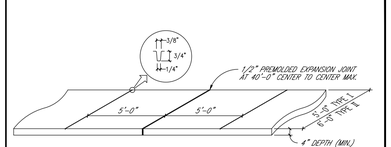
CURB DOWEL DETAIL

NOTES:

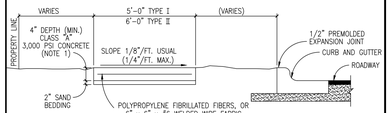
1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752, BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP-RAP.
5. TRANSITIONS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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
CURB AND GUTTER DETAILS	SD06
NTS / MRS	1/2003 / TRB



TYPE I – AS REQUIRED FOR SINGLE FAMILY, DUPLEXES AND TOWNHOUSES, TRIPLEXES AND QUADRAPLEXES.
TYPE II – AS REQUIRED FOR MULTI-FAMILY, OTHER NON-RESIDENTIAL USES AND PARKING LOTS/STRUCTURES.
ALL THOROUGHFARES (COLLECTOR AND ABOVE) REQUIRE TYPE II.

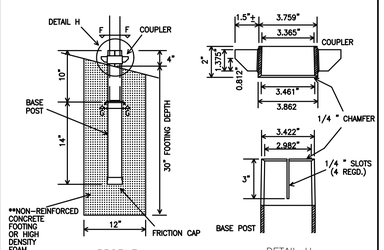


NOTES:

1. STANDARD LOCATION OF SIDEWALK SHALL BE IN CONFORMANCE WITH THE UDC.
2. SIDEWALK SHALL CONFORM TO CURRENT TDLR/TAS STANDARDS.
3. ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND ENGINEER OF RECORD.
4. ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT SHALL BE APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND BY THE CITY ENGINEER.
5. SLIP DOWEL SHALL BE INSTALLED AT EVERY LONGITUDINAL EXPANSION JOINT (UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER DURING ENGINEERING PLAN REVIEW PRIOR TO FINAL DESIGN).

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

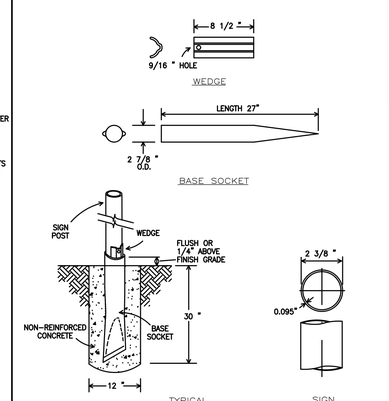
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006 TRB
SIDEWALK SECTION AND JOINT DETAIL	SD14
NTS / MRS	1/2003 / TRB



* PLASTING INSERT MUST BE USED WITH 1/16 " THIN WALL TUBING.
** FOOTING SHALL BE REMOVED AND BACKFILLED WHEN BARRICADE IS REMOVED.

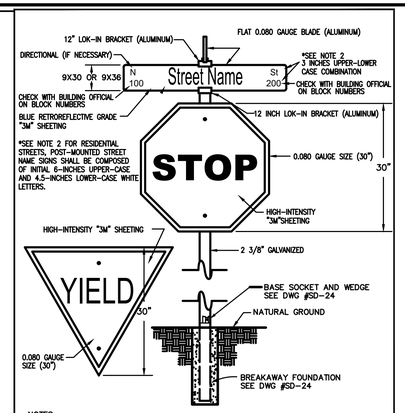
The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
UNIVERSAL ANCHOR SYSTEM	SD23
NTS / MRS	1/2003 / TRB



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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
POZ-LOC (BREAKAWAY FOUNDATION)	SD24
NTS / MRS	1/2003 / TRB

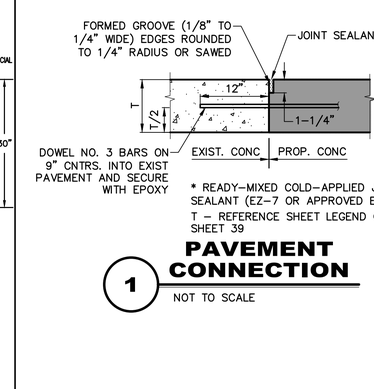


NOTES:
1. 7'-FOOT MIN. HEIGHT FROM GROUND TO BOTTOM OF SIGN.
2. ALL SIGNS TO BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TXMUTCD).
3. ALL SIGNAGE SHEETINGS SHALL BE HIGH-INTENSITY "3M" SHEETING.
4. ANY MODIFICATION TO THIS STANDARD SHALL BE SUBMITTED FOR APPROVAL.

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

****MODIFIED****

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISED 1/14/2014 WBD ADOPTED 6/21/2006 TRB
STANDARD STREET SIGN DETAIL	SD25
NTS / MRS/MP	1/2003 / TRB



* READY-MIXED COLD-APPLIED JOINT SEALANT (EZ-7 OR APPROVED EQUAL)
T – REFERENCE SHEET LEGEND ON SHEET 39

PAVEMENT CONNECTION 1

NOT TO SCALE

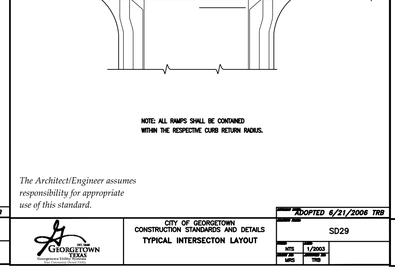
NOTES:

1. COMMERCIAL SIDEWALKS WIDTHS – 6'
   RESIDENTIAL SIDEWALKS WIDTHS – 5'
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. FLATTER SLOPES THAT WILL STILL DRAIN PROPERLY ARE ENCOURAGED.
3. ALL CONCRETE SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
4. FOR PURPOSES OF WARNING, THE CURB RAMPS SHALL HAVE A LIGHT REFLECTIVE VALUE AND TEXTURE THAT SIGNIFICANTLY CONTRASTS WITH THAT OF ADJOINING PEDESTRIAN ROUTES.
5. TEXTURES MAY CONSIST OF PAVERS WITH TRUNCATED DOMED SURFACES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED.
6. COLOR CONTRAST, FOR EXAMPLE, MAY BE ACCOMPLISHED WITH COLORED CONCRETE PAVERS THAT HAVE TRUNCATED DOMES WHICH WOULD PROVIDE A CONTRAST WITH TYPICALLY LIGHT COLORED CONCRETE.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, VISIBILITY AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).
8. RAISED MEDIANS SEPARATE OPPOSING DIRECTIONS OF TRAFFIC AND PROVIDE A REFUGE AREA FOR PEDESTRIANS IF THEY ARE UNABLE TO CROSS THE ENTIRE ROADWAY IN THE ALLOTTED SIGNAL PHASE. MEDIAN CROSSING SHALL BE A MINIMUM OF 5' WIDE. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR TROUGH THEM.
9. ALL SIDEWALK PLANS AND DETAILS SHALL BE SUBMITTED AND APPROVED BY "REGISTERED ACCESSIBILITY SPECIALIST" (RAS).
10. ANY PART OF THE ACCESSIBLE ROUTE WITH A SLOPE GRATER THAN 1:20 (5%) SHALL BE CONSIDERED A RAMP. IF A RAMP HAS A RISE GREATER THAN 6 INCHES OR A HORIZONTAL PROJECTION GREATER THAN 72 INCHES, THEN IT SHALL MEET THE REQUIREMENTS OF A RAMP PER TAS 405.THE ONLY EXCEPTION IS AT CURB RAMPS. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. CURB RAMPS SHALL BE PROVIDED WHERE EVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
11. TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SHALL BE PLACED SO NOT TO OBSTRUCT THE ACCESSIBLE ROUTE OR ACT PROTRUDING OBJECTS.
12. ALL SIDEWALKS SHALL BE DOWELED INTO EXISTING SIDEWALKS, DRIVEWALKS, DRIVEWAYS, INLET BOXES, RETAINING WALLS, ETC.
13. ALL SIDEWALK CROSS-SLOPES SHALL NOT EXCEED 1:50, UNLESS A VARIANCE IS PROVIDED BY TDLR.

(PENETRATES) A CURB.

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

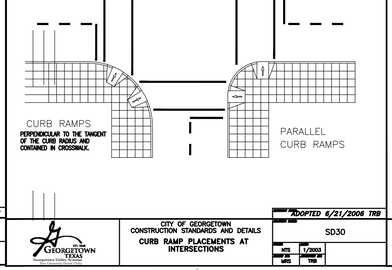
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006 TRB
PEDESTRIAN RAMPS GENERAL NOTES	SD28
NTS / MRS	1/2003 / TRB



NOTE: ALL RAMPS SHALL BE CONTAINED WITHIN THE RESPECTIVE CURB RETURN RADIUS.

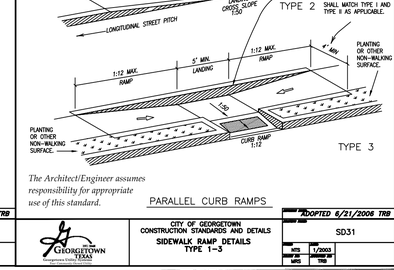
The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006 TRB
TYPICAL INTERSECTON LAYOUT	SD29
NTS / MRS	1/2003 / TRB



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

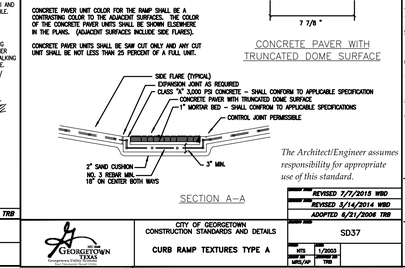
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006 TRB
CURB RAMP PLACEMENTS AT INTERSECTIONS	SD30
NTS / MRS	1/2003 / TRB



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

PARALLEL CURB RAMPS

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006 TRB
SIDEWALK RAMP DETAILS TYPE 1–3	SD31
NTS / MRS	1/2003 / TRB



GENERAL NOTES

CONCRETE PAVER UNITS SHALL MEET ALL REQUIREMENTS OF ASTM C-936, C-33, AND SHALL BE LAID IN A TWO BY TWO UNIT BASKET WEAVE PATTERN, UNLESS SHOWN OTHERWISE IN THE PLANS.

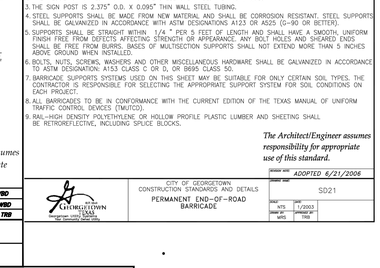
CONCRETE PAVER UNIT SHALL HAVE A TRUNCATED DOME TOP SURFACE FOR DETECTABLE WARNING TO PEDESTRIANS.

CONCRETE PAVER UNIT COLOR FOR THE RAMP SHALL BE A CONTRASTING COLOR TO THE ADJACENT SURFACES. THE COLOR OF THE CONCRETE PAVER UNITS SHALL BE SHOWN ELSEWHERE IN THE PLANS. (ADJACENT SURFACES INCLUDE SIDE FLARES).

CONCRETE PAVER UNITS SHALL BE SAW CUT ONLY AND ANY CUT UNIT SHALL BE NOT LESS THAN 25 PERCENT OF A FULL UNIT.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISED 7/7/2015 WBD REVISED 3/14/2014 WBD ADOPTED 6/21/2006 TRB
CURB RAMP TEXTURES TYPE A	SD37
NTS / MRS/MP	1/2003 / TRB



GENERAL NOTES FOR THIN WALL TUBE TYPE SIGN SUPPORT:

1. THE BASE SOCKET IS FORMED FROM 2 7/8 " O.D. X 12 GAUGE GALVANIZED PIPE.
2. THE WEDGE IS FORMED FROM 11' GAUGE STEEL GALVANIZED PER ASTM A525.
3. THE SIGN POST IS 2.375" O.D. X 0.095" THIN WALL STEEL TUBING.
4. STEEL SUPPORTS SHALL BE MADE FROM NEW MATERIAL AND SHALL BE CORROSION RESISTANT. STEEL SUPPORTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATIONS A123 OR A525 (G-90 OR BETTER).
5. SUPPORTS SHALL BE STRAIGHT WITHIN 1/4 " PER 5 FEET OF LENGTH AND SHALL HAVE A SMOOTH, UNIFORM FINISH FREE FROM DEFECTS AFFECTING STRENGTH OR APPEARANCE. ANY BOLT HOLES AND SHEARED ENDS SHALL BE FREE FROM BURRS. BASES OF MULTISECTION SUPPORTS SHALL NOT EXTEND MORE THAN 5 INCHES ABOVE GROUND WHEN INSTALLED.
6. BOLTS, NUTS, SCREWS, WASHERS AND OTHER MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE TO ASTM DESIGNATION: A153 CLASS C OR D, OR B695 CLASS 50.
7. BARRICADE SUPPORTS SYSTEMS USED ON THIS SHEET MAY BE SUITABLE FOR ONLY CERTAIN SOIL TYPES. THE CONTRACTOR IS RESPONSIBLE FOR SELECTING THE APPROPRIATE SUPPORT SYSTEM FOR SOIL CONDITIONS ON EACH PROJECT.
8. ALL BARRICADES TO BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
9. RAIL–HIGH DENSITY POLYETHYLENE OR HOLLOW PROFILE PLASTIC LUMBER AND SHEETING SHALL BE RETROREFLECTIVE, INCLUDING SPLICE BLOCKS.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
PERMANENT END-OF-ROAD BARRICADE	SD21
NTS / MRS	1/2003 / TRB

GENERAL NOTES

1. Longitudinal crosswalk lines should not be placed in the wheel path of vehicles. Center the crosswalk lines on travel lanes, lane lines, and shoulder lines (if present).
2. A minimum 6' clear distance shall be provided to the curb face. If the last crosswalk line falls into this distance it must be omitted.
3. For divided roadways, adjustments in spacing of the crosswalk lines should be made in the median so that the crosswalk lines are delineated in their proper location across the travel portion of the roadway.
4. At skewed crossings, the crosswalk lines are to remain parallel to the lane lines.
5. Each crosswalk shall be a minimum of 6' wide.
6. The High-Visibility Longitudinal Crosswalk is the preferred crosswalk pattern on State Highways. Other crosswalk patterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used. All crosswalk designs and dimension shall comply with the "Texas Manual on Uniform Traffic Control Devices."
7. Final placement of Stop Bar/Yield Triangles and Crosswalk shall be approved by the Engineer in the field.

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

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

NOTES

1. Use yield triangles with "Yield Here to Pedestrians" signs on unsignalized mid block crosswalks.
2. Use stop bars with "Stop Here on Red" signs at mid block crosswalks controlled by traffic signals or pedestrian hybrid beacons.

Texas Department of Transportation — Traffic Operations Standard

CROSSWALK PAVEMENT MARKINGS

PM(4)-20

FILE: pm-20.dgn	DN:	CK:	DW:	CK:
©TxDOT: June 2005	DIST	COUNTY	SHEET NO.	

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PEDESTRIAN ADA HANDRAIL ON SIDEWALK OPTION 3
ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 707-4 1 OF 2

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PEDESTRIAN ADA HANDRAIL ON SIDEWALK-OPTION 3
ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 707-4 2 OF 2

NOTES:

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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
RIBBON CURB DETAILS	SD08
NTS / MRS	1/2003 / TRB

2024-06-CON

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westwoodps.com

Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

PAVING DETAILS

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED PROFESSIONAL ENGINEER

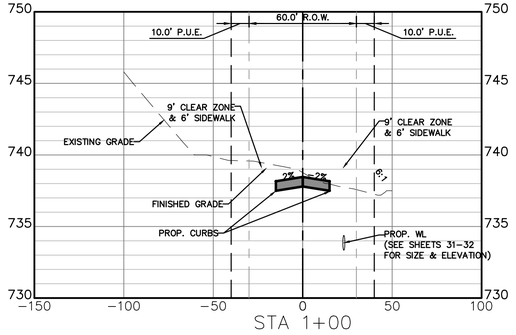
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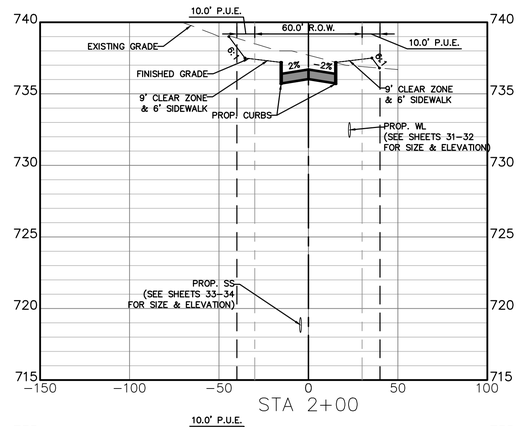
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HAS	NBB	MAR 2024

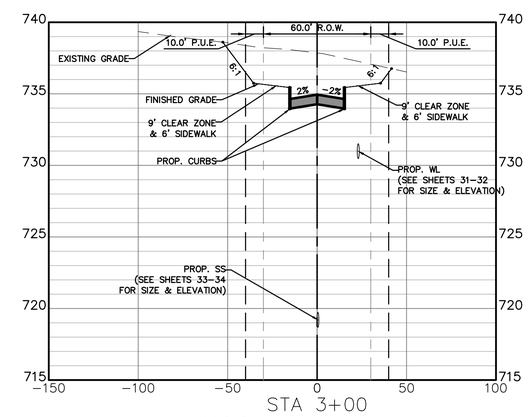
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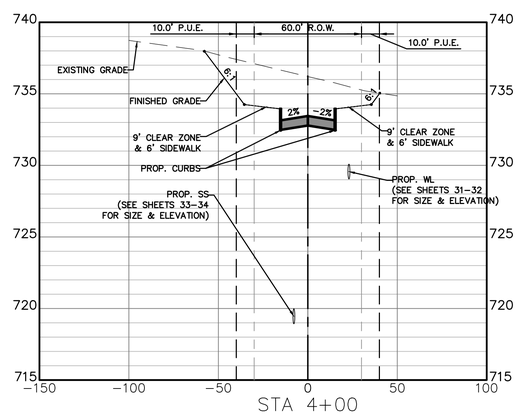
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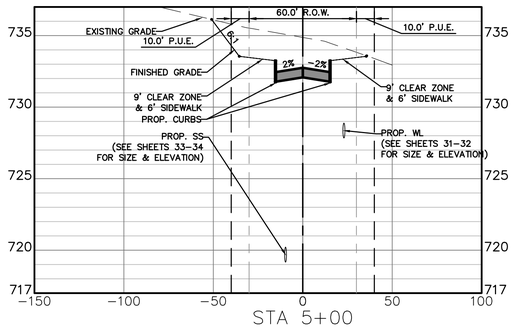
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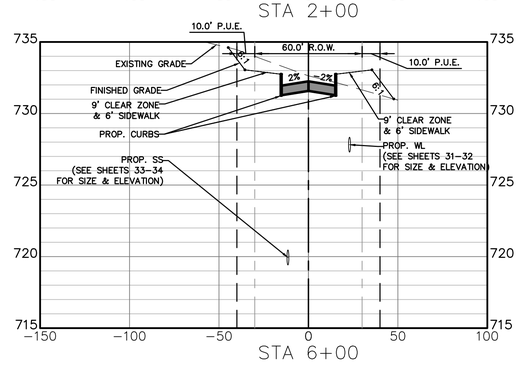


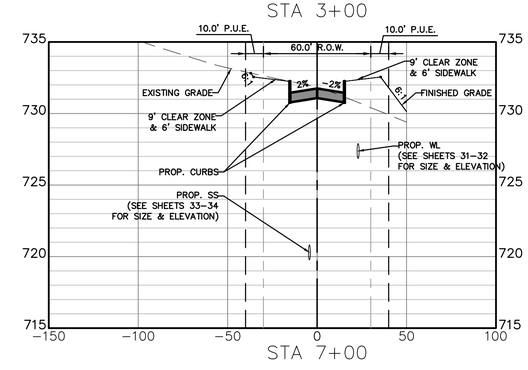


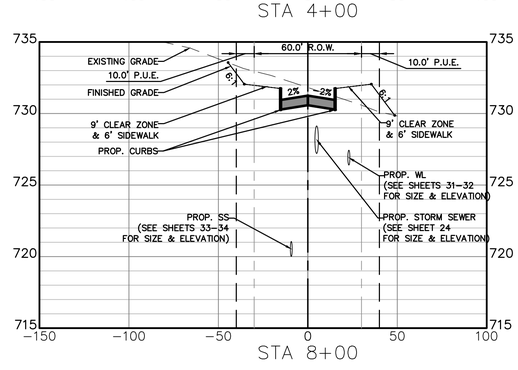


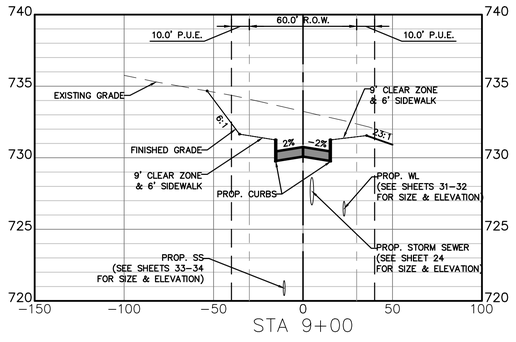


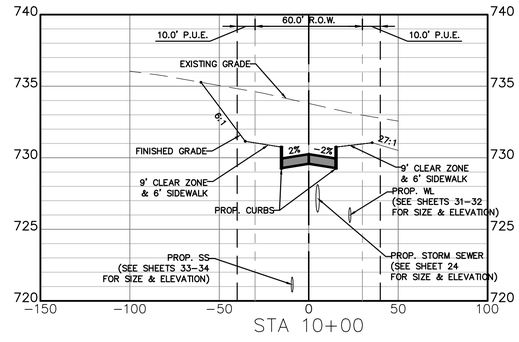


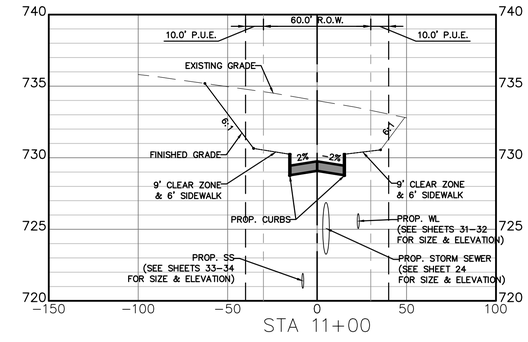


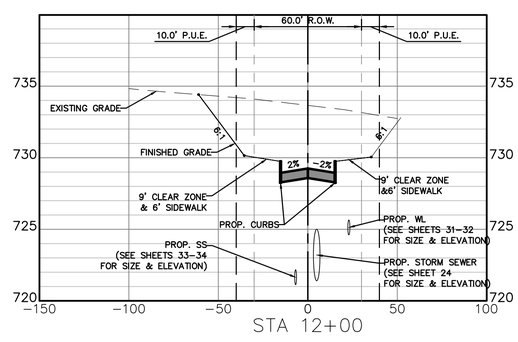


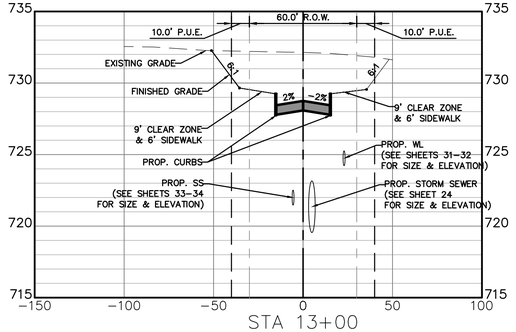


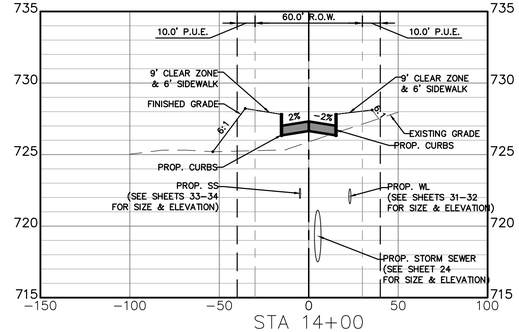


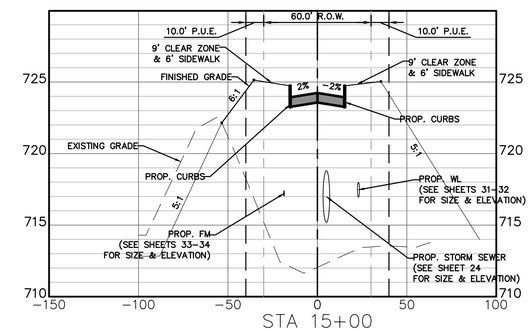


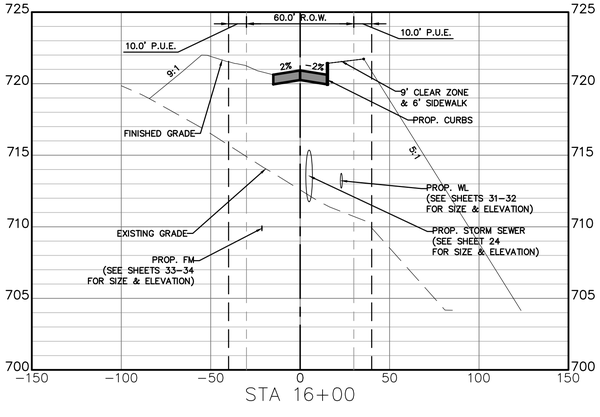












0 20 40 80 120
GRAPHIC SCALE IN FEET
1"=40'

0 5 10 15
VERTICAL SCALE IN FEET
V: 1"=5'

2024-06-CON

Westwood
Phone (512) 485-0831
Toll Free (888) 937-5150
8701 N. Mopac Expy, Suite 320
Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

SIENA PEAK DR CROSS SECTIONS



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISION OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
41

SFORERO
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PK-0041495.00_GRAD.DWG

Attachment F – Construction Plans
Building Plans (Titan NorthPark Building 9)

SITE DEVELOPMENT PERMIT PLANS

FOR

TITAN NORTHPARK35 BUILDING 9

205 SIENA PEAK DRIVE GEORGETOWN, TX 78268

OWNER

TITAN NP35 PHASE II, LLC
JOE IANNACONE
4903 WOODROW AVENUE
AUSTIN TX, 78756
JIANNACONE@TITAN-DEVELOPMENT.COM
TITAN-DEVELOPMENT.COM
210.338.5220

DEVELOPER

TITAN DEVELOPMENT
4903 WOODROW AVENUE
AUSTIN, TX 78756
TITAN-DEVELOPMENT.COM
210.338.5220

CONTRACTOR

CERRIS BUILDERS
3712 HELIOS WAY
PFLUGERVILLE, TX, 78660
KMAXWELL@MWBUILDERS.COM
MWBUILDERS.COM
512.687.6400

ARCHITECT

GBA TEAM
11800 RIDGE PARKWAY SUITE 550
BROOMFIELD, CO 80021
GBATEAM.COM
MHENSON@GBATEAM.COM
303.469.288

ENGINEER

HOLLIS SCHEFFLER, P.E.
8701 N. MOPAC EXPY, SUITE 320
AUSTIN TX 78759
HOLLIS.SCHEFFLER@WESTWOODPS.COM
512.485.0831

LANDSCAPE ARCHITECT

MATTHEW TAYLOR, P.L.A
3218 MANOR ROAD, SUITE 200
AUSTIN, TX 78723
512.900.7888
TAYLOR@NORRIS-DESIGN.COM

LEGAL DESCRIPTION:
LOT 1, BLOCK A
TITAN NORTHPARK 35 TOWNCENTER, PHASE 4
DOC. NO. #####

FLOODPLAIN INFORMATION:
PER FEMA FIRM PANEL NO. 48491C0291F DATED 12/20/2019 AND FEMA FIRM PANEL NO. 48491C0283F DATED 12/20/2019, THE PROPOSED IMPROVEMENTS ARE IN THE AREA OF MINIMAL FLOOD HAZARD, ZONE X, AND NOT IN THE 100 YEAR FLOODPLAIN.
THERE ARE NO SPRINGS, STREAMS OR BUFFER ZONES LOCATED ON THE SUBJECT SITE.

PROPOSED USE:
OFFICE/WAREHOUSE

ACREAGE:
15.675 AC (682,824 SF)

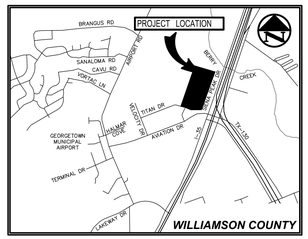
TOTAL IMPERVIOUS COVER:
EXISTING: 0 ACRES (00.0%)
PROPOSED: 9.74 AC (62.16%)

FIRE DEPARTMENT:
GEORGETOWN FIRE DEPARTMENT
3500 DB WOOD RD.
GEORGETOWN, TEXAS 78628
(512) 930-3473

ELECTRICITY, WATER & WASTEWATER:
GEORGETOWN UTILITY SYSTEMS
300-1 INDUSTRIAL AVENUE
GEORGETOWN, TX 78626
(512) 930-3555
HTTPS://GEORGETOWN.ORG/CATEGORY/GEORGETOWN-UTILITY-SYSTEMS/

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 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 OF THE UDC.
11. A SEPARATE IRRIGATION PLAN SHALL BE REQUIRED AT THE TIME OF BUILDING PERMIT APPLICATION.
12. FIRE FLOW REQUIREMENTS OF 2,000 GALLONS 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 FEDERAL REQUIREMENTS AND CODES.
15. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
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. ALTERNATE IMPERVIOUS COVER STANDARDS ARE PROPOSED IN ACCORDANCE WITH SECTION 11.02 OF THE UDC FOR LOW IMPACT SITE DESIGN AND PARKING LOT DESIGN.
19. THE PROPERTY SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN.
20. A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER QUALITY REGULATIONS, WAS COMPLETED ON DECEMBER 12, 2020. NO SPRINGS OR STREAMS WERE IDENTIFIED IN THE GEOLOGIC ASSESSMENT.
21. PER UDC 12.09.030.A.1 TRAFFIC IMPACT ANALYSIS (TIA) SHALL BE PROVIDED FOR ANY SUBDIVISIONS OR SITE DEVELOPMENTS GENERATING TRAFFIC IN EXCESS OF OR CLOSE TO 2,000 AVERAGE DAILY TRIPS. THE AVERAGE DAILY TRIPS FOR THIS SITE PER ITE CODE 154 IS 272 DAILY TRIPS AND A (TIA) IS NOT REQUIRED. THE AM PEAK HOUR TRAFFIC IS 16 TOTAL TRIPS, AND THE PM PEAK HOUR TRAFFIC IS 19 TOTAL TRIPS.



VICINITY MAP
1" = 3000'

STOP!
CALL BEFORE YOU DIG
TEXAS ONE CALL SYSTEM
1-800-245-4545
(@ least 48 hours prior to digging)

SHEET SET INDEX

SHEET NUMBER	SHEET NUMBER	SHEET TITLE
1	1	COVER
2	2	FINAL PLAT SHEET 1 OF 3
3	3	FINAL PLAT SHEET 2 OF 3
4	4	FINAL PLAT SHEET 3 OF 3
5	5	GENERAL NOTES
6	6	EXISTING CONDITIONS & DEMOLITION PLAN
7	7	EROSION CONTROL PLAN
8	8	EROSION CONTROL DETAILS
9	9	EXISTING DRAINAGE AREA MAP
10	10	POND A DRAINAGE AREA MAP
11	11	SITE DRAINAGE AREA MAP
12	12	DRAINAGE CALCULATIONS
13	13	OVERALL SITE PLAN
14	14	DIMENSIONAL CONTROL PLAN 1 OF 2
15	15	DIMENSIONAL CONTROL PLAN 2 OF 2
16	16	GRADING PLAN 1 OF 2
17	17	GRADING PLAN 2 OF 2
18	18	STORM SEWER PLAN 1 OF 2
19	19	STORM SEWER PLAN 2 OF 2
20	20	STORM SEWER PROFILE SHEET 1 OF 2
21	21	STORM SEWER PROFILE SHEET 2 OF 2
22	22	STORM DETAILS
23	23	UTILITY PLAN
24	24	UTILITY PROFILES
25	25	UTILITY DETAILS 1 OF 2
26	26	UTILITY DETAILS 2 OF 2
27	27	PAVING PLAN
28	28	PAVING DETAILS 1 OF 2
29	29	PAVING DETAILS 2 OF 2
30	A 1.01	ARCHITECTURAL SITE PLAN
31	A 1.10	OVERALL BUILDING PLAN
32	A 1.11	ENLARGED BUILDING PLAN - AREA A
33	A 1.12	ENLARGED BUILDING PLAN - AREA B
34	A 1.13	ENLARGED BUILDING PLAN - AREA C
35	A 1.14	ENLARGED BUILDING PLAN - AREA D
36	A 3.01	EXTERIOR ELEVATIONS
37	A 3.02	ENLARGED EXTERIOR ELEVATIONS
38	A 5.02	DETAILS
39	L 100	OVERALL LANDSCAPE PLAN
40	L 101	LANDSCAPE PLAN
41	L 102	LANDSCAPE PLAN
42	L 103	LANDSCAPE AND TREE MITIGATION CALCS
43	L 104	LANDSCAPE NOTES
44	L 105	LANDSCAPE DETAILS
45	E 0.50	ELECTRICAL SITE PLAN
46	E 0.51	PHOTOMETRIC SITE PLAN
47	E 7.01	PANEL SCHEDULES & RISER
48	E 7.02	PANEL SCHEDULES

REVISIONS/CORRECTIONS

NO.	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET NO.S	TOTAL # SHEETS IN PLAN SET	NET CHANGE TO IMP. COVER (sq. ft.)	TOTAL SITE IMP. COVER (sq. ft.) (%)	CITY OF GEORGETOWN APPROVAL/DATE	DATE IMAGED

PREPARED BY
Westwood
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

PROJECT ZONING: TITAN NORTHPARK 35 PUD (2023-58)

PROJECT ADDRESS: 205 SIENA PARK DRIVE GEORGETOWN, TX 78628

SUBMITTAL DATE: FEBRUARY 3, 2025

Westwood
Westwood Professional Services, Inc.
8701 NORTH MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS
205 SIENA PARK DRIVE
TITAN NORTHPARK 35 IX
COVER

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

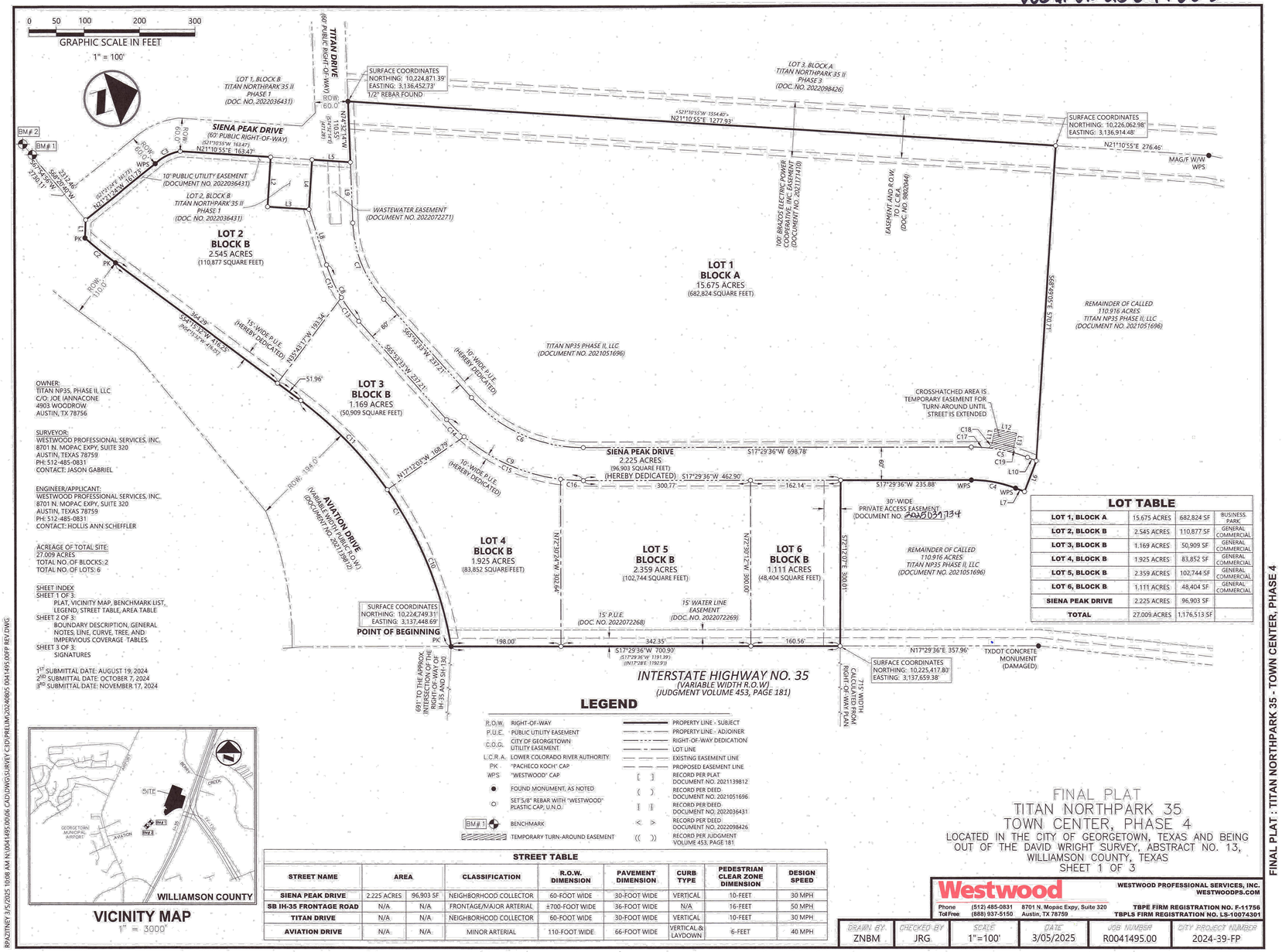
4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

1
SHEET 1 OF 48

2025-20-SDP

Last Saved by: SForeno
Last Saved: 4/4/2025 1:46 PM
Plot Date: 4/4/2025 1:52 PM
Drawing: N:\0039532.05\06 CAD\DWG\site design c3d\Sheets\0039532.05-C-COVR-AUSTIN

VOC # 20250440003



LEGEND

R.O.W.	RIGHT-OF-WAY		PROPERTY LINE - SUBJECT
P.U.E.	PUBLIC UTILITY EASEMENT		PROPERTY LINE - ADJOINER
C.O.G.	CITY OF GEORGETOWN UTILITY EASEMENT		RIGHT-OF-WAY DEDICATION
			LOT LINE
L.C.R.A.	LOWER COLORADO RIVER AUTHORITY		EXISTING EASEMENT LINE
PK	"PACHECO KOCH" CAP		PROPOSED EASEMENT LINE
WPS	"WESTWOOD" CAP	[ ]	RECORD PER PLAT DOCUMENT NO. 2021139812
●	FOUND MONUMENT, AS NOTED	( )	RECORD PER DEED DOCUMENT NO. 2021051696
○	SET 5/8" REBAR WITH "WESTWOOD" PLASTIC CAP, U.N.O.	[ ]	RECORD PER DEED DOCUMENT NO. 2022036431
BM # 1	BENCHMARK	< >	RECORD PER DEED DOCUMENT NO. 2022098426
	TEMPORARY TURN-AROUND EASEMENT	(( ))	RECORD PER JUDGMENT VOLUME 453, PAGE 181

VICINITY MAP
1" = 3000'

STREET TABLE

STREET NAME	AREA		CLASSIFICATION	R.O.W. DIMENSION	PAVEMENT DIMENSION	CURB TYPE	PEDESTRIAN CLEAR ZONE DIMENSION	DESIGN SPEED
SIENA PEAK DRIVE	2.225 ACRES	96,903 SF	NEIGHBORHOOD COLLECTOR	60-FOOT WIDE	30-FOOT WIDE	VERTICAL	10-FEET	30 MPH
SB IH-35 FRONTAGE ROAD	N/A	N/A	FRONTAGE/MAJOR ARTERIAL	±700-FOOT WIDE	36-FOOT WIDE	N/A	16-FEET	50 MPH
TITAN DRIVE	N/A	N/A	NEIGHBORHOOD COLLECTOR	60-FOOT WIDE	30-FOOT WIDE	VERTICAL	10-FEET	30 MPH
AVIATION DRIVE	N/A	N/A	MINOR ARTERIAL	110-FOOT WIDE	66-FOOT WIDE	VERTICAL & LAYDOWN	6-FEET	40 MPH

LOT TABLE

LOT 1, BLOCK A	15.675 ACRES	682,824 SF	BUSINESS PARK
LOT 2, BLOCK B	2.545 ACRES	110,877 SF	GENERAL COMMERCIAL
LOT 3, BLOCK B	1.169 ACRES	50,909 SF	GENERAL COMMERCIAL
LOT 4, BLOCK B	1.925 ACRES	83,852 SF	GENERAL COMMERCIAL
LOT 5, BLOCK B	2.359 ACRES	102,744 SF	GENERAL COMMERCIAL
LOT 6, BLOCK B	1.111 ACRES	48,404 SF	GENERAL COMMERCIAL
SIENA PEAK DRIVE	2.225 ACRES	96,903 SF	
TOTAL	27.009 ACRES	1,176,513 SF	

FINAL PLAT
TITAN NORTHPARK 35
TOWN CENTER, PHASE 4

LOCATED IN THE CITY OF GEORGETOWN, TEXAS AND BEING OUT OF THE DAVID WRIGHT SURVEY, ABSTRACT NO. 13, WILLIAMSON COUNTY, TEXAS
SHEET 1 OF 3

Westwood
WESTWOOD PROFESSIONAL SERVICES, INC.
WESTWOOD-PS.COM
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

DRAWN BY:	CHECKED BY:	SCALE:	DATE:	JOB NUMBER:	CITY PROJECT NUMBER:
ZNBM	JRG	1"=100'	3/05/2025	R0041495.00	2024-39-FP

FINAL PLAT : TITAN NORTHPARK 35 - TOWN CENTER, PHASE 4

Westwood Professional Services, Inc.
8701 NORTH MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX
FINAL PLAT SHEET 1 OF 3

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

2
SHEET 2 OF 48

2025-20-SDP

RPAZITNEY 3/5/2025 10:08 AM N:\0041495\00\06 CAD\DWG\SURVEY C3D\PRELIM\20240805 0041495 00FP REV.DWG

Last Saved by: SNAbarreal
Last Saved: 6/17/2025 2:05 PM
Plotted: 6/17/2025 2:05 PM
Drawing: N:\0039532.05\06 CAD\DWG\site design c3d\Sheets\0039532.05-C-COVR-AUSTIN

DOC#20250 44003

DESCRIPTION OF PROPERTY SURVEYED

27.009 ACRES OF LAND SITUATED IN THE DAVID WRIGHT SURVEY, ABSTRACT NO. 13, WILLIAMSON COUNTY, TEXAS, SAID TRACT BEING OUT OF AND PART OF THE REMAINDER OF A CALLED 110.916 ACRE TRACT OF LAND ("TRACT I") DESCRIBED IN A DEED TO TITAN N/35 PHASE II, LLC RECORDED IN DOCUMENT NO. 2021051696 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS ("O.P.R.W.C.T." HEREAFTER), SAID 27.009 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT THE NORTHERNMOST NORTHEAST CORNER OF AVIATION DRIVE, A VARIABLE-WIDTH PUBLIC RIGHT-OF-WAY, AS DEDICATED IN THE FINAL PLAT OF AVIATION DRIVE, A SUBDIVISION OF RECORD LOCATED IN THE CITY OF GEORGETOWN, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF, APPEARING IN DOCUMENT NO. 2021139812, O.P.R.W.C.T., SAID TERMINUS BEING MARKED BY A 1/2-INCH REBAR WITH CAP STAMPED "PACHECO KOCH" FOUND FOR THE BEGINNING OF A CURVE TO THE LEFT, SAID MONUMENT BEING LOCATED IN THE WESTERLY LINE OF INTERSTATE HIGHWAY 35, A VARIABLE-WIDTH PUBLIC RIGHT-OF-WAY;

THENCE WITH SAID NORTHWESTERLY LINE OF AVIATION DRIVE, THE FOLLOWING **THREE (3) COURSES AND DISTANCES:**

- WITH SAID CURVE TO THE LEFT, HAVING AN **ARC LENGTH** OF **533.77'**, A **RADIUS** OF **695.50'**, A **DELTA ANGLE** OF **43°58'20"**, AND A **CHORD BEARING** AND **DISTANCE** OF **S76°14'41"W 520.76'**, TO A SET STAKE MARKING THE END OF SAID CURVE;
- **S54°15'32"W 416.25'** TO THE BEGINNING OF A CURVE TO THE RIGHT, BEING MARKED BY A 1/2-INCH REBAR WITH CAP STAMPED "PACHECO KOCH";
- WITH SAID CURVE TO THE RIGHT, HAVING AN **ARC LENGTH** OF **70.66'**, A **RADIUS** OF **757.01'**, A **DELTA ANGLE** OF **05°20'53"**, AND A **CHORD BEARING** AND **DISTANCE** OF **S56°54'51"W 70.63'**, TO THE EASTERNMOST CORNER OF TITAN NORTHPARK 35 II, PHASE 1, A SUBDIVISION OF RECORD LOCATED IN THE CITY OF GEORGETOWN, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF, APPEARING IN DOCUMENT NO. 2022036431, O.P.R.W.C.T., FOR THE NORTHERLY INTERSECTION OF SAID AVIATION DRIVE AND SIENA PEAK DRIVE, A VARIABLE-WIDTH PUBLIC RIGHT-OF-WAY, AS DEDICATED IN SAID TITAN NORTHPARK 35 II, PHASE 1, BEING MARKED BY A 1/2-INCH REBAR FOUND WITH CAP STAMPED "PACHECO KOCH";

THENCE WITH SAID NORTHEASTERLY LINE OF SAID TITAN NORTHPARK 35 II, PHASE 1 AND SAID SIENA PEAK DRIVE, THE FOLLOWING **FOUR (4) COURSES AND DISTANCES:**

- **N70°24'40"W 32.77'** TO A 5/8-INCH REBAR FOUND WITH CAP STAMPED "PACHECO KOCH",
- **N21°21'24"W 161.73'** TO THE BEGINNING OF A CURVE TO THE RIGHT, BEING MARKED BY A 5/8-INCH REBAR FOUND WITH CAP STAMPED "PACHECO KOCH",
- WITH SAID CURVE TO THE RIGHT, HAVING AN **ARC LENGTH** OF **50.97'**, A **RADIUS** OF **87.72'**, A **DELTA ANGLE** OF **33°17'39"**, AND A **CHORD BEARING** AND **DISTANCE** OF **N09°05'53"W 50.26'**, TO THE END OF SAID CURVE, BEING MARKED BY A SET STAKE,
- **N21°10'55"E 163.47'** TO THE SOUTHWEST CORNER OF LOT 2, BLOCK B OF SAID TITAN NORTHPARK 35 II, PHASE 1, SAID CORNER BEING MARKED BY A SET STAKE;

THENCE, WITH THE EXTERIOR OF SAID LOT 2, BLOCK B, TITAN NORTHPARK 35 II, PHASE 1, THE FOLLOWING **THREE (3) COURSES AND DISTANCES:**

- **S68°49'07"E 90.00'** TO THE SOUTHEAST CORNER OF SAID LOT 2, BLOCK B, BEING MARKED BY A SET STAKE,
- **N21°10'48"E 75.00'** TO THE NORTHEAST CORNER OF SAID LOT 2, BLOCK B, BEING MARKED BY A SET STAKE,
- **N68°49'05"W 90.00'**, RETURNING TO THE EASTERLY LINE OF SIENA PEAK DRIVE, FOR THE NORTHWEST CORNER OF SAID LOT 2, BLOCK B, BEING MARKED BY A SET STAKE,

THENCE N21°10'55"E 69.20', WITH SAID EASTERLY LINES OF TITAN NORTHPARK 35 II, PHASE 1 AND SIENA PEAK DRIVE, TO THE NORTHEAST CORNER OF SAME;

THENCE N74°32'14"W 110.55', AT 60.00' PASSING THE NORTHEAST CORNER OF TITAN DRIVE, A VARIABLE-WIDTH PUBLIC RIGHT-OF-WAY, AS DEDICATED IN SAID TITAN NORTHPARK 35 II, PHASE 1, AND CONTINUING WITH SAID NORTHERLY LINE OF TITAN DRIVE, TO THE SOUTHEAST CORNER OF LOT 3, BLOCK A OF TITAN NORTHPARK 35 II, PHASE 3, A SUBDIVISION OF RECORD LOCATED IN THE CITY OF GEORGETOWN, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF, APPEARING IN DOCUMENT NO. 2022098426, O.P.R.W.C.T., SAID CORNER BEING MARKED BY A FOUND 1/2-INCH REBAR;

THENCE N21°10'55"E 1277.93', WITH THE EASTERLY LINE OF SAID LOT 3, BLOCK A, TO THE NORTHWEST CORNER HEREOF, SAID CORNER BEING MARKED BY A SET STAKE, FROM WHICH A MAG NAIL WITH WASHER STAMPED "WESTWOOD AUSTIN" FOUND FOR A NORTHEASTERLY CORNER OF SAID LOT 3, BLOCK A, BEARS N21°10'55"E 276.46';

THENCE TRAVERSING THROUGH SAID REMAINDER OF 110.916 ACRES, WITH THE NORTHERLY LINES HEREOF, THE FOLLOWING **SIX (6) COURSES AND DISTANCES:**

- **S68°49'05"E 570.71'** TO A SET STAKE,
- **S51°18'43"E 60.00'** TO A SET STAKE,
- **S38°41'17"W 17.17'** TO THE BEGINNING OF A CURVE TO THE LEFT, BEING MARKED BY A 5/8-INCH REBAR WITH CAP STAMPED "WESTWOOD";
- WITH SAID CURVE TO THE LEFT, HAVING AN **ARC LENGTH** OF **81.38'**, A **RADIUS** OF **220.00'**, A **DELTA ANGLE** OF **21°11'41"**, AND A **CHORD BEARING** AND **DISTANCE** OF **S28°05'26"W 80.92'**, TO A 5/8-INCH REBAR WITH CAP STAMPED "WESTWOOD" MARKING THE END OF SAID CURVE,
- **S17°29'36"W 235.88'** TO A SET STAKE,
- **S72°12'07"E 300.01'** TO SAID WESTERLY LINE OF INTERSTATE HIGHWAY 35, BEING IN THE EAST LINE OF SAID 110.916 ACRES, FOR A NORTHEAST CORNER HEREOF, SAID CORNER BEING MARKED BY A SET STAKE, AND FROM WHICH A DAMAGED TXDOT CONCRETE MONUMENT FOUND FOR CORNER IN SAID WESTERLY LINE OF INTERSTATE HIGHWAY 35 BEARS N17°29'36"E 357.96';

THENCE S17°29'36"W 700.90', CONTINUING WITH THE WESTERLY LINE OF SAID INTERSTATE HIGHWAY 35 AND THE EASTERLY LINE OF SAID 110.916 ACRE TRACT TO THE **POINT OF BEGINNING** OF THE HEREIN DESCRIBED TRACT OF LAND, CONTAINING **27.009 ACRES (1,176,513 SQUARE FEET)**, MORE OR LESS. BEARINGS ARE RELATIVE TO STATE PLANE COORDINATES, NAD83 (2011), TEXAS CENTRAL ZONE. DISTANCES AND AREAS HAVE BEEN SCALED BY APPLYING A SURFACE ADJUSTMENT FACTOR OF 1.0001313201 AND THUS REPRESENT SURFACE MEASUREMENTS. SET STAKES ARE 5/8-INCH REBAR WITH CAP STAMPED "WESTWOOD".

GENERAL NOTES

1. BEARING SYSTEM FOR THIS SURVEY IS BASED ON THE STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (2011), TEXAS CENTRAL ZONE 4203. DISTANCES AND AREAS REPORTED HAVE BEEN SCALED BY APPLYING THE SURFACE ADJUSTMENT FACTOR OF 1.0001313201.
2. THE WATER, WASTEWATER, AND ELECTRIC UTILITY PROVIDER FOR THIS DEVELOPMENT IS THE CITY OF GEORGETOWN.
3. THERE ARE NO AREAS WITHIN THE BOUNDARIES OF THIS SUBDIVISION IN THE 100-YEAR FLOODPLAIN AS DEFINED BY FIRM MAP NUMBER 48491C0291F, EFFECTIVE DATE OF DECEMBER 20, 2019 AND BY FIRM MAP NUMBER 48491C0283F, EFFECTIVE DATE OF DECEMBER 20, 2019.
4. IN ORDER TO PROMOTE DRAINAGE AWAY FROM A STRUCTURE, THE SLAB ELEVATION SHOULD BE BUILT AT LEAST ONE-FOOT ABOVE THE SURROUNDING GROUND, AND THE GROUND SHOULD BE GRADED AWAY FROM THE STRUCTURE AT A SLOPE OF 1/2" PER FOOT FOR A DISTANCE OF AT LEAST 10 FEET.
5. THE MONUMENTS OF THIS PLAT HAVE BEEN ROTATED TO THE NAD 83/93 HARN - TEXAS CENTRAL ZONE AND NAVD 88.
6. ALL SEDIMENTATION, FILTRATION, DETENTION, AND/OR RETENTION BASINS AND RELATED APPURTENANCES SHOWN SHALL BE SITUATED WITHIN A DRAINAGE EASEMENT OR DRAINAGE LOT. THE OWNERS, HOA, OR ASSIGNEES OF THE TRACTS UPON WHICH ARE LOCATED SUCH EASEMENTS, APPURTENANCES, AND DETENTION FACILITIES SHALL MAINTAIN SAME AND BE RESPONSIBLE FOR THEIR MAINTENANCE, ROUTINE INSPECTION, AND UPKEEP.
7. THE LANDOWNER ASSUMES ALL RISKS ASSOCIATED WITH IMPROVEMENTS LOCATED IN THE RIGHT-OF-WAY, OR ROAD WIDENING EASEMENTS. BY PLACING ANYTHING IN THE RIGHT-OF-WAY OR ROAD WIDENING EASEMENTS, THE LANDOWNER INDEMNIFIES AND HOLDS THE CITY OF GEORGETOWN, WILLIAMSON COUNTY, THEIR OFFICERS, AGENTS AND EMPLOYEES HARMLESS FROM ANY LIABILITY OWING TO PROPERTY DEFECTS OR NEGLIGENCE NOT ATTRIBUTABLE TO THEM AND ACKNOWLEDGES THAT THE IMPROVEMENTS MAY BE REMOVED BY THE CITY AND/OR COUNTY AND THAT THE OWNER OF THE IMPROVEMENTS WILL BE RESPONSIBLE FOR THE RELOCATION AND/OR REPLACEMENT OF THE IMPROVEMENTS.
8. THE BUILDING OF ALL STREETS, ROADS, AND OTHER PUBLIC THOROUGHFARES AND ANY BRIDGES OR CULVERTS NECESSARY TO BE CONSTRUCTED OR PLACED IS THE RESPONSIBILITY OF THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY THE CITY OF GEORGETOWN AND/OR WILLIAMSON COUNTY, TEXAS. NEITHER THE CITY OF GEORGETOWN NOR WILLIAMSON COUNTY ASSUMES ANY OBLIGATION TO BUILD ANY OF THE STREETS, ROADS, OR OTHER PUBLIC THOROUGHFARES SHOWN ON THIS PLAT OR OF CONSTRUCTING ANY OF THE BRIDGES OR DRAINAGE IMPROVEMENTS IN CONNECTION THEREWITH. NEITHER THE CITY OF GEORGETOWN NOR WILLIAMSON COUNTY ASSUMES ANY RESPONSIBILITY FOR DRAINAGE WAYS OR EASEMENTS IN THE SUBDIVISION, OTHER THAN THOSE DRAINING OR PROTECTING THE ROAD SYSTEM AND STREETS IN THEIR RESPECTIVE JURISDICTIONS.
9. RIGHT-OF-WAY EASEMENTS FOR WIDENING ROADWAYS OR IMPROVING DRAINAGE SHALL BE MAINTAINED BY THE LANDOWNER UNTIL ROAD OR DRAINAGE IMPROVEMENTS ARE ACTUALLY CONSTRUCTED ON THE PROPERTY. THE CITY AND/OR COUNTY HAVE THE RIGHT AT ANY TIME TO TAKE POSSESSION OF ANY ROAD WIDENING EASEMENT FOR CONSTRUCTION, IMPROVEMENT, OR MAINTENANCE OF THE ADJACENT ROAD.
10. A 10-FOOT OR 15-FOOT PUBLIC UTILITY EASEMENT IS HEREBY DEDICATED ALONG ALL STREET FRONTAGES WITHIN THIS PLAT AS NOTED.
11. NEITHER THE CITY OF GEORGETOWN NOR WILLIAMSON COUNTY ASSUMES ANY RESPONSIBILITY FOR THE ACCURACY OF REPRESENTATIONS BY OTHER PARTIES IN THIS PLAT. FLOODPLAIN DATA, IN PARTICULAR, MAY CHANGE DEPENDING ON SUBSEQUENT DEVELOPMENT. IT IS FURTHER UNDERSTOOD THAT THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT MUST INSTALL AT THEIR OWN EXPENSE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE THAT MAY BE REQUIRED BEFORE THE STREETS IN THE SUBDIVISION HAVE FINALLY BEEN ACCEPTED FOR MAINTENANCE BY THE CITY AND / OR COUNTY.
12. THIS PLAT IS SUBJECT TO THE PROVISIONS OF THE CITY OF GEORGETOWN WATER CONSERVATION ORDINANCE.
13. THE SUBDIVISION SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN.
14. A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER QUALITY REGULATIONS, WAS COMPLETED ON DECEMBER 2, 2020. ANY SPRINGS AND STREAMS AS IDENTIFIED IN THE GEOLOGIC ASSESSMENT ARE SHOWN HEREIN.
15. THE MAXIMUM IMPERVIOUS COVERAGE PER NON-RESIDENTIAL LOT SHALL BE PURSUANT TO THE APPROVED PRELIMINARY PLAT (2023-35-PP) AND TABLE SHOWN HEREON.
16. THERE IS HEREBY GRANTED FOR THE USE AND BENEFIT OF THE PUBLIC A CONTINUING AVIGATION EASEMENT FOR THE FREE AND UNOBSTRUCTED FLIGHT OF AIRCRAFT (WHICH TERM SHALL INCLUDE ANY CONTRIVANCE NOW OR HEREAFTER USED FOR FLIGHT THROUGH THE AIR) AND THE RIGHT OF FLIGHT FOR THE PASSAGE OF AIRCRAFT IN THE AIR SPACE ABOVE THE SURFACE OF THE PROPERTY, TOGETHER WITH SUCH NOISE AND OTHER EFFECTS AS MAY BE INHERENT IN THE OPERATION OF AIRCRAFT LANDING AT, TAKING OFF FROM, OR ENGAGED IN OTHER FLIGHT ACTIVITIES AT THE GEORGETOWN MUNICIPAL AIRPORT.
17. GRANTORS DO HEREBY GRANT AND CONVEY AN EASEMENT FOR THE HORIZONTAL ZONE, AS THAT TERM IS DEFINED IN SECTION 12.36 OF THE CITY OF GEORGETOWN CODE OF ORDINANCES AND AS SHOWN ON THIS PLAT, BEING FURTHER DESCRIBED AS AFFECTING LOT 1 OF BLOCK A (PHASE 4) AND LOTS 2-6 OF BLOCK B (PHASE 4) OF THIS PLAT.
18. THESE EASEMENTS SHALL BE PERPETUAL AND SHALL BE BINDING ON GRANTOR AND ITS ASSIGNS, HEIRS, AND SUCCESSORS.
19. UNLESS OTHERWISE NOTED HEREIN, ALL EASEMENTS DEDICATED TO THE CITY OF GEORGETOWN BY THIS PLAT SHALL BE EXCLUSIVE TO THE CITY OF GEORGETOWN, AND GRANTOR COVENANTS THAT GRANTOR AND GRANTOR'S HEIRS, SUCCESSORS, AND ASSIGNS SHALL NOT CONVEY ANY OTHER EASEMENT, LICENSE, OR CONFLICTING RIGHT TO USE IN ANY MANNER, THE AREA (OR ANY PORTION THEREOF) COVERED BY THIS GRANT.
20. ALL EASEMENTS DEDICATED TO THE CITY OF GEORGETOWN BY THIS PLAT ADDITIONALLY INCLUDE THE FOLLOWING RIGHTS:
    (1) THE RIGHT OF THE CITY TO CHANGE THE SIZE OF ANY FACILITIES INSTALLED, MAINTAINED, OR OPERATED WITHIN THE EASEMENT AREA;
    (2) THE RIGHT OF THE CITY TO RELOCATE ANY FACILITIES WITHIN THE EASEMENT AREA; AND
    (3) THE RIGHT OF THE CITY TO REMOVE FROM THE EASEMENT AREA ALL TREES AND PARTS THEREOF, OR OTHER OBSTRUCTIONS, WHICH ENDANGER OR MAY INTERFERE WITH THE EFFICIENCY AND MAINTENANCE OF ANY FACILITIES WITHIN THE EASEMENT AREA.
21. SIDEWALK ALONG THE SOUTHBOUND FRONTAGE ROAD OF IH-35 WILL BE PLACED IN RIGHT-OF-WAY AS LOTS ARE DEVELOPED.
22. ANY HERITAGE TREE AS NOTED ON THIS PLAT IS SUBJECT, IN PERPETUITY, TO THE MAINTENANCE, CARE, PRUNING AND REMOVAL REQUIREMENTS OF THE CITY OF GEORGETOWN. APPROVED REMOVAL DOES NOT REQUIRE MODIFICATION OF THE PLAT.
23. ALL INDIVIDUAL LOTS CONTAINING HERITAGE TREES ARE CONFIGURED AND DESIGNED SO THAT THE LOT IS DEVELOPABLE FOR THE INTENDED PURPOSE WITHOUT REQUIRING REMOVAL OF THE HERITAGE TREES OR EXCEEDING THE PERCENTAGE OF ALLOWABLE DISTURBANCE WITHIN THE HERITAGE TREES' CRZ.

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	43°58'20"	695.50'	533.77'	S76°14'41"W	520.76'
[C1]	[43°58'20"]	[695.50']	[533.77']	[N76°14'41"E]	[520.76']
C2	05°20'53"	757.01'	70.66'	S56°54'51"W	70.63'
[C2]	[14°51'30"]	[757.01']	[196.31']	[N61°40'10"E]	[195.76']
C3	33°17'39"	87.72'	50.97'	N09°05'53"W	50.26'
(C3)	(33°17'39")	(87.72')	(50.97')	(S09°05'53"E)	(50.26')
C4	21°11'41"	220.00'	81.38'	S28°05'26"W	80.92'
C5	21°11'41"	280.00'	103.58'	S28°05'26"W	102.99'
C6	48°23'57"	270.00'	228.08'	S41°41'34"W	221.35'
C7	39°34'16"	220.00'	151.94'	S85°40'42"W	148.94'
C8	24°12'41"	280.00'	118.32'	S77°59'53"W	117.44'
C9	48°23'57"	330.00'	278.76'	S41°41'34"W	270.54'
C10	25°25'55"	695.50'	308.71'	S85°30'54"W	306.18'
C11	18°32'25"	695.50'	225.06'	S63°31'44"W	224.07'
C12	13°19'52"	280.00'	65.15'	S83°26'17"W	65.00'
C13	10°52'50"	280.00'	53.17'	S71°19'59"W	53.09'
C14	07°38'57"	330.00'	44.06'	S62°04'04"W	44.02'
C15	33°30'31"	330.00'	192.99'	S41°29'22"W	190.25'
C16	07°14'31"	330.00'	41.71'	S21°06'53"W	41.68'
C17	6°25'11"	280.00'	31.37'	N20°42'11"E	31.36'
C18	39°59'43"	18.00'	12.56'	N41°07'25"W	12.31'
C19	39°58'22"	18.00'	12.56'	S81°06'27"E	12.30'

LINE TABLE

LINE	BEARING	LENGTH	BEARING	LENGTH
L1	N70°24'40"W	32.77'	(S70°24'40"E)	(32.77')
L2	S68°49'07"E	90.00'	(N68°49'07"W)	(90.00')
L3	N21°10'48"E	75.00'	(S21°10'48"W)	(75.00')
L4	N68°49'05"W	90.00'	(S68°49'05"E)	(90.00')
L5	N21°10'55"E	69.20'	(S21°10'55"W)	(69.20')
L6	S51°18'43"E	60.00'	N/A	N/A
L7	S38°41'17"W	17.17'	N/A	N/A
L8	N89°53'47"W	105.04'	N/A	N/A
L9	N74°32'14"W	109.78'	N/A	N/A
L10	S38°41'17"W	17.17'	N/A	N/A
L11	N61°07'16"W	24.48'	N/A	N/A
L12	N28°52'44"E	40.00'	N/A	N/A
L13	S61°07'16"E	24.48'	N/A	N/A

IMPERVIOUS COVER TABLE

LOT	BLOCK	PHASE	ACREAGE AREA	IMPERVIOUS COVER AREA	IMPERVIOUS COVER PERCENTAGE
1	A	4	15.675	7.75	49.44%
2	B	4	2.545	1.20	47.15%
3	B	4	1.169	0.47	40.21%
4	B	4	1.925	0.80	41.56%
5	B	4	2.359	1.33	56.38%
6	B	4	1.111	0.55	49.50%
SIENA PEAK DRIVE			2.225	1.50	67.42%
TOTALS			27.009	13.60	50.35%

BENCHMARK LIST

BM# 1 - ⊠ - "CUT SET ON THE SOUTH EDGE OF A CONCRETE SIDEWALK ±33 FEET SOUTH OF A CONCRETE HEADWALL, ±13 FEET WEST OF A BARBED WIRE FENCE, AND ±30 FEET NORTH OF A SANITARY SEWER MANHOLE.

SURFACE NORTHING=10,223,501.42
SURFACE EASTING=3,134,365.71
ELEV=766.68

BM# 2 - ⊠ - "CUT SET IN CONCRETE ON THE SOUTH EDGE OF AVIATION DRIVE, ± 16 FEET NORTH OF A WOOD FENCE POST, ±18 FEET SOUTH OF THE CENTERLINE OF AVIATION DRIVE, AND ±95 SOUTHWEST OF A SANITARY SEWER MANHOLE

SURFACE NORTHING=10,223,328.33
SURFACE EASTING=3,133,985.15
ELEV=769.87

FINAL PLAT
TITAN NORTHPARK 35
TOWN CENTER, PHASE 4
LOCATED IN THE CITY OF GEORGETOWN, TEXAS AND BEING OUT OF THE DAVID WRIGHT SURVEY, ABSTRACT NO. 13, WILLIAMSON COUNTY, TEXAS
SHEET 2 OF 3

Westwood
WESTWOOD PROFESSIONAL SERVICES, INC.
WESTWOODPS.COM
Phone (512) 485-0831 | 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 | Austin, TX 78759
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

DRAWN BY	CHECKED BY	SCALE	DATE	JOB NUMBER	CITY PROJECT NUMBER
ZNBM	JRG	N/A	3/05/2025	R0041495.00	2024-39-FP

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Drawing: N:\0039532.05\06 CAD\DWG\site design c3d\Sheets\0039532.05-C-COVR-AUSTIN

Westwood Professional Services, Inc.
8701 NORTH MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
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F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX
FINAL PLAT SHEET 2 OF 3

FINAL PLAT : TITAN NORTHPARK 35 - TOWN CENTER, PHASE 4

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

3
SHEET 3 OF 48

2025-20-SDP

DOC# 2025044003

OWNER'S SIGNATURE BLOCK

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

THAT CHRISTOPHER PACHECO, AS MANAGER FOR TITAN PROPERTY MANAGEMENT, LLC, AS MANAGER FOR TITAN NP35 PHASE II, LLC, OWNER OF THE 27.009-ACRE TRACT OF LAND SHOWN HEREON, SAID 27.009 ACRES BEING OUT OF THAT CERTAIN 110.916-ACRE TRACT OF LAND DESCRIBED IN A DEED RECORDED IN DOCUMENT NO. 2021051696 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS OF THE CERTAIN TRACT OF LAND, DO HEREBY CERTIFY THERE ARE NO EASEMENT HOLDERS EXCEPT AS SHOWN HEREON AND DO HEREBY SUBDIVIDE, SAID TRACT AS SHOWN HEREON; DO HEREBY COVENANT TO ALL RESTRICTIONS LISTED HEREIN, WHICH SHALL RUN WITH THE LAND; AND DO HEREBY DEDICATE TO THE CITY OF GEORGETOWN THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF GEORGETOWN MAY DEEM APPROPRIATE. I HEREBY BIND MY HEIRS, SUCCESSORS, AND ASSIGNS TO WARRANT AND FOREVER DEFEND SUCH DEDICATIONS, ALL AND SINGULAR, TO THE CITY OF GEORGETOWN AGAINST EVERY PERSON WHOMSOEVER CLAIMING OR TO CLAIM THE SAME OR ANY PART THEREOF. THIS SUBDIVISION IS TO BE KNOWN AS **TITAN NORTHPARK 35 TOWN CENTER, PHASE 4**.

TO CERTIFY WHICH, WITNESS BY MY HAND THIS 12TH DAY OF MARCH, 2025.

TITAN NP35 PHASE II, LLC, A TEXAS LIMITED LIABILITY COMPANY
6300 RIVERSIDE PLAZA LN. NW, SUITE 200
ALBUQUERQUE, NM, 87210

BY: TITAN PROPERTY MANAGEMENT, LLC, A TEXAS LIMITED LIABILITY COMPANY
6300 RIVERSIDE PLAZA LN. NW, SUITE 200
ALBUQUERQUE, NM, 87210
ITS MANAGER

CHRISTOPHER PACHECO MANAGER

STATE OF NEW MEXICO (
KNOW ALL MEN BY THESE PRESENTS
COUNTY OF BERNALILLO (

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED CHRISTOPHER PACHECO, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL THIS 12TH DAY OF MARCH, 2025.

NOTARY PUBLIC IN AND FOR THE STATE OF NEW MEXICO

STATE OF NEW MEXICO
NOTARY PUBLIC
E. AIMEE GONZALEZ E.
Commission # 1067801
My Comm. Exp. 12-19-2028

MY COMMISSION EXPIRES ON: 12-19-2028

ENGINEER'S CERTIFICATE

STATE OF TEXAS (
COUNTY OF TRAVIS (

I, HOLLIS ANN SCHEFFLER, REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS SUBDIVISION IS IN THE EDWARDS AQUIFER RECHARGE ZONE AND IS NOT ENCROACHED BY ZONE A FLOOD AREA, AS DENOTED HEREIN AND AS DEFINED BY FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, COMMUNITY PANEL NUMBER 48491C0291F, EFFECTIVE DATE DECEMBER 20, 2019 AND BY FIRM MAP NUMBER 48491C0283F, EFFECTIVE DATE OF DECEMBER 20, 2019, AND THAT EACH LOT CONFORMS TO THE CITY OF GEORGETOWN REGULATIONS.

THE FULLY DEVELOPED, CONCENTRATED STORMWATER RUNOFF RESULTING FROM THE ONE HUNDRED (100) YEAR FREQUENCY STORM IS CONTAINED WITHIN THE DRAINAGE EASEMENT SHOWN AND/OR PUBLIC RIGHTS-OF-WAY DEDICATED BY THIS PLAT.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL, THIS 5th DAY OF March, 2025.

HOLLIS ANN SCHEFFLER
REGISTERED PROFESSIONAL ENGINEER
NO. 136049 STATE OF TEXAS

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

3/5/2025

SURVEYOR'S CERTIFICATE

STATE OF TEXAS (
KNOW ALL MEN BY THESE PRESENTS
COUNTY OF TRAVIS (

I, JASON R. GABRIEL, A REGISTERED PROFESSIONAL LAND SURVEYOR, LICENSED BY THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE FROM AN ACTUAL SURVEY MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON, AND THAT THERE ARE NO APPARENT DISCREPANCIES, CONFLICTS, OVERLAPPING OF IMPROVEMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE, EXCEPT AS SHOWN ON THE ACCOMPANYING PLAT, AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF GEORGETOWN, TEXAS.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL, THIS 5th DAY OF March, 2025.

JASON R. GABRIEL
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 6530 STATE OF TEXAS

STATE OF TEXAS
REGISTERED
JASON R. GABRIEL
6530
PROFESSIONAL
LAND SURVEYOR

3/15/2025

PLANNING DIRECTOR

I, SOFIA NELSON, PLANNING DIRECTOR OF THE CITY OF GEORGETOWN, TEXAS, DO HEREBY CERTIFY THIS PLAT IS APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

SOFIA NELSON, PLANNING DIRECTOR — DATE 06/5/2025

CITY BUILDING OFFICIAL

BASED UPON THE ABOVE REPRESENTATIONS OF THE ENGINEER OR SURVEYOR WHOSE SEAL IS AFFIXED HERETO, AND AFTER A REVIEW OF THE PLAT AS REPRESENTED BY THE SAID ENGINEER OR SURVEYOR, I FIND THAT THIS PLAT COMPLIES WITH THE REQUIREMENTS OF CHAPTER 15.44, FLOOD DAMAGE PREVENTION, OF THE GEORGETOWN MUNICIPAL CODE. THIS CERTIFICATION IS MADE SOLELY UPON SUCH REPRESENTATIONS AND SHOULD NOT BE RELIED UPON FOR VERIFICATIONS OF THE FACTS ALLEGED. THE CITY OF GEORGETOWN DISCLAIMS ANY RESPONSIBILITY TO ANY MEMBER OF THE PUBLIC OR INDEPENDENT VERIFICATIONS OF THE REPRESENTATION, FACTUAL OR OTHERWISE, CONTAINED IN THIS PLAT AND THE DOCUMENTS ASSOCIATED WITH IT.

GLEN HOLCOMB, BUILDING OFFICIAL — DATE 06-05-2025
CITY OF GEORGETOWN

COUNTY CLERK SIGNATURE BLOCK

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 6th DAY OF June 2025, A.D., AT 2:30 O'CLOCK P.M., AND DULY RECORDED THIS THE 6th DAY OF June 2025, A.D., AT 2:30 O'CLOCK P.M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN DOCUMENT NO. 2025044003.

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

BY ASHLEY MARSEY DEPUTY

COUNTY COURT
WILLIAMSON COUNTY, TEXAS

FINAL PLAT
TITAN NORTHPARK 35
TOWN CENTER, PHASE 4

LOCATED IN THE CITY OF GEORGETOWN, TEXAS AND BEING OUT OF THE DAVID WRIGHT SURVEY, ABSTRACT NO. 13, WILLIAMSON COUNTY, TEXAS
SHEET 3 OF 3

Westwood
WESTWOOD PROFESSIONAL SERVICES, INC.
WESTWOODPS.COM
Phone (512) 485-0831 8701 N. Mopac Expy, Suite 320
Toll Free (888) 937-5150 Austin, TX 78759
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

DRAWN BY	CHECKED BY	SCALE	DATE	JOB NUMBER	CITY PROJECT NUMBER
ZNBM	JRG	N/A	3/05/2025	R0041495.00	2024-39-FP

FINAL PLAT : TITAN NORTHPARK 35 - TOWN CENTER, PHASE 4

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westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

205 SIENA PARK DRIVE
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

TITAN NORTHPARK 35 IX
FINAL PLAT SHEET 3 OF 3

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

4
SHEET 4 OF 48

2025-20-SDP

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

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.

2. 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.

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

4. 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.

5. 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 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.

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.

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

1. 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.

2. 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.

3. 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.

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

5. 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.

6. 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
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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.

7. 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.

8. 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.

9. 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 __.
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.

10. 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).

11. 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: N/A
IF PIPE FLEXURE IS PROPOSED, THE FOLLOWING METHOD OF PREVENTING DEFLECTION OF THE JOINT MUST BE N/A SPECIFIC CARE MUST BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC §217.54.

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

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

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

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 C924, OR ASTM F-1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS REQUIRED IN TABLE C.3 IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH.
(B) FOR SECTIONS OF COLLECTION SYSTEM PIPE LESS THAN 36 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY, UNLESS A PIPE IS TO BE TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION.
(I) A PIPE MUST BE PRESSURIZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE.
(II) ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS COMPUTED FROM THE FOLLOWING EQUATION:
EQUATION C.3

$$T = \frac{0.085 \cdot D \cdot K}{Q}$$

WHERE:
T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS
K = 0.000419 X D X L, BUT NOT LESS THAN 1.0
D = AVERAGE INSIDE PIPE DIAMETER IN INCHES
L = LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET
Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE.
(C) SINCE A K VALUE OF LESS THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING TABLE C.3:

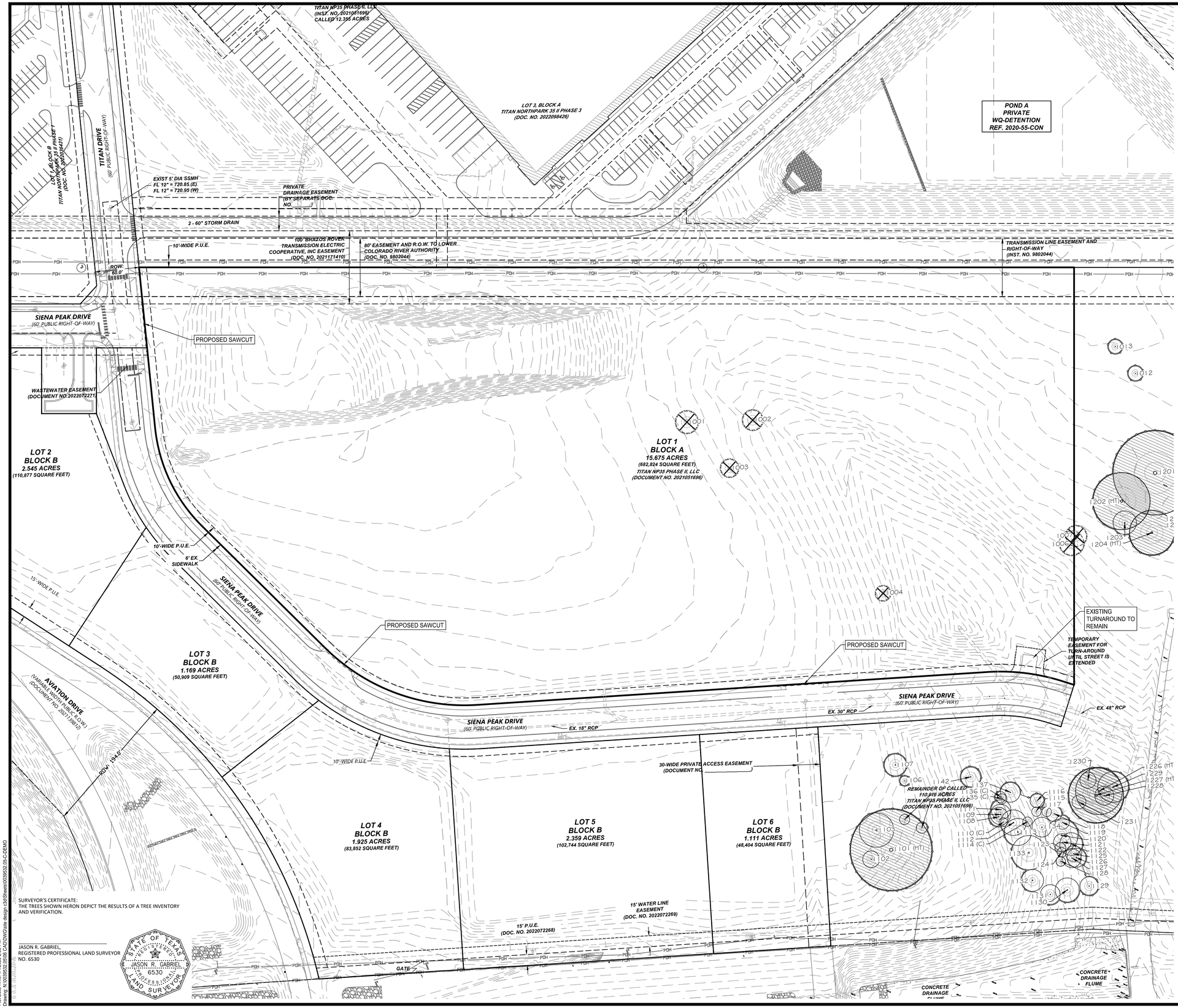
PIPE DIAMETER(INCHES)	MINIMUM TIME (SECONDS)	MAXIMUM LENGTH FOR MINIMUM TIME (FEET)	TIME FOR LONGER LENGTH (SECONDS/FOOT)
6	340	398	0.855
8	454	298	1.520
10	467	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
14	1360	100	13.676
17	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

(A) AN OWNER MAY STOP A TEST IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME.
(B) IF ANY PRESSURE LOSS OR LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF A TESTING PERIOD, THEN THE TEST MUST CONTINUE FOR THE ENTIRE TEST DURATION AS OUTLINED ABOVE OR UNTIL FAILURE.
(C) WASTEWATER COLLECTION SYSTEM PIPES WITH A 27 INCH OR LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT INSTEAD OF FOLLOWING THE PROCEDURE OUTLINED IN THIS SECTION.
(D) A TESTING PROCEDURE FOR PIPE WITH AN INSIDE DIAMETER GREATER THAN 33 INCHES MUST BE APPROVED BY THE EXECUTIVE DIRECTOR.
(2) INFILTRATION/EXFILTRATION TEST.
(A) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF 2.0 FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE.
(B) AN OWNER SHALL USE AN INFILTRATION TEST IN LIEU OF AN EXFILTRATION TEST WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER LEVEL.
(C) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST TWO FEET ABOVE EXISTING GROUNDWATER LEVEL, WHICHEVER IS GREATER.
(D) FOR CONSTRUCTION WITHIN A 25-YEAR FLOOD PLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD AS IN SUBPARAGRAPH (C) OF THIS PARAGRAPH.
(E) IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, AN OWNER SHALL UNDERTAKE REMEDIAL ACTION IN EXCEEDS TO REDUCE

THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED. AN OWNER SHALL RETEST A PIPE FOLLOWING A REMEDIATION ACTION.
(b) IF A GRAVITY COLLECTION PIPE IS COMPOSED OF FLEXIBLE PIPE, DEFLECTION TESTING IS ALSO REQUIRED. THE FOLLOWING PROCEDURES MUST BE FOLLOWED:
(1) FOR A COLLECTION PIPE WITH INSIDE DIAMETER LESS THAN 27 INCHES, DEFLECTION MEASUREMENT REQUIRES A RIGID MANDREL.
(A) MANDREL SIZING.
(i) A RIGID MANDREL MUST HAVE AN OUTSIDE DIAMETER (OD) NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A PIPE, AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTMS, AMERICAN WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN NATIONAL STANDARDS INSTITUTE, OR ANY RELATED APPENDIX.
(ii) IF A MANDREL SIZING DIAMETER IS NOT SPECIFIED IN THE APPROPRIATE STANDARD, THE MANDREL MUST HAVE AN OD EQUAL TO 95% OF THE ID OF A PIPE. IN THIS CASE, THE ID OF THE PIPE, FOR THE PURPOSE OF DETERMINING THE OD OF THE MANDREL, MUST EQUAL BE THE AVERAGE OUTSIDE DIAMETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD CONTROLLED PIPE AND THE AVERAGE INSIDE DIAMETER FOR ID CONTROLLED PIPE.
(iii) ALL DIMENSIONS MUST MEET THE APPROPRIATE STANDARD.
(B) MANDREL DESIGN.
(i) A RIGID MANDREL MUST BE CONSTRUCTED OF A METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200 PSI WITHOUT BEING DEFORMED.
(ii) A MANDREL MUST HAVE NINE OR MORE ODD NUMBER OF RUNNERS OR LEGS.
(iii) A BARREL SECTION LENGTH MUST EQUAL AT LEAST 75% OF THE INSIDE DIAMETER OF A PIPE.
(iv) EACH SIZE MANDREL MUST USE A SEPARATE PROVING RING.
(C) METHOD OPTIONS.
(i) AN ADJUSTABLE OR FLEXIBLE MANDREL IS PROHIBITED.
(ii) A TEST MAY NOT USE TELEVISION INSPECTION AS A SUBSTITUTE FOR A DEFLECTION TEST.
(iii) IF REQUESTED, THE EXECUTIVE DIRECTOR MAY APPROVE THE USE OF A DEFLECTOMETER OR A MANDREL WITH REMOVABLE LEGS OR RUNNERS ON A CASE-BY-CASE BASIS.
(2) FOR A GRAVITY COLLECTION SYSTEM PIPE WITH AN INSIDE DIAMETER 27 INCHES AND GREATER, OTHER TEST METHODS MAY BE USED TO DETERMINE VERTICAL DEFLECTION.
(3) A DEFLECTION TEST METHOD MUST BE ACCURATE TO WITHIN PLUS OR MINUS 0.2% DEFLECTION.
(4) AN OWNER SHALL NOT CONDUCT A DEFLECTION TEST UNTIL AT LEAST 30 DAYS AFTER THE FINAL BACKFILL.
(5) GRAVITY COLLECTION SYSTEM PIPE DEFLECTION MUST NOT EXCEED FIVE PERCENT (5%).
(6) IF A PIPE SECTION FAILS A DEFLECTION TEST, AN OWNER SHALL CORRECT THE PROBLEM AND CONDUCT A SECOND TEST AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.
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 TESTING, VACUUM TESTING, OR OTHER METHOD APPROVED BY THE EXECUTIVE DIRECTOR.
(1) HYDROSTATIC TESTING.
(A) THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING OR ANY ALTERNATIVE TEST METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH PER HOUR.
(B) TO PERFORM A HYDROSTATIC EXFILTRATION TEST, AN OWNER SHALL SEAL ALL WASTEWATER PIPES COMING INTO A MANHOLE WITH AN INTERNAL PIPE PLUG, FILL THE MANHOLE WITH WATER, AND MAINTAIN THE TEST FOR AT LEAST ONE HOUR.
(C) A TEST FOR CONCRETE MANHOLES MAY USE A 24-HOUR WETTING PERIOD BEFORE TESTING TO ALLOW SATURATION OF THE CONCRETE.
(2) VACUUM TESTING.
(A) TO PERFORM A VACUUM TEST, AN OWNER SHALL PLUG ALL LIFT HOLES AND EXTERIOR JOINTS WITH A NON-SHRINK GROUT AND PLUG ALL PIPES ENTERING A MANHOLE.
(B) NO GROUT MUST BE PLACED IN HORIZONTAL JOINTS BEFORE TESTING.
(C) STUB-OUTS, MANHOLE BOOTS, AND PIPE PLUGS MUST BE SECURED TO PREVENT MOVEMENT WHILE A VACUUM IS DRAWN.
(D) AN OWNER SHALL USE A MINIMUM 60 INCH/LB TORQUE WRENCH TO TIGHTEN THE EXTERNAL CLAMPS THAT SECURE A TEST COVER TO THE TOP OF A MANHOLE.
(E) A TEST HEAD MUST BE PLACED AT THE INSIDE OF THE TOP OF A CONE SECTION, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
(F) THERE MUST BE A VACUUM OF 10 INCHES OF MERCURY INSIDE A MANHOLE TO PERFORM A VALID TEST.
(G) A TEST MUST NOT BEGIN UNTIL AFTER THE VACUUM PUMP IS OFF.
(H) A MANHOLE PASSES THE TEST IF AFTER 2.0 MINUTES AND WITH ALL VALVES CLOSED, THE VACUUM IS AT LEAST 9.0 INCHES OF MERCURY.
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 CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.

GENERAL NOTES

1. ALL WORK, UNLESS OTHERWISE NOTED, SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION SPECIFICATIONS OR THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ISSUED BY THE CITY OF GEORGETOWN STANDARD CONSTRUCTION SPECIFICATIONS.
2. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL BE FAMILIAR WITH THE PLANS, ALL NOTES, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, THE CITY STANDARDS FOR CONSTRUCTION, AND ANY OTHER APPLICABLE STANDARDS AND SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO BE FAMILIAR WITH ALL STANDARDS AND SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY OF PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.
3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. CONTRACTOR SHALL VERIFY ELEVATIONS SHOWN AND ENSURE THAT NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSINGS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEANOUTS, VALVE BOXES, AND FIRE HYDRANTS, ETC. CONTRACTOR TO ADJUST TO PROPER LINE AND GRADE PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING THE CONSTRUCTION OF THE PAVING FOR THIS DEVELOPMENT.
5.
   5.1. PROTECT AND MAINTAIN ROADWAY TRAFFIC THROUGHOUT THE PROJECT, PROVIDING A MINIMUM OF ONE (1) LANE OPEN IN EACH DIRECTION;
   5.2. PROVIDE AND MAINTAIN INTERIM ACCESS FROM ROADWAYS CURRENTLY IN USE TO ALL DRIVEWAYS AND INTERSECTING STREETS OR ALLEYS;
   5.3. MAINTAIN NORMAL PROJECT DRAINAGE UNTIL NEW DRAINAGE FACILITIES ARE FUNCTIONAL, INCLUDING, WHERE NECESSARY, INTERIM REPLACEMENT OF EXISTING DRAINAGE STRUCTURES REMOVED FOR CONSTRUCTION OF NEW DRAINAGE FACILITIES;
   5.4. MAINTAIN ALL WORK AND MATERIAL STORAGE AREAS IN ORDERLY CONDITION, FREE OF DEBRIS AND WASTE. ON COMPLETION OF CONSTRUCTION, CLEAN UP THE PROJECT AND ADJACENT AFFECTED AREAS TO ACCEPTABLE CONDITION, ALL AS PROVIDED IN THE GENERAL CONDITIONS.
6. PRIOR TO COMMENCEMENT OF CONSTRUCTION, BONDS AND THREE-WAY CONTRACTS SHALL BE SUBMITTED TO THE CITY AS REQUIRED.
7. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.
8. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
9. REFER TO ARCHITECTURAL PLANS FOR DETAILED BUILDING ENTRANCE LAYOUTS, RAMPS, LANDSCAPE, AND SIDEWALKS.
10. BARRICADING AND PROJECT SIGNS SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND LATEST UPDATES.
11. EXACT SAWCUT PAVEMENT REMOVAL AND REPLACEMENT LIMITS



NOTES:

1. CONTRACTOR IS TO REVIEW ALL GENERAL NOTES PRIOR TO BEGINNING WORK.
2. REMOVE ALL EXISTING PAVEMENT AND STRUCTURES WITHIN THE LIMITS OF DEMOLITION UNLESS OTHERWISE NOTED.
3. SAWCUT AND REMOVE ALL EXISTING DRIVE APPROACHES (WITHIN THE LIMITS OF DEMOLITION) TWO FEET FROM BACK OF CURB. SIDEWALKS, PAVEMENT, AND UTILITIES WITHIN THE PUBLIC RIGHT-OF-WAY ARE TO REMAIN UNLESS OTHERWISE NOTED.
4. CONSULT THE DIMENSIONAL CONTROL PLAN. VERIFY THE PORTION OF EXISTING CONCRETE CURBS AND PAVEMENT WHICH ARE TO REMAIN.
5. COORDINATE WITH LOCAL POWER, TELEPHONE, CABLE, AND GAS COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITIES.
6. ALL UTILITIES SHOULD BE CUT AND PLUGGED IN ACCORDANCE WITH THEIR RESPECTIVE UTILITY COMPANY REQUIREMENTS AND PRIOR TO DEMOLITION OF THE EXISTING BUILDINGS.
7. CONTRACTOR TO PLUG ALL EXISTING EXPOSED ENDS OF ABANDONED UTILITIES.
8. CONTRACTOR TO DETERMINE SOURCE OF ALL EXPOSED UTILITIES AND, IF REQUIRED, RECONNECT TO PROPOSED UTILITIES.
9. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND LEGAL DISPOSAL OF ALL THE UNSUITABLE MATERIALS FROM THE PROJECT SITE. CONTRACTOR SHALL CONTACT ALL LOCAL AUTHORITIES TO DETERMINE DISPOSAL REQUIREMENTS.
10. ALL TREES ON THE PROPERTY SHALL BE PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS UNLESS OTHERWISE NOTED. THE TREE PROTECTION SHALL BE PLACED AROUND TREES PRIOR TO ANY DEMOLITION OR GRADING. TREE PROTECTION SHALL REMAIN UNTIL ALL WORK IS COMPLETED. REFER TO LANDSCAPE PLANS FOR TREE REMOVAL AND PROTECTION DETAILS.
11. ANY DAMAGE DONE TO EXISTING TREE CROWNS OR ROOT SYSTEMS SHALL BE REPAIRED IMMEDIATELY BY AN APPROVED TREE SURGEON AT THE OWNER'S DIRECTION. ROOTS EXPOSED AND/OR DAMAGED DURING DEMOLITION AND/OR GRADING OPERATIONS SHALL BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA, CUT SURFACES PAINTED WITH AN APPROVED TREE PAINT, AND TOPSOIL AND MULCH PLACED OVER THE EXPOSED ROOT AREA IMMEDIATELY.
12. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING EROSION CONTROL MEASURES ON THE SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS UNTIL THE SITE HAS BEEN STABILIZED.
13. CONTRACTOR IS RESPONSIBLE FOR GRADING ALL DISTURBED AREAS TO ALLOW FOR POSITIVE DRAINAGE. GRADING SLOPES ARE NOT TO EXCEED 3:1.
14. AREAS EXCAVATED FOR FOUNDATION OR UNDERGROUND STRUCTURE REMOVAL SHALL BE BACK-FILLED AND COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
15. CONTRACTOR IS RESPONSIBLE FOR SECURITY OF THE SITE DURING DEMOLITION ACTIVITIES AND UNTIL SUBSTANTIAL COMPLETION.
16. ALL WORK, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS AND CITY STANDARD CONSTRUCTION SPECIFICATIONS.
17. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITY MAINS, MANHOLES, CLEANOUTS, VALVE BOXES, AND FIRE HYDRANTS, ETC. IN THE AREA OF DEMOLITION.
18. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.
19. BARRICADING AND PROJECT SIGNS SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND LATEST UPDATES.
20. CONTRACTOR SHALL MAINTAIN EXISTING PAVEMENT AND ACCESS TO FIRE HYDRANTS ON SITE UNTIL THE BUILDINGS AND STRUCTURES IN THAT AREA HAVE BEEN DEMOLISHED AND REMOVED.
21. CONTRACTOR WILL PROVIDE ON-SITE PARKING FOR WORKERS. VEHICLE PARKING WILL NOT BE ALLOWED WITHIN THE PUBLIC RIGHT-OF-WAY.
22. CONTRACTOR WILL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING ADEQUATE DUST CONTROL MEASURES DURING DEMOLITION ACTIVITIES.
23. CONTRACTOR IS TO COORDINATE DEMOLITION ACTIVITIES WITH THE HAZARDOUS MATERIAL ABATEMENT CONTRACTORS' ACTIVITIES, IF APPLICABLE.
24. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ALL TEMPORARY UTILITY SERVICES REQUIRED TO COMPLETE THE SCOPE OF WORK.

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

EXISTING CONDITIONS & DEMOLITION PLAN

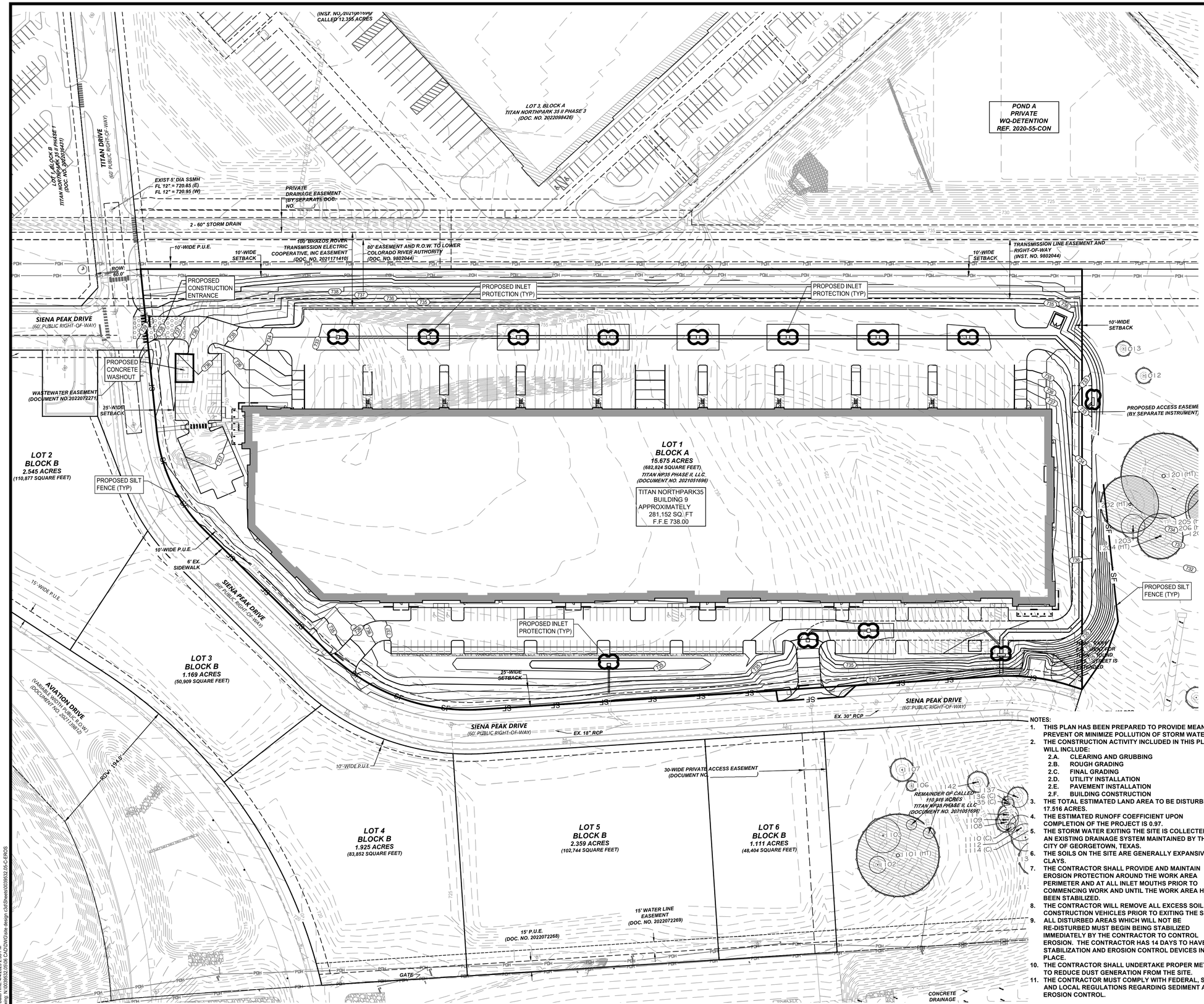
DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL
ENGINEER

6
SHEET 6 OF 48

2025-20-SDP

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Last Saved: 4/4/2025 11:02 AM
Plot Date/Time: 4/4/2025 11:03 AM
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GRAPHIC SCALE IN FEET
1"=60'

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- 100YR FP — 100 YR FLOODPLAIN LIMIT
- 133 — PROPOSED CONTOUR
- 133 — EXISTING CONTOUR
- SF — PROPOSED SILT FENCE
- LOC — PROPOSED LIMITS OF CONSTRUCTION
- TP — PROPOSED TREE PROTECTION
- RB — PROPOSED ROCK BERM
- PROPOSED CHECK DAM
- INLET PROTECTION
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED TEMPORARY ROCK RIPRAP
- PROPOSED VEGETATIVE FILTER STRIP
- PROPOSED SOIL RETENTION BLANKET
- DRAINAGE FLOW DIRECTION
- INLET PROTECTION

NOTES:

1. THIS PLAN HAS BEEN PREPARED TO PROVIDE MEANS TO PREVENT OR MINIMIZE POLLUTION OF STORM WATER.
2. THE CONSTRUCTION ACTIVITY INCLUDED IN THIS PLAN WILL INCLUDE:
   - 2.A. CLEARING AND GRUBBING
   - 2.B. ROUGH GRADING
   - 2.C. FINAL GRADING
   - 2.D. UTILITY INSTALLATION
   - 2.E. PAVEMENT INSTALLATION
   - 2.F. BUILDING CONSTRUCTION
3. THE TOTAL ESTIMATED LAND AREA TO BE DISTURBED IS 17.516 ACRES.
4. THE ESTIMATED RUNOFF COEFFICIENT UPON COMPLETION OF THE PROJECT IS 0.97.
5. THE STORM WATER EXITING THE SITE IS COLLECTED IN AN EXISTING DRAINAGE SYSTEM MAINTAINED BY THE CITY OF GEORGETOWN, TEXAS.
6. THE SOILS ON THE SITE ARE GENERALLY EXPANSIVE CLAYS.
7. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION PROTECTION AROUND THE WORK AREA PERIMETER AND AT ALL INLET MOUTHS PRIOR TO COMMENCING WORK AND UNTIL THE WORK AREA HAS BEEN STABILIZED.
8. THE CONTRACTOR WILL REMOVE ALL EXCESS SOIL FROM CONSTRUCTION VEHICLES PRIOR TO EXITING THE SITE.
9. ALL DISTURBED AREAS WHICH WILL NOT BE RE-DISTURBED MUST BEGIN BEING STABILIZED IMMEDIATELY BY THE CONTRACTOR TO CONTROL EROSION. THE CONTRACTOR HAS 14 DAYS TO HAVE ALL STABILIZATION AND EROSION CONTROL DEVICES IN PLACE.
10. THE CONTRACTOR SHALL UNDERTAKE PROPER METHODS TO REDUCE DUST GENERATION FROM THE SITE.
11. THE CONTRACTOR MUST COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS REGARDING SEDIMENT AND EROSION CONTROL.
12. A COPY OF THIS PLAN, AS PART OF THE SWPPP, MUST BE KEPT AT THE CONSTRUCTION FACILITY DURING THE ENTIRE CONSTRUCTION PERIOD.
13. CONSTRUCTION SEQUENCING MUST PROVIDE FOR THE EXCAVATION OF AN ON-SITE BASIN AS A SEDIMENT COLLECTION BASIN PRIOR TO THE DISTURBANCE OF GREATER THAN 10 ACRES OF LAND.
14. ALL FINISHED GRADES ARE TO BE HYDROMULCHED, SPOT SODDED OR SEEDED AND WATERED UNTIL GROWTH IS ESTABLISHED ON AND OFF-SITE.
15. A PIT OR WASH OUT BASIN SHALL BE CONSTRUCTED ON-SITE BY THE CONTRACTOR FOR THE "WASH OUT" OF CONCRETE TRUCKS.
16. A BERM OR OTHER SPILL PROTECTION MEASURE SHALL BE USED FOR ANY TEMPORARY FUEL STORAGE TANK ON-SITE.
17. IF "SUMP" PUMPS ARE USED TO REMOVE WATER FROM EXCAVATED AREAS, FILTER THE DISCHARGE TO REMOVE SEDIMENT AND OTHER POLLUTANTS BEFORE THE WATER LEAVES THE SITE.
18. TO PREVENT DAMAGE TO VEGETATION IN DOWNSTREAM WATER COURSES, LIMIT ANY PROPOSED LIME STABILIZATION OPERATIONS TO THAT WHICH CAN BE MIXED AND COMPACTED BY THE END OF EACH WORK DAY. GEOTEXTILE FABRIC IS NOT EFFECTIVE IN FILTERING LIME SINCE THE GRAIN SIZE IS SMALLER THAN THE OPENING IN THE FABRIC.
19. TO PREVENT DAMAGE TO VEGETATION IN DOWNSTREAM WATER COURSES, LIMIT ANY PROPOSED LIME STABILIZATION OPERATIONS TO THAT WHICH CAN BE MIXED AND COMPACTED BY THE END OF EACH WORK DAY. GEOTEXTILE FABRIC IS NOT EFFECTIVE IN FILTERING LIME SINCE THE GRAIN SIZE IS SMALLER THAN THE OPENING IN THE FABRIC.
20. VEHICLE PARKING AREAS, STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. OTHERWISE, COVERING OR ENCIRCLING THE AREAS WITH PROTECTIVE MEASURES SHALL BE NECESSARY.
21. STORE ALL TRASH AND BUILDING MATERIALS WASTE IN AN ENCLOSURE UNTIL IT CAN BE PROPERLY DISPOSED OF AT THE APPROPRIATE OFF-SITE FACILITIES.
22. TRACKING OF SEDIMENT OFF-SITE BY TRUCK TRAFFIC SHALL BE HANDLED THROUGH REGULAR CLEANING.
23. INSPECTIONS SHALL BE CONDUCTED BY THE PERMITEE ONCE EVERY TWO WEEKS AND WITHIN 24 HOURS AFTER STORM EVENT OF 0.5 INCHES OR MORE OR ONCE PER WEEK ON A SPECIFIC PRE-DEFINED DAY. THE INSPECTIONS WILL INCLUDE:
   - 23.A. DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN STABILIZED.
   - 23.B. AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
   - 23.C. STRUCTURAL CONTROL MEASURES.
   - 23.D. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
   - 23.E. IDENTIFICATIONS OF MEASURES THAT NEED TO BE MAINTAINED, MODIFIED, OR ADDED TO CORRECT PROBLEMS.
24. CONTRACTOR SHALL MINIMIZE THE EXPOSURE OF BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE TO PRECIPITATION AND TO STORMWATER.
25. PERMANENTLY STABILIZE EXPOSED SOIL, WITHIN AND ADJACENT TO THE SITE, THAT IS DISTURBED BY VEHICLES, GRADING AND OTHER CONSTRUCTION ACTIVITIES.
26. CONTAIN ALL RUNOFF FROM MATERIAL USED IN SUBGRADE STABILIZATION.
27. MATERIAL STOCKPILES SHALL BE COVERED BY PLASTIC OR SURROUNDED BY EROSION CONTROL STRUCTURES TO CONTROL SEDIMENT RELEASES.
28. CONTRACTOR SHALL PROTECT SLOPES IN EXCESS OF 15% IN ORDER TO MINIMIZE EROSION OF SOILS AND THE DISTURBANCE OF SLOPES.
29. VEGETATION TO BE PRESERVED WHERE EVER POSSIBLE TO HELP REDUCE EROSION. WHERE VEGETATION MUST BE REMOVED, PRESERVE NATIVE TOPSOIL IN ALL AREAS POSSIBLE.
30. MINIMIZE SOIL COMPACTION IN AREAS INTENDED FOR POST CONSTRUCTION PERVIOUS SURFACE.

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

EROSION CONTROL PLAN

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS

PROJECT NO.
0039532.05

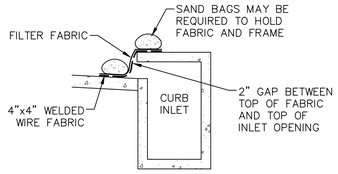
4/2/2025

STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

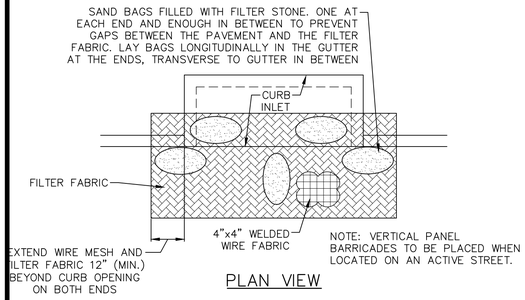
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SHEET 7 OF 48

2025-20-SDP

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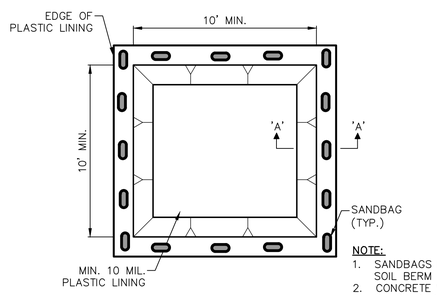
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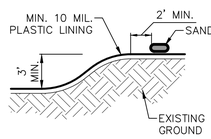
PLAN VIEW

1 CURB INLET PROTECTION

NOT TO SCALE



PLAN VIEW



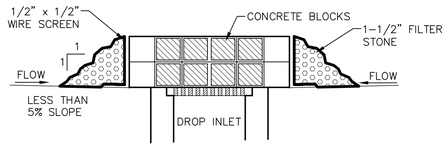
SECTION A–A

NOTE:

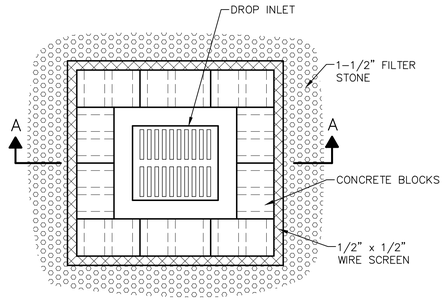
1. SANDBAGS MAY BE REPLACED BY A SOIL BERM TO ANCHOR PLASTIC LINING.
2. CONCRETE WASHOUT AREA TO BE CHECKED REGULARLY FOR REPAIRS.
3. REGULARLY REMOVE CONCRETE WASTE TO PREVENT OVERFLOWING.
4. PROVIDE MINIMUM 6 CF OF CONTAINMENT VOLUME FOR EVERY 10 CY OF CONCRETE PLACED. PROVIDE MINIMUM 1' FREEBOARD ABOVE CONTAINMENT VOLUME.

2 CONCRETE WASHOUT AREA

NOT TO SCALE



SECTION A–A



PLAN VIEW

3 DROP INLET PROTECTION

NOT TO SCALE

GUIDELINES FOR DESIGN AND INSTALLATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS

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

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

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

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

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

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

1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. ALL PROJECTS WITHIN THE RECHARGE ZONE OF THE EDWARD'S AQUIFER SHALL SUBMIT A BEST MANAGEMENT PRACTICES AND WATER POLLUTION AND ABATEMENT PLAN TO THE TNRCC FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
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 100lb/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED. ALL 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 LOSS DUE TO EVAPORATION.
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 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

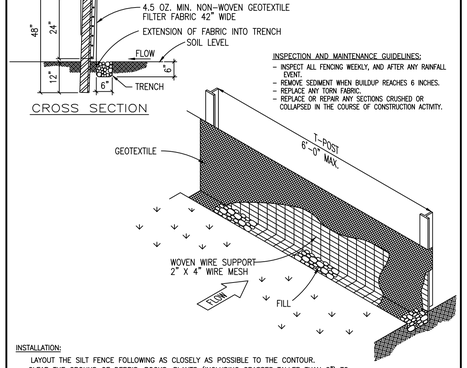
SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR

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 WASTE OR EQUIPMENT FLUIDS OTHER THAN WATER ONTO THE GROUND SURFACE, TREE WELL OR STORM DRAIN SYSTEMS IS PROHIBITED. ANY SPILLS OR LEAKS RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

FEET (2'–4') BEHIND THE AREA IN QUESTION.

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

REVISION NOTE: ADOPTED 6/21/2006			
STANDARD NAME: EC01A			
GEORGETOWN TEXAS	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	SCALE: NTS	DATE: 1/2003
	EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES	DRAWN BY: MRS	APPROVED BY: TRB



CROSS SECTION

INSTALLATION:

LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
CLEAR THE GROUND OF DEBRIS, ROCKS, PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON

DRIVE THE HEAVY DUTY T–POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW. THE T–POST SPACING SHALL BE 6'–0" MAX.

FASTEN THE REINFORCED WIRE MESH TO THE T–POST WITH 11 1/2 GAUGE GALVANIZED T–POST CLIPS. THE TOP OF THE WIRE TO BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND

THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1".

ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").

GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED

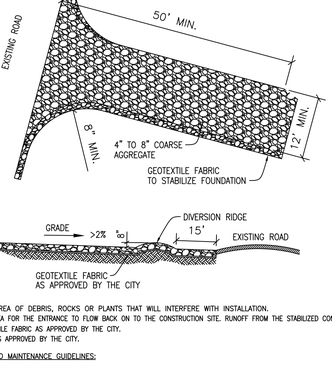
SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM

INSPECTION AND MAINTENANCE GUIDELINES:

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

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

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



INSTALLATION:

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

INSPECTIONS AND MAINTENANCE GUIDELINES:

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

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

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

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TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

EROSION CONTROL DETAILS

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO. 0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136048
LICENSED
PROFESSIONAL ENGINEER

2025–20–SDP

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

EXISTING DRAINAGE AREA MAP

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO. 0039532.05

4/2/2025
STATE OF TEXAS
Hollis A Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

9
SHEET 9 OF 48

2025-20-SDP

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

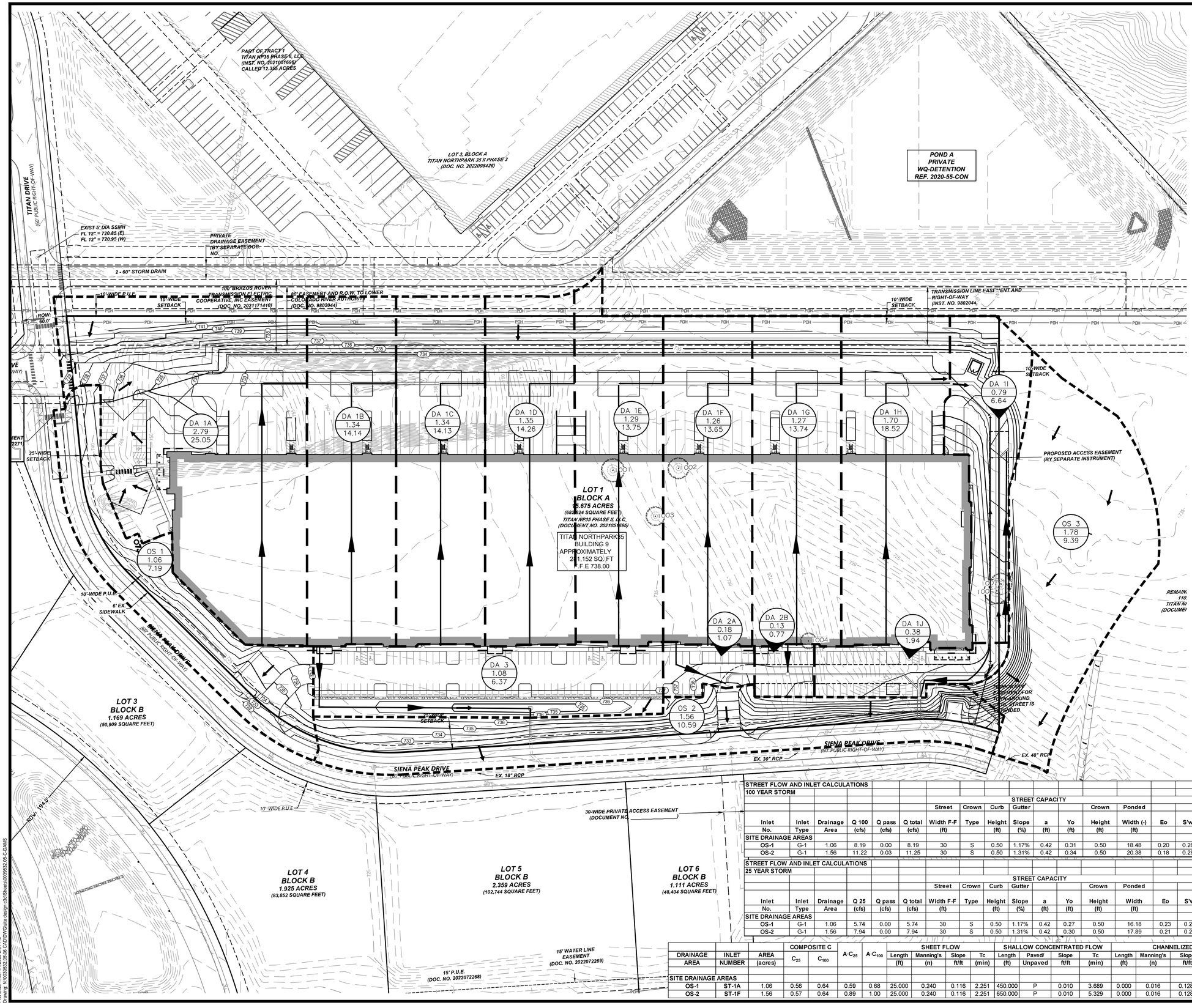
TITAN NORTHPARK 35 IX
POND A DRAINAGE AREA MAP

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO. 0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

10
SHEET 10 OF 48

2025-20-SDP



0 30 60 120 180

GRAPHIC SCALE IN FEET
1"=60'

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- 100YR FP — 100 YR FLOODPLAIN LIMIT
- 133 — PROPOSED CONTOUR
- 133 — EXISTING CONTOUR
- DRAINAGE SWALE
- DRAINAGE DIVIDE
- EX DRAINAGE DIVIDE
- DA 1 / 1.00 / 7.99 — DRAINAGE AREA ID, AREA IN ACRES, Q_{100} IN CUBIC FEET PER SECOND
- DRAINAGE FLOW DIRECTION
- CURB INLET
- GRATE INLET
- DROP INLET (Y-INLET)
- A1 — PROPOSED INLET LABEL

STREET FLOW AND INLET CALCULATIONS
100 YEAR STORM

						STREET CAPACITY												INLET ON GRADE CAPACITY					
						Street	Crown	Curb	Gutter			Crown	Ponded										
Inlet No.	Inlet Type	Drainage Area	Q 100 (cfs)	Q pass (cfs)	Q total (cfs)	Width F-F (ft)	Type	Height (ft)	Slope (%)	a (ft)	Yo (ft)	Height (ft)	Width (-) (ft)	Eo	S'w	Sx	Se	LT	L	E	Qi	Qpass (cfs)	Pass to Inlet #
SITE DRAINAGE AREAS																							
OS-1	G-1	1.06	8.19	0.00	8.19	30	S	0.50	1.17%	0.42	0.31	0.50	18.48	0.20	0.28	0.02	0.07	21.90	20	0.99	8.08	0.10	ST-1F
OS-2	G-1	1.56	11.22	0.03	11.25	30	S	0.50	1.31%	0.42	0.34	0.50	20.38	0.18	0.28	0.02	0.07	27.01	20	0.91	10.26	0.99	-

STREET FLOW AND INLET CALCULATIONS
25 YEAR STORM

						STREET CAPACITY												INLET ON GRADE CAPACITY					
						Street	Crown	Curb	Gutter			Crown	Ponded										
Inlet No.	Inlet Type	Drainage Area	Q 25 (cfs)	Q pass (cfs)	Q total (cfs)	Width F-F (ft)	Type	Height (ft)	Slope (%)	a (ft)	Yo (ft)	Height (ft)	Width (ft)	Eo	S'w	Sx	Se	LT	L	E	Qi	Qpass (cfs)	Pass to Inlet #
SITE DRAINAGE AREAS																							
OS-1	G-1	1.06	5.74	0.00	5.74	30	S	0.50	1.17%	0.42	0.27	0.50	16.18	0.23	0.28	0.02	0.08	17.81	20	1.00	5.74	0.00	ST-1F
OS-2	G-1	1.56	7.94	0.00	7.94	30	S	0.50	1.31%	0.42	0.30	0.50	17.89	0.21	0.28	0.02	0.08	22.06	20	0.99	7.83	0.11	-

			COMPOSITE C				SHEET FLOW				SHALLOW CONCENTRATED FLOW				CHANNELIZED FLOW					Cumulative	INTENSITY		DISCHARGE	
DRAINAGE AREA	INLET NUMBER	AREA (acres)	C_{25}	C_{100}	$A \cdot C_{25}$	$A \cdot C_{100}$	Length (ft)	Manning's (n)	Slope ft/ft	Tc (min)	Length (ft)	Paved/ Unpaved	Slope ft/ft	Tc (min)	Length (ft)	Manning's (n)	Slope ft/ft	Velocity ft/s	Tc (min)	Tc (min)	I 25yr (in/hr)	I 100yr (in/hr)	Q 25 (cfs)	Q 100 (cfs)
SITE DRAINAGE AREAS																								
OS-1	ST-1A	1.06	0.56	0.64	0.59	0.68	25.000	0.240	0.116	2.251	450.000	P	0.010	3.689	0.000	0.016	0.1285	12.928	0.000	5.94	9.67	12.07	5.74	8.19
OS-2	ST-1F	1.56	0.57	0.64	0.89	1.00	25.000	0.240	0.116	2.251	650.000	P	0.010	5.329	0.000	0.016	0.1285	12.928	0.000	7.58	9.01	11.32	8.01	11.30

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE
TITAN NORTHPARK 35 IX
SITE DRAINAGE AREA MAP

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
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ENGINEER

11
SHEET 11 OF 48

2025-20-SDP

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EXISTING DRAINAGE AREA MAP CALCULATIONS

HEC-HMS SUMMARY: EXISTING CONDITONS

Drainage Area Basin Designation	Point of Analysis	Drainage Area (ac)	Base Curve Number CN	Lag Time (min)	Cumulative Area (ac)	Impervious Cover %	2 YEAR STORM Runoff Per Drainage Area (cfs)	2 YEAR STORM Routed Cumulative Runoff (cfs)	10 YEAR STORM Runoff Per Drainage Area (cfs)	10 YEAR STORM Routed Cumulative Runoff (cfs)	25 YEAR STORM Runoff Per Drainage Area (cfs)	25 YEAR STORM Routed Cumulative Runoff (cfs)	100 YEAR STORM Runoff Per Drainage Area (cfs)	100 YEAR STORM Routed Cumulative Runoff (cfs)
DA-1		8.86	80	12.37		51.18%	26.80		39.40		48.30		61.70	
DA-2		9.73	84	3.00		85.40%	71.60		73.50		86.60		104.10	
DA-3		8.61	84	3.00		78.70%	60.90		63.70		75.40		91.00	
DA-4		9.26	84	6.72		70.00%	45.80		56.40		67.00		82.80	
DA-5		12.79	80	3.00		91.81%	96.60		97.70		114.70		137.50	
DA-6		10.74	80	3.52		87.32%	75.00		78.50		92.00		111.50	
DA-9		21.90	80	13.08		7.12%	40.30		75.80		98.00		132.40	
DA-10		5.87	80	12.70		0.00%	10.00		19.70		25.70		35.10	
DA-11		8.75	80	8.57		0.00%	18.00		34.10		43.90		59.70	
DA-13		2.68	93	3.00		90.20%	21.00		21.00		24.50		29.30	
DA-14		1.00	80	3.00		0.00%	3.00		4.90		6.40		8.40	
POND-A								50.20		95.80		119.10		142.20
DA-7		9.76	80	8.30		13.90%	24.50		41.50		52.50		69.80	
DA-8		8.39	80	8.34		0.00%	17.50		33.00		42.50		57.60	
DA-12		4.36	80	14.12		0.00%	7.00		14.00		18.30		25.00	
OS-1		106.13	84	22.93		0.00%	161.20		307.20		398.90		530.90	
	POA							265.20		519.90		677.40		890.90

Basin ID	Flowpath Length (ft)	Overland Flow Length	Slope	Surface Cover	Velocity	*Manning's n	T_o	Shallow Concentrated Flow Length	Slope	Surface Type	Velocity	*K	T_s	Channel Flow Length	Slope	Type	*K	Velocity	T_h	T_c	T_{design}	T_L
	(ft)	(ft)	(ft/ft)		(ft/s)		(min)	(ft)	(ft/ft)		(ft/s)		(min)	(ft)	(ft/ft)		(ft)	(ft/s)	(min)	(min)	(min)	(min)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
DA 1	2480	100	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.557	0.01	1.07	2380	0.010	PAVED	2.03	20.3	19.54							20.61	20.61	12.37
DA 2	1173	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	45	0.010	PAVED	2.03	20.3	0.37	1078	0.005	48" RCP	114.31	8.1	2.22	3.39	5.00	3.00
DA 3	1200	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	295	0.010	PAVED	2.03	20.3	2.42	855	0.005	48" RCP	114.31	8.1	1.76	4.99	5.00	3.00
DA 4	1128	50	0.010	SHORT GRASS PRAIRIE	0.129	0.15	6.48	250	0.010	PAVED	2.03	20.3	2.05	828	0.003	36" RCP	94.36	5.2	2.67	11.20	11.20	6.72
														178	0.024	18" RCP	59.44	9.2	0.32			
														174	0.007	24" RCP	72.01	6.0	0.48			
														174	0.005	30" RCP	83.56	5.9	0.49			
DA 5	383	100	0.007	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.035	0.01	1.61	254	0.01	PAVED	1.57	20.30	2.70	474	0.006	36" RCP	94.36	7.4	1.07	4.63	5.00	3.00
														234	0.007	42" RCP	104.57	8.6	0.45			
														22	0.036	48" RCP	114.31	21.8	0.02			
														28	0.086	60" RCP	132.64	38.8	0.01			
														299	0.004	18" RCP	59.44	3.7	1.33			
														351	0.008	24" RCP	72.01	6.4	0.92			
														174	0.012	30" RCP	83.56	9.1	0.32			
DA 6	637	100	0.044	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	2.158	0.01	0.77	239	0.02	PAVED	2.62	20.30	1.52	174	0.010	36" RCP	94.36	9.2	0.31	5.87	5.87	3.52
														153	0.005	42" RCP	104.57	7.1	0.36			
														137	0.003	48" RCP	114.31	6.7	0.34			
DA 7	1035	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	785	0.010	6X6 RCB	149.79	15.0	0.87	13.85	13.85	8.31
DA 8	1249	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	999	0.010	8X4 RCB	138.47	13.8	1.20	14.18	14.18	8.51
DA 9	1540	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	1290	0.010	10X7 RCB	184.99	18.5	1.16	14.14	14.14	8.48
DA 10	1041	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	941	0.010	UNPAVED	1.61	16.1	9.74							21.16	21.16	12.70
DA 11	851	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	601	0.010	24" RCP	72.01	7.2	1.39	14.37	14.37	8.62
														1055	0.010	PARABOLIC SWALE, 1' DEEP, 10' SPREAD	27.68	2.77	6.35			
														275	0.010	24" RCP	72.01	7.20	0.64			
DA 12	1985	80	0.010	DENSE GRASS	0.096	0.24	13.92	25	0.010	UNPAVED	1.61	16.10	0.26	100	0.010	10X7 RCB	184.99	18.50	0.09	23.53	23.53	14.12
														325	0.010	48" RCP	114.31	11.43	0.47			
														500	0.005	CONCRETE TRAP CHANNEL, B=0, Y= 2, SS=1:1	65.52	4.63	1.80			
DA 13	371	160	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.731	0.01	1.54	1	0.005	PAVED	1.44	20.3	0.01	210	0.010	24" RCP	72.01	7.2	0.49	2.04	5.00	3.00
DA 14	166	15	0.005	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	0.619	0.01	0.40	1	0.005	PAVED	1.44	20.3	0.01	150	0.010	18" RCP	59.44	5.9	0.42	0.84	5.00	3.00
OS-1	3300	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	2400	0.010	UNPAVED	1.61	16.1	24.84	800	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3:1	68.56	6.86	1.94	38.21	38.21	22.93

PROPOSED DRAINAGE AREA MAP CALCULATIONS

HEC-HMS SUMMARY: DEVELOPED CONDITONS

Drainage Area Basin Designation	Point of Analysis	Drainage Area (ac)	Base Curve Number CN	Lag Time (min)	Cumulative Area (ac)	Impervious Cover %	2 YEAR STORM Runoff Per Drainage Area (cfs)	2 YEAR STORM Routed Cumulative Runoff (cfs)	10 YEAR STORM Runoff Per Drainage Area (cfs)	10 YEAR STORM Routed Cumulative Runoff (cfs)	25 YEAR STORM Runoff Per Drainage Area (cfs)	25 YEAR STORM Routed Cumulative Runoff (cfs)	100 YEAR STORM Runoff Per Drainage Area (cfs)	100 YEAR STORM Routed Cumulative Runoff (cfs)
DA-1		8.86	80	12.37		51.18%	26.80		39.40		48.30		61.70	
DA-2		9.73	84	3.00		85.40%	71.60		73.50		86.60		104.10	
DA-3		8.61	84	3.00		78.70%	60.90		63.70		75.40		91.00	
DA-4		9.26	84	6.72		70.00%	45.80		56.40		67.00		82.80	
DA-5		12.79	80	3.00		91.81%	96.60		97.70		114.70		137.50	
DA-6		10.74	80	3.52		87.32%	75.00		78.50		92.00		111.50	
DA-9		21.90	80	13.08		58.00%	105.20		130.40		159.30		198.80	
DA-10		5.87	80	12.70		0.00%	10.00		19.70		25.70		35.10	
DA-11		8.75	80	8.57		0.00%	18.00		34.10		43.90		59.70	
DA-13		2.68	93	3.00		90.20%	21.00		21.00		24.50		29.30	
DA-14		1.00	80	3.00		0.00%	3.00		4.90		6.40		8.40	
POND-A								50.20		95.80		119.10		142.20
DA-7		9.76	80	8.30		13.90%	24.50		41.50		52.50		69.80	
DA-8		8.39	80	8.34		0.00%	17.50		33.00		42.50		57.60	
DA-12		4.36	80	14.12		0.00%	7.00		14.00		18.30		25.00	
OS-1		106.13	84	22.93		0.00%	161.20		307.20		398.90		530.90	
	POA							255.40		497.70		648.80		850.10

Basin ID	Flowpath Length (ft)	Overland Flow Length	Slope	Surface Cover	Velocity	*Manning's n	T_o	Shallow Concentrated Flow Length	Slope	Surface Type	Velocity	*K	T_s	Channel Flow Length	Slope	Type	*K	Velocity	T_h	T_c	T_{design}	T_L
	(ft)	(ft)	(ft/ft)		(ft/s)		(min)	(ft)	(ft/ft)		(ft/s)		(min)	(ft)	(ft/ft)		(ft)	(ft/s)	(min)	(min)	(min)	(min)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
DA 1	2480	100	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.557	0.01	1.07	2380	0.010	PAVED	2.03	20.3	19.54							20.61	20.61	12.37
DA 2	1173	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	45	0.010	PAVED	2.03	20.3	0.37	1078	0.005	48" RCP	114.31	8.1	2.22	3.39	5.00	3.00
DA 3	1200	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	295	0.010	PAVED	2.03	20.3	2.42	855	0.005	48" RCP	114.31	8.1	1.76	4.99	5.00	3.00
DA 4	1128	50	0.010	SHORT GRASS PRAIRIE	0.129	0.15	6.48	250	0.010	PAVED	2.03	20.3	2.05	828	0.003	36" RCP	94.36	5.2	2.67	11.20	11.20	6.72
														178	0.024	18" RCP	59.44	9.2	0.32			
														174	0.007	24" RCP	72.01	6.0	0.48			
														174	0.005	30" RCP	83.56	5.9	0.49			
DA 5	383	100	0.007	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.035	0.01	1.61	254	0.01	PAVED	1.57	20.30	2.70	474	0.006	36" RCP	94.36	7.4	1.07	4.63	5.00	3.00
														234	0.007	42" RCP	104.57	8.6	0.45			
														22	0.036	48" RCP	114.31	21.8	0.02			
														28	0.086	60" RCP	132.64	38.8	0.01			
														299	0.004	18" RCP	59.44	3.7	1.33			
														351	0.008	24" RCP	72.01	6.4	0.92			
														174	0.012	30" RCP	83.56	9.1	0.32			
DA 6	637	100	0.044	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	2.158	0.01	0.77	239	0.02	PAVED	2.62	20.30	1.52	174	0.010	36" RCP	94.36	9.2	0.31	5.87	5.87	3.52
														153	0.005	42" RCP	104.57	7.1	0.36			
														137	0.003	48" RCP	114.31	6.7	0.34			
DA 7	1035	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	785	0.010	6X6 RCB	149.79	15.0	0.87	13.85	13.85	8.31
DA 8	1249	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	999	0.010	8X4 RCB	138.47	13.8	1.20	14.18	14.18	8.51
DA 9	2200	100	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.180	0.01	1.41	300	0.010	PAVED	2.03	20.3	2.46	1800	0.005	48" RCP	114.31	8.1	3.71	7.59	7.59	4.55
DA 10	1041	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	941	0.010	UNPAVED	1.61	16.1	9.74							21.16	21.16	12.70
DA 11	851	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	601	0.010	24" RCP	72.01	7.2	1.39	14.37	14.37	8.62
														1055	0.010	PARABOLIC SWALE, 1' DEEP, 10' SPREAD	27.68	2.77	6.35			
														275	0.010	24" RCP	72.01	7.20	0.64			
DA 12	1985	80	0.010	DENSE GRASS	0.096	0.24	13.92	25	0.010	UNPAVED	1.61	16.10	0.26	100	0.010	10X7 RCB	184.99	18.50	0.09	23.53	23.53	14.12
														325	0.010	48" RCP	114.31	11.43	0.47			
														500	0.005	CONCRETE TRAP CHANNEL, B=0, Y= 2, SS=1:1	65.52	4.63	1.80			
DA 13	371	160	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.731	0.01	1.54	1	0.005	PAVED	1.44	20.3	0.01	210	0.010	24" RCP	72.01	7.2	0.49	2.04	5.00	3.00
DA 14	166	15	0.005	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	0.619	0.01	0.40	1	0.005	PAVED	1.44	20.3	0.01	150	0.010	18" RCP	59.44	5.9	0.42	0.84	5.00	3.00
OS-1	3300	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	2400	0.010	UNPAVED	1.61	16.1	24.84	800	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3:1	68.56	6.86	1.94	38.21	38.21	22.93

SITE DRAINAGE AREA MAP CALCULATIONS

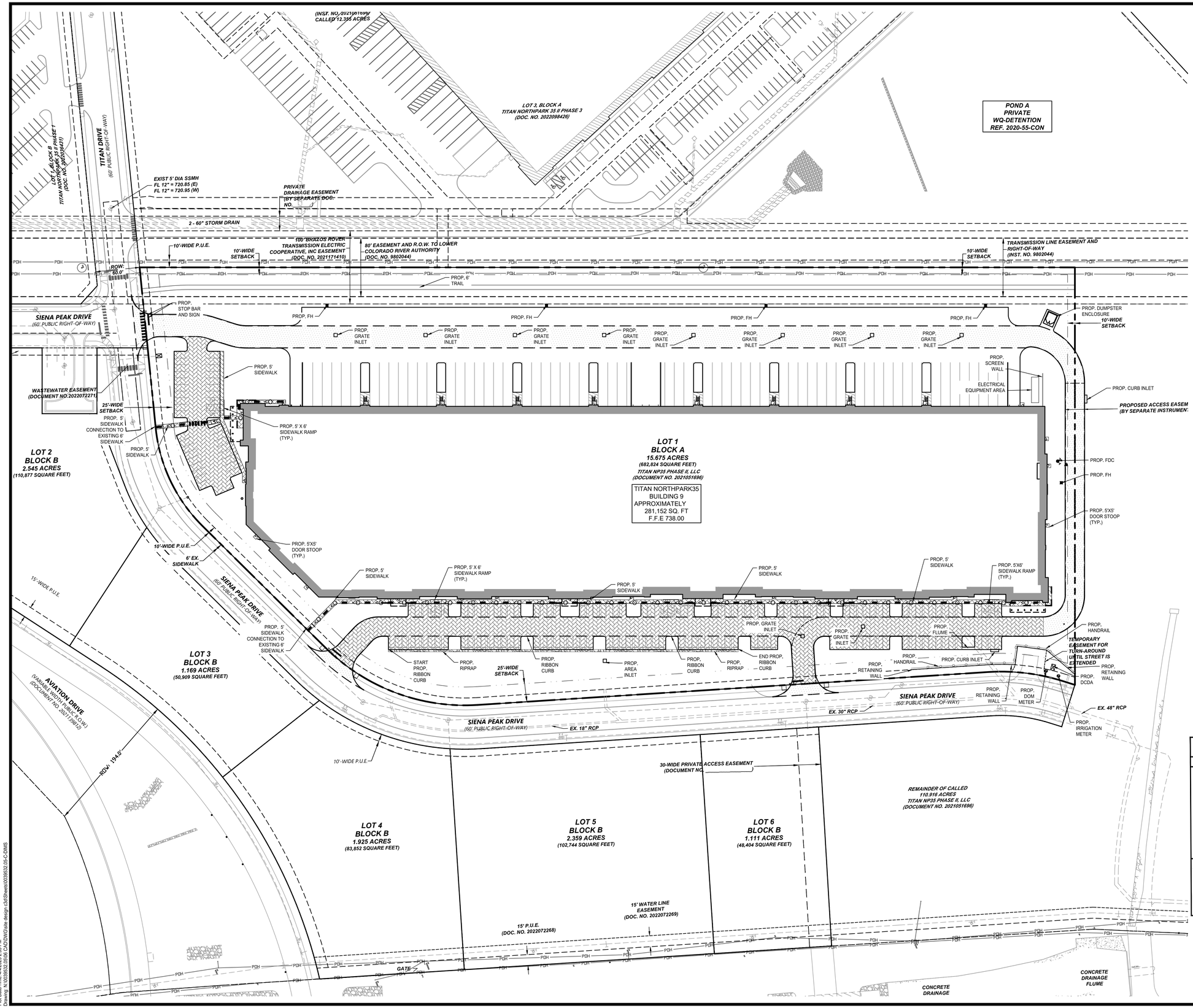
Drainage Number	MASTER DRAINAGE AREA	IC	PC	%IC	2 year perv C	2 year imp C	2 year weighted C	10 year perv C	10 year imp C	10 year weighted C	25 year perv C	25 year imp C	25 year weighted C	100 year perv C	100 year imp C	100 year weighted C
SITE CONDITION DRAINAGE AREAS																
1A	**2.79**	**1.542**	1.2478	55.28%	0.34	0.42	0.97	0.39	0.49	0.97	0.42	0.52	0.97	0.49	0.61	0.97
1B	**1.34**	**1.112**	0.2275	83.02%	0.34	0.08	0.97	0.39	0.09	0.97	0.42	0.10	0.97	0.49	0.11	0.97
1C	**1.34**	**1.111**	0.2293	82.89%	0.34	0.08	0.97	0.39	0.09	0.97	0.42	0.10	0.97	0.49	0.11	0.97
1D	**1.35**	**1.123**	0.2272	83.17%	0.34	0.08	0.97	0.39	0.09	0.97	0.42	0.10	0.97	0.49	0.11	0.97
1E	**1.29**	**1.095**	0.1949	84.89%	0.34	0.07	0.97	0.39	0.08	0.97	0.42	0.08	0.97	0.49	0.10	0.97
1F	**1.26**	**1.107**	0.1525	87.89%	0.34	0.05	0.97	0.39	0.06	0.97	0.42	0.06	0.97	0.49	0.07	0.97
1G	**1.27**	**1.113**	0.1575	87.60%	0.34	0.05	0.97	0.39	0.06	0.97	0.42	0.07	0.97	0.49	0.08	0.97
1H	**1.70**	**1.512**	0.1884	88.92%	0.34	0.06	0.97	0.39	0.07	0.97	0.42	0.08	0.97	0.49	0.09	0.97
1I	**0.85**	**0.306**	0.5440	36.00%	0.34	0.18	0.97	0.39	0.21	0.97	0.42	0.23	0.97	0.49	0.27	0.97
1J	**0.31**	**0.023**	0.2866	7.54%	0.34	0.10	0.97	0.39	0.11	0.97	0.42	0.12	0.97	0.49	0.14	0.97
2A	**0.18**	**0.003**	0.1770	1.68%	0.34	0.06	0.97	0.39	0.07	0.97	0.42	0.07	0.97	0.49	0.09	0.97
2B	**0.13**	**0.002**	0.1278	1.68%	0.34	0.04	0.97	0.39	0.05	0.97	0.42	0.05	0.97	0.49	0.06	0.97
3	**1.08**	**0.015**	1.0648	1.41%	0.34	0.36	0.97	0.39	0.42	0.97	0.42	0.45	0.97	0.49	0.52	0.97
OS 1	**1.06**	**0.310**	0.7504	29.21%	0.34	0.26	0.97	0.39	0.29	0.97	0.42	0.32	0.97	0.49	0.37	0.97
OS 2	**1.56**	**0.457**	1.1028	29.31%	0.34	0.37	0.97	0.39	0.43	0.97	0.42	0.46	0.97	0.49	0.54	0.97
OS 3	**1.78**	**0.000**	1.7800	0.00%	0.34	0.61	0.97	0.39	0.69	0.97	0.42	0.75	0.97	0.49	0.87	0.97

Drainage Number	2 year perv C	2 year imp C	2 year weighted C	10 year perv C	10 year imp C	10 year weighted C	25 year perv C	25 year imp C	25 year weighted C	100 year perv C	100 year imp C	100 year weighted C
1A	0.34	0.42	0.69	0.39	0.49	0.71	0.42	0.52	0.72	0.49	0.61	0.76
1B	0.34	0.08	0.86	0.39	0.09	0.87	0.42	0.10	0.88	0.49	0.11	0.89
1C	0.34	0.08	0.86	0.39	0.09	0.87	0.42	0.10	0.88	0.49	0.11	0.89
1D	0.34	0.08	0.86	0.39	0.09	0.87	0.42	0.10	0.89	0.49	0.11	0.89
1E	0.34	0.07	0.87	0.39	0.08	0.88	0.42	0.08	0.89	0.49	0.10	0.90
1F	0.34	0.05	0.89	0.39	0.06	0.90	0.42	0.06	0.90	0.49	0.07	0.91
1G	0.34	0.05	0.89	0.39	0.06	0.90	0.42	0.07	0.90	0.49	0.08	0.91
1H	0.34	0.06	0.90	0.39	0.07	0.91	0.42	0.08	0.91	0.49	0.09	0.92
1I	0.34	0.18	0.57	0.39	0.21	0.60	0.42	0.23	0.62	0.49	0.27	0.66
1J	0.34	0.10	0.39	0.39	0.11	0.43	0.42	0.12	0.46	0.49	0.14	0.53
2A	0.34	0.06	0.35	0.39	0.07	0.40	0.42	0.07	0.43	0.49	0.09	0.50
2B	0.34	0.04	0.35	0.39	0.05	0.40	0.42	0.05	0.43	0.49	0.06	0.50
3	0.34	0.36	0.35	0.39	0.42	0.40	0.42	0.45	0.43	0.49	0.52	0.50
OS 1	0.34	0.26	0.52	0.39	0.29	0.56	0.42	0.32	0.58	0.49	0.37	0.63
OS 2	0.34	0.37	0.52	0.39	0.43	0.56	0.42	0.46	0.58	0.49	0.54	0.63
OS 3	0.34	0.61	0.34	0.39	0.69	0.39	0.42	0.75	0.49	0.87	0.49	0.49

NOTE: DETENTION AND WATER QUALITY FOR THIS SITE IS BEING PROVIDED WITH 2020-55-CON, POND A

NOTE: THIS HAS BEEN CALCULATED WITH SCS METHOD-TIME OF CONCENTRATION CALCS.

DRAINAGE NUMBER	INLET NUMBER	AREA (acres)	C_2	C_{10}	C_{25}	C_{100}	SHEET FLOW Length (ft)	Slope (ft/ft)	Surface Cover	Velocity (ft/s)	Manning's n	T_{sheet} (min)	SHALLOW CONCENTRATED FLOW Length (ft)	Slope (ft/ft)	Surface Type	Velocity (ft/s)	K	$T_{shallow}$ (min)	CHANNEL FLOW Length (ft)	Slope (ft/ft)	Type	K (ft) $K=\frac{1.486 \cdot R^{2/3}}{n}$	Velocity (ft/s)	$T_{channel}$ (min)	Tc (min)	INTENSITY I 2yr (in/hr)	I 10yr (in/hr)	I 25yr (in/hr)	I 100yr (in/hr)	DISCHARGE Q 2 (cfs)	Q 10 (cfs)	Q 25 (cfs)	Q 100 (cfs)
DA 1A	1A	2.79	0.69	0.71	0.72	0.76	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	24" RCP	72.01	5.09	0.23	5.00	6.48	8.62	9.84	11.88	12.44	17.08	19.88	25.04
DA 1B	1B	1.34	0.86	0.87	0.88	0.89	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	30" RCP	83.56	5.91	0.20	5.00	6.48	8.62	9.84	11.88	7.49	10.06	11.56	14.14
DA 1C	1C	1.34	0.86	0.87	0.88	0.89	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	30" RCP	83.56	5.91	0.20	5.00	6.48	8.62	9.84	11.88	7.49	10.05	11.55	14.13
DA 1D	1D	1.35	0.86	0.87	0.88	0.89	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	30" RCP	83.56	5.91	0.20	5.00	6.48	8.62	9.84	11.88	7.56	10.15	11.66	14.26
DA 1E	1E	1.29	0.87	0.88	0.89	0.90	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	42" RCP	104.57	7.39	0.16	5.00	6.48	8.62	9.84	11.88	7.31	9.81	11.26	13.75
DA 1F	1F	1.26	0.89	0.90	0.90	0.91	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	48" RCP	114.31	8.08	0.14	5.00	6.48	8.62	9.84	11.88	7.30	9.77	11.20	13.65
DA 1G	1G	1.27	0.89	0.90	0.90	0.91	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	48" RCP	114.31	8.08	0.14	5.00	6.48	8.62	9.84	11.88	7.34	9.83	11.27	13.74
DA 1H	1H	1.70	0.90	0.91	0.91	0.92	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	48" RCP	114.31	8.08	0.14	5.00	6.48	8.62	9.84	11.88	9.92	13.27	15.21	18.52
DA 1I	1I	0.85	0.57	0.60	0.62	0.66	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	350.00	0.01	48" RCP	114.31	8.08	0.72	5.22	6.42	8.54	9.76	11.79	3.09	4.35	5.13	6.64
DA 1J	1J	0.31	0.39	0.43	0.46	0.53	90.00	0.01	CONCRETE	0.78	0.013	1.93	0.00	0.01	PAVED	1.74	20.33	0.00	0.00	0.01	48" RCP	114.31	8.08	0.00	5.00	6.48	8.62	9.84	11.88	0.78	1.16	1.41	1.94
DA 2A	2A	0.18	0.35	0.40	0.43	0.50	100.00	0.01	CONCRETE	0.79	0.013	2.10	5.00	0.01	PAVED	1.74	20.33	0.05	50.00	0.01	18" RCP	59.44	4.20	0.20	5.



LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- EASEMENT LINE
- ROAD CENTER LINE
- BUILDING SETBACK LINE
- BACK OF CURB LINE
- PROPOSED FIRELANE
- PROPOSED PAVEMENT
- PERVIOUS PARKING AREA
- PROP. ACCESSIBLE ROUTE

ALL DIMENSIONS ARE TO BACK-OF-CURB UNLESS OTHERWISE NOTED

NOTES:

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, COLOR-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 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.**

PARKING REQUIREMENT

RATIO	REQUIRED	PROVIDED
INDOOR FACILITY 10% - 1/500 (31,250 SF)	63	167
INDOOR STORAGE 90% - 1/2,500 (249,902 SF)	102	
ADA SPACES	6	8
TOTAL	*171*	*175*

IMPERVIOUS COVER CALCULATIONS

TOTAL SITE AREA	**15.675 AC (682,824 SF)**	
ALLOWED IC		
PER PRELIM PLAT (2023-35-PP) ALLOWABLE IC%		**49.44%**
WAIVERS:		
• LOW IMPACT DESIGN		+7.00%
• PARKING LOT DESIGN		+5.00%
• PLANT MATERIALS CLASSIFIED AS LOW WATER USERS		+3.00%
ALLOWABLE IC%	**10.10 AC (440,011 SF)**	**64.44%**
PROPOSED IC		
BUILDING	**6.45 AC (281,152 SF)**	**41.15 %**
PAVEMENT (excludes pavers)	**3.29 AC (143,300 SF)**	**20.99%**
TOTAL	**9.74 AC (424,452 SF)**	**62.16%**

Westwood
Westwood Professional Services, Inc.
8701 NORTH MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX OVERALL SITE PLAN

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS

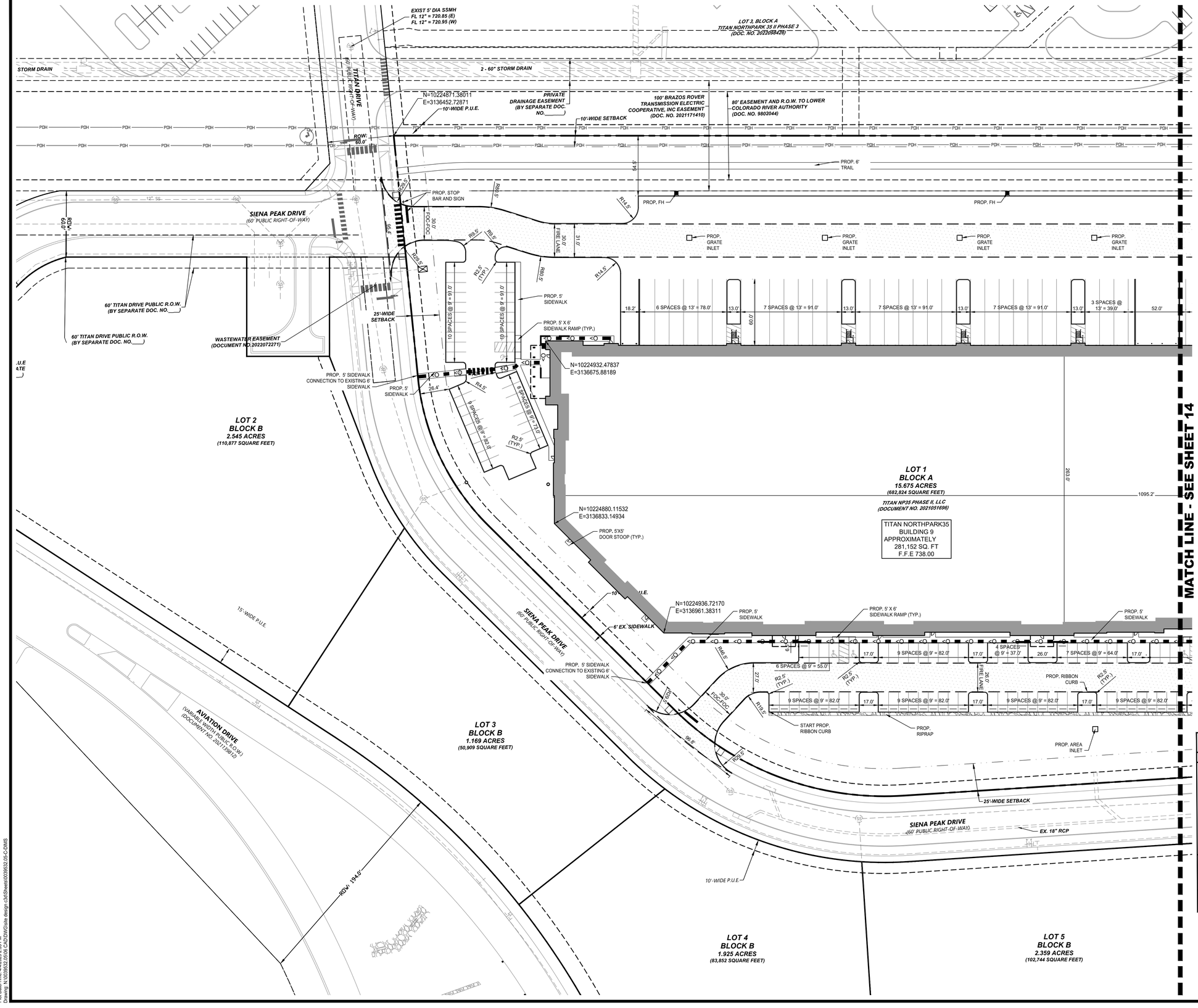
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

13
SHEET 13 OF 48

2025-20-SDP

Last Saved by: SForeen
Last Saved: 4/4/2025 1:26 PM
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Drawing: N:\0039532.05\06 CAD\DWG\site design c3d\Sheets\0039532.05-C-DIMS



LEGEND

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- RIGHT-OF-WAY LINE
- EASEMENT LINE
- ROAD CENTER LINE
- BUILDING SETBACK LINE
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- PROPOSED PAVEMENT
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ALL DIMENSIONS ARE TO BACK-OF-CURB UNLESS OTHERWISE NOTED

NOTES:

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, COLOR-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 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.**

PARKING REQUIREMENT

RATIO	REQUIRED	PROVIDED
INDOOR FACILITY 10% - 1/500 (31,250 SF)	63	167
INDOOR STORAGE 90% - 1/2,500 (249,902 SF)	102	
ADA SPACES	6	8
TOTAL	*171*	*175*

IMPERVIOUS COVER CALCULATIONS

TOTAL SITE AREA	**15.675 AC (682,824 SF)**	
ALLOWED IC		
PER PRELIM PLAT (2023-35-PP) ALLOWABLE IC%		**49.44%**
WAIVERS:		
• LOW IMPACT DESIGN		+7.00%
• PARKING LOT DESIGN		+5.00%
• PLANT MATERIALS CLASSIFIED AS LOW WATER USERS		+3.00%
ALLOWABLE IC%	**10.10 AC (440,011 SF)**	**64.44%**
PROPOSED IC		
BUILDING	**6.45 AC (281,152 SF)**	**41.15 %**
PAVEMENT (excludes pavers)	**3.29 AC (143,300 SF)**	**20.99%**
TOTAL	**9.74 AC (424,452 SF)**	**62.16%**

Westwood
Westwood Professional Services, Inc.
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F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX
DIMENSIONAL CONTROL PLAN 1 OF 2

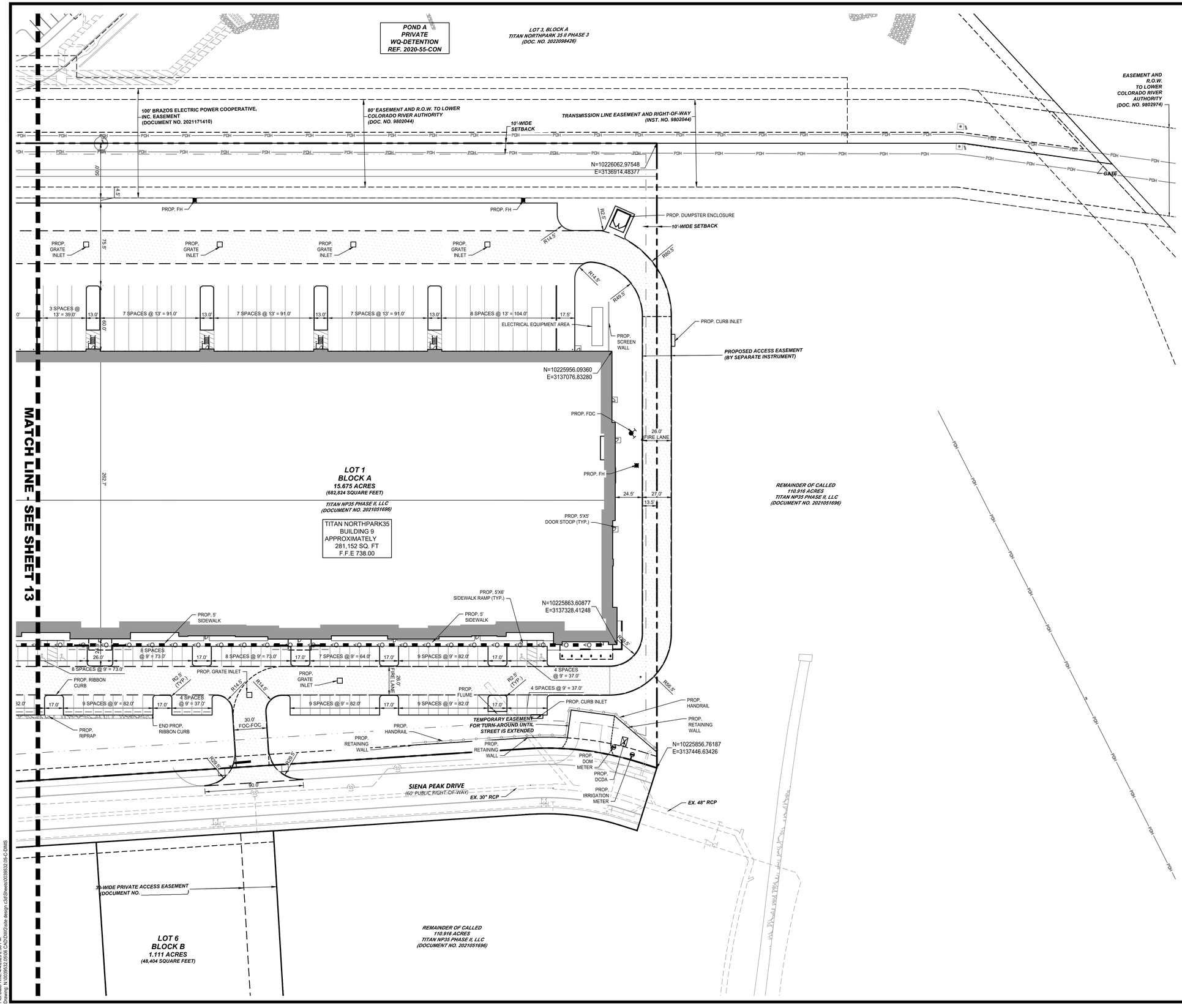
DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

14
SHEET 14 OF 48

2025-20-SDP

Last Saved by: SForero
Last Saved: 4/4/2025 1:26 PM
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LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- EASEMENT LINE
- ROAD CENTER LINE
- BUILDING SETBACK LINE
- BACK OF CURB LINE
- PROPOSED FIRELANE
- PROPOSED PAVEMENT
- PERVIOUS PARKING AREA
- PROP. ACCESSIBLE ROUTE

ALL DIMENSIONS ARE TO BACK-OF-CURB UNLESS OTHERWISE NOTED

NOTES:

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TOTAL	**9.74 AC (424,452 SF)**	**62.16%**

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TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

DIMENSIONAL CONTROL PLAN 2 OF 2

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS

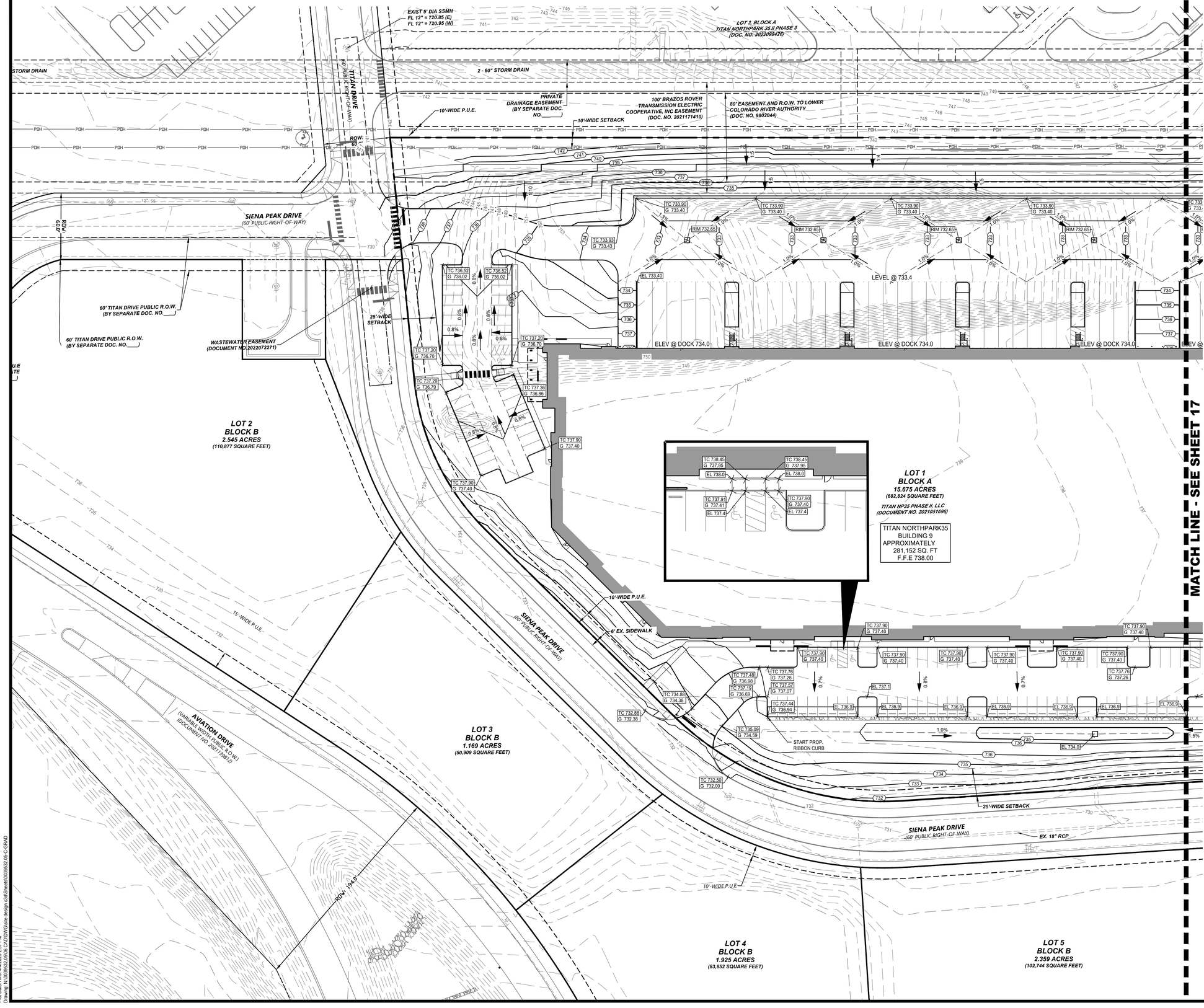
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

15
SHEET 15 OF 48

2025-20-SDP

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Plot Date: 4/4/2025 1:27:58 PM
Drawing: N:\0039532.05\05 CAD\DWG\site design c3d\Sheets\0039532.05-C-DIMS



0 20 40 80 120

GRAPHIC SCALE IN FEET
1"=40'

LEGEND

PROPERTY LINE	
EASEMENT LINE	
100YR FP	100 YR FLOODPLAIN LIMIT
133	PROPOSED CONTOUR
133	EXISTING CONTOUR
RETAINING WALL	
DRAINAGE SWALE	
EG 132.50	EX. SPOT GRADE
FG 132.50	FINISHED GRADE
TP 132.50	TOP OF PAVEMENT
LP 132.50	LOW POINT
HP 132.50	HIGH POINT
TW 132.50 / BW 132.00	TOP OF WALL / BOTTOM OF WALL
TC 132.50 / G 132.00	TOP OF CURB / GUTTER
FF=132.50	FINISHED FLOOR ELEVATION

NOTES:
1. ALL PROPOSED AND EXISTING GRADES IN NON-PAVED AREAS ARE "FINISHED GRADE" (i.e. IN LANDSCAPE BEDS, TOP OF MULCH/BEDDING MATERIAL).
2. CONTRACTOR SHALL FORM SIDEWALK AND VERIFY SLOPES PRIOR TO POURING CONCRETE. CONTRACTOR SHALL ENSURE THAT CROSS SLOPES AREA NO GREATER THAN 2% ALONG THE ACCESSIBLE ROUTE AND RUNNING SLOPE IS NOT GREATER THAN 5%, UNLESS THE RUNNING SLOPE MATCHES THE EXISTING STREET SLOPE. IF ANY DISCREPANCY ARISES, CONTRACTOR SHALL CONTACT THE ENGINEER FOR SOLUTION.
3. AREAS AROUND THE PERIMETER OF THE BUILDING(S) SHALL BE AT A POSITIVE SLOPE AWAY FROM THE BUILDING TO ENSURE PROPER DRAINAGE AWAY FROM THE FOUNDATION.
4. THE CONTRACTOR MUST REFER TO THE GEOTECHNICAL REPORT, FOUNDATION PLANS, AND LANDSCAPE PLANS FOR 1) ALL BACKFILL AND COMPACTION REQUIREMENTS, 2) FOUNDATION WATER PROOFING AND 3) UNDERDRAINS AND LANDSCAPE DRAINS AROUND THE PERIMETER OF THE BUILDINGS(S).

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TBPELS SURVEYING FIRM NO. 10074301
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX
GRADING PLAN 1 OF 2

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

16
SHEET 16 OF 48

2025-20-SDP

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Plot Date: 4/4/2025 1:20:37 PM
Drawing: N:\0039532.05\06 CAD\DWG\site design cd\Sheet\0039532.05-C-GRAD

POND A
PRIVATE
WQ-DETENTION
REF. 2020-55-CON

LOT 3, BLOCK A
TITAN NORTHPARK 35 II PHASE 3
(DOC. NO. 2022098426)

100' BRAZOS ELECTRIC POWER COOPERATIVE, INC. EASEMENT
(DOCUMENT NO. 2021171410)

80' EASEMENT AND R.O.W. TO LOWER COLORADO RIVER AUTHORITY
(DOC. NO. 9802044)

10'-WIDE SETBACK

TRANSMISSION LINE EASEMENT AND RIGHT-OF-WAY
(INST. NO. 9802044)

EASEMENT AND R.O.W. TO LOWER COLORADO RIVER AUTHORITY
(DOC. NO. 9802974)

GATE

10'-WIDE SETBACK

PROPOSED ACCESS EASEMENT
(BY SEPARATE INSTRUMENT)

LEVEL @ 733.4

ELEV @ DOCK 734.0

ELEV @ DOCK 734.0

ELEV @ DOCK 734.0

LOT 1
BLOCK A
15.675 ACRES
(682,824 SQUARE FEET)

TITAN NP35 PHASE II, LLC
(DOCUMENT NO. 2021051696)

TITAN NORTHPARK35
BUILDING 9
APPROXIMATELY
281,152 SQ. FT
F.F.E 738.00

REMAINDER OF CALLED
110.916 ACRES
TITAN NP35 PHASE II, LLC
(DOCUMENT NO. 2021051696)

PROP. FLUME

START RETAINING WALL

END PROP. RIBBON CURB

TEMPORARY EASEMENT
TURNAROUND UNTIL STR. TENDS

END RETAINING WALL

PROP. 18" CURB

SIENA PEAK DRIVE
(60' PUBLIC RIGHT-OF-WAY)

EX. 30" RCP

EX. 48" RCP

30-WIDE PRIVATE ACCESS EASEMENT
(DOCUMENT NO. _____)

LOT 6
BLOCK B
1.111 ACRES
(48,404 SQUARE FEET)

REMAINDER OF CALLED
110.916 ACRES
TITAN NP35 PHASE II, LLC
(DOCUMENT NO. 2021051696)

MATCH LINE - SEE SHEET 16

0 20 40 80 120
GRAPHIC SCALE IN FEET
1"=40'

LEGEND

PROPERTY LINE	
EASEMENT LINE	
100YR FP	100 YR FLOODPLAIN LIMIT
133	PROPOSED CONTOUR
133	EXISTING CONTOUR
RETAINING WALL	
DRAINAGE SWALE	
EG 132.50	EX. SPOT GRADE
FG 132.50	FINISHED GRADE
TP 132.50	TOP OF PAVEMENT
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX
GRADING PLAN 2 OF 2

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS

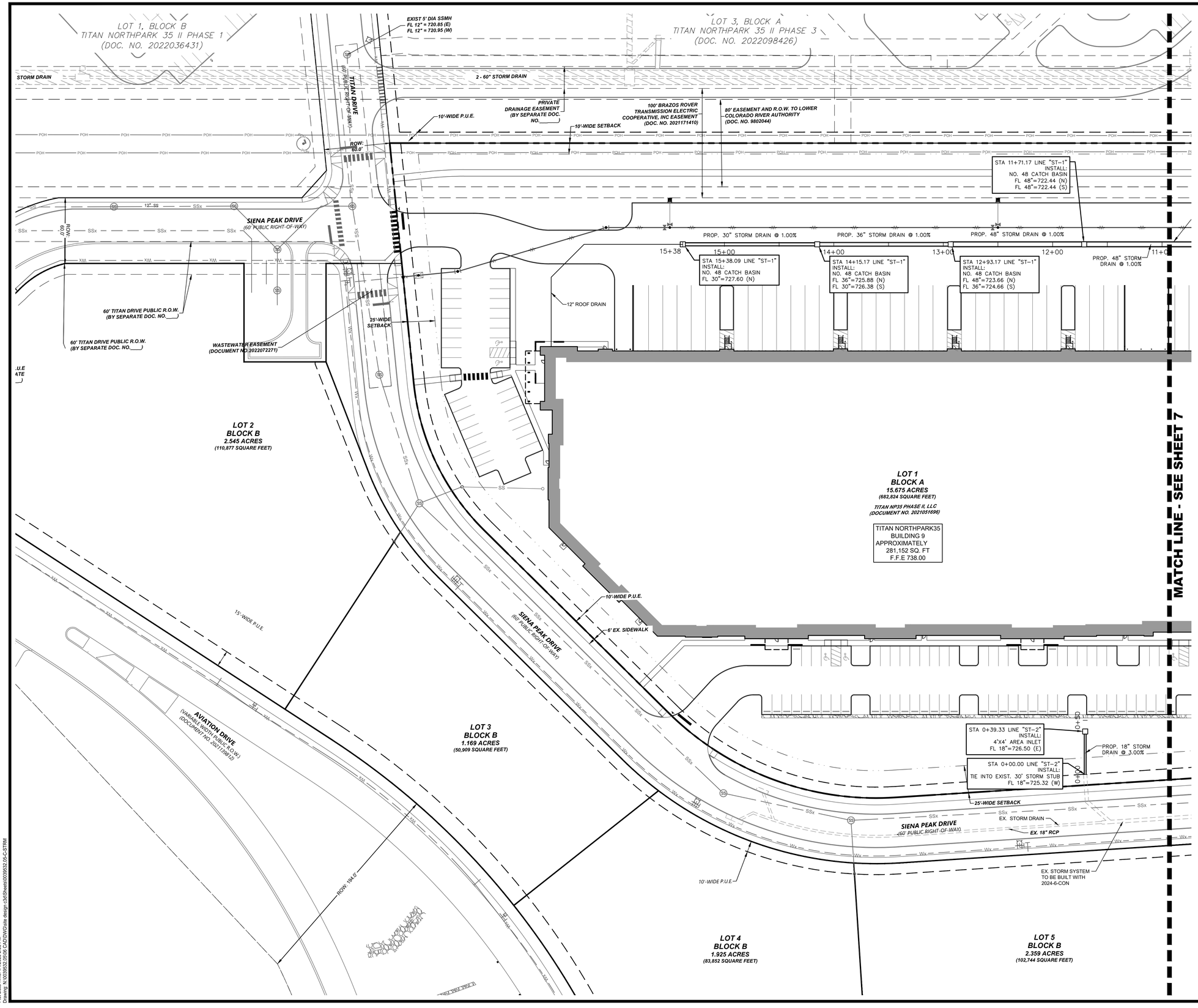
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

17
SHEET 17 OF 48

2025-20-SDP

Last Saved by: CYSaucedo
Last Saved: 4/4/2025 1:20 PM
Plot Scale: 1 inch = 40 feet
Plot Date: 4/4/2025 1:21 PM
Drawing: N:\0039532.05\05 CAD\DWG\site design c3d\Sheets\0039532.05-C-GRAD



0 20 40 80 120
GRAPHIC SCALE IN FEET
1"=40'

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- 133 PROPOSED CONTOUR
- 133 EXISTING CONTOUR
- WV / Wx EXISTING WATERLINE
- SSx EXISTING SEWER LINE
- EXISTING STORM DRAIN LINE
- W PROPOSED WATERLINE
- SS PROPOSED SEWER LINE
- PROPOSED STORM DRAIN LINE

NOTES:
1. THE CITY OF GEORGETOWN DESIGN AND CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
2. CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. REFER TO LANDSCAPE PLANS FOR HARDSCAPE IMPROVEMENTS AND IRRIGATION SLEEVES CROSSING PAVED AREAS.
4. REFER TO STRUCTURAL PLANS FOR ALL BUILDING AND DUMPSTER ENCLOSURE FOUNDATION DESIGNS AND DETAILS.
5. ALL T.C.E.Q. PIPE SEPARATION MUST BE MET.
6. ALL WYE CONNECTIONS AND BENDS SHALL BE MANUFACTURED FITTINGS.
7. GRATE INLETS ARE PRECAST PARTS PER OLDCASTLE OR APPROVED EQUAL.
8. STORM CONSTRUCTION WILL INCLUDE FURNISHING AND INSTALLING THE MATERIALS AND ALL STORM DRAIN PIPES, BOXES, INLETS, APPURTENANCE, INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL, AS SHOWN ON THESE PLANS.
9. ALL STORM DRAINS PIPING ARE PRIVATE UNLESS OTHERWISE NOTED ON PLANS.

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX
STORM SEWER PLAN 1 OF 2

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO. 0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

18
SHEET 18 OF 48

2025-20-SDP

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Last Saved: 4/4/2025 2:24 PM
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POND A
PRIVATE
WQ-DETENTION
REF. 2020-55-CON

LOT 3, BLOCK A
LOT 3, BLOCK A
TITAN NORTHPARK 35 II PHASE 3
(DOC. NO. 2022098426)

100' BRAZOS ELECTRIC POWER COOPERATIVE, INC. EASEMENT (DOCUMENT NO. 2021171410)

80' EASEMENT AND R.O.W. TO LOWER COLORADO RIVER AUTHORITY (DOC. NO. 9802044)

10'-WIDE SETBACK

TRANSMISSION LINE EASEMENT AND RIGHT-OF-WAY (INST. NO. 9802044)

EASEMENT AND R.O.W. TO LOWER COLORADO RIVER AUTHORITY (DOC. NO. 9802974)

GATE

MATCH LINE - SEE SHEET 23

LOT 1
BLOCK A
15.675 ACRES
(682,824 SQUARE FEET)

TITAN NP35 PHASE II, LLC
(DOCUMENT NO. 2021051696)

TITAN NORTHPARK35
BUILDING 9
APPROXIMATELY
281,152 SQ. FT
F.F.E 738.00

LOT 6
BLOCK B
1.111 ACRES
(48,404 SQUARE FEET)

30-WIDE PRIVATE ACCESS EASEMENT (DOCUMENT NO. _____)

REMAINDER OF CALLED 112.516 ACRES TITAN NP35 PHASE II, LLC (DOCUMENT NO. 2021051696)

SIENA PEAK DRIVE
(60' PUBLIC RIGHT-OF-WAY)

TEMPORARY EASEMENT FOR TURN-AROUND UNTIL STREET IS EXTENDED

PROPOSED ACCESS EASEMENT (BY SEPARATE INSTRUMENT)

EX. 48" RCP

EX. STORM SYSTEM TO BE BUILT WITH 2024-6-CON

REMOVE REMAINDER OF EX. 48" STORM DRAIN

!!!CAUTION!!! W & STORM CROSSING

PROP. 48" STORM DRAIN @ 1.00%

PROP. 18" STORM DRAIN @ 4.00%

PROP. 18" STORM DRAIN @ 4.01%

PROP. 48" STORM DRAIN @ 1.71%

PROP. 18" STORM DRAIN

PROP. 18" STORM DRAIN @ 3.00%

12" ROOF DRAIN

STA 5+63.34 LINE "ST-1"
INSTALL:
1-48" 45° HORZ. BEND
FL 48"=716.36 (S)
FL 48"=716.36 (NE)

STA 5+39.77 LINE "ST-1"
INSTALL:
1-48" X 12" 45° WYE
FL 48"=716.12 (SW)
FL 48"=716.12 (NE)

STA 5+16.19 LINE "ST-1"
INSTALL:
1-48" 45° HORZ. BEND
FL 48"=715.89 (E)
FL 48"=715.89 (SW)

STA 0+23.69 LINE "ST-1B"
INSTALL:
10' CURB INLET
FL 18"=718.38 (SE)

STA 4+45.28 LINE"ST-1"=
STA 0+00.00 LINE "ST-1B"
INSTALL:
1-48" X 24" 45° WYE

STA 10+49.17 LINE "ST-1"
INSTALL:
NO. 48 CATCH BASIN
FL 48"=721.21 (N)
FL 48"=721.22 (S)

STA 9+27.17 LINE "ST-1"
INSTALL:
NO. 48 CATCH BASIN
FL 48"=719.99 (N)
FL 48"=720.00 (S)

STA 8+05.17 LINE "ST-1"
INSTALL:
NO. 48 CATCH BASIN
FL 48"=718.78 (N)
FL 48"=718.77 (S)

STA 6+82.75 LINE "ST-1"
INSTALL:
NO. 48 CATCH BASIN
FL 48"=717.55 (N)
FL 48"=717.55 (S)

STA 0+49.22 LINE "ST-1"
INSTALL:
1-48" 45° HORZ. BEND
FL 48"=710.54 (NW)
FL 48"=710.54 (E)

STA 0+62.08 LINE"ST-1"=
STA 0+09.19 LINE "ST-1A"
INSTALL:
1-48" 45° HORZ. BEND
FL 48"=710.76 (N)

STA 0+31.11 LINE "ST-1A"
INSTALL:
1-18" 45° HORZ. BEND
FL 18"=714.74 (S)
FL 18"=714.74 (NE)

STA 1+89.11 LINE "ST-1A"
INSTALL:
NO. 48 CATCH BASIN
FL 18"=721.06 (N)
FL 18"=721.07 (S)

STA 2+66.06 LINE "ST-1A"
INSTALL:
1-18" 45° HORZ. BEND
FL 18"=724.14 (N)
FL 18"=724.14 (SE)

STA 2+74.11 LINE "ST-1A"
INSTALL:
1-18" 45° HORZ. BEND
FL 18"=724.46 (NW)
FL 18"=724.46 (E)

STA 2+81.44 LINE "ST-1A"
INSTALL:
NO. 48 CATCH BASIN
FL 18"=724.76 (W)

STA 0+25.67 LINE "ST-1"
INSTALL:
10' CURB INLET
FL 48"=710.14 (W)
FL 48"=710.14 (E)

STA 0+00.00 LINE "ST-1"
INSTALL:
1-48" 45° WYE
BEGIN 48" STORM
CONNECT TO EX. 48" STORM
FL 48"=709.70 (W)

STA 0+36.40 LINE"ST-1"=
STA 0+00.00 LINE "ST-1A"
INSTALL:
1-48" X 18" 45° WYE
FL 48"=710.33 (W)
FL 48"=713.50 (SW)

STA 1+67.33 LINE "ST-1"
INSTALL:
1-48" 45° HORZ. BEND
FL 48"=712.40 (W)
FL 48"=712.40 (SE)

STA 1+44.28 LINE "ST-1"
INSTALL:
1-48" 45° HORZ. BEND
FL 48"=712.17 (NW)
FL 48"=712.17 (S)

11+00 10+00 9+00 8+00 7+00 6+00 5+00 4+00 3+00 2+00 1+00 0+00 2+89

001 002 003 004 005 006 007 100 101 102 103 104 105 106 107 108 109 110 (C) 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 (C) 136 (C) 137 138 139 140 141 142 143 145 148 149 150 153 201 (HT) 202 (HT) 203 204 (HT) 205 (HT) 206 (HT) 207 208 (HT) 209 (HT) 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 (HT) 227 (HT) 228 229 230 231 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 331 332 333 334 335 336 337 338 339 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 (HT) 1012 1013 1014 1015 1016 1017 1018 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029

0 20 40 80 120
GRAPHIC SCALE IN FEET
1"=40'

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- PROPOSED CONTOUR (133)
- EXISTING CONTOUR (133)
- EXISTING WATERLINE (WV, Wx)
- EXISTING SEWER LINE (SSx)
- EXISTING STORM DRAIN LINE
- PROPOSED WATERLINE (W)
- PROPOSED SEWER LINE (SS)
- PROPOSED STORM DRAIN LINE

NOTES:
1. THE CITY OF GEORGETOWN DESIGN AND CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
2. CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. REFER TO LANDSCAPE PLANS FOR HARDSCAPE IMPROVEMENTS AND IRRIGATION SLEEVES CROSSING PAVED AREAS.
4. REFER TO STRUCTURAL PLANS FOR ALL BUILDING AND DUMPSTER ENCLOSURE FOUNDATION DESIGNS AND DETAILS.
5. ALL T.C.E.Q. PIPE SEPARATION MUST BE MET.
6. ALL WYE CONNECTIONS AND BENDS SHALL BE MANUFACTURED FITTINGS.
7. GRATE INLETS ARE PRECAST PARTS PER OLDCASTLE OR APPROVED EQUAL.
8. STORM CONSTRUCTION WILL INCLUDE FURNISHING AND INSTALLING THE MATERIALS AND ALL STORM DRAIN PIPES, BOXES, INLETS, APPURTENANCE, INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL, AS SHOWN ON THESE PLANS.
9. ALL STORM DRAINS PIPING ARE PRIVATE UNLESS OTHERWISE NOTED ON PLANS.

Westwood
Westwood Professional Services, Inc.
8701 NORTH MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

STORM SEWER PLAN 2 OF 2

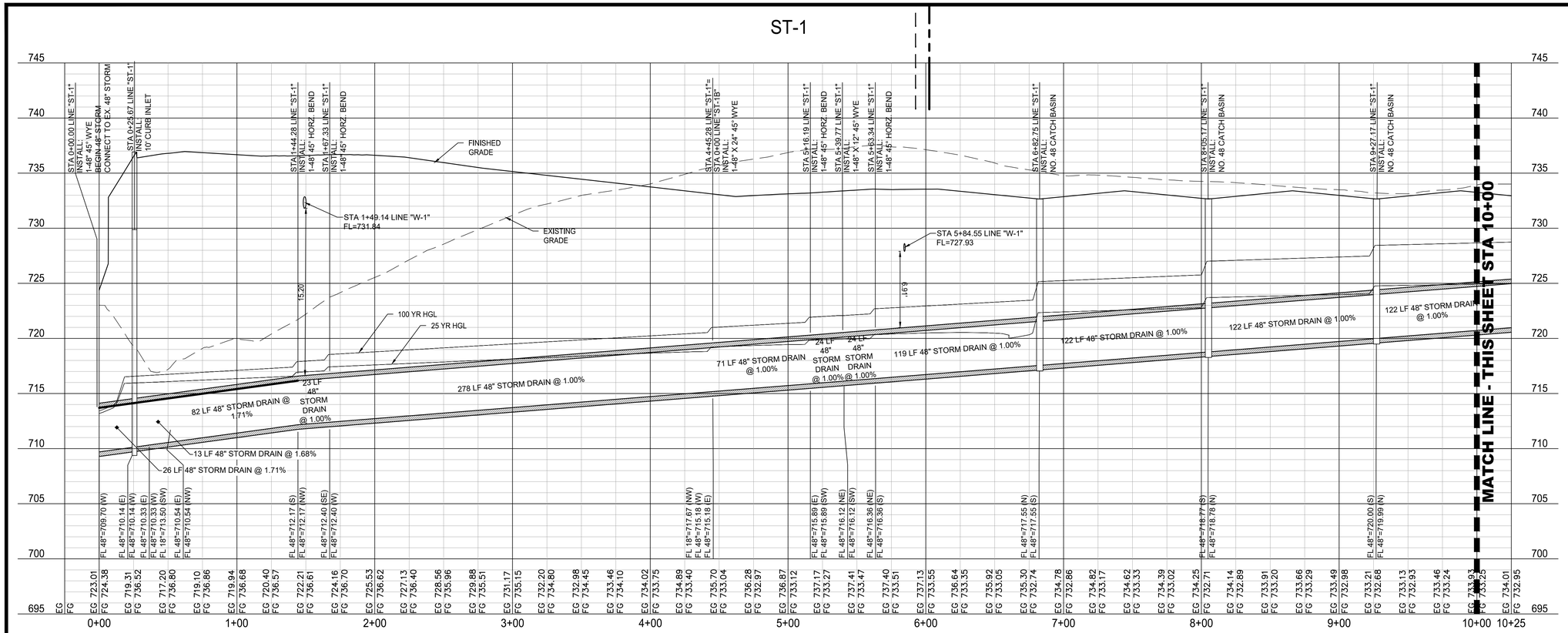
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DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

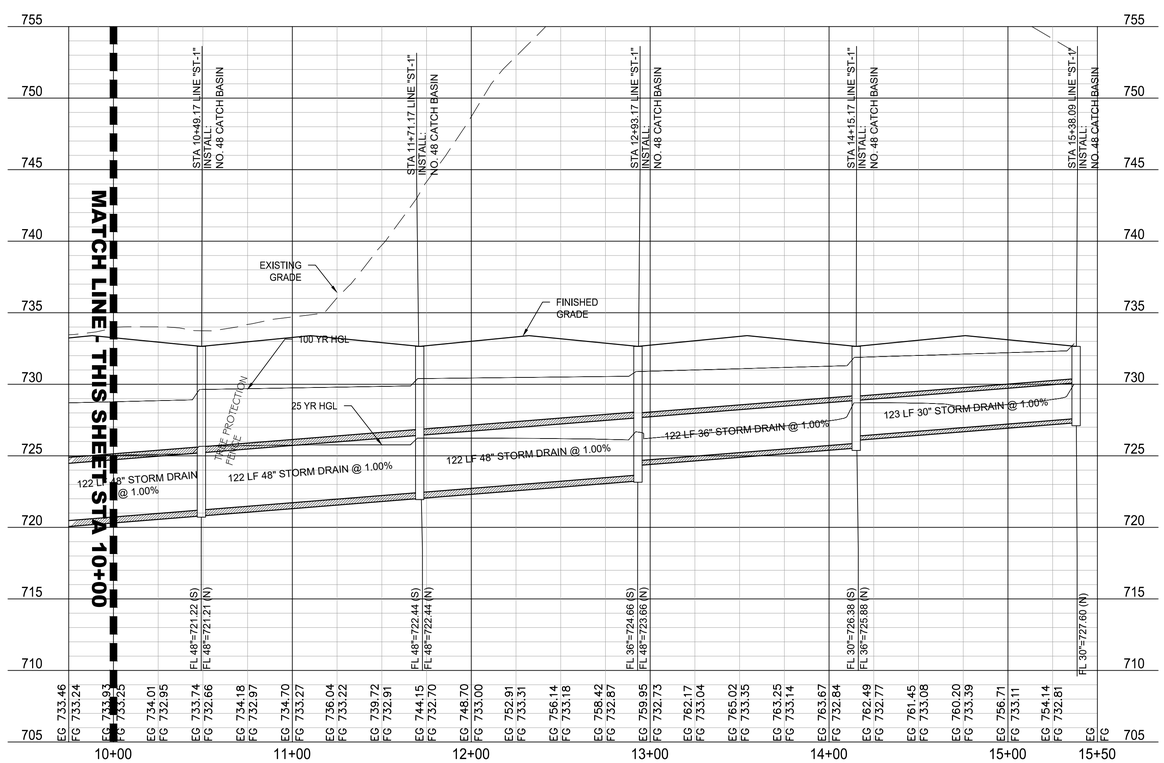
4/2/2025
STATE OF TEXAS
Hollis A Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

19
SHEET 19 OF 48

2025-20-SDP

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Last Saved: 4/4/2025 2:24 PM
Plotted: 4/4/2025 2:25 PM
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

STORM SEWER PROFILE SHEET 1 OF 2

DATE:	APRIL, 2025
DRAFTER:	CBA/JDI
DESIGNER:	SF
CHECKED:	HAS
PROJECT NO.	0039532.05

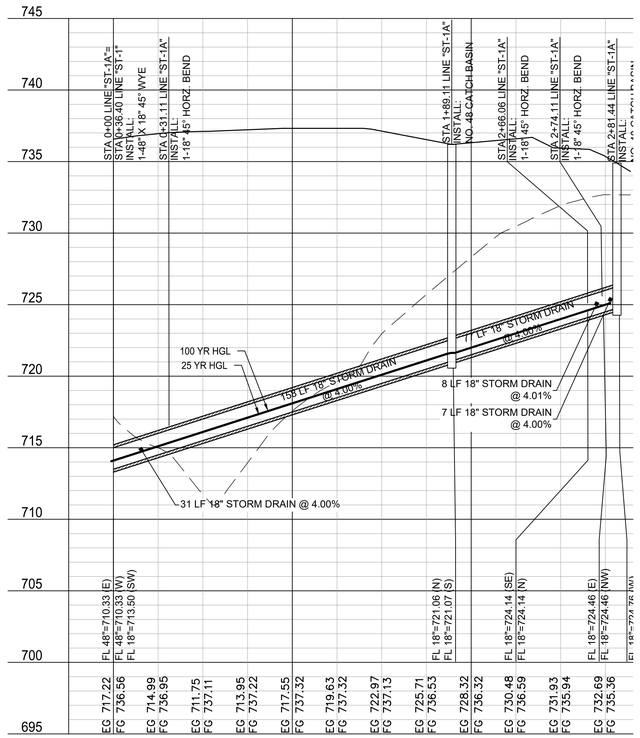
4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

20
SHEET 20 OF 48

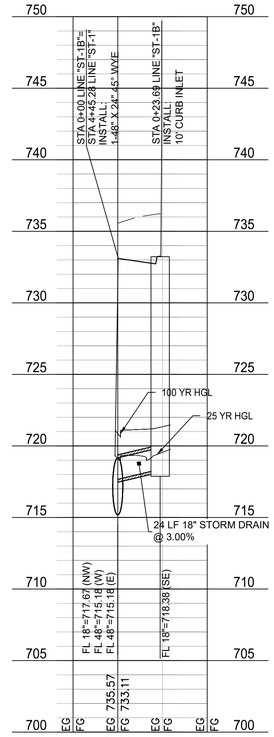
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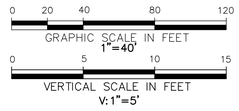
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ST-1A

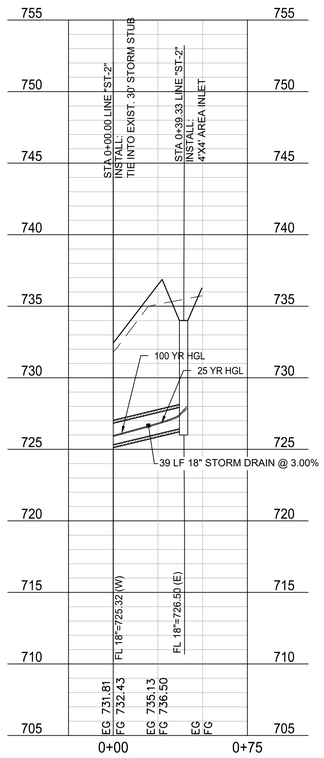


ST-1B





ST-2



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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

STORM SEWER PROFILE SHEET 2 OF 2

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS

PROJECT NO.
0039532.05

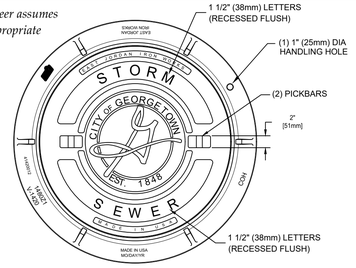
4/2/2025
STATE OF TEXAS
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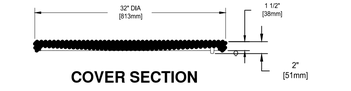
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SHEET 21 OF 48

2025-20-SDP

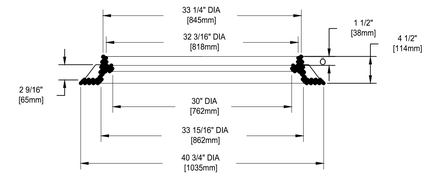
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The Architect/Engineer assumes responsibility for appropriate use of this standard.





COVER SECTION



FRAME SECTION

NOTES:

1. STANDARD STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V-1420\1480Z1, COVER TO BE STAMPED WITH "STORM SEWER".
2. STANDARD STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148391.
4. FOR BOLTED STORM SEWER MANHOLE SET REFER TO DETAIL SD11A.

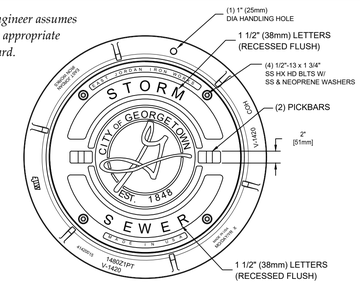
REVISION NOTE: ADOPTED 6/21/2006

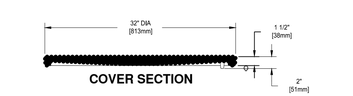
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

STANDARD STORM SEWER MANHOLE SET

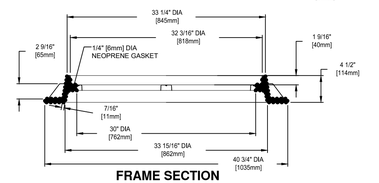
DRAWING NAME: SD11
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

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





COVER SECTION



FRAME SECTION

NOTES:

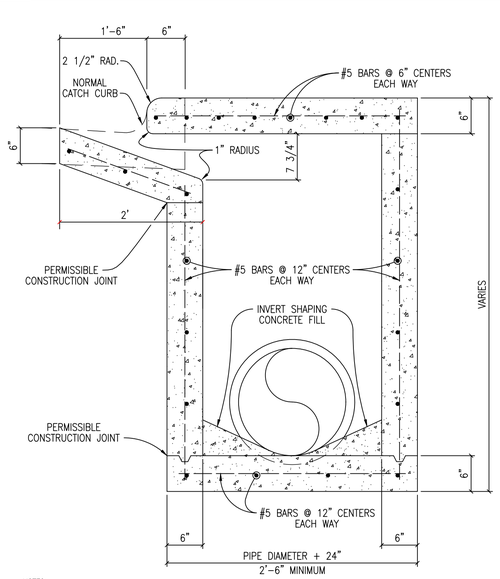
1. BOLTED STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480APT V-1420\1480Z1PT. COVER TO BE STAMPED WITH "STORM SEWER"
2. BOLTED STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 00148393 41420015.
4. FOR STANDARD STORM SEWER MANHOLE SET REFER TO DETAIL SD11.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

BOLTED STORM SEWER MANHOLE SET

DRAWING NAME: SD11A
SCALE: NTS | DATE: 1/2006
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI CONCRETE.
2. STORM SEWER PIPE MATERIAL TO BE R.C.P. (CLASS III) UNLESS OTHERWISE APPROVED BY THE CITY OF GEORGETOWN.

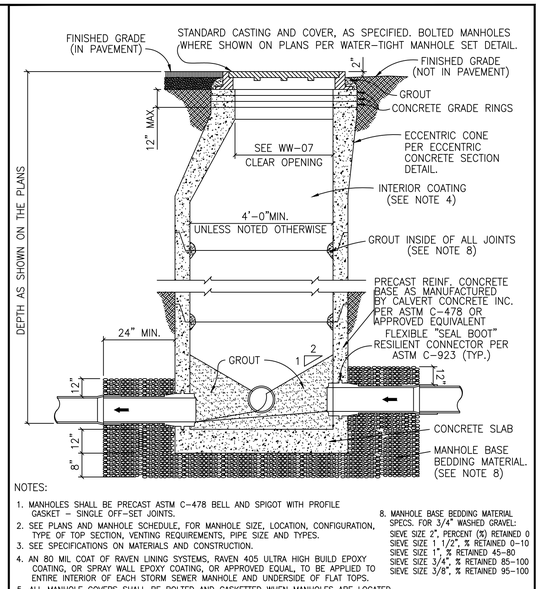
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

CURB DRAIN INLET TYPICAL SECTION

DRAWING NAME: SD10
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET – SINGLE OFF-SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
4. AN 80 MIL COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH STORM SEWER MANHOLE AND UNDERSIDE OF FLAT TOPS.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETTED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
6. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
7. MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS-20 TRAFFIC LOADS.
8. GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
8. MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL: SIEVE SIZE 2", PERCENT (%) RETAINED 0 SIEVE SIZE 1 1/2", % RETAINED 0-10 SIEVE SIZE 1", % RETAINED 45-80 SIEVE SIZE 3/4", % RETAINED 85-100 SIEVE SIZE 3/8", % RETAINED 95-100

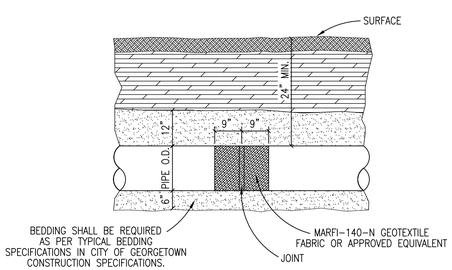
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

STANDARD STORM SEWER MANHOLE – SECTION

DRAWING NAME: SD13
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES

1. PIPE SHALL BE REINFORCED CONCRETE PIPE CLASS III UNLESS THE DEPTH OF PIPE REQUIRES A STRONGER CLASS.
2. ALL FITTINGS AND WYES SHALL BE MANUFACTURED AND NOT CONSTRUCTED ON THE PROJECT WITHOUT PRIOR APPROVAL FROM THE CITY.
3. ALL JOINTS SHALL BE WRAPPED WITH MARF1-140-N GEOTEXTILE FABRIC OR APPROVED EQUIVALENT. EACH JOINT SHALL BE WRAPPED WITH 18" WIDE FABRIC CENTERED ON THE JOINT.

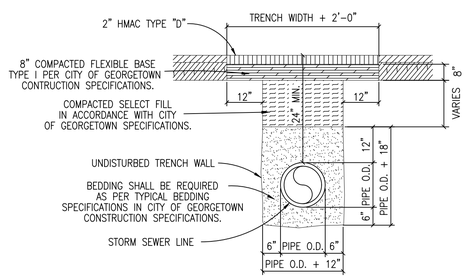
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

TRENCH AND EMBEDMENT DETAIL (PROFILE) FOR STORM SEWER

DRAWING NAME: SD42
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



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

NOTES:

1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE.
2. BASE MATERIAL SHALL BE IN LIFTS NOT TO EXCEED 6" AND EACH LIFT THOROUGHLY ROLLED OR TAMPED TO SPECIFIED MAXIMUM DENSITY.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE.
5. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
6. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

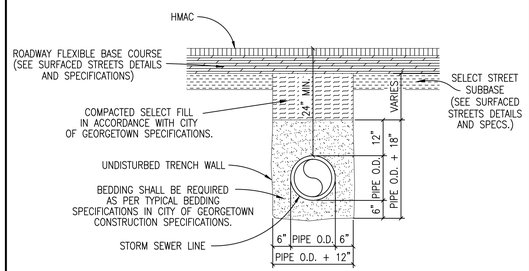
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

TRENCH, EMBEDMENT AND PAVEMENT REPLACEMENT DETAIL UNDER EXISTING ROADWAY FOR STORM SEWER

DRAWING NAME: SD40
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

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

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

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

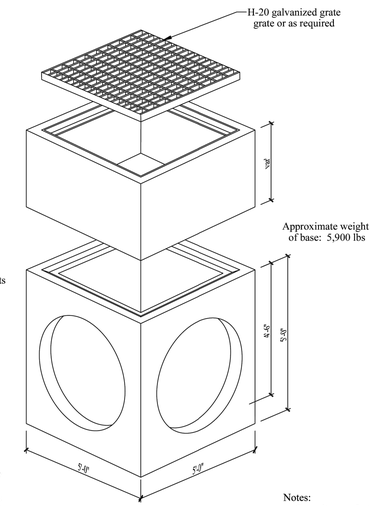
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY FOR STORM SEWER

DRAWING NAME: SD41
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

4' x 4' x var Grate Inlet



Specifications:
- Concrete has a 28 day strength of 5,000 psi
- Steel reinforcement is ASTM A615 grade 60
- Load design is H-20

Notes:
- Consult manufacturer before handling

CAPITAL PRECAST, INC.
6905 SOUTH OLD BASTROP HWY
SAN MARCOS, TEXAS 78666
PH. (830) 606-6200

FOR: 4' x 4' x var Grate Inlet
JOB:
DRAWN: RW | DATE: 12/1/2015 | Rev. No.: | SHEET: 1 OF 1
FILE: catalog\grate inlets\4x4 Grate Inlet

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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

STORM DETAILS

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS

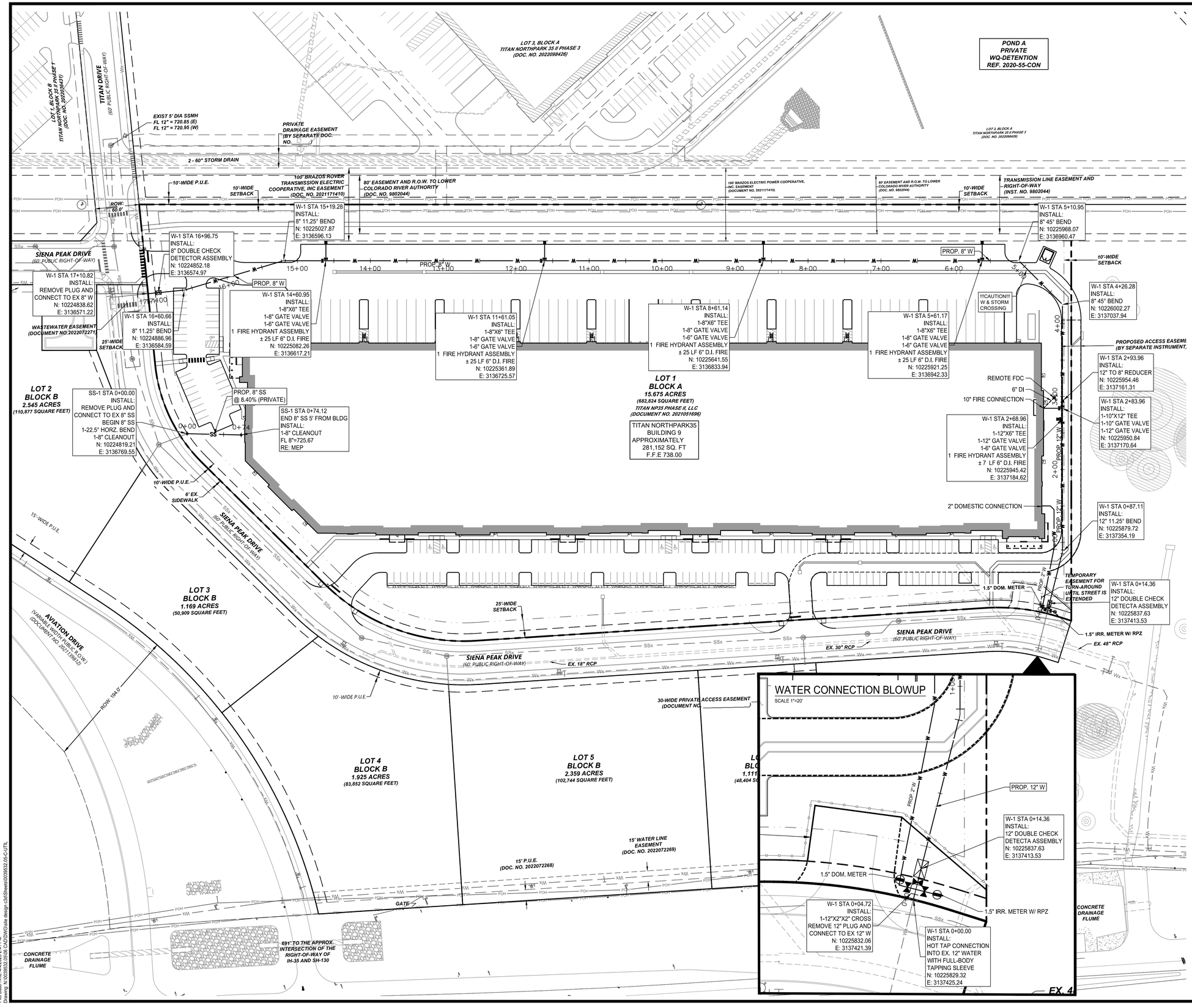
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

22
SHEET 22 OF 48

2025-20-SDP

Last Saved by: CYSaucedo
Last Saved: 4/4/2025 2:24 PM
Plot Date/Time: 4/4/2025 2:25 PM
Drawing: N:\0039532.05\06 CAD\DWG\site design c3d\Sheets\0039532.05-C-STRM



0 30 60 120 180

GRAPHIC SCALE IN FEET
1"=60'

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- 133 — PROPOSED CONTOUR
- - 133 - - EXISTING CONTOUR
- WV — Wx — EXISTING WATERLINE
- SSx — EXISTING SEWER LINE
- EXISTING STORM DRAIN LINE
- W — PROPOSED WATERLINE
- SS — PROPOSED SEWER LINE
- PROPOSED STORM DRAIN LINE

NOTES:

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5. ALL T.C.E.Q. PIPE SEPARATION MUST BE MET.
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7. GRATE INLETS ARE PRECAST PARTS PER OLDCASTLE OR APPROVED EQUAL.
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9. ALL STORM DRAINS PIPING ARE PRIVATE UNLESS OTHERWISE NOTED ON PLANS.

FIRE PROTECTION NOTES

1. APPROVAL OF THIS SITE PLAN DOES NOT IMPLY APPROVAL TO INSTALL UNDERGROUND FIRE LINES. PRIOR TO INSTALLATION OF UNDERGROUND FIRE LINES, A SEPARATE PERMIT SHALL BE SUBMITTED, UNDER GROUND FIRE LINE SUPPLY.
2. BACKFLOW PROTECTION WILL BE PROVIDED IN ACCORDANCE WITH THE CITY OF GEORGETOWN REQUIREMENTS WHEN REQUIRED. BACKFLOW PROTECTION WILL BE INSTALLED IN ACCORDANCE WITH THE DETAIL PROVIDED IN THE UTILITY DRAWINGS.
3. ALL PRIVATE FIRE LINES AND WHAT THEY PROVIDE SERVICE TO WILL BE INSTALLED IN ACCORDANCE WITH NFPA 24 INSTILLATION OF PRIVATE SERVICE MAINS AND THEIR APPURTENANCES.
4. ALL TEES, PLUGS, CAPS, BENDS, REDUCERS, VALVES SHALL BE RESTRAINED AGAINST MOVEMENT. THRUST BLOCKING AND JOINT RESTRAINED WILL BE INSTALLED IN ACCORDANCE WITH NFPA 24.
5. ALL UNDERGROUND SHALL REMAIN UNCOVERED UNTIL A VISUAL INSPECTION IS CONDUCTED BY THE GEORGETOWN FIRE MARSHAL'S OFFICE (FMO). ALL JOINT RESTRAINTS AND THRUST BLOCKING SHALL BE UNCOVERED FOR VISUAL INSPECTION.
6. ALL UNDERGROUND SHALL BE FLUSHED PER THE REQUIREMENTS OF NFPA STANDARD 24 AND WITNESSED BY GEORGETOWN FMO.
7. ALL UNDERGROUND SHALL PASS A HYDROSTATIC TEST WITNESSED BY GEORGETOWN FMO. ALL JOINTS SHALL BE UNCOVERED FOR HYDROSTATIC TESTING. ALL PIPING AND ATTACHMENTS SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE TESTED AT 200 PSI, OR 50 PSI MORE THAN THE SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE + OR – 5 PSI FOR 2 HOURS.
8. FENCES, LANDSCAPING, AND OTHER ITEMS WILL NOT BE INSTALLED WITHIN 3 FT, AND WHERE THEY WILL OBSTRUCT THE VISIBILITY OR ACCESS TO HYDRANTS, OR REMOTE FDCS.
9. LICENSE REQUIREMENTS OF EITHER RME-U OR G, WHEN CONNECTING BY UNDERGROUND TO THE WATER PURVEYOR'S MAIN FROM THE POINT OF CONNECTION OR VALVE WHERE THE PRIMARY PURPOSE OF WATER IS FOR FIRE PROTECTION SPRINKLER SYSTEM.

IRRIGATION NOTES

1. THE ALLOWED WATERING DAYS AND TIMES TO FOLLOW THE LATEST GUIDANCE FROM CITY OF GEORGETOWN, CURRENTLY FOR THIS PROPERTY THEY ARE :
   1.1. TUESDAYS, MIDNIGHT TO 10:00 AM
   1.2. FRIDAYS, 7:00 PM TO MIDNIGHT

CITY OF GEORGETOWN
PRESSURE PLANE:
866'-906'

Westwood
Westwood Professional Services, Inc.
8701 NORTH MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX
UTILITY PLAN

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS

PROJECT NO.
0039532.05

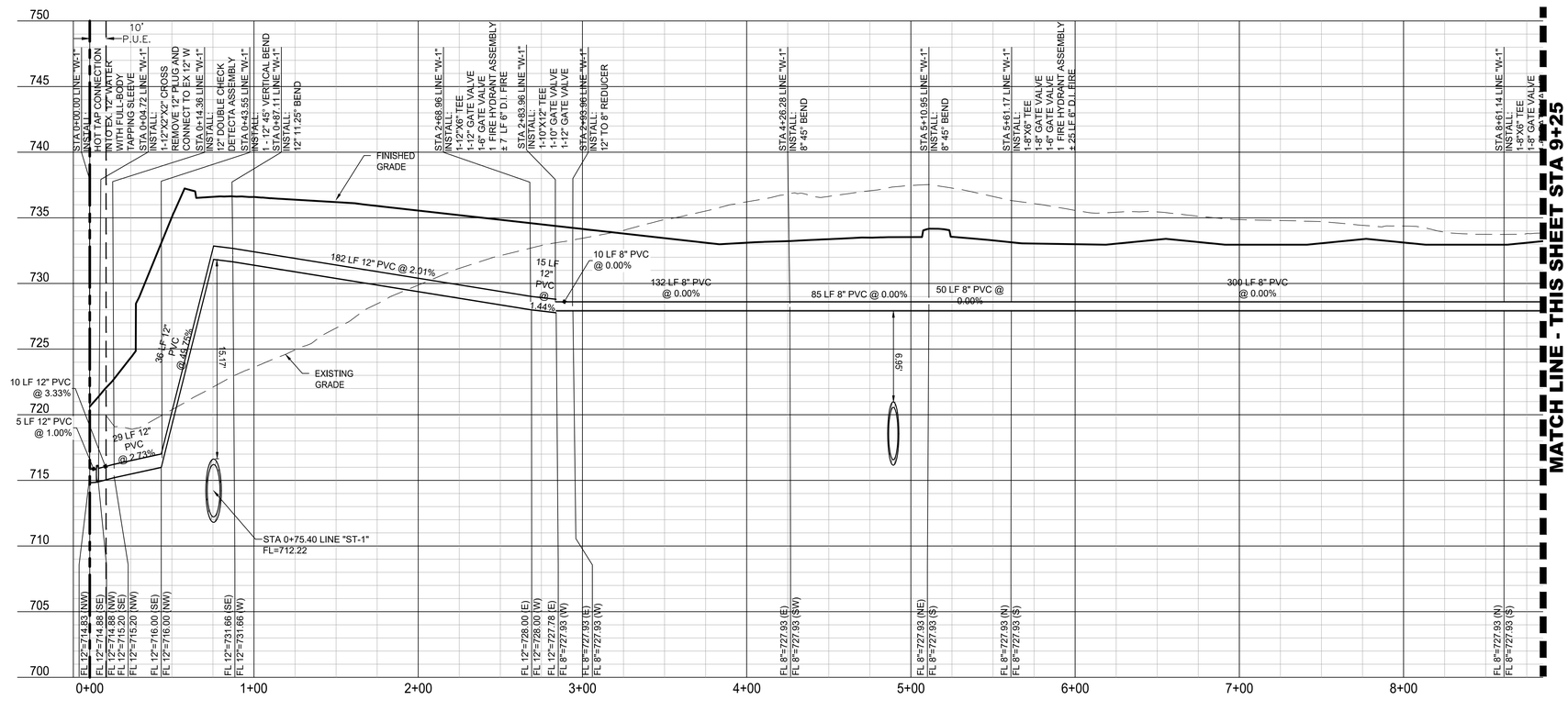
4/2/2025

STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

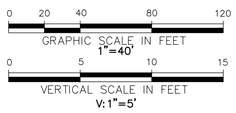
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SHEET 23 OF 48

2025-20-SDP

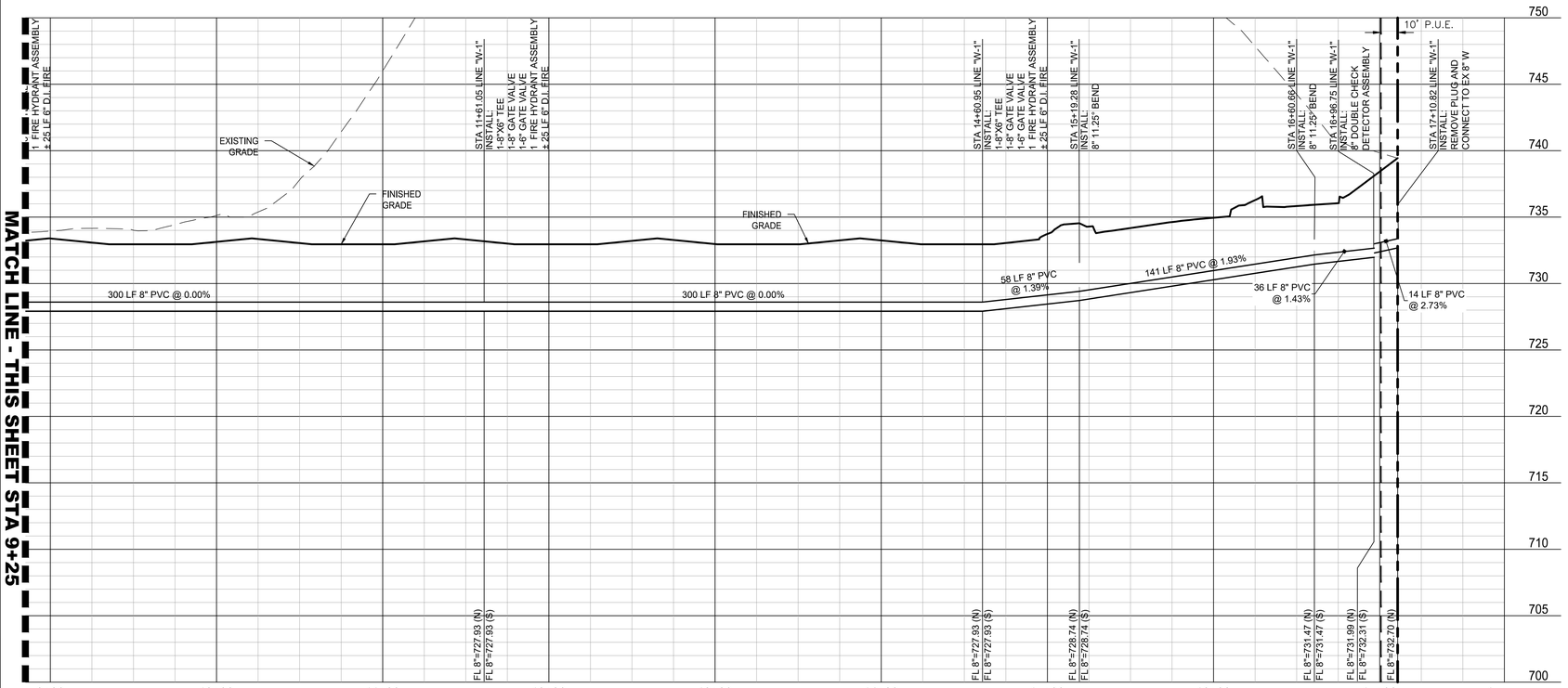
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W-1



SS-1



Westwood
Westwood Professional Services, Inc.
8701 NORTH MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
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TBPELS ENGINEERING FIRM NO. 11756
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westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

UTILITY PROFILES

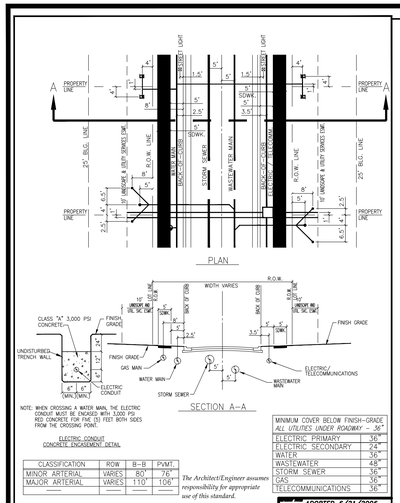
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DESIGNER: SF
CHECKED: HAS
PROJECT NO. 0039532.05

4/2/2025
STATE OF TEXAS
Hollis A Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

24
SHEET 24 OF 48

2025-20-SDP

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NOTE: WHEN CROSSING A WATER MAIN, THE ELECTRIC CONDUIT MUST BE ENCASED WITH 3,000 PSI RED CONCRETE FOR FIVE (5) FEET BOTH SIDES FROM THE CROSSING POINT.

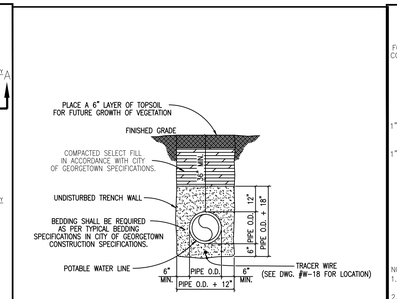
ELECTRIC CONDUIT CONCRETE ENCASEMENT DETAIL

CLASSIFICATION	ROW	B–B	PVMT.
MINOR ARTERIAL	VARIES	80'	76'
MAJOR ARTERIAL	VARIES	110'	106'

MINIMUM COVER BELOW FINISH-GRADE ALL UTILITIES UNDER ROADWAY - 36"	
ELECTRIC PRIMARY	24"
ELECTRIC SECONDARY	24"
WATER	36"
WASTEWATER	48"
STORM SEWER	36"
GAS	36"
TELECOMMUNICATIONS	36"

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

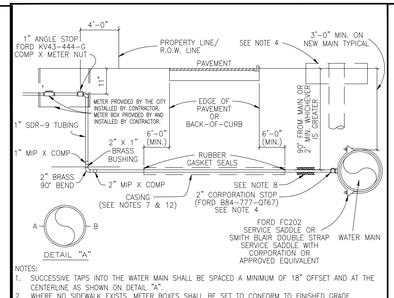
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
UTILITY ASSIGNMENTS FOR MINOR ARTERIAL AND MAJOR ARTERIAL ROADWAYS
ADOPTED 6/21/2006 — W01B — NTS — 1/2003 — MRS — TRB



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

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

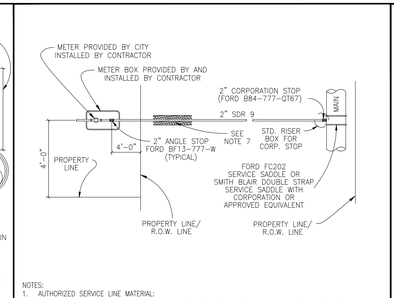
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS
ADOPTED 6/21/2006 — W02 — NTS — 1/2003 — MRS — TRB



NOTES:
1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET AND AT THE CENTERLINE AS SHOWN ON DETAIL "A".
2. WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE.
3. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR-9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
4. ROTATE THE CORPORATION STOP SO THAT THE OPERATING NUT IS ACTUATED FROM THE VERTICAL POSITION RATHER THAN THE HORIZONTAL. SEE STD. RISER FOR CORP. STOP DETAIL. (DWG # W08).
5. SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO CORPORATION STOP WITH NO FITTINGS IN BETWEEN.
6. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.
7. CASING REQUIRED FOR ALL PAVEMENT CROSSINGS.. 4" SDR-26 REQUIRED FOR OPEN-CUT. STEEL CASING PIPE REQUIRED FOR JACK AND BORE. LIMITS OF CASING SHOULD EXTEND SIX FEET BEYOND THE EDGE OF PAVEMENT OR BACK-OF-CURB.
8. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. METER BOX TO BE CAPABLE OF HOUSING ITRON AUTOMATIC METER READING DEVICE. USE DFW-PLASTICS, INC. PART NO. 1200-SBAMR OR APPROVED EQUAL.
11. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY. SEE DETAIL W23.
12. CASING SHALL EXTEND OUT TO WITHIN 4' INSIDE OF THE R.O.W. LINE, ON BOTH SIDES.

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

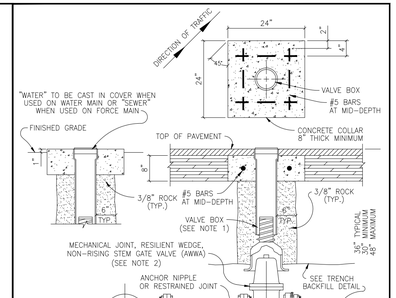
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL WATER SERVICE-ELEVATION
ADOPTED 01/23/2013 — W03 — NTS — 1/2013 — MF



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

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

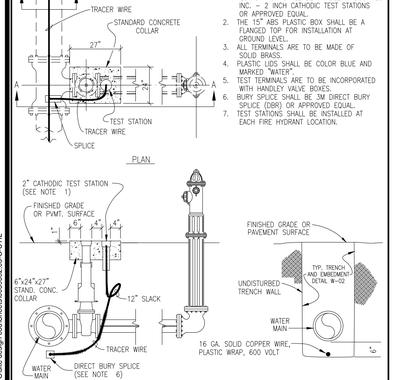
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
SINGLE WATER SERVICE PLAN
ADOPTED 01/23/2013 — W04 — NTS — 1/2013 — MF



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

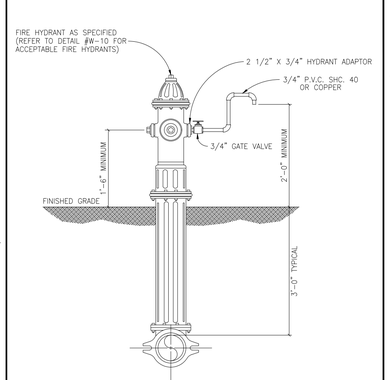
The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL VALVE SETTING
ADOPTED 6/21/2006 — W07 — NTS — 1/2003 — TRB



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

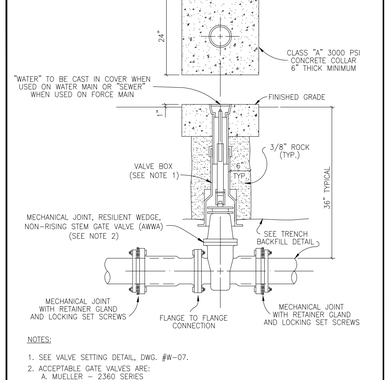
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD RISER BOX FOR CORPORATION STOP
ADOPTED 6/21/2006 — W08 — NTS — 1/2003 — MRS — TRB



NOTES:
1. FIRE HYDRANT SHALL BE INSTALLED ON SAME SIDE OF ROAD AS WATER MAIN.
2. FIRE HYDRANT SHALL BE INSTALLED PLUMB AND TRUE.
3. ALL FIRE HYDRANT EXTERIORS SHALL BE FACTORY PRIMED AND PAINTED SILVER USING A HIGH GRADE ENAMEL.
4. HEEL AND THRUST BLOCKS TO REST IN UNDISTURBED SOIL.
5. THE ONLY FIRE HYDRANTS ACCEPTABLE ARE:
   A. KENNEDY – K81
   B. AMERICAN DARLING – B84B
   C. CLOW MEDALLION
6. DOUBLE BLUE REFLECTOR "HYE-LITES" BRAND, MANUFACTURED BY PAVEMENT MARKERS INC. TO BE INSTALLED AT CENTERLINE OF STREET PERPENDICULAR TO HYDRANT.
7. ALL METALLIC PIPES AND FITTINGS SHALL BE WRAPPED WITH 8 MIL. POLYETHELENE FILM.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL FIRE HYDRANT INSTALLATION
ADOPTED 6/21/2006 — W10 — NTS — 1/2003 — MRS — TRB



*DEADMAN — TYPICAL SECTION

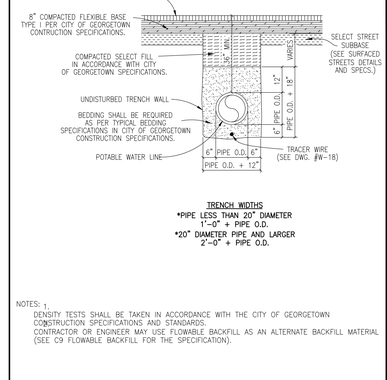
ALL THRUST BLOCKS SHALL BE FORMED. LAID FORMS SHALL BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO THE POURING OF CONCRETE AND SHALL ALSO BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO COVERING. TYPICAL LOCATIONS WHICH REQUIRE CONCRETE REACTION (THRUST) BLOCKS, FOR PRESSURE MAINS FOUR INCHES (4") AND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

PIPE SIZE	THRUST BLOCK AREA REQUIRED	PIPE SIZE	THRUST BLOCK AREA REQUIRED	REMARKS
4"	2.0 SQ. FT.	18"	30.0 SQ. FT.	VALUES ARE FOR 90° BENDS, BASED ON 2000 P.S.F. SAFE BEARING LOAD AND PIPE PRESSURE OF 150 P.S.I. PLUS 33% SAFETY FACTOR FOR OTHER SOILS AND PRESSURES, THE AREA REQUIRED IS IN DIRECT PROPORTION.
6"	4.0 SQ. FT.	20"	37.0 SQ. FT.	
8"	6.6 SQ. FT.	24"	53.0 SQ. FT.	
10"	10.0 SQ. FT.	27"	80.0 SQ. FT.	
12"	14.0 SQ. FT.	30"	98.0 SQ. FT.	
14"	18.0 SQ. FT.	36"	127.0 SQ. FT.	
16"	24.0 SQ. FT.			

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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL THRUST BLOCKS FOR WATER AND FORCE MAIN
ADOPTED 6/21/2006 — W11 — NTS — 1/2003 — MRS — TRB

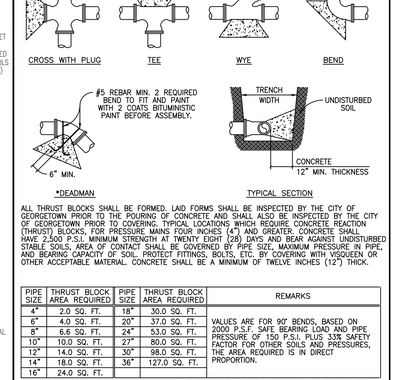


TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

NOTES:
1. ENCASEMENT TO BE CONSTRUCTED WHERE SEWER LINES PASS OVER OR UNDER A WATER MAIN WITH LESS THAN TWELVE INCHES (12") CLEAR DISTANCE.
2. AT CROSSINGS, ENCASEMENT SHALL EXTEND TEN FEET (10'-0") ON EITHER SIDE OF CROSSING.
3. BEGINNING AND ENDING OF ENCASEMENTS SHALL NOT BE MORE THAN SIX INCHES (6") FROM A PIPE JOINT.
4. WHERE WATER AND SEWER LINES PARALLEL WITH LESS THAN TEN FEET (10'-0") HORIZONTAL CLEAR DISTANCE, NO ENCASEMENT IS REQUIRED IF BOTH LINES ARE 150 PSI PRESSURE PIPE.
5. RAW WATER MAINS SHALL BE 150 PSI PRESSURE RATED WHEN PARALLELING POTABLE WATER MAINS WITH LESS THAN NINE FEET (9'-0") HORIZONTAL CLEARANCE.
6. WHERE MINIMUM COVER, THIRTY SIX INCHES (36") IS NOT AVAILABLE, ENCASEMENT WILL BE REQUIRED.
7. ALL CONCRETE ENCASEMENTS MUST BE FORMED AND INSPECTED BY THE CITY OF GEORGETOWN INSPECTOR PRIOR TO PLACING CONCRETE AND BACKFILLING.
8. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

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

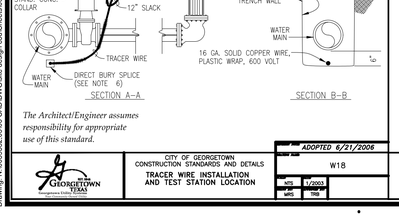
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CONCRETE ENCASEMENT DETAIL
ADOPTED 6/21/2006 — W15 — NTS — 1/2003 — MRS — TRB



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

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

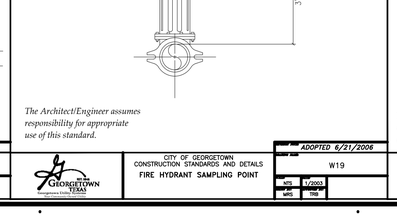
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CONCRETE ENCASEMENT DETAIL
ADOPTED 6/21/2006 — W16 — NTS — 1/2003 — MRS — TRB



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

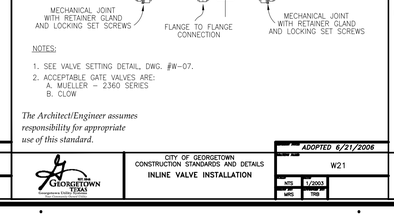
The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRACER WIRE INSTALLATION AND TEST STATION LOCATION
ADOPTED 6/21/2006 — W18 — NTS — 1/2003 — MRS — TRB



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

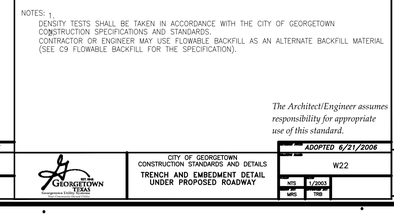
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
FIRE HYDRANT SAMPLING POINT
ADOPTED 6/21/2006 — W19 — NTS — 1/2003 — MRS — TRB



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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
INLINE VALVE INSTALLATION
ADOPTED 6/21/2006 — W21 — NTS — 1/2003 — MRS — TRB

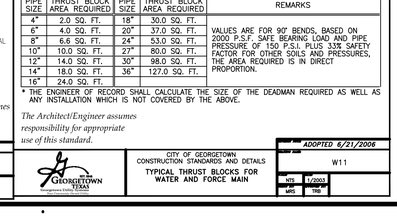


TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY
ADOPTED 6/21/2006 — W22 — NTS — 1/2003 — MRS — TRB



*DEADMAN — TYPICAL SECTION

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

PIPE SIZE	THRUST BLOCK AREA REQUIRED	PIPE SIZE	THRUST BLOCK AREA REQUIRED	REMARKS
4"	2.0 SQ. FT.	18"	30.0 SQ. FT.	VALUES ARE FOR 90° BENDS, BASED ON 2000 P.S.F. SAFE BEARING LOAD AND PIPE PRESSURE OF 150 P.S.I. PLUS 33% SAFETY FACTOR FOR OTHER SOILS AND PRESSURES, THE AREA REQUIRED IS IN DIRECT PROPORTION.
6"	4.0 SQ. FT.	20"	37.0 SQ. FT.	
8"	6.6 SQ. FT.	24"	53.0 SQ. FT.	
10"	10.0 SQ. FT.	27"	80.0 SQ. FT.	
12"	14.0 SQ. FT.	30"	98.0 SQ. FT.	
14"	18.0 SQ. FT.	36"	127.0 SQ. FT.	
16"	24.0 SQ. FT.			

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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL THRUST BLOCKS FOR WATER AND FORCE MAIN
ADOPTED 6/21/2006 — W11 — NTS — 1/2003 — MRS — TRB

Westwood
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TBPELS SURVEYING FIRM NO. 10074301
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

UTILITY DETAILS 1 OF 2

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS

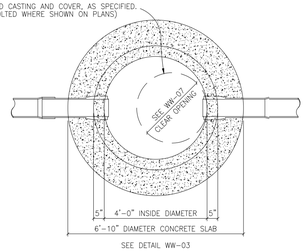
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

25
SHEET 25 OF 48

2025-20-SDP

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SEE DETAIL WW-03

MANHOLE PLAN

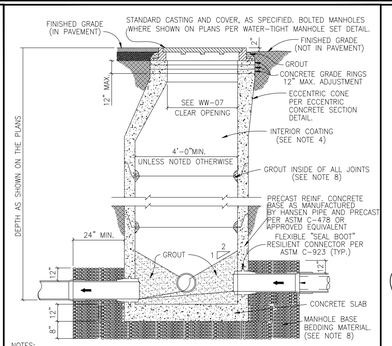
CITY OF GEORGETOWN NOTES:

MANHOLE DETAILS SHALL REFLECT THE CITY'S MINIMUM SPECIFICATIONS, AS STATED BELOW:

A. ALL MANHOLES SHALL BE 48" I.D., R.C.P., CLASS III, WITH RUBBER PROFILE GASKET – SINGLE OFF–SET JOINT CONFORMING TO ASTM C478, C433 AND C76.
B. ALL MANHOLES SHALL HAVE FRAME AND COVER, AS MANUFACTURED BY EAST JORDAN IRON WORKS (AS PER DETAIL # WW–07) OR APPROVED EQUIVALENT.
C. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON FRAME AND COVER.
D. ALL MANHOLES SHALL HAVE AN ECCENTRIC CONE.
E. MANHOLES MAY HAVE A FLAT LID, IF APPROVED BY CITY OF GEORGETOWN, BEING 12" THICK WITH A MINIMUM 30" OPENING, AS MANUFACTURED BY HANSEN PIPE AND PRECAST OR APPROVED EQUAL M.F.G. CONFORMING TO ASTM C478, 5000 P.S.I. CONCRETE, TRAFFIC BEARING AND WITH PROFILE GASKET – SINGLE OFF–SET JOINT CONFORMING TO ASTM C443.
F. INVERTS AND FLEXIBLE SEAL BOOTS, PER ASTM C–923, SHALL BE CAST INTO BASE SECTION.
G. MINIMUM DROP BETWEEN INVERTS SHALL BE ONE–TENTH OF A FOOT (0.1').
H. GRADE RINGS WITH AN I.D. TO MATCH FRAMES CLEAR OPENING WITH A MAXIMUM ADJUSTMENT OF 12" ARE ALLOWED.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
STANDARD MANHOLE – PLAN	WW02
NTS / MRS	1/2003 / TRB

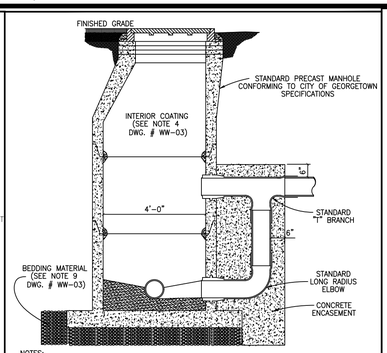


NOTES:

1. MANHOLES SHALL BE PRECAST ASTM C–478 BELL AND SPIGOT WITH PROFILE GASKET – SINGLE OFF–SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
4. AN 80 MIL. COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH WASTEWATER MANHOLE AND UNDERSIDE OF FLAT TOPS.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETTED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
6. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
7. MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS–20 TRAFFIC LOADS.
8. GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
9. MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL:
   SIEVE SIZE 2", PERCENT (%) RETAINED 0
   SIEVE SIZE 1 1/2", % RETAINED 0–10
   SIEVE SIZE 1", % RETAINED 45–80
   SIEVE SIZE 3/4", % RETAINED 85–100
   SIEVE SIZE 3/8", % RETAINED 95–100

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
STANDARD MANHOLE – SECTION	WW03
NTS / MRS	1/2003 / TRB

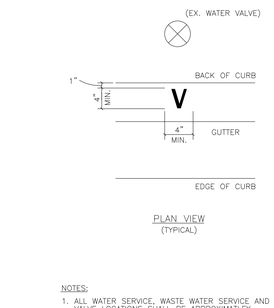


NOTES:

1. CONCRETE ENCASEMENT FOR DROP CONNECTION TO BE POURED INTEGRALLY WITH BOTH MANHOLE SLAB AND WALL.
2. DROP CONNECTIONS SHALL BE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED TWO FEET (2') OR MORE ABOVE THE MAIN INVERT CHANNEL.
3. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
4. WHEN P.V.C. IS USED IN SANITARY SEWER LINES, SOLVENT TYPE JOINT P.V.C. FITTINGS MAY BE UTILIZED IN THE DROP ASSEMBLY ONLY.
5. MINIMUM PIPE SIZE FOR DROP IS EIGHT INCHES (8").
6. SEE STANDARD MANHOLE DETAIL (DWG. # WW–03) FOR ADDITIONAL REQUIREMENTS.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
DROP CONNECTION–PRECAST MANHOLE TYPE "A"	WW04
NTS / MRS	1/2003 / TRB



PLAN VIEW
(TYPICAL)

NOTES:

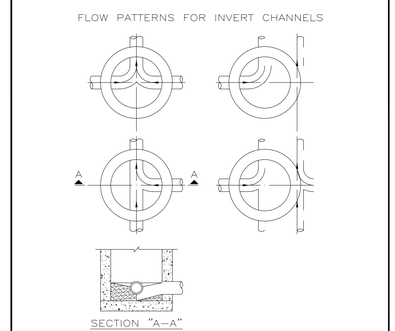
1. ALL WATER SERVICE, WASTE WATER SERVICE AND VALVE LOCATIONS SHALL BE APPROXIMATELY MARKED AS FOLLOWS:

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

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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
CURB STAMP DETAIL	SD05
NTS / MRS	1/2003 / TRB



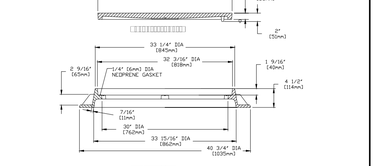
NOTES:

1. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
2. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOW.
3. CHANNELS FOR FUTURE CONSTRUCTIONS (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND, AND COVERED WITH 1" OF MORTAR.
4. SLOPE MANHOLE ITSELF WITH A 1:2 SLOPE FROM MANHOLE TO CHANNEL.
5. INVERT SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR 4" DEEP.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
FLOW PATTERNS FOR INVERT CHANNELS	WW06
NTS / MRS	1/2003 / TRB

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

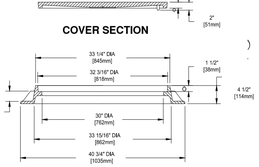


NOTES:

1. BOLTED WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480APT V–1420/1480Z1PT, COVER TO BE STAMPED WITH "SANITARY SEWER".
2. BOLTED WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 00148392 41420015.
4. FOR STANDARD WASTEWATER MANHOLE SET REFER TO DETAIL WW07.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
BOLTED WASTEWATER MANHOLE SET	WW07A
NTS / MRS	1/2006 / TRB

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



COVER SECTION

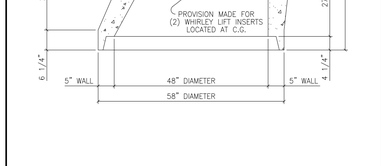
FRAME SECTION

NOTES:

1. STANDARD WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V–1420/148021, COVER TO BE STAMPED WITH "SANITARY SEWER".
2. STANDARD WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148390.
4. FOR BOLTED WASTEWATER MANHOLE SET REFER TO DETAIL WW07A.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
STANDARD WASTEWATER MANHOLE SET	WW07
NTS / MRS	1/2003 / TRB



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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
48"X5" TO 33"X8"X36" TALL ECCENTRIC CONCRETE SECTION	WW08
NTS / MRS	1/2003 / TRB

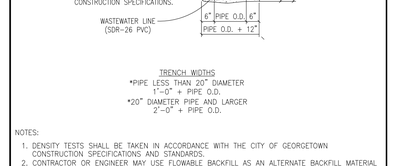


5 1/4" LOCKING LID
(F/461–S)

SEWER CLEAN–OUT
CITY OF GEORGETOWN
(RESIDENTIAL SERVICE)

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
SEWER CLEAN–OUT DETAIL	WW12
NTS / MRS	1/2003 / TRB



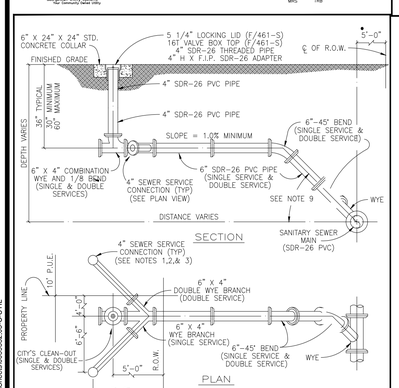
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'–0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'–0" + PIPE O.D.

NOTES:

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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY	WW18
NTS / MRS	1/2003 / TRB



NOTES:

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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	ADOPTED 6/21/2006
SEWER SERVICE CONNECTIONS	WW13
NTS / MRS	1/2003 / TRB

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TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

UTILITY DETAILS 2 OF 2

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS

PROJECT NO.
0039532.05

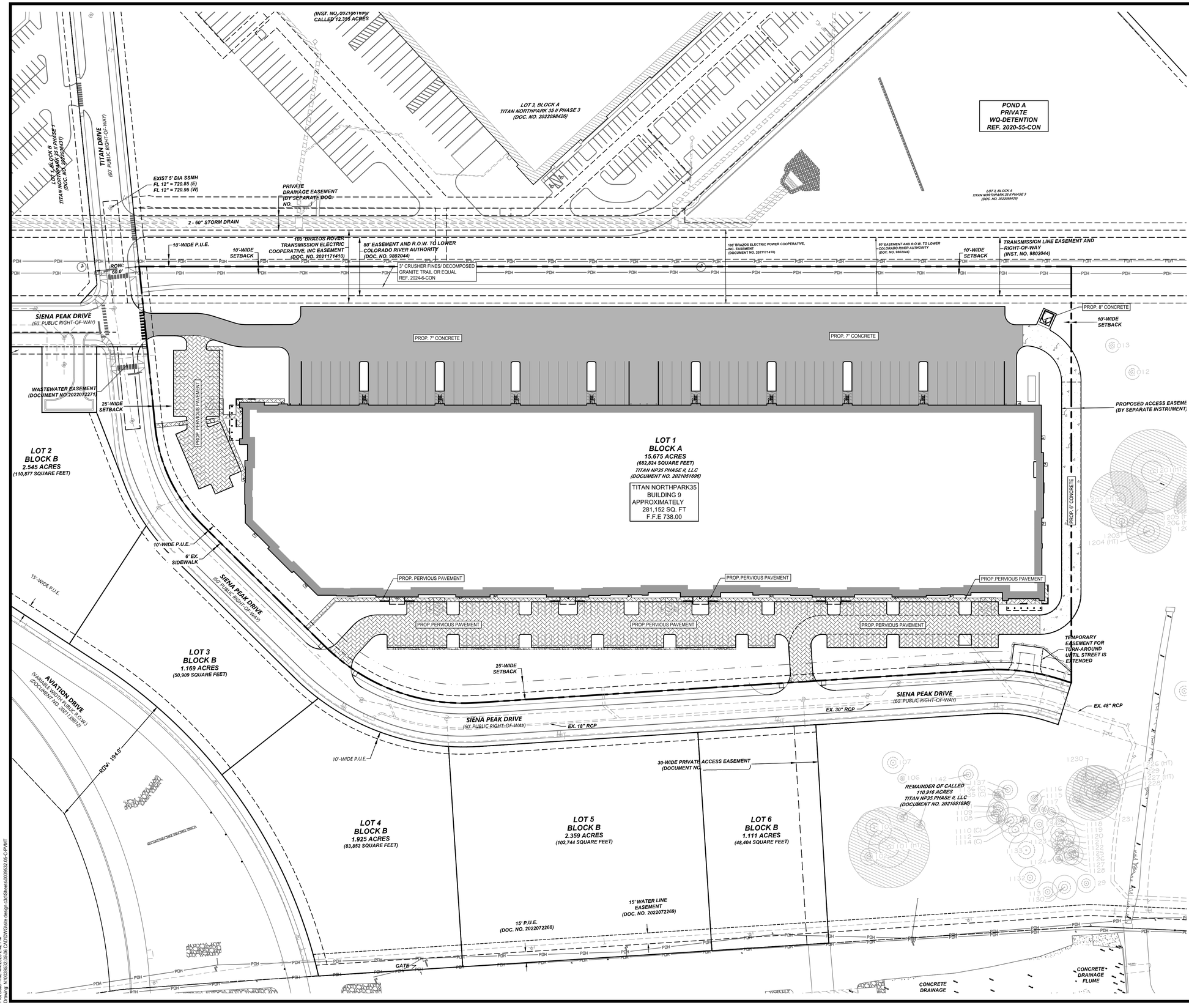
4/2/2025

STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

26
SHEET 26 OF 48

2025–20–SDP

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LEGEND

- PERVIOUS PARKING AREA
- MEDIUM DUTY PAVING — 7" CONCRETE PAVEMENT WITH #4 BARS @ 18" O.C.E.W. (CLASS "C", 4000 PSI)
- 6" CONCRETE PAVEMENT WITH #4 BARS @ 18" O.C.E.W. (CLASS "C", 4000 PSI)
- HEAVY DUTY PAVING — 8" CONCRETE PAVEMENT WITH #4 BARS @ 16" O.C.E.W. (CLASS "C", 4000 PSI)
- RETAINING WALL OR CURB WALL
- FIRE LANE

NOTES:

1. **ALL DIMENSIONS ARE FROM BACK OF CURB UNLESS OTHERWISE NOTED.**
2. **ALL CONCRETE SHALL CONFORM TO WHAT IS SHOWN ON THESE PLANS, STATED IN STANDARD CITY SPECIFICATIONS OR STATED IN TXDOT STANDARD SPECIFICATIONS.**
3. **SUBGRADE PREPARATION IN RIGHT OF WAY SHALL CONFORM TO STANDARD CITY SPECIFICATIONS OR TXDOT STANDARD SPECIFICATIONS.**
4. **ALL FILL PLACED UNDER PAVING SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6 INCH LIFTS, UNLESS OTHERWISE NOTED, OR STATED IN GEOTECH REPORT. REFER TO STRUCTURAL SPECIFICATIONS FOR FILL PLACED BENEATH BUILDING AREAS. ALL OTHER FILL AREAS TO BE COMPACTED TO 90% STANDARD PROCTOR.**
5. **THE CONTRACTOR SHALL SUBMIT A JOINT SPACING PLAN TO THE ENGINEER FOR APPROVAL. EXPANSION JOINT SPACING SHALL BE 90' MAXIMUM EACH WAY WITH NO KEYWAYS AND SAWED DUMMY JOINTS SHALL BE 15' EACH WAY, UNLESS OTHERWISE NOTED.**
6. **TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED AT THE END OF EACH DAYS PAVING AND WHERE INTERRUPTIONS SUSPEND OPERATIONS FOR 30 MINUTES OR MORE.**
7. **ALL PAVING TO BE REMOVED SHALL BE SAWCUT TO A NEAT LINE, MINIMUM 1-1/2" DEEP, AND THE PAVEMENT REMOVED IN SUCH A MANNER AS TO PRESERVE THE EXISTING TRANSVERSE REINFORCING STEEL TO THE MAXIMUM EXTENT POSSIBLE.**
8. **ALL CURB AND GUTTER SHALL BE INTEGRAL WITH THE PAVEMENT AND HAVE THE SAME COMPRESSIVE STRENGTH.**
9. **PAVEMENT REINFORCEMENT SHALL BE #3 BARS, SPACED AT 18 INCHES CENTER TO CENTER EACH WAY EXCEPT WHERE OTHERWISE NOTED IN THE PLANS OR GEOTECH REPORT.**
10. **BAR LAPS SHALL BE 30 DIAMETERS IN LENGTH.**
11. **ALL STRIPES SHALL BE 4 INCHES WIDE, UNLESS OTHERWISE NOTED.**
12. **INSTALLATION AND PLACEMENT OF IRRIGATION SLEEVES AND UTILITY CONDUITS SHALL BE IN ACCORDANCE WITH LANDSCAPE ARCHITECT AND MEP PLANS. CONTRACTOR TO VERIFY ALL SLEEVES HAVE BEEN PLACED PRIOR TO PAVING BEING PLACED.**
13. **SIDEWALKS AND ACCESSIBLE ROUTES SHALL HAVE A RUNNING SLOPE NO GREATER THAN 5% (UNLESS OTHERWISE NOTED) AND A CROSS SLOPE NO GREATER THAN 2%.**

Westwood
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE
TITAN NORTHPARK 35 IX
PAVING PLAN

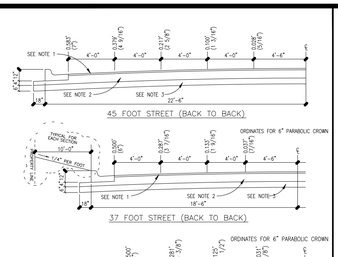
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CHECKED: HAS
PROJECT NO. 0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

27
SHEET 27 OF 48

2025-20-SDP

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2" HOT MIX ASPHALTIC CONCRETE, 8" FLEXBASE SHALL BE PLACED IN LIFTS NOT EXCEEDING 6" COMPACTED DEPTH AND TO 100% OF MAXIMUM DENSITY AS DETERMINED BY TEX-113E AT ±3% OF OPTIMUM MOISTURE CONTENT.

SCARIFICATION MAY BE USED

REPORT INDICATES THAT THE SOILS ARE SUBGRADE.

STREET AND ROADWAY DESIGN CRITERIA

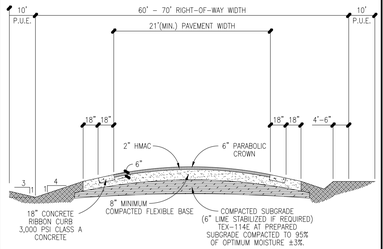
STREET CLASSIFICATION	TOTAL EQUIVALENT 18K AXLE LOAD APPLICATIONS (20 YEAR FLEXIBLE DESIGN)
LOCAL	
ALLEY	20,000
RESIDENTIAL LANE	20,000
LOCAL STREET	20,000
COLLECTORS	
RESIDENTIAL	80,000
MAJOR NEIGHBORHOOD	290,000
ARTERIALS	
MINOR ARTERIAL	1,020,000
MAJOR ARTERIAL	5,200,000

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL HALF CROSS – SECTIONS FOR H.M.A.C. SURFACED STREETS
SD01

NTS | 1/2003



NOTE:

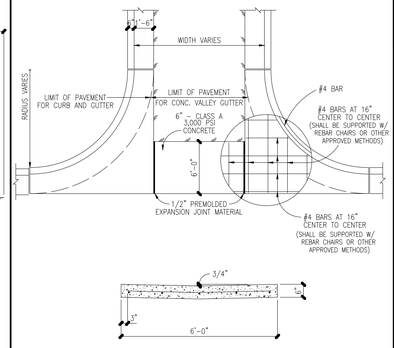
AT MINIMUM, ALL RURAL STREETS SHALL BE PAVED WITH A MINIMUM OF 8" OF FLEXIBLE BASE COMPACTED TO 100% MAXIMUM DENSITY IN ACCORDANCE WITH TEX-113E AT OPTIMUM MOISTURE ±3%, AND 2" OF HMAC TYPE D.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL RURAL PAVING DETAIL
SD02

NTS | 1/2003

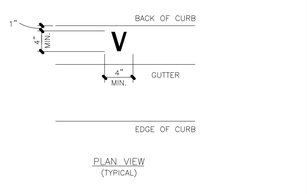


The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CONCRETE VALLEY GUTTER DETAIL
SD03

NTS | 1/2003



PLAN VIEW
(TYPICAL)

NOTES:

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

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

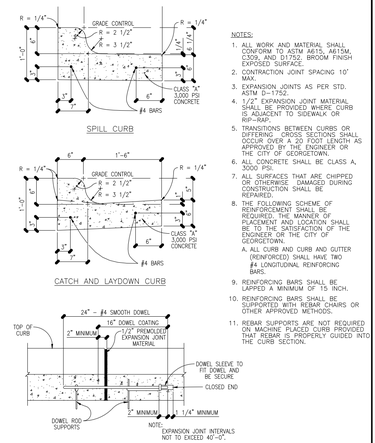
2. LETTERS SHALL HAVE A 1/2" MAX. WIDTH.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CURB STAMP DETAIL
SD05

NTS | 1/2003



NOTES:

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

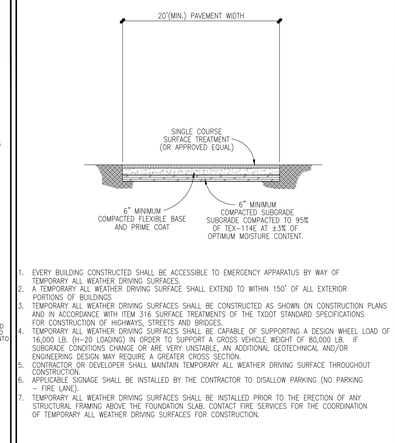
CURB DOWEL DETAIL

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CURB AND GUTTER DETAILS
SD06

NTS | 1/2003



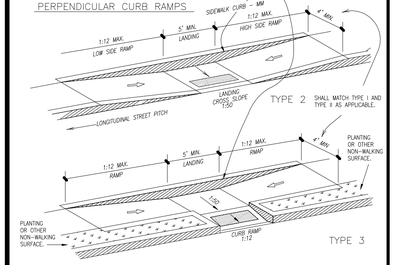
1. EVERY BUILDING CONSTRUCTED SHALL BE ACCESSIBLE TO EMERGENCY APPARATUS BY WAY OF TEMPORARY ALL WEATHER DRIVING SURFACES.
2. A TEMPORARY ALL WEATHER DRIVING SURFACE SHALL EXTEND TO WITHIN 150' OF ALL EXTERIOR PORTIONS OF BUILDINGS
3. TEMPORARY ALL WEATHER DRIVING SURFACES SHALL BE CONSTRUCTED AS SHOWN ON CONSTRUCTION PLANS AND IN ACCORDANCE WITH ITEM 316 SURFACE TREATMENTS OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES.
4. TEMPORARY ALL WEATHER DRIVING SURFACES SHALL BE CAPABLE OF SUPPORTING A DESIGN WHEEL LOAD OF 16,000 LB. (H-20 LOADING) IN ORDER TO SUPPORT A GROSS VEHICLE WEIGHT OF 80,000 LB. IF SUBGRADE CONDITIONS CHANGE OR ARE VERY UNSTABLE, AN ADDITIONAL GEOTECHNICAL AND/OR ENGINEERING DESIGN MAY REQUIRE A GREATER CROSS SECTION.
5. CONTRACTOR OR DEVELOPER SHALL MAINTAIN TEMPORARY ALL WEATHER DRIVING SURFACE THROUGHOUT CONSTRUCTION.
6. APPLICABLE SIGNAGE SHALL BE INSTALLED BY THE CONTRACTOR TO DISALLOW PARKING (NO PARKING – FIRE LANE).
7. TEMPORARY ALL WEATHER DRIVING SURFACES SHALL BE INSTALLED PRIOR TO THE ERECTION OF ANY STRUCTURAL FRAMING ABOVE THE FOUNDATION SLAB. CONTACT FIRE SERVICES FOR THE COORDINATION OF TEMPORARY ALL WEATHER DRIVING SURFACES FOR CONSTRUCTION.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TEMPORARY ALL WEATHER DRIVING SURFACE
SD43

NTS | 1/2003



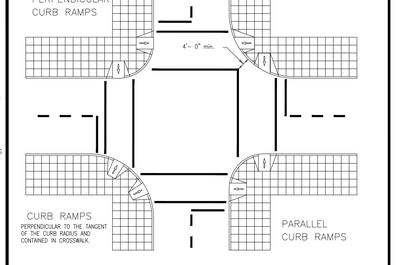
The Architect/Engineer assumes responsibility for appropriate use of this standard.

PARALLEL CURB RAMPS

ADOPTED 6/21/2006 TRB

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
SIDEWALK RAMP DETAILS TYPE 1–3
SD31

NTS | 1/2003



CURB RAMP

FOR ON-SYSTEM PROJECTS SUCH AS RESTORATION, SEAL COAT AND OVERLAY PROJECTS, PLACEMENT OF CURB RAMPS SHALL BE EVALUATED IN THE FOLLOWING ORDER OF PREFERENCE: PERPENDICULAR, PARALLEL OR COMBINATION. THE MOST PREFERABLE OPTION THAT IS FEASIBLE AT EACH CORNER SHALL BE PROVIDED.

ALL RAMPS SHALL BE CONTAINED WITHIN THE RESPECTIVE CURB RETURN RADIUS.

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

ADOPTED 6/21/2006 TRB

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CURB RAMP PLACEMENTS AT INTERSECTIONS
SD30

NTS | 1/2003

NOTES:

1. COMMERCIAL SIDEWALKS WIDTHS – 6'
   RESIDENTIAL SIDEWALKS WIDTHS – 5'
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. FLATTER SLOPES THAT WILL STILL DRAIN PROPERLY ARE ENCOURAGED.
3. ALL CONCRETE SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
4. FOR PURPOSES OF WARNING, THE CURB RAMPS SHALL HAVE A LIGHT REFLECTIVE VALUE AND TEXTURE THAT SIGNIFICANTLY CONTRASTS WITH THAT OF ADJOINING PEDESTRIAN ROUTES.
5. TEXTURES MAY CONSIST OF PAVERS WITH TRUNCATED DOMED SURFACES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED.
6. COLOR CONTRAST, FOR EXAMPLE, MAY BE ACCOMPLISHED WITH COLORED CONCRETE PAVERS THAT HAVE TRUNCATED DOMES WHICH WOULD PROVIDE A CONTRAST WITH TYPICALLY LIGHT COLORED CONCRETE.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, VISIBILITY AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).
8. RAISED MEDIANS SEPARATE OPPOSING DIRECTIONS OF TRAFFIC AND PROVIDE A REFUGE AREA FOR PEDESTRIANS IF THEY ARE UNABLE TO CROSS THE ENTIRE ROADWAY IN THE ALLOTTED SIGNAL PHASE. MEDIAN CROSSING SHALL BE A MINIMUM OF 5' WIDE. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR TROUGH THEM.
9. ALL SIDEWALK PLANS AND DETAILS SHALL BE SUBMITTED AND APPROVED BY "REGISTERED ACCESSIBILITY SPECIALIST" (RAS).
10. ANY PART OF THE ACCESSIBLE ROUTE WITH A SLOPE GRATER THAN 1:20 (5%) SHALL BE CONSIDERED A RAMP. IF A RAMP HAS A RISE GREATER THAN 6 INCHES OR A HORIZONTAL PROJECTION GREATER THAN 72 INCHES, THEN IT SHALL MEET THE REQUIREMENTS OF A RAMP PER TAS 405.THE ONLY EXCEPTION IS AT CURB RAMPS. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. CURB RAMPS SHALL BE PROVIDED WHERE EVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
11. TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SHALL BE PLACED SO NOT TO OBSTRUCT THE ACCESSIBLE ROUTE OR ACT PROTRUDING OBJECTS.
12. ALL SIDEWALKS SHALL BE DOWELED INTO EXISTING SIDEWALKS, DRIVEWALKS, DRIVEWAYS, INLET BOXES, RETAINING WALLS, ETC.
13. ALL SIDEWALK CROSS–SLOPES SHALL NOT EXCEED 1:50, UNLESS A VARIANCE IS PROVIDED BY TDLR.

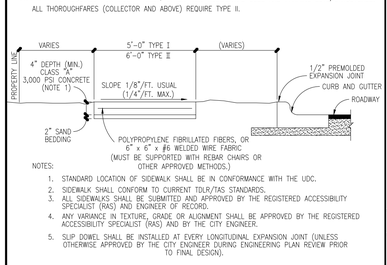
(PENETRATES) A CURB.

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

ADOPTED 6/21/2006 TRB

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
PEDESTRIAN RAMPS GENERAL NOTES
SD28

NTS | 1/2003



NOTES:

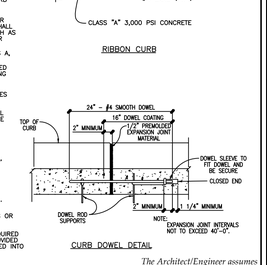
1. STANDARD LOCATION OF SIDEWALK SHALL BE IN CONFORMANCE WITH THE UDC.
2. SIDEWALK SHALL CONFORM TO CURRENT TDLR/TAS STANDARDS.
3. ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND ENGINEER OF RECORD.
4. ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT SHALL BE APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND BY THE CITY ENGINEER.
5. SLIP DOWEL SHALL BE INSTALLED AT EVERY LONGITUDINAL EXPANSION JOINT (UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER DURING ENGINEERING PLAN REVIEW PRIOR TO FINAL DESIGN).

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

ADOPTED 6/21/2006 TRB

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
SIDEWALK SECTION AND JOINT DETAIL
SD14

NTS | 1/2003



NOTES:

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

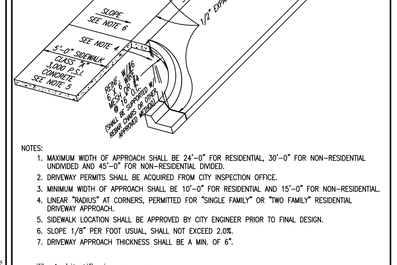
CURB DOWEL DETAIL

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
RIBBON CURB DETAILS
SD08

NTS | 1/2003



NOTES:

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

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

ADOPTED 6/21/2006 TRB

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CONCRETE DRIVEWAY APPROACH TYPICAL
SD15

NTS | 1/2003

Westwood
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TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

PAVING DETAILS 1 OF 2

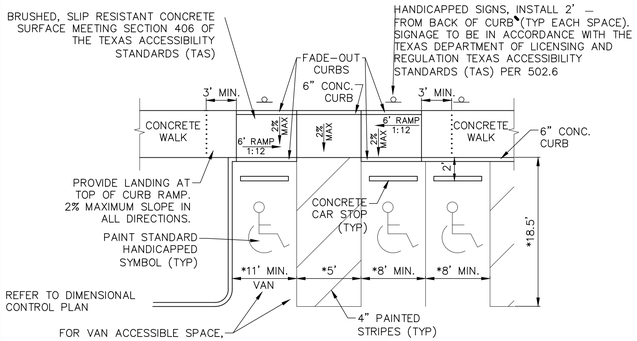
DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

28
SHEET 28 OF 48

2025–20–SDP

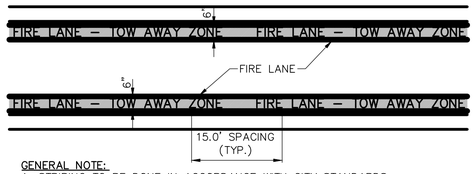
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NOTES:
1. MAXIMUM RUNNING SLOPE FOR ALL PATHS IS 5%; MAXIMUM CROSS SLOPE IS 2%; FOR THE FIRST FIVE FEET FROM THE DOOR A 2% SLOPE (MAX) MUST BE MAINTAINED.
2. SIGNAGE AND MARKINGS TO BE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

1 90° HANDICAP PARKING & TWO-WAY CURB RAMP

NOT TO SCALE (PRIVATE ONLY)



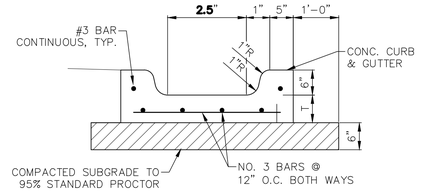
GENERAL NOTE:
A. STRIPING TO BE DONE IN ACCORDANCE WITH CITY STANDARDS.

LA-503.3.2 DETAILS OF FIRE LANE MARKING:
1. ALL CURBS AND CURB ENDS SHALL BE PAINTED RED WITH FOUR-INCH WHITE LETTERING STATING "FIRE LANE – TOW AWAY ZONE". THE WORDS "FIRE LANE" BY THEMSELVES ARE NOT ACCEPTABLE. WORDING MAY NOT BE SPACED MORE THAN 30 FEET APART.

STRIPING DETAIL NOTE:
A. PAINT:
1. STRIPE SHALL BE SIX (6) INCHES WIDE PAINTED WITH AN EXTERIOR ACRYLIC LATEX PAINT.
A. COLOR SHALL BE "TRAFFIC RED" GLIDDEN NO. 63251 OR EQUAL.
2. LETTERS SHALL BE FOUR (4) INCHES HIGH PAINTED WITH AN EXTERIOR ACRYLIC LATEX PAINT.
B. COLOR SHALL BE "TRAFFIC WHITE" GLIDDEN NO. 563245 OR EQUAL.
B. APPLICATION:
1. STRIPE MAY BE BRUSHED OR SPRAYED, ONE COAT TO FINISH.
2. LETTERS SHALL BE STENCIL FORMED, BRUSH APPLIES AND SPACED AS DETAILED ON THIS SHEET.

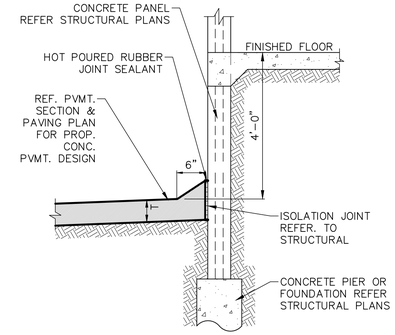
2 FIRE LANE STRIPING

NOT TO SCALE



3 FLUME DETAIL

NOT TO SCALE



4 RAISED PAVEMENT AT TRUCK DOCK

NOT TO SCALE

NOTE:
REFER TO GEOTECH REPORT FOR FURTHER INFORMATION

5 CONCRETE PAVEMENT SECTION

NOT TO SCALE

* READY-MIXED COLD-APPLIED JOINT SEALANT (EZ-7 OR APPROVED EQUAL)

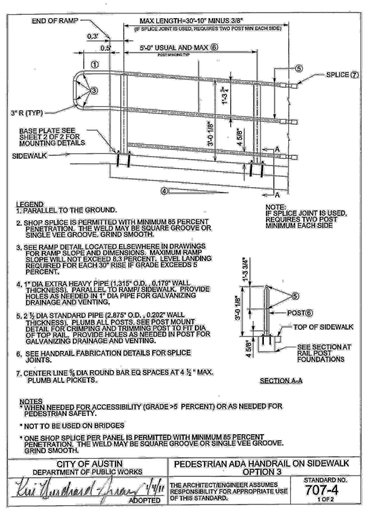
6 PAVEMENT CONNECTION

NOT TO SCALE

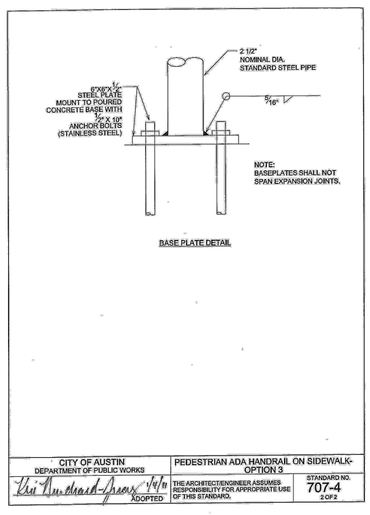
* READY-MIXED COLD-APPLIED JOINT SEALANT (EZ-7 OR APPROVED EQUAL)

7 SAWED DUMMY JOINT

NOT TO SCALE



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PEDESTRIAN ADA HANDRAIL ON SIDEWALK OPTION 3	
Kevi Shuckard-Jones 7/1/19 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 707-4 1 OF 2



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PEDESTRIAN ADA HANDRAIL ON SIDEWALK- OPTION 3	
Kevi Shuckard-Jones 7/1/19 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 707-4 2 OF 2

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TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

TITAN NORTHPARK 35 IX

PAVING DETAILS 2 OF 2

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO. 0039532.05

4/2/2025
STATE OF TEXAS
Hollis A Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

29
SHEET 29 OF 48

2025-20-SDP

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Attachment G – Inspection, Maintenance, Repair and Retrofit Plan

The following inspection and maintenance guidelines for the permanent best management practices will be followed in accordance with the Edwards Aquifer Technical Guidance on Best Management Practices. A log documenting the performed inspections, maintenance activities, and repairs will be kept to ensure BMPs are performing and operating as designed.

Grassy Swales

- *Pest Management*. An Integrated Pest Management (IPM) Plan should be developed for vegetated areas. This plan should specify how problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.
- *Seasonal Mowing and Lawn Care*. Lawn mowing should be performed routinely, as needed, throughout the growing season. Grass height should not exceed 18 inches. Grass cuttings should be collected and disposed of offsite, or a mulching mower can be used. Regular mowing should also include weed control practices; however, herbicide use should be kept to a minimum (Urbonas et al., 1992). Healthy grass can be maintained without using fertilizers because runoff usually contains sufficient nutrients.
- *Inspection*. Inspect swales at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is most desirable. The swale should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. More frequent inspections of the grass cover during the first few years after establishment will help to determine if any problems are developing, and to plan for long-term restorative maintenance needs. Bare spots and areas of erosion identified during semi-annual inspections should be replanted and restored to meet specifications. Construction of a level spreader device may be necessary to reestablish shallow overland flow.
- *Debris and Litter Removal*. Trash tends to accumulate in swale areas, particularly along highways. Any swale structures (i.e. check dams) should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection, but should be performed no less than two times per year (Urbonas et al., 1992).
- *Sediment Removal*. Sediment accumulating near culverts and in channels needs to be removed when they build up to 3 inches at any spot, or cover vegetation. Excess sediment should be removed by hand or with flat-bottomed shovels. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level with the bottom of the swale. Sediment removal should be performed periodically, as determined through inspection.
- *Grass Reseeding and Mulching*. A healthy dense grass should be maintained in the channel and side slopes. Grass damaged during the sediment removal process should be promptly replaced using the same seed mix used during swale establishment. If possible, flow should be diverted from the damaged areas until the grass is firmly established.

- *Public Education*. Private homeowners are often responsible for roadside swale maintenance. Unfortunately, overzealous lawn care on the part of homeowners can present some problems. For example, mowing the swale too close to the ground, or excessive application of fertilizer and pesticides will all be detrimental to the performance of the swale. Pet waste can also be a problem in swales, and should be removed to avoid contamination from fecal coliform and other waste-associated bacteria. The delegation of maintenance responsibilities to individual landowners is a cost benefit to the locality. However, localities should provide an active educational program to encourage the recommended practices.

Extended Detention

- *Inspections*. Basins should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the pond is meeting the target detention times. In particular, the extended detention control device should be regularly inspected for evidence of clogging, or conversely, for too rapid a release. If the design drawdown times are exceeded by more than 24 hours, then repairs should be scheduled immediately. The upper stage pilot channel, if any, and its flow path to the lower stage should be checked for erosion problems. During each inspection, erosion areas inside and downstream of the BMP should be identified and repaired or revegetated immediately.
- *Mowing*. The upper stage, side slopes, embankment, and emergency spillway of an extended detention basin must be mowed regularly to discourage woody growth and control weeds. Grass areas in and around basins should be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. When mowing of grass is performed, a mulching mower should be used, or grass clippings should be caught and removed.
- *Debris and Litter Removal*. Debris and litter will accumulate near the extended detention control device and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.
- *Erosion Control*. The pond side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion, although this should not occur often if the soils are properly compacted during construction. Regrading and revegetation may be required to correct the problems. Similarly, the channel connecting an upper stage with a lower stage may periodically need to be replaced or repaired.
- *Structural Repairs and Replacement*. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. These repairs should include patching of cracked concrete, sealing of voids, and removal of vegetation from cracks and joints. The various inlet/outlet and riser works in a basin will eventually deteriorate and must be replaced. Public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yr, whereas reinforced concrete barrels and risers may last from 50 to 75 yr.
- *Nuisance Control*. Standing water (not desired in a extended detention basin) or soggy conditions within the lower stage of the basin can create nuisance conditions for nearby residents. Odors, mosquitoes, weeds, and litter are all occasionally perceived to be problems. Most of these problems are generally a sign that regular inspections and maintenance are not being performed (e.g., mowing, debris removal, clearing the outlet control device).

Sediment Removal. When properly designed, dry extended detention basins will accumulate quantities of sediment over time. Sediment accumulation is a serious maintenance concern in extended detention dry ponds for several reasons. First, the sediment gradually reduces available stormwater management storage capacity within the basin. Second, unlike wet extended detention basins (which have a permanent pool to conceal deposited sediments), sediment accumulation can make dry extended detention basins very unsightly. Third, and perhaps most importantly, sediment tends to accumulate around the control device. Sediment deposition increases the risk that the orifice will become clogged, and gradually reduces storage capacity reserved for pollutant removal. Sediment can also be resuspended if allowed to accumulate over time and escape through the hydraulic control to downstream channels and streams. For these reasons, accumulated sediment needs to be removed from the lower stage when sediment buildup fills 20% of the volume of the basin or at least every 10 years.

Engineer Signature

Hollis Scheffler, P.E.
Printed Name

Senior Project Manager
Title

02/12/2025
Date

Owner Signature

Valentina Rucker
Printed Name

VP, General Counsel
Title

02/12/2025
Date

Temporary Stormwater Section

Texas Commission on Environmental Quality

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

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

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

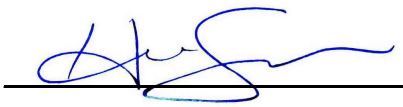
Signature

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

Print Name of Customer/Agent: Hollis Scheffler, P.E.

Date: 02/11/2025

Signature of Customer/Agent:



Regulated Entity Name: Titan NorthPark 35

Project Information

Potential Sources of Contamination

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

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

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

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

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

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

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

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

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

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

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

Sequence of Construction

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

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

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

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

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☐ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

Attachment A – Spill Response Actions

In accordance with the Edwards Aquifer Technical Guidance on Best Management Practices Operators, the following actions will be followed to ensure appropriate measures are taken in the case of a spill:

Education

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

General Measures

- 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.
- Store hazardous materials and wastes in covered containers and protect from vandalism.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Train employees in spill prevention and cleanup.
- Designate responsible individuals to oversee and enforce control measures.
- Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise clean up activities.
- Do not bury or wash spills with water.
- Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- 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.
- Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- 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.
- 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

- Clean up leaks and spills immediately.
- 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.
- 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

- 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.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Absorbent materials should be promptly removed and disposed of properly.
- Follow the practice below for a minor spill:
- Contain the spread of the spill.
- Recover spilled materials.
- Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

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

Significant/Hazardous Spills

- 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.
- 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.
- Notification should first be made by telephone and followed up with a written report.
- 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.
- Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

Attachment B – Potential Sources of Contamination

The following are potential sources of surface and groundwater contamination from construction activities:

- Clearing and grubbing
- Grading and site excavation
- Vehicle tracking
- Topsoil stripping and stockpiling
- Landscaping operations
- Staging and storage area
- Paving (including curb and gutter)
- Building Construction
- Concrete washout area

Attachment C – Sequence of Major Activities

The following sequence of construction is included in the construction plans:

1. Rough cut pond to be used as sediment basin.
   Estimated area disturbed = 5.62 ac (completed with original WPAP)
   Estimated timing = Completed

2. Temporary erosion controls, silt fencing and tree protection fencing to be installed.
   Estimated area disturbed = 28.16 ac
   Estimated timing = 1 week

3. Pre-construction meeting to be held on-site.
   Estimated area disturbed = n/a ac
   Estimated timing = 1 day

4. Demolition of existing materials.
5. Estimated area disturbed = 28.16 ac
   Estimated timing = 6 weeks

6. Site staking and rough grading.
7. Estimated area disturbed = 28.16 ac
   Estimated timing = 6 weeks

8. Storm sewers to be installed.
9. Estimated area disturbed = 28.16 ac
   Estimated timing = 8 weeks

10. Water, wastewater and paving improvements to begin.
11. Estimated area disturbed = 28.16 ac
    Estimated timing = 8 weeks

12. Temporary erosion control measures to be inspected on a regular basis; any sediment buildup to be removed.
    Estimated area disturbed = n/a
    Estimated timing = 1 week

13. Site to be cleaned up and revegetated.
14. Estimated area disturbed = 28.16 ac
    Estimated timing = 6 weeks

15. Temporary erosion controls to be removed after permanent restoration of site is established.
    Estimated area disturbed = n/a
    Estimated timing = 1 week

Attachment D – Temporary Best Management Practices and Measures

The following temporary best management practices will be conducted to prevent pollution of surface water, groundwater, and stormwater in accordance with the Edwards Aquifer Technical Guidance on Best Management Practices.

Temporary Vegetation
Vegetation will be used as a temporary stabilization technique for areas disturbed by construction, but not covered by pavement, buildings, or other structures. As a temporary control, vegetation will be used to stabilize stockpiles and barren areas that are inactive for long periods of time.

Dust Control
Dust control will prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards and improve traffic safety. This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Temporary Construction Entrance/Exit
The temporary gravel construction entrance will provide a stable entrance/exit condition from the construction site and keep mud and sediment off public roads. A stabilized construction entrance is a stabilized pad of crushed stone located at any point traffic will be entering or leaving the construction site from a public right-of way, street, alley, sidewalk or parking area. The stabilized construction entrance will reduce or eliminate the tracking or flowing of sediment onto public rights of-way. This practice should be used at all points of construction ingress and egress.

Silt Fence
A silt fence is a barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site. Proposed silt fences will be highly effective at controlling sediment from disturbed areas. They cause runoff to pond, allowing heavier solids to settle out.

Inlet Protection
All proposed inlets that may receive storm runoff from disturbed areas should be protected. Temporary inlet protection is a series of different measures that provide protection against silt transport or accumulation in storm sewer systems. This clogging can greatly reduce or completely stop the flow in the pipes. The different measures are used for different site conditions and inlet types. Filter barrier protection using silt fence is appropriate when the drainage area is less than one acre and the basin slope is less than five percent. This type of protection is not applicable in paved areas. Block and gravel protection is used when flows exceed 0.5 cubic feet per second and it is necessary to allow for overtopping to prevent flooding. This form of protection is also useful for curb type inlets as it works well in paved areas. Wire mesh and gravel protection is used when flows exceed 0.5 cubic feet per second and construction traffic may occur over the inlet. This form of protection may be used with both curb and drop inlets.

Concrete Washout Area

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

The following steps will help reduce stormwater pollution from concrete wastes: • Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.

- Avoid mixing excess amounts of fresh concrete.
- Perform washout of concrete trucks in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped onsite, except in designated areas.

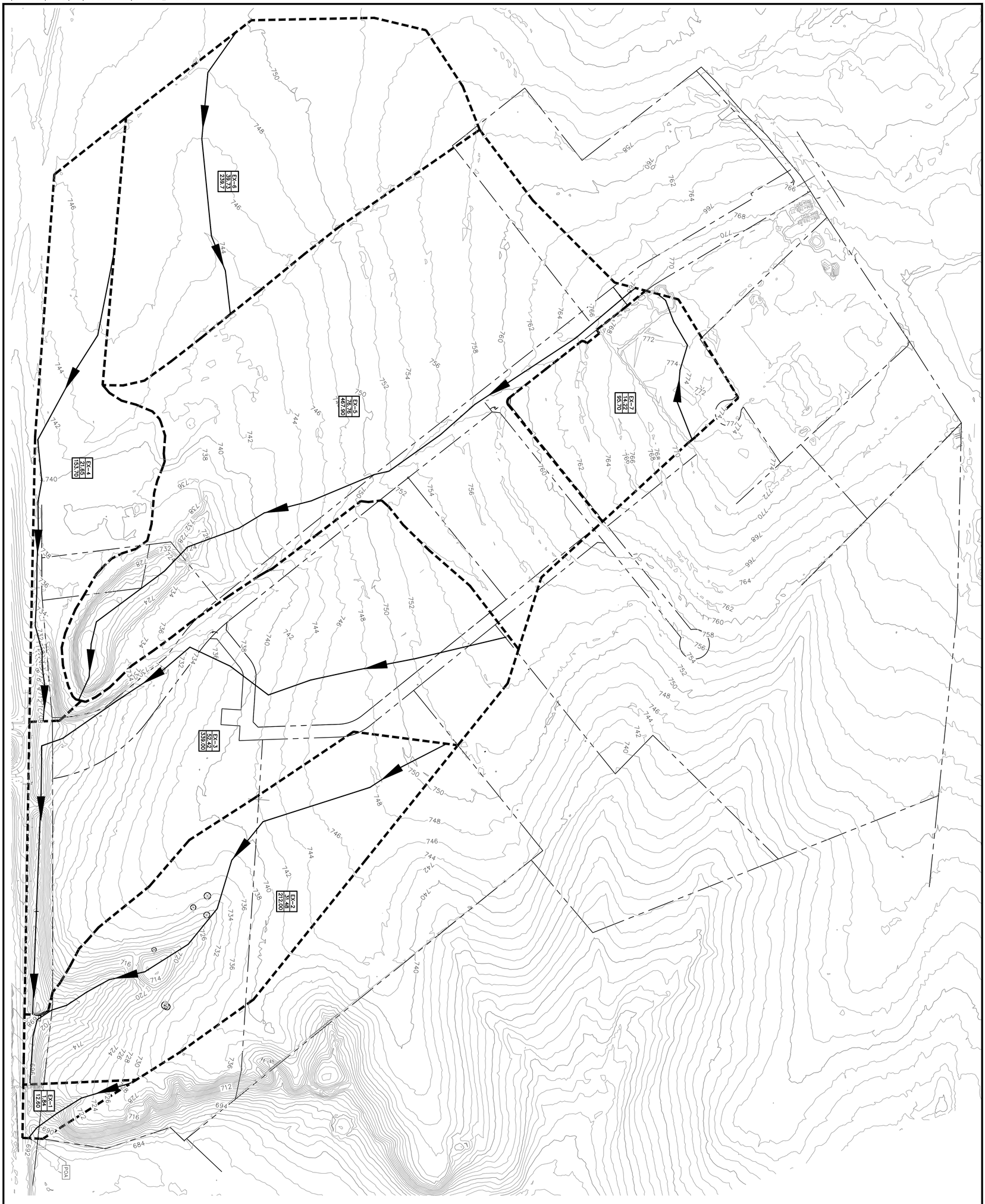
For onsite washout:

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

Attachment F – Structural Practices

Stormwater will be routed through the proposed silt fence and inlet protection for pollutant removal. The proposed permanent BMPs are to be constructed as to intercept stormwater flowing from the parking lots, streets, building roofs, and other impervious areas. The silt fence will provide temporary sedimentation control during construction prior to the permanent BMPs being finalized. No part of the site or placement of the structural practices will be encumbered by floodplain as shown on FEMA #48491C0283F & 48491C0291F.

Attachment G – Drainage Area Map



SEE SHEET 16 FOR DRAINANCE AREA CALCULATIONS

TC FLOW PATH & ARROW

EXISTING DRAINAGE AREA ID
AREA IN ACRES
Q_{100} IN CUBIC FEET PER SECOND

EX-8
1.80
7.89

DRAINAGE DIVIDE

DRAINAGE FLOW DIRECTION

EXISTING CONTOUR

FENCE

PROPERTY LINE

RIGHT-OF-WAY

FLAG POLE

FLOODLIGHT

TRAFFIC SIGNAL CONTROL BOX

TRAFFIC SIGNAL POLE

MANHOLE

FIRE HYDRANT

IRRIGATION CONTROL VALVE

WATER VALVE

WATER METER

LIGHT STANDARD

POWER POLE

ELECTRIC METER

BOLLARD

LEGEND

GRAPHIC SCALE IN FEET
1"=200'
0 100 200 400 600

2024-06-CON

PK-0041495.00_EX DAMS.DWG

SHEET NO.	DESIGN	DRAWN	DATE
12	HAS	NBB	MAR 2024

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TITAN NORTHPARK TOWN CENTER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION PLAN SET GEORGETOWN, WILLIAMSON COUNTY, TEXAS

EXISTING DRAINAGE AREA MAP

REVISIONS			
NO.	DATE	DESCRIPTION	BY

Westwood

Phone (512) 485-0831
Toll Free (888) 937-5150
8701 N. Mopac Expy, Suite 320
Austin, TX 78759
westwoodps.com

Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

0 100 200 400 600

GRAPHIC SCALE IN FEET
1"=200'

LEGEND

- BOLLARD
- ELECTRIC METER
- POWER POLE
- LIGHT STANDARD
- WATER METER
- WATER VALVE
- IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- CLEANOUT
- MANHOLE
- TRAFFIC SIGNAL CONTROL
- TRAFFIC SIGNAL POLE
- TELEPHONE BOX
- FLOOD LIGHT
- FLAG POLE
- TRAFFIC SIGN
- PROPERTY LINE
- FENCE
- 613 EXISTING CONTOUR
- DRAINAGE FLOW DIRECTION
- DRAINAGE DIVIDE
- EX 8 / 1.00 / 7.99 EXISTING DRAINAGE AREA ID, AREA IN ACRES, Q_{100} IN CUBIC FEET PER SECOND
- TC FLOW PATH & ARROW

SEE SHEET 16 FOR DRAINAGE AREA CALCULATIONS.

DRAINAGE SCHEMATIC

2024-06-CON

Westwood
Phone (512) 485-0831
Toll Free (888) 937-5150
8701 N. Mopac Expy, Suite 320
Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

INTERIM DRAINAGE AREA MAP

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

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DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO.
13

EXISTING DRAINAGE AREA MAP CALCULATIONS

HEC-HMS SUMMARY: EXISTING CONDITONS														
							2 YEAR STORM		10 YEAR STORM		25 YEAR STORM		100 YEAR STORM	
Drainage Area Basin Designation	Point of Analysis	Drainage Area (ac)	Base Curve Number CN	Lag Time (min)	Cumulative Area (ac)	Impervious Cover %	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)
EX 1		1.84	84	8.29		0.00%	3.80		7.20		9.30		12.60	
EX 2		31.48	84	11.23		0.00%	72.10		126.40		160.20		212.00	
EX 3		52.42	84	12.81		0.00%	113.30		201.70		25.40		339.00	
EX 4		21.65	84	10.77		0.00%	52.90		92.00		116.20		153.70	
EX 5		76.76	84	12.84		0.00%	156.70		278.30		353.60		467.90	
EX 6		39.73	84	15.29		0.00%	77.70		141.40		180.90		239.70	
EX 7		14.22	84	12.31		0.00%	32.50		57.10		72.30		95.70	
	POA							402.20		762.70		1002.60		1362.50

Basin ID	Flowpath Length (ft)	Overland Flow: Length (ft)	Slope (ft/ft)	Surface Cover	Velocity (ft/s)	*Manning's n	T_0 (min)	Shallow Concentrated Flow: Length (ft)	Slope (ft/ft)	Surface Type	Velocity (ft/s)	*K	T_S (min)	Channel Flow: Length (ft)	Slope (ft/ft)	Type	*K (ft)	Velocity (ft/s)	T_h (min)	T_C (min)	T_{design} (min)	T_L (min)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
EX-1	559	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	409	0.010	24" RCP		72.01	7.20	0.95	13.92	13.92	8.35
EX-2	2734	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	2684	0.010	24" RCP		72.01	7.20	6.21	19.19	19.19	11.51
EX-3	3698	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	3448	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3;		68.56	6.86	8.38	21.36	21.36	12.81
EX-4	2299	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	2049	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3;		68.56	6.86	4.98	17.96	17.96	10.77
EX-5	3399	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	3249	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3;		68.56	6.86	7.90	20.87	20.87	12.52
EX-6	1458	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	1358	0.010	UNPAVED	1.61	16.1	14.06							25.48	25.48	15.29
EX-7	752	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	752	0.010	UNPAVED	1.61	16.1	7.78							19.21	19.21	11.52

INTERIM DRAINAGE AREA MAP CALCULATIONS

HEC-HMS SUMMARY: INTERIM CONDITONS							2 YEAR STORM		10 YEAR STORM		25 YEAR STORM		100 YEAR STORM	
Drainage Area Basin Designation	Point of Analysis	Drainage Area (ac)	Base Curve Number CN	Lag Time (min)	Cumulative Area (ac)	Impervious Cover %	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)
A-1		8.86	80	12.37		51.18%	26.80		39.40		48.30		61.70	
A-2		9.73	84	3.00		85.40%	71.60		73.50		86.60		104.10	
A-3		8.61	84	3.00		78.70%	60.90		63.70		75.40		91.00	
A-4		9.26	84	6.72		70.00%	45.80		56.40		67.00		82.80	
A-5		12.79	80	3.00		91.81%	96.60		97.70		114.70		137.50	
A-6		10.74	80	3.52		87.32%	75.00		78.50		92.00		111.50	
A-10		5.87	80	12.70		0.00%	10.00		19.70		25.70		35.10	
A-13		2.68	93	3.00		90.20%	21.00		21.00		24.50		29.30	
A-14		1.00	80	3.00		0.00%	3.00		4.90		6.40		8.40	
POND-A								50.20		95.80		119.10		142.20
A-7		12.76	80	8.31		13.90%	32.00		54.30		68.60		91.20	
A-8		10.40	80	8.51		0.00%	21.50		40.60		52.30		71.10	
A-9		18.96	80	8.48		0.00%	39.30		74.10		95.50		129.70	
A-11		6.72	80	8.62		0.00%	13.80		26.10		33.70		45.80	
A-12		4.36	80	14.12		7.80%	7.80		14.70		19.00		25.60	
OS-1		106.13	84	22.93		0.00%	161.20		307.20		398.90		530.90	
	POA							258.90		508.30		663.70		873.00

Basin ID	Flowpath Length (ft)	Overland Flow: Length (ft)	Slope (ft/ft)	Surface Cover	Velocity (ft/s)	*Manning's n	T_0 (min)	Shallow Concentrated Flow: Length (ft)	Slope (ft/ft)	Surface Type	Velocity (ft/s)	*K	T_S (min)	Channel Flow: Length (ft)	Slope (ft/ft)	Type	*K (ft)	Velocity (ft/s)	T_h (min)	T_C (min)	T_{design} (min)	T_L (min)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
A 1	2480	100	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.558	0.01	1.07	2380	0.010	PAVED	2.03	20.3	19.54							20.61	20.61	12.37
A 2	1173	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	45	0.010	PAVED	2.03	20.3	0.37	1078	0.005	48" RCP		114.31	8.1	2.22	3.39	5.00	3.00
A 3	1200	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	295	0.010	PAVED	2.03	20.3	2.42	855	0.005	48" RCP		114.31	8.1	1.76	4.99	5.00	3.00
A 4	1128	50	0.010	SHORT GRASS PRAIRIE	0.129	0.15	6.48	250	0.010	PAVED	2.03	20.3	2.05	828	0.003	36" RCP		94.36	5.2	2.67	11.20	11.20	6.72
A 5	383	100	0.007	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.035	0.01	1.61	254	0.006	PAVED	1.57	20.3	2.70	178	0.024	18" RCP		59.44	9.2	0.32			
														174	0.007	24" RCP		72.01	6.0	0.48			
														174	0.005	30" RCP		83.56	5.9	0.49			
														474	0.006	36" RCP		94.36	7.4	1.07	4.63	5.00	3.00
														234	0.007	42" RCP		104.57	8.6	0.45			
														22	0.036	48" RCP		114.31	21.8	0.02			
														28	0.086	60" RCP		132.64	38.8	0.01			
A 6	637	100	0.044	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	2.158	0.01	0.77	239	0.017	PAVED	2.62	20.3	1.52	299	0.004	18" RCP		59.44	3.7	1.33			
														351	0.008	24" RCP		72.01	6.4	0.92			
														174	0.012	30" RCP		83.56	9.1	0.32			
														174	0.010	36" RCP		94.36	9.2	0.31	5.87	5.87	3.52
														153	0.005	42" RCP		104.57	7.1	0.36			
														137	0.003	48" RCP		114.31	6.7	0.34			
A 7	1035	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	785	0.010	6X6 RCB		149.79	14.98	0.87	13.85	13.85	8.31
A 8	1249	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	999	0.010	8X4 RCB		138.47	13.85	1.20	14.18	14.18	8.51
A 9	1540	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	1290	0.010	10X7 RCB		184.99	18.50	1.16	14.14	14.14	8.48
A 10	1041	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	941	0.010	UNPAVED	1.61	16.1	9.74							21.16	21.16	12.70
A 11	851	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	601	0.010	24" RCP		72.01	7.20	1.39	14.37	14.37	8.62
A 12	1985	80	0.010	DENSE GRASS	0.096	0.24	13.92	25	0.010	UNPAVED	1.61	16.10	0.26	1055	0.010	PARABOLIC SWALE, 1' DEEP, 10' SPREAD		27.68	2.77	6.35			
														275	0.010	24" RCP		72.01	7.20	0.64			
														100	0.010	10X7 RCB		184.99	18.50	0.09	23.53	23.53	14.12
														325	0.010	48" RCP		114.31	11.43	0.47			
														500	0.005	CONCRETE TRAP CHANNEL, B=0, Y= 2, SS=1:1		65.52	4.63	1.80			
A 13	371	160	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.731	0.01	1.54	1	0.005	PAVED	1.44	20.3	0.01	210	0.010	24" RCP		72.01	7.2	0.49	2.04	5.00	3.00
A 14	166	15	0.005	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	0.619	0.01	0.40	1	0.005	PAVED	1.44	20.3	0.01	150	0.010	18" RCP		59.44	5.9	0.42	0.84	5.00	3.00
OS-1	3300	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	2400	0.010	UNPAVED	1.61	16.1	24.84	800	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3:1		68.56	6.86	1.94	38.21	38.21	22.93

PROPOSED DRAINAGE AREA MAP CALCULATIONS

HEC-HMS SUMMARY: DEVELOPED CONDITONS							2 YEAR STORM		10 YEAR STORM		25 YEAR STORM		100 YEAR STORM	
Drainage Area Basin Designation	Point of Analysis	Drainage Area (ac)	Base Curve Number CN	Lag Time (min)	Cumulative Area (ac)	Impervious Cover %	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)	Runoff Per Drainage Area (cfs)	Routed Cumulative Runoff (cfs)
DA-1		8.86	80	12.37		51.18%	26.80		39.40		48.30		61.70	
DA-2		9.73	84	3.00		85.40%	71.60		73.50		86.60		104.10	
DA-3		8.61	84	3.00		78.70%	60.90		63.70		75.40		91.00	
DA-4		9.26	84	6.72		70.00%	45.80		56.40		67.00		82.80	
DA-5		12.79	80	3.00		91.81%	96.60		97.70		114.70		137.50	
DA-6		10.74	80	3.52		87.32%	75.00		78.50		92.00		111.50	
DA-9		21.90	80	13.08		7.12%	40.30		75.80		98.00		132.40	
DA-10		5.87	80	12.70		0.00%	10.00		19.70		25.70		35.10	
DA-11		8.75	80	8.57		0.00%	18.00		34.10		43.90		59.70	
DA-13		2.68	93	3.00		90.20%	21.00		21.00		24.50		29.30	
DA-14		1.00	80	3.00		0.00%	3.00		4.90		6.40		8.40	
POND-A								50.20		95.80		119.10		142.20
DA-7		9.76	80	8.30		13.90%	24.50		41.50		52.50		69.80	
DA-8		8.39	80	8.34		0.00%	17.50		33.00		42.50		57.60	
DA-12		4.36	80	14.12		0.00%	7.00		14.00		18.30		25.00	
OS-1		106.13	84	22.93		0.00%	161.20		307.20		398.90		530.90	
	POA							265.20		519.90		677.40		890.90

Basin ID	Flowpath Length (ft)	Overland Flow: Length (ft)	Slope (ft/ft)	Surface Cover	Velocity (ft/s)	*Manning's n	T_0 (min)	Shallow Concentrated Flow: Length (ft)	Slope (ft/ft)	Surface Type	Velocity (ft/s)	*K	T_S (min)	Channel Flow: Length (ft)	Slope (ft/ft)	Type	*K (ft)	Velocity (ft/s)	T_h (min)	T_C (min)	T_{design} (min)	T_L (min)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
DA 1	2480	100	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.557	0.01	1.07	2380	0.010	PAVED	2.03	20.3	19.54							20.61	20.61	12.37
DA 2	1173	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	45	0.010	PAVED	2.03	20.3	0.37	1078	0.005	48" RCP		114.31	8.1	2.22	3.39	5.00	3.00
DA 3	1200	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	295	0.010	PAVED	2.03	20.3	2.42	855	0.005	48" RCP		114.31	8.1	1.76	4.99	5.00	3.00
DA 4	1128	50	0.010	SHORT GRASS PRAIRIE	0.129	0.15	6.48	250	0.010	PAVED	2.03	20.3	2.05	828	0.003	36" RCP		94.36	5.2	2.67	11.20	11.20	6.72
DA 5	383	100	0.007	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.035	0.01	1.61	254	0.01	PAVED	1.57	20.30	2.70	178	0.024	18" RCP		59.44	9.2	0.32			
														174	0.007	24" RCP		72.01	6.0	0.48			
														174	0.005	30" RCP		83.56	5.9	0.49			
														474	0.006	36" RCP		94.36	7.4	1.07	4.63	5.00	3.00
														234	0.007	42" RCP		104.57	8.6	0.45			
														22	0.036	48" RCP		114.31	21.8	0.02			
														28	0.086	60" RCP		132.64	38.8	0.01			
DA 6	637	100	0.044	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	2.158	0.01	0.77	239	0.02	PAVED	2.62	20.30	1.52	299	0.004	18" RCP		59.44	3.7	1.33			
														351	0.008	24" RCP		72.01	6.4	0.92			
														174	0.012	30" RCP		83.56	9.1	0.32			
														174	0.010	36" RCP		94.36	9.2	0.31	5.87	5.87	3.52
														153	0.005	42" RCP		104.57	7.1	0.36			
														137	0.003	48" RCP		114.31	6.7	0.34			
DA 7	1035	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	785	0.010	6X6 RCB		149.79	15.0	0.87	13.85	13.85	8.31
DA 8	1249	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	999	0.010	8X4 RCB		138.47	13.8	1.20	14.18	14.18	8.51
DA 9	1540	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	1290	0.010	10X7 RCB		184.99	18.5	1.16	14.14	14.14	8.48
DA 10	1041	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	941	0.010	UNPAVED	1.61	16.1	9.74							21.16	21.16	12.70
DA 11	851	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	601	0.010	24" RCP		72.01	7.2	1.39	14.37	14.37	8.62
DA 12	1985	80	0.010	DENSE GRASS	0.096	0.24	13.92	25	0.010	UNPAVED	1.61	16.10	0.26	1055	0.010	PARABOLIC SWALE, 1' DEEP, 10' SPREAD		27.68	2.77	6.35			
														275	0.010	24" RCP		72.01	7.20	0.64			
														100	0.010	10X7 RCB		184.99	18.50	0.09	23.53	23.53	14.12
														325	0.010	48" RCP		114.31	11.43	0.47			
														500	0.005	CONCRETE TRAP CHANNEL, B=0, Y= 2, SS=1:1		65.52	4.63	1.80			
DA 13	371	160	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.731	0.01	1.54	1	0.005	PAVED	1.44	20.3	0.01	210	0.010	24" RCP		72.01	7.2	0.49	2.04	5.00	3.00
DA 14	166	15	0.005	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	0.619	0.01	0.40	1	0.005	PAVED	1.44	20.3	0.01	150	0.010	18" RCP		59.44	5.9	0.42	0.84	5.00	3.00
OS-1	3300	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	2400	0.010	UNPAVED	1.61	16.1	24.84	800	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3:1		68.56	6.86	1.94	38.21	38.21	22.93

POA COMPARISON

FLOW COMPARISON: EXISTING VS. INTERIM VS. PROPOSED												
	2 YEAR STORM			10 YEAR STORM			25 YEAR STORM			100 YEAR STORM		
Point of Analysis	Existing (cfs)	Interim (cfs)	Proposed (cfs)	Existing (cfs)	Interim (cfs)	Proposed (cfs)	Existing (cfs)	Interim (cfs)	Proposed (cfs)	Existing (cfs)	Interim (cfs)	Proposed (cfs)
POA	402.20	258.90	265.20	762.70	508.30	519.90	1002.60	663.70	677.40	1362.50	873.00	890.90

NOTE: DETENTION FOR THIS SITE IS BEING PROVIDED WITH 2020-55-CON, POND A
NOTE: THIS HAS BEEN CALCULATED WITH SCS METHOD-TIME OF CONCENTRATION CALCS.

Westwood
Phone (512) 485-0831
Toll Free (888) 937-5150
8701 N. Mopac Expy, Suite 320
Austin, TX 78759
westwoodps.com
Westwood Professional Services, Inc.
TBPE FIRM REGISTRATION NO. F-11756
TBPLS FIRM REGISTRATION NO. LS-10074301

REVISIONS

NO.	DATE	DESCRIPTION	BY

TITAN NORTHPARK TOWN CENTER
INFRASTRUCTURE IMPROVEMENTS
CONSTRUCTION PLAN SET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

DRAINAGE AREA CALCULATIONS

STATE OF TEXAS
HOLLIS ANN SCHEFFLER
136049
LICENSED
PROFESSIONAL ENGINEER

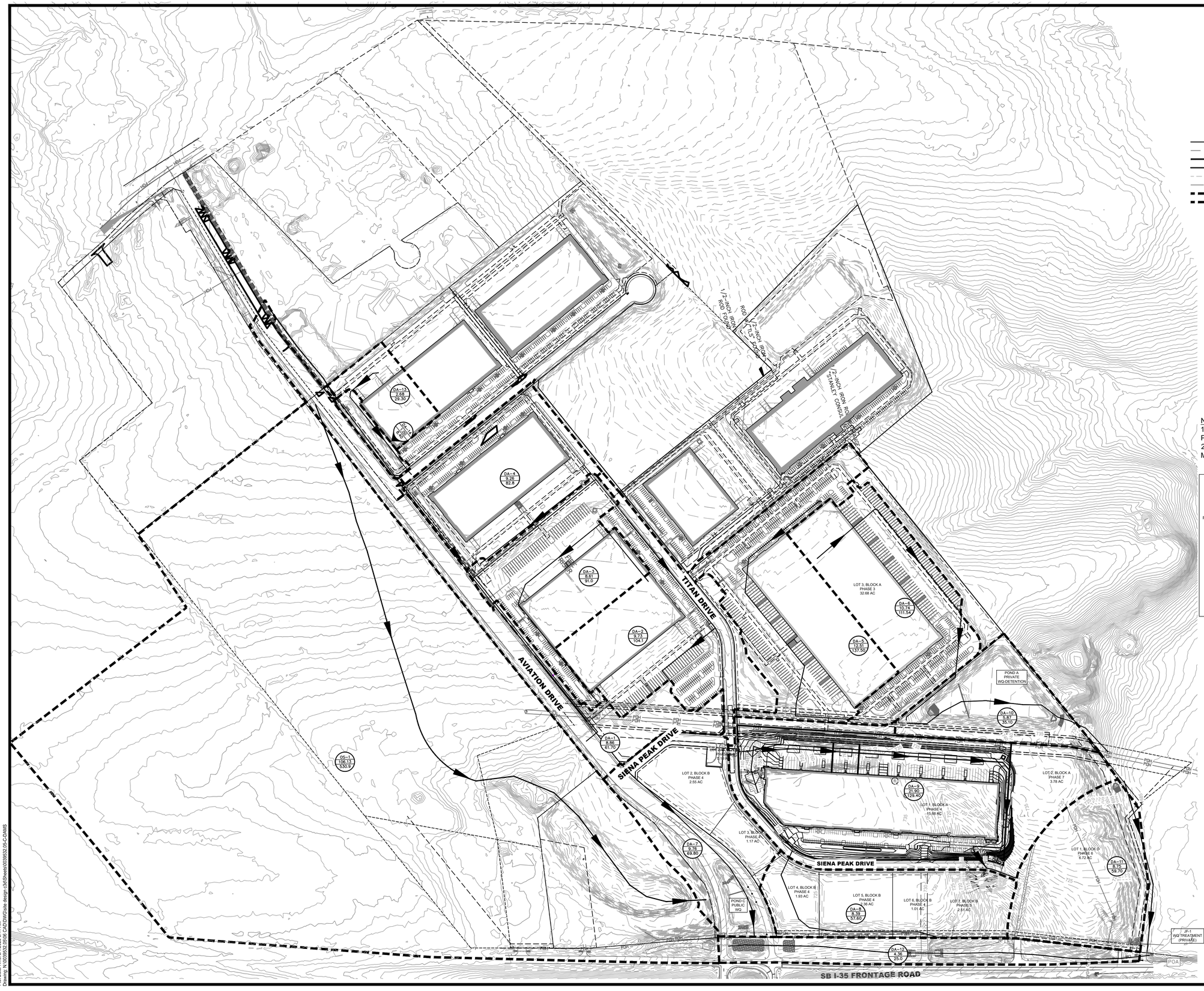
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SUPERVISOR OF HOLLIS ANN SCHEFFLER, P.E. 136049 ON 5/1/2025. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
HAS	NBB	MAR 2024

SHEET NO. 16

2024-06-CON

SFORERO
5/7/2025 9:59 AM
N:\0041495.00\06 CAD\DWG\SITE DESIGN C3D\0041495.00_DRAMS.DWG



Last Saved by: SFontero
Last Saved: 4/4/2025 9:23 AM
Plotted: 4/4/2025 9:25 AM
Drawing: N:\0039532.05\06 CAD\DWG\site design c3d\Sheets\0039532.05-C-DAMS

Westwood
Westwood Professional Services, Inc.
8701 NORTH MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE

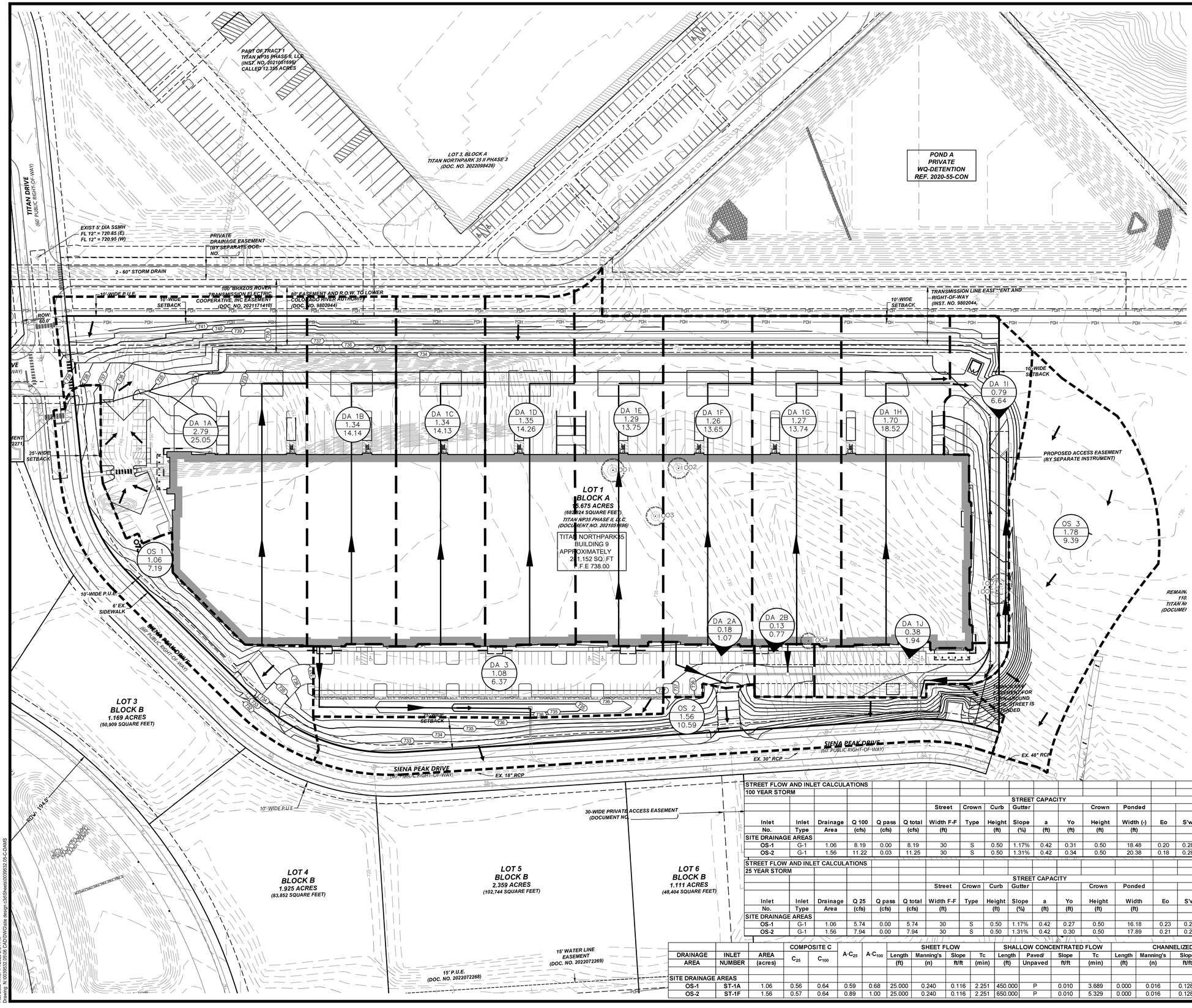
TITAN NORTHPARK 35 IX
POND A DRAINAGE AREA MAP

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A Scheffler
136049
LICENSED
PROFESSIONAL ENGINEER

10
SHEET 10 OF 48

2025-20-SDP



0 30 60 120 180

GRAPHIC SCALE IN FEET
1"=60'

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- 100YR FP — 100 YR FLOODPLAIN LIMIT
- 133 — PROPOSED CONTOUR
- 133 — EXISTING CONTOUR
- DRAINAGE SWALE
- DRAINAGE DIVIDE
- EX DRAINAGE DIVIDE
- DA 1 / 1.00 / 7.99 — DRAINAGE AREA ID, AREA IN ACRES, Q_{100} IN CUBIC FEET PER SECOND
- DRAINAGE FLOW DIRECTION
- CURB INLET
- GRATE INLET
- DROP INLET (Y-INLET)
- A1 — PROPOSED INLET LABEL

STREET FLOW AND INLET CALCULATIONS
100 YEAR STORM

						STREET CAPACITY												INLET ON GRADE CAPACITY					
						Street	Crown	Curb	Gutter			Crown	Ponded										
Inlet No.	Inlet Type	Drainage Area	Q 100 (cfs)	Q pass (cfs)	Q total (cfs)	Width F-F (ft)	Type	Height (ft)	Slope (%)	a (ft)	Yo (ft)	Height (ft)	Width (-) (ft)	Eo	S'w	Sx	Se	LT	L	E	Qi	Qpass (cfs)	Pass to Inlet #
SITE DRAINAGE AREAS																							
OS-1	G-1	1.06	8.19	0.00	8.19	30	S	0.50	1.17%	0.42	0.31	0.50	18.48	0.20	0.28	0.02	0.07	21.90	20	0.99	8.08	0.10	ST-1F
OS-2	G-1	1.56	11.22	0.03	11.25	30	S	0.50	1.31%	0.42	0.34	0.50	20.38	0.18	0.28	0.02	0.07	27.01	20	0.91	10.26	0.99	-

STREET FLOW AND INLET CALCULATIONS
25 YEAR STORM

						STREET CAPACITY												INLET ON GRADE CAPACITY					
						Street	Crown	Curb	Gutter			Crown	Ponded										
Inlet No.	Inlet Type	Drainage Area	Q 25 (cfs)	Q pass (cfs)	Q total (cfs)	Width F-F (ft)	Type	Height (ft)	Slope (%)	a (ft)	Yo (ft)	Height (ft)	Width (ft)	Eo	S'w	Sx	Se	LT	L	E	Qi	Qpass (cfs)	Pass to Inlet #
SITE DRAINAGE AREAS																							
OS-1	G-1	1.06	5.74	0.00	5.74	30	S	0.50	1.17%	0.42	0.27	0.50	16.18	0.23	0.28	0.02	0.08	17.81	20	1.00	5.74	0.00	ST-1F
OS-2	G-1	1.56	7.94	0.00	7.94	30	S	0.50	1.31%	0.42	0.30	0.50	17.89	0.21	0.28	0.02	0.08	22.06	20	0.99	7.83	0.11	-

			COMPOSITE C				SHEET FLOW				SHALLOW CONCENTRATED FLOW				CHANNELIZED FLOW					Cumulative	INTENSITY		DISCHARGE	
DRAINAGE AREA	INLET NUMBER	AREA (acres)	C_{25}	C_{100}	$A \cdot C_{25}$	$A \cdot C_{100}$	Length (ft)	Manning's (n)	Slope ft/ft	Tc (min)	Length (ft)	Paved/ Unpaved	Slope ft/ft	Tc (min)	Length (ft)	Manning's (n)	Slope ft/ft	Velocity ft/s	Tc (min)	Tc (min)	I 25yr (in/hr)	I 100yr (in/hr)	Q 25 (cfs)	Q 100 (cfs)
SITE DRAINAGE AREAS																								
OS-1	ST-1A	1.06	0.56	0.64	0.59	0.68	25.000	0.240	0.116	2.251	450.000	P	0.010	3.689	0.000	0.016	0.1285	12.928	0.000	5.94	9.67	12.07	5.74	8.19
OS-2	ST-1F	1.56	0.57	0.64	0.89	1.00	25.000	0.240	0.116	2.251	650.000	P	0.010	5.329	0.000	0.016	0.1285	12.928	0.000	7.58	9.01	11.32	8.01	11.30

Westwood
Westwood Professional Services, Inc.
8701 NORTH MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

GEORGETOWN, WILLIAMSON COUNTY, TEXAS

205 SIENA PARK DRIVE
TITAN NORTHPARK 35 IX
SITE DRAINAGE AREA MAP

DATE: APRIL, 2025
DRAFTER: CBA/JDI
DESIGNER: SF
CHECKED: HAS
PROJECT NO.
0039532.05

4/2/2025
STATE OF TEXAS
Hollis A. Scheffler
136049
LICENSED
PROFESSIONAL
ENGINEER

11
SHEET 11 OF 48

2025-20-SDP

Last Saved by: SFlorero
Last Saved: 4/4/2025 9:25 AM
Plotted by: Hollis Scheffler 4/4/2025 9:25 AM
Drawing: N:\0039532.05\06 CAD\DWG\site design c3d\Sheets\0039532.05-C-DAMS

EXISTING DRAINAGE AREA MAP CALCULATIONS

HEC-HMS SUMMARY: EXISTING CONDITONS

Drainage Area Basin Designation	Point of Analysis	Drainage Area (ac)	Base Curve Number CN	Lag Time (min)	Cumulative Area (ac)	Impervious Cover %	2 YEAR STORM Runoff Per Drainage Area (cfs)	2 YEAR STORM Routed Cumulative Runoff (cfs)	10 YEAR STORM Runoff Per Drainage Area (cfs)	10 YEAR STORM Routed Cumulative Runoff (cfs)	25 YEAR STORM Runoff Per Drainage Area (cfs)	25 YEAR STORM Routed Cumulative Runoff (cfs)	100 YEAR STORM Runoff Per Drainage Area (cfs)	100 YEAR STORM Routed Cumulative Runoff (cfs)
DA-1		8.86	80	12.37		51.18%	26.80		39.40		48.30		61.70	
DA-2		9.73	84	3.00		85.40%	71.60		73.50		86.60		104.10	
DA-3		8.61	84	3.00		78.70%	60.90		63.70		75.40		91.00	
DA-4		9.26	84	6.72		70.00%	45.80		56.40		67.00		82.80	
DA-5		12.79	80	3.00		91.81%	96.60		97.70		114.70		137.50	
DA-6		10.74	80	3.52		87.32%	75.00		78.50		92.00		111.50	
DA-9		21.90	80	13.08		7.12%	40.30		75.80		98.00		132.40	
DA-10		5.87	80	12.70		0.00%	10.00		19.70		25.70		35.10	
DA-11		8.75	80	8.57		0.00%	18.00		34.10		43.90		59.70	
DA-13		2.68	93	3.00		90.20%	21.00		21.00		24.50		29.30	
DA-14		1.00	80	3.00		0.00%	3.00		4.90		6.40		8.40	
POND-A								50.20		95.80		119.10		142.20
DA-7		9.76	80	8.30		13.90%	24.50		41.50		52.50		69.80	
DA-8		8.39	80	8.34		0.00%	17.50		33.00		42.50		57.60	
DA-12		4.36	80	14.12		0.00%	7.00		14.00		18.30		25.00	
OS-1		106.13	84	22.93		0.00%	161.20		307.20		398.90		530.90	
	POA							265.20		519.90		677.40		890.90

Basin ID	Flowpath Length (ft)	Overland Flow Length	Slope	Surface Cover	Velocity	*Manning's n	T_o	Shallow Concentrated Flow Length	Slope	Surface Type	Velocity	*K	T_s	Channel Flow Length	Slope	Type	*K	Velocity	T_h	T_c	T_{design}	T_L
	(ft)	(ft)	(ft/ft)		(ft/s)		(min)	(ft)	(ft/ft)		(ft/s)		(min)	(ft)	(ft/ft)		(ft)	(ft/s)	(min)	(min)	(min)	(min)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
DA 1	2480	100	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.557	0.01	1.07	2380	0.010	PAVED	2.03	20.3	19.54							20.61	20.61	12.37
DA 2	1173	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	45	0.010	PAVED	2.03	20.3	0.37	1078	0.005	48" RCP	114.31	8.1	2.22	3.39	5.00	3.00
DA 3	1200	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	295	0.010	PAVED	2.03	20.3	2.42	855	0.005	48" RCP	114.31	8.1	1.76	4.99	5.00	3.00
DA 4	1128	50	0.010	SHORT GRASS PRAIRIE	0.129	0.15	6.48	250	0.010	PAVED	2.03	20.3	2.05	828	0.003	36" RCP	94.36	5.2	2.67	11.20	11.20	6.72
														178	0.024	18" RCP	59.44	9.2	0.32			
														174	0.007	24" RCP	72.01	6.0	0.48			
														174	0.005	30" RCP	83.56	5.9	0.49			
DA 5	383	100	0.007	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.035	0.01	1.61	254	0.01	PAVED	1.57	20.30	2.70	474	0.006	36" RCP	94.36	7.4	1.07	4.63	5.00	3.00
														234	0.007	42" RCP	104.57	8.6	0.45			
														22	0.036	48" RCP	114.31	21.8	0.02			
														28	0.086	60" RCP	132.64	38.8	0.01			
														299	0.004	18" RCP	59.44	3.7	1.33			
														351	0.008	24" RCP	72.01	6.4	0.92			
														174	0.012	30" RCP	83.56	9.1	0.32			
DA 6	637	100	0.044	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	2.158	0.01	0.77	239	0.02	PAVED	2.62	20.30	1.52	174	0.010	36" RCP	94.36	9.2	0.31	5.87	5.87	3.52
														153	0.005	42" RCP	104.57	7.1	0.36			
														137	0.003	48" RCP	114.31	6.7	0.34			
DA 7	1035	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	785	0.010	6X6 RCB	149.79	15.0	0.87	13.85	13.85	8.31
DA 8	1249	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	999	0.010	8X4 RCB	138.47	13.8	1.20	14.18	14.18	8.51
DA 9	1540	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	1290	0.010	10X7 RCB	184.99	18.5	1.16	14.14	14.14	8.48
DA 10	1041	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	941	0.010	UNPAVED	1.61	16.1	9.74							21.16	21.16	12.70
DA 11	851	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	601	0.010	24" RCP	72.01	7.2	1.39	14.37	14.37	8.62
														1055	0.010	PARABOLIC SWALE, 1' DEEP, 10' SPREAD	27.68	2.77	6.35			
														275	0.010	24" RCP	72.01	7.20	0.64			
DA 12	1985	80	0.010	DENSE GRASS	0.096	0.24	13.92	25	0.010	UNPAVED	1.61	16.10	0.26	100	0.010	10X7 RCB	184.99	18.50	0.09	23.53	23.53	14.12
														325	0.010	48" RCP	114.31	11.43	0.47			
														500	0.005	CONCRETE TRAP CHANNEL, B=0, Y= 2, SS=1:1	65.52	4.63	1.80			
DA 13	371	160	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.731	0.01	1.54	1	0.005	PAVED	1.44	20.3	0.01	210	0.010	24" RCP	72.01	7.2	0.49	2.04	5.00	3.00
DA 14	166	15	0.005	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	0.619	0.01	0.40	1	0.005	PAVED	1.44	20.3	0.01	150	0.010	18" RCP	59.44	5.9	0.42	0.84	5.00	3.00
OS-1	3300	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	2400	0.010	UNPAVED	1.61	16.1	24.84	800	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3:1	68.56	6.86	1.94	38.21	38.21	22.93

PROPOSED DRAINAGE AREA MAP CALCULATIONS

HEC-HMS SUMMARY: DEVELOPED CONDITONS

Drainage Area Basin Designation	Point of Analysis	Drainage Area (ac)	Base Curve Number CN	Lag Time (min)	Cumulative Area (ac)	Impervious Cover %	2 YEAR STORM Runoff Per Drainage Area (cfs)	2 YEAR STORM Routed Cumulative Runoff (cfs)	10 YEAR STORM Runoff Per Drainage Area (cfs)	10 YEAR STORM Routed Cumulative Runoff (cfs)	25 YEAR STORM Runoff Per Drainage Area (cfs)	25 YEAR STORM Routed Cumulative Runoff (cfs)	100 YEAR STORM Runoff Per Drainage Area (cfs)	100 YEAR STORM Routed Cumulative Runoff (cfs)
DA-1		8.86	80	12.37		51.18%	26.80		39.40		48.30		61.70	
DA-2		9.73	84	3.00		85.40%	71.60		73.50		86.60		104.10	
DA-3		8.61	84	3.00		78.70%	60.90		63.70		75.40		91.00	
DA-4		9.26	84	6.72		70.00%	45.80		56.40		67.00		82.80	
DA-5		12.79	80	3.00		91.81%	96.60		97.70		114.70		137.50	
DA-6		10.74	80	3.52		87.32%	75.00		78.50		92.00		111.50	
DA-9		21.90	80	13.08		58.00%	105.20		130.40		159.30		198.80	
DA-10		5.87	80	12.70		0.00%	10.00		19.70		25.70		35.10	
DA-11		8.75	80	8.57		0.00%	18.00		34.10		43.90		59.70	
DA-13		2.68	93	3.00		90.20%	21.00		21.00		24.50		29.30	
DA-14		1.00	80	3.00		0.00%	3.00		4.90		6.40		8.40	
POND-A								50.20		95.80		119.10		142.20
DA-7		9.76	80	8.30		13.90%	24.50		41.50		52.50		69.80	
DA-8		8.39	80	8.34		0.00%	17.50		33.00		42.50		57.60	
DA-12		4.36	80	14.12		0.00%	7.00		14.00		18.30		25.00	
OS-1		106.13	84	22.93		0.00%	161.20		307.20		398.90		530.90	
	POA							255.40		497.70		648.80		850.10

Basin ID	Flowpath Length (ft)	Overland Flow Length	Slope	Surface Cover	Velocity	*Manning's n	T_o	Shallow Concentrated Flow Length	Slope	Surface Type	Velocity	*K	T_s	Channel Flow Length	Slope	Type	*K	Velocity	T_h	T_c	T_{design}	T_L
	(ft)	(ft)	(ft/ft)		(ft/s)		(min)	(ft)	(ft/ft)		(ft/s)		(min)	(ft)	(ft/ft)		(ft)	(ft/s)	(min)	(min)	(min)	(min)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
DA 1	2480	100	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.557	0.01	1.07	2380	0.010	PAVED	2.03	20.3	19.54							20.61	20.61	12.37
DA 2	1173	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	45	0.010	PAVED	2.03	20.3	0.37	1078	0.005	48" RCP	114.31	8.1	2.22	3.39	5.00	3.00
DA 3	1200	50	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.040	0.01	0.80	295	0.010	PAVED	2.03	20.3	2.42	855	0.005	48" RCP	114.31	8.1	1.76	4.99	5.00	3.00
DA 4	1128	50	0.010	SHORT GRASS PRAIRIE	0.129	0.15	6.48	250	0.010	PAVED	2.03	20.3	2.05	828	0.003	36" RCP	94.36	5.2	2.67	11.20	11.20	6.72
														178	0.024	18" RCP	59.44	9.2	0.32			
														174	0.007	24" RCP	72.01	6.0	0.48			
														174	0.005	30" RCP	83.56	5.9	0.49			
DA 5	383	100	0.007	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.035	0.01	1.61	254	0.01	PAVED	1.57	20.30	2.70	474	0.006	36" RCP	94.36	7.4	1.07	4.63	5.00	3.00
														234	0.007	42" RCP	104.57	8.6	0.45			
														22	0.036	48" RCP	114.31	21.8	0.02			
														28	0.086	60" RCP	132.64	38.8	0.01			
														299	0.004	18" RCP	59.44	3.7	1.33			
														351	0.008	24" RCP	72.01	6.4	0.92			
														174	0.012	30" RCP	83.56	9.1	0.32			
DA 6	637	100	0.044	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	2.158	0.01	0.77	239	0.02	PAVED	2.62	20.30	1.52	174	0.010	36" RCP	94.36	9.2	0.31	5.87	5.87	3.52
														153	0.005	42" RCP	104.57	7.1	0.36			
														137	0.003	48" RCP	114.31	6.7	0.34			
DA 7	1035	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	785	0.010	6X6 RCB	149.79	15.0	0.87	13.85	13.85	8.31
DA 8	1249	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	999	0.010	8X4 RCB	138.47	13.8	1.20	14.18	14.18	8.51
DA 9	2200	100	0.010	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.180	0.01	1.41	300	0.010	PAVED	2.03	20.3	2.46	1800	0.005	48" RCP	114.31	8.1	3.71	7.59	7.59	4.55
DA 10	1041	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	941	0.010	UNPAVED	1.61	16.1	9.74							21.16	21.16	12.70
DA 11	851	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	150	0.010	UNPAVED	1.61	16.1	1.55	601	0.010	24" RCP	72.01	7.2	1.39	14.37	14.37	8.62
														1055	0.010	PARABOLIC SWALE, 1' DEEP, 10' SPREAD	27.68	2.77	6.35			
														275	0.010	24" RCP	72.01	7.20	0.64			
DA 12	1985	80	0.010	DENSE GRASS	0.096	0.24	13.92	25	0.010	UNPAVED	1.61	16.10	0.26	100	0.010	10X7 RCB	184.99	18.50	0.09	23.53	23.53	14.12
														325	0.010	48" RCP	114.31	11.43	0.47			
														500	0.005	CONCRETE TRAP CHANNEL, B=0, Y= 2, SS=1:1	65.52	4.63	1.80			
DA 13	371	160	0.020	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	1.731	0.01	1.54	1	0.005	PAVED	1.44	20.3	0.01	210	0.010	24" RCP	72.01	7.2	0.49	2.04	5.00	3.00
DA 14	166	15	0.005	SMOOTH SURFACES (CONCRETE, ASPHALT, GRAVEL, OR BARE SOIL)	0.619	0.01	0.40	1	0.005	PAVED	1.44	20.3	0.01	150	0.010	18" RCP	59.44	5.9	0.42	0.84	5.00	3.00
OS-1	3300	100	0.010	SHORT GRASS PRAIRIE	0.146	0.15	11.42	2400	0.010	UNPAVED	1.61	16.1	24.84	800	0.010	NATURAL TRAP CHANNEL, B=10, Y= 6, SS=3:1	68.56	6.86	1.94	38.21	38.21	22.93

SITE DRAINAGE AREA MAP CALCULATIONS

Drainage Number	MASTER DRAINAGE AREA	IC	PC	%IC	2 year perv C	2 year imp C	2 year weighted C	10 year perv C	10 year imp C	10 year weighted C	25 year perv C	25 year imp C	25 year weighted C	100 year perv C	100 year imp C	100 year weighted C
SITE CONDITION DRAINAGE AREAS																
1A	**2.79**	**1.542**	1.2478	55.28%	0.34	0.42	0.97	0.39	0.49	0.97	0.42	0.52	0.97	0.49	0.61	0.97
1B	**1.34**	**1.112**	0.2275	83.02%	0.34	0.08	0.97	0.39	0.09	0.97	0.42	0.10	0.97	0.49	0.11	0.97
1C	**1.34**	**1.111**	0.2293	82.89%	0.34	0.08	0.97	0.39	0.09	0.97	0.42	0.10	0.97	0.49	0.11	0.97
1D	**1.35**	**1.123**	0.2272	83.17%	0.34	0.08	0.97	0.39	0.09	0.97	0.42	0.10	0.97	0.49	0.11	0.97
1E	**1.29**	**1.095**	0.1949	84.89%	0.34	0.07	0.97	0.39	0.08	0.97	0.42	0.08	0.97	0.49	0.10	0.97
1F	**1.26**	**1.107**	0.1525	87.89%	0.34	0.05	0.97	0.39	0.06	0.97	0.42	0.06	0.97	0.49	0.07	0.97
1G	**1.27**	**1.113**	0.1575	87.60%	0.34	0.05	0.97	0.39	0.06	0.97	0.42	0.07	0.97	0.49	0.08	0.97
1H	**1.70**	**1.512**	0.1884	88.92%	0.34	0.06	0.97	0.39	0.07	0.97	0.42	0.08	0.97	0.49	0.09	0.97
1I	**0.85**	**0.306**	0.5440	36.00%	0.34	0.18	0.97	0.39	0.21	0.97	0.42	0.23	0.97	0.49	0.27	0.97
1J	**0.31**	**0.023**	0.2866	7.54%	0.34	0.10	0.97	0.39	0.11	0.97	0.42	0.12	0.97	0.49	0.14	0.97
2A	**0.18**	**0.003**	0.1770	1.68%	0.34	0.06	0.97	0.39	0.07	0.97	0.42	0.07	0.97	0.49	0.09	0.97
2B	**0.13**	**0.002**	0.1278	1.68%	0.34	0.04	0.97	0.39	0.05	0.97	0.42	0.05	0.97	0.49	0.06	0.97
3	**1.08**	**0.015**	1.0648	1.41%	0.34	0.36	0.97	0.39	0.42	0.97	0.42	0.45	0.97	0.49	0.52	0.97
OS 1	**1.06**	**0.310**	0.7504	29.21%	0.34	0.26	0.97	0.39	0.29	0.97	0.42	0.32	0.97	0.49	0.37	0.97
OS 2	**1.56**	**0.457**	1.1028	29.31%	0.34	0.37	0.97	0.39	0.43	0.97	0.42	0.46	0.97	0.49	0.54	0.97
OS 3	**1.78**	**0.000**	1.7800	0.00%	0.34	0.61	0.97	0.39	0.69	0.97	0.42	0.75	0.97	0.49	0.87	0.97

Drainage Number	2 year perv C	2 year imp C	2 year weighted C	10 year perv C	10 year imp C	10 year weighted C	25 year perv C	25 year imp C	25 year weighted C	100 year perv C	100 year imp C	100 year weighted C
1A	0.34	0.42	0.69	0.39	0.49	0.71	0.42	0.52	0.72	0.49	0.61	0.76
1B	0.34	0.08	0.86	0.39	0.09	0.87	0.42	0.10	0.88	0.49	0.11	0.89
1C	0.34	0.08	0.86	0.39	0.09	0.87	0.42	0.10	0.88	0.49	0.11	0.89
1D	0.34	0.08	0.86	0.39	0.09	0.87	0.42	0.10	0.89	0.49	0.11	0.89
1E	0.34	0.07	0.87	0.39	0.08	0.88	0.42	0.08	0.89	0.49	0.10	0.90
1F	0.34	0.05	0.89	0.39	0.06	0.90	0.42	0.06	0.90	0.49	0.07	0.91
1G	0.34	0.05	0.89	0.39	0.06	0.90	0.42	0.07	0.90	0.49	0.08	0.91
1H	0.34	0.06	0.90	0.39	0.07	0.91	0.42	0.08	0.91	0.49	0.09	0.92
1I	0.34	0.18	0.57	0.39	0.21	0.60	0.42	0.23	0.62	0.49	0.27	0.66
1J	0.34	0.10	0.39	0.39	0.11	0.43	0.42	0.12	0.46	0.49	0.14	0.53
2A	0.34	0.06	0.35	0.39	0.07	0.40	0.42	0.07	0.43	0.49	0.09	0.50
2B	0.34	0.04	0.35	0.39	0.05	0.40	0.42	0.05	0.43	0.49	0.06	0.50
3	0.34	0.36	0.35	0.39	0.42	0.40	0.42	0.45	0.43	0.49	0.52	0.50
OS 1	0.34	0.26	0.52	0.39	0.29	0.56	0.42	0.32	0.58	0.49	0.37	0.63
OS 2	0.34	0.37	0.52	0.39	0.43	0.56	0.42	0.46	0.58	0.49	0.54	0.63
OS 3	0.34	0.61	0.34	0.39	0.69	0.39	0.42	0.75	0.49	0.87	0.49	0.49

NOTE: DETENTION AND WATER QUALITY FOR THIS SITE IS BEING PROVIDED WITH 2020-55-CON, POND A

NOTE: THIS HAS BEEN CALCULATED WITH SCS METHOD-TIME OF CONCENTRATION CALCS.

DRAINAGE NUMBER	INLET NUMBER	AREA (acres)	C_2	C_{10}	C_{25}	C_{100}	SHEET FLOW Length (ft)	Slope (ft/ft)	Surface Cover	Velocity (ft/s)	Manning's n	T_{sheet} (min)	SHALLOW CONCENTRATED FLOW Length (ft)	Slope (ft/ft)	Surface Type	Velocity (ft/s)	K	$T_{shallow}$ (min)	CHANNEL FLOW Length (ft)	Slope (ft/ft)	Type	K (ft) $K=\frac{1.486 \cdot R^{2/3}}{n}$	Velocity (ft/s)	$T_{channel}$ (min)	Tc (min)	INTENSITY I 2yr (in/hr)	I 10yr (in/hr)	I 25yr (in/hr)	I 100yr (in/hr)	DISCHARGE Q 2 (cfs)	Q 10 (cfs)	Q 25 (cfs)	Q 100 (cfs)
DA 1A	1A	2.79	0.69	0.71	0.72	0.76	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	24" RCP	72.01	5.09	0.23	5.00	6.48	8.62	9.84	11.88	12.44	17.08	19.88	25.04
DA 1B	1B	1.34	0.86	0.87	0.88	0.89	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	30" RCP	83.56	5.91	0.20	5.00	6.48	8.62	9.84	11.88	7.49	10.06	11.56	14.14
DA 1C	1C	1.34	0.86	0.87	0.88	0.89	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	30" RCP	83.56	5.91	0.20	5.00	6.48	8.62	9.84	11.88	7.49	10.05	11.55	14.13
DA 1D	1D	1.35	0.86	0.87	0.88	0.89	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	30" RCP	83.56	5.91	0.20	5.00	6.48	8.62	9.84	11.88	7.56	10.15	11.66	14.26
DA 1E	1E	1.29	0.87	0.88	0.89	0.90	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	42" RCP	104.57	7.39	0.16	5.00	6.48	8.62	9.84	11.88	7.31	9.81	11.26	13.75
DA 1F	1F	1.26	0.89	0.90	0.90	0.91	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	48" RCP	114.31	8.08	0.14	5.00	6.48	8.62	9.84	11.88	7.30	9.77	11.20	13.65
DA 1G	1G	1.27	0.89	0.90	0.90	0.91	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	48" RCP	114.31	8.08	0.14	5.00	6.48	8.62	9.84	11.88	7.34	9.83	11.27	13.74
DA 1H	1H	1.70	0.90	0.91	0.91	0.92	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	70.00	0.01	48" RCP	114.31	8.08	0.14	5.00	6.48	8.62	9.84	11.88	9.92	13.27	15.21	18.52
DA 1I	1I	0.85	0.57	0.60	0.62	0.66	100.00	0.01	CONCRETE	0.79	0.013	2.10	250.00	0.01	PAVED	1.74	20.33	2.40	350.00	0.01	48" RCP	114.31	8.08	0.72	5.22	6.42	8.54	9.76	11.79	3.09	4.35	5.13	6.64
DA 1J	1J	0.31	0.39	0.43	0.46	0.53	90.00	0.01	CONCRETE	0.78	0.013	1.93	0.00	0.01	PAVED	1.74	20.33	0.00	0.00	0.01	48" RCP	114.31	8.08	0.00	5.00	6.48	8.62	9.84	11.88	0.78	1.16	1.41	1.94
DA 2A	2A	0.18	0.35	0.40	0.43	0.50	100.00	0.01	CONCRETE	0.79	0.013	2.10	5.00	0.01	PAVED	1.74	20.33	0.05	50.00	0.01	18" RCP	59.44	4.20	0.20	5.

Attachment I – Inspection and Maintenance for BMPs

The following inspection and maintenance guidelines for the temporary best management practices will be followed in accordance with the Edwards Aquifer Technical Guidance on Best Management Practices. Inspections of the Temporary BMPs will be documented in an inspection report. Inspection reports will document maintenance activities, sediment removal and modifications to the sediment and erosion controls.

Temporary Vegetation

1. Temporary vegetation should be inspected weekly and after each rain event to locate and repair any erosion.
2. Erosion from storms or other damage should be repaired as soon as practical by regrading the area and applying new seed.
3. If the vegetated cover is less than 80%, the area should be reseeded.

Dust Control

1. When dust is evident during dry weather, reapply dust control BMPs.

Temporary Construction Entrance/Exit

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

Silt Fence

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

Inlet Protection

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

Concrete Washout Area

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

Attachment H – Temporary Sediment Pond Plans and Calculations

A rough cut water quality pond will be utilized for the temporary sedimentation removal on-site and is to be graded in accordance with the following plan sheet provided. Revegetation or placement of underdrain piping shall not be carried out until the site construction phase is complete.

PROPOSED WALL (BY MWB)
TW 731.51
EL 731.18
TW 731.98
EL 720.75
EL 725.52
TW 732.08
EL 729.57
TW 731.34
EL 731.34
PROPOSED WALL (BY MWB)
TW 731.16
EL 731.16
TW 726.85
EL 719.24
TW 728.52
EL 728.52
A
12' MAINTENANCE ROAD
POND A EMERGENCY SPILLWAY (SEE DETAIL THIS SHEET)
48" HDPE
12" HDPE
POND CENTERLINE @ 1.0%
MAIN POOL
12' MAINTENANCE ROAD
GABION FOREBAY WALL
SEE DETAIL 7, SHEET 70
GABION SECTION VIEW
SEE DETAIL 8, SHEET 70
VERTICAL SEDIMENT DEPTH MARKER (DETAIL 5, SHEET 69)
FOREBAY
POND CENTERLINE @ 1.0%
EX. 60' ELECTRICAL EASEMENT
LCRA 10' EASEMENT
B
B
A
28'
27'
15'

STA 3+34.33 POND A OUTFALL
1-48" 30° BEND
FL 48"=712.04
N=10226361.65
E=3136927.06

STA 0+97.06 POND A OUTFALL
1-48" 11.25° BEND
FL 48"=688.59
N=10226448.45
E=3137147.89

STA 0+00.00 POND A OUTFALL
FL 48"=687.00
WITH ENERGY DISSIPATORS (DETAIL 6, SHEET 69)
950 SF 8"-10" ROCK RIP RAP
CLEAN WELL GRADED
GROUTED IN PLACE
N=10226465.64
E=3137243.41

STA 0+00.00 POND A WQV OUTFALL
STA 0+00.00 POND A MAINTENANCE
CONNECT TO 48" STORM DRAIN
FL 12"= 711.09
FL 12"= 711.09
FL 48"= 709.59
N=10226370.88
E=3136950.53

STA 4+24.34 POND A OUTFALL
CONSTRUCT:
1-TXDOT HEADWALL TYPE CH-FW-0
400 SF 8"-10" ROCK RIP RAP
CLEAN WELL GRADED
GROUTED IN PLACE
FL 48"=721.00
N=10226291.26
E=3136870.97

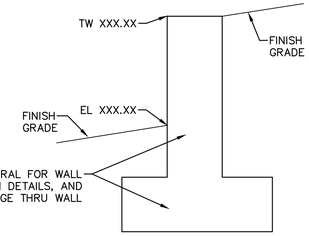
STA 1+24.62 POND A WQV OUTFALL
STA 1+24.62 POND A MAINTENANCE
2-12" 30° BEND
FL 12"=712.34
FL 12"=712.34
N=10226269.36
E=3136878.25

STA 1+51.54 POND A WQV OUTFALL
STA 2+07.12 POND A MAINTENANCE
INSTALL:
1-TYPE B HEADWALL WITH ORIFICE PLATE
CUT 6.56" DIA. HOLE IN ORIFICE PLATE
1-DEBRIS CAGE PER DETAIL 2, SHEET 69
1-TYPE B HEADWALL (MAINTENANCE)
FL 12"=713.00
FL 12"=713.00
N=10226259.29
E=3136853.28

STA 1+84.63 ST-A
CONSTRUCT:
1-CONCRETE HEADWALL
WITH FLARED WINGS
(CH-FW-0) (3:1) (2-60" HDPE)
WITH ENERGY DISSIPATORS (DETAIL 6, SHEET 69)
1850 SF 8"-12" ROCK RIP RAP
CLEAN WELL GRADED GROUTED IN PLACE
N=10225643.37
E=3136642.74

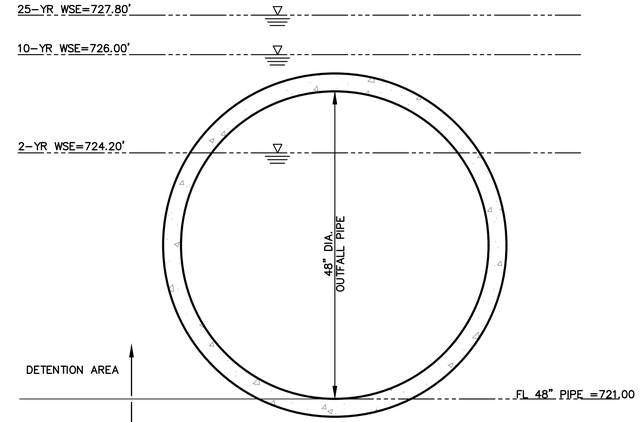
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HORIZONTAL SCALE IN FEET

LEGEND
- PROPERTY LINE
- OHL — OVERHEAD UTILITY LINE
- PROPOSED STORM LINE
- TI — TOP OF INLET
- 766 — PROPOSED DRAINAGE CONTOUR



WALL GRADING DETAIL

NOT TO SCALE

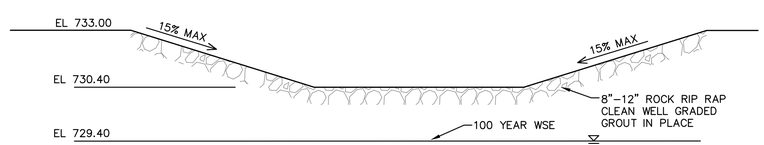


POND A DETENTION AREA OUTFALL DETAILS

Detention Pond Stage Storage Table			
Elevation	Area (SF)	Volume (CF)	Total Volume (CF)
721	103,079.00	N/A	0.00
722	107,411.06	105,245.03	105,245.03
723	111,799.52	109,605.29	214,850.32
724	116,244.38	114,021.95	328,872.27
725	120,745.63	118,495.01	447,367.27
726	125,303.28	123,024.46	570,391.73
727	129,917.33	127,610.31	698,002.04
728	134,587.78	132,252.55	830,254.60
729	139,314.62	136,951.20	967,205.79
730	144,097.86	141,706.24	1,108,912.03
731	148,937.49	146,517.68	1,255,429.71
Required Detention Volume = 1,089,000 CF			
100 Year WSE = 729.40			

Water Quality Volume Stage Storage Table			
Elevation	Area (SF)	Volume (CF)	Total Volume (CF)
713	3,661.98	N/A	0.00
714	15,741.29	9,701.64	9,701.64
715	43,435.61	29,588.45	39,290.09
716	65,527.51	54,481.56	93,771.65
717	81,037.63	73,282.57	167,054.22
718	90,424.69	85,731.16	252,785.38
719	94,586.26	92,505.48	345,290.85
720	98,804.28	96,695.27	441,986.12
721	103,079.00	100,941.64	542,927.76
Water Quality Surface Elevaton = 721.00			
Water Quality Required Volume = 542,908.00 CF			

Forebay Stage Storage Table			
Elevation	Area (SF)	Volume (CF)	Total Volume (CF)
717	6,893.88	N/A	0.00
718	13,047.58	9,970.73	9,970.73
719	14,330.92	13,689.25	23,659.98
720	15,451.32	14,891.12	38,551.11
721	16,600.30	16,025.81	54,576.92
10% of Required WQV = 54,290.80 CF			
Forebay Volume Provided = 54,576.00 CF			

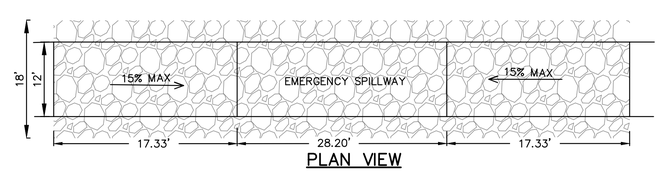


SECTION VIEW

PROPOSED HEC-HMS DETENTION SUMMARY								
AREA No.	2-YR INFLOW (CFS)	2-YR DISCHARGE (CFS)	10-YR INFLOW (CFS)	10-YR DISCHARGE (CFS)	25-YR INFLOW (CFS)	25-YR DISCHARGE (CFS)	100-YR INFLOW (CFS)	100-YR DISCHARGE (CFS)
POND A	186.7	45.2	284.8	93.9	347.1	129.7	430.9	152.6

WQV Orifice Equation						
Q=C*A*sqrt(2gH)						
C =	0.6	Diameter (in) =	6.56 in	Provided Volume =	542,908	
A =	0.235	Diameter (ft) =	0.55 ft	Drain Time =	48.00 hrs	48 hour max
g =	32.2	Area =	0.23 ft^2			
H =	7.73		0.02 in^2			
QOUT =	3.14					

POND A DETENTION SUMMARY							
100YR STORAGE		25YR STORAGE		10YR STORAGE		2YR STORAGE	
Provided Vol.	1,089,000 CF	Provided Vol.	803,804 CF	Provided Vol.	570,391 CF	Provided Vol.	352,571 CF
depth=	8.40 FT	depth=	6.80 FT	depth=	5.00 ft	depth=	3.20 ft



PLAN VIEW

POND A EMERGENCY SPILLWAY

NOT TO SCALE

Pacheco Koch
8701 N. MOPAC EXPY. SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008000

REVISIONS

NO.	DATE	DESCRIPTION	BY

AVIATION DRIVE EXTENSION
CIVIL INFRASTRUCTURE
GEORGETOWN, WILLIAMSON COUNTY, TEXAS
100% SUBMITTAL

POND A PLAN

STATE OF TEXAS
KEVIN C. MINKLER
124843
LICENSED PROFESSIONAL ENGINEER
08/23/2021

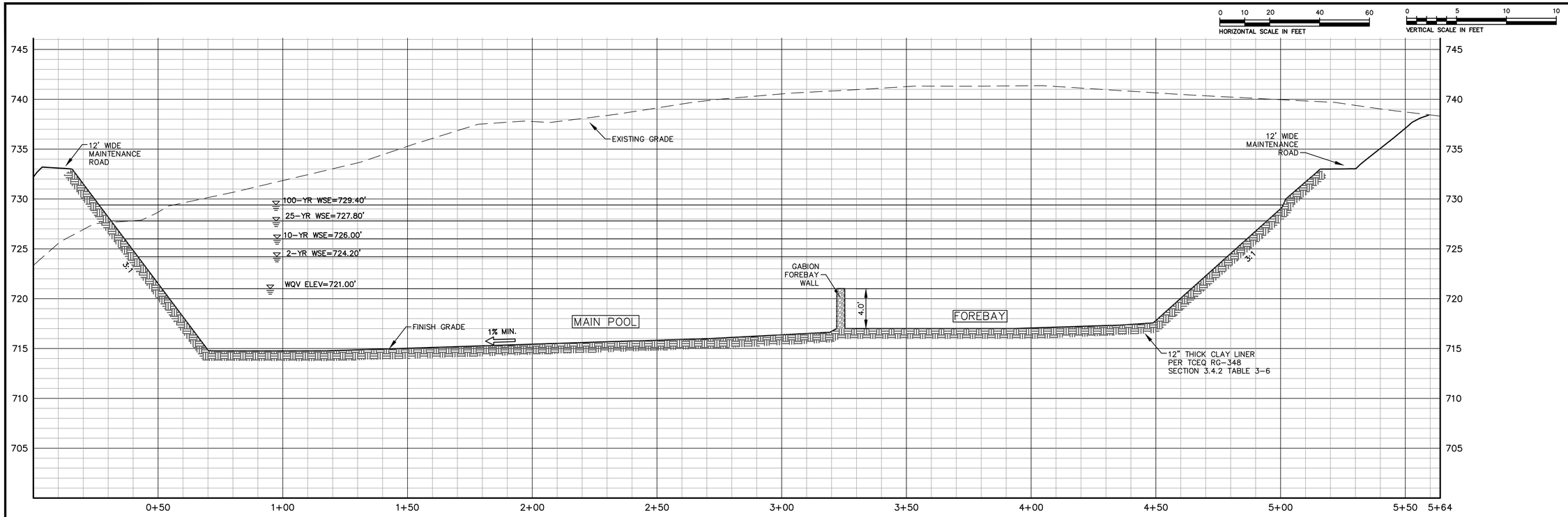
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN C. MINKLER, P.E. 124843 ON 08/23/2021. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
DMS/KCM	DMS/KCM	AUGUST 2021

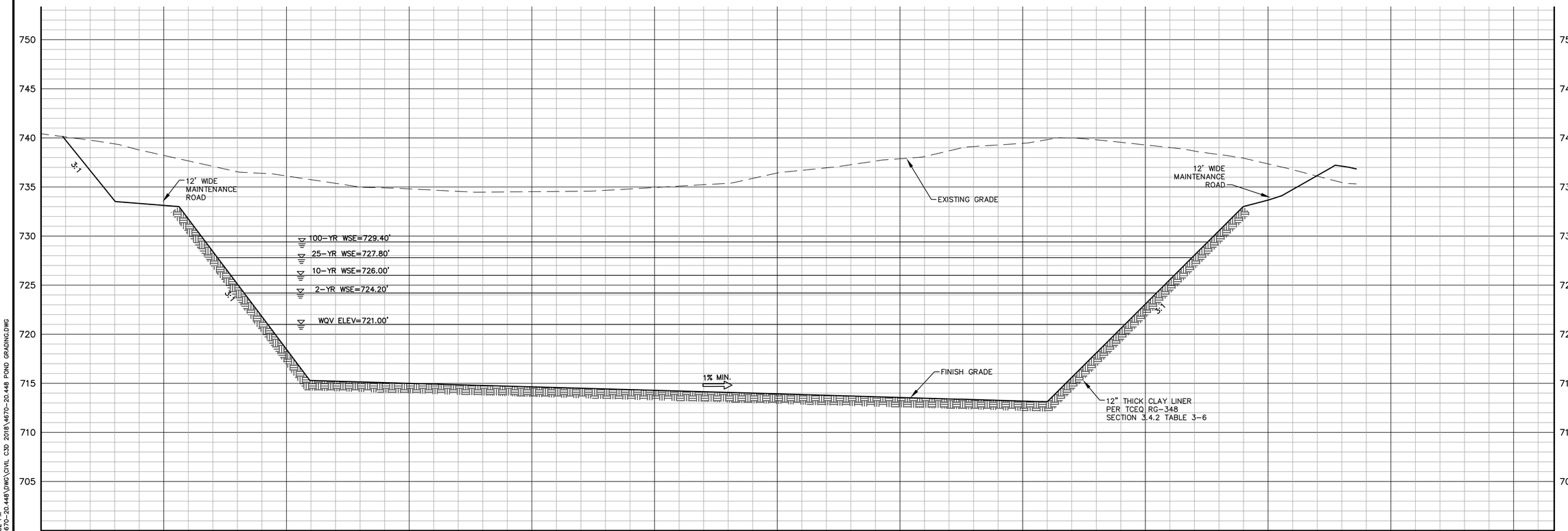
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PK FILE: 4670-20.448
CITY FILE: 2020-55-CON



POND A SECTION A–A



POND A SECTION B–B

Pacheco Koch
8701 N. MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008000

REVISIONS

NO.	DATE	DESCRIPTION	BY

AVIATION DRIVE EXTENSION
CIVIL INFRASTRUCTURE
GEORGETOWN, WILLIAMSON COUNTY, TEXAS
100% SUBMITTAL

POND A CROSS SECTIONS

STATE OF TEXAS
KEVIN C. MINKLER
124843
LICENSED
PROFESSIONAL
ENGINEER
08/23/2021

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DESIGN	DRAWN	DATE
DMS/KCM	DMS/KCM	AUGUST 2021

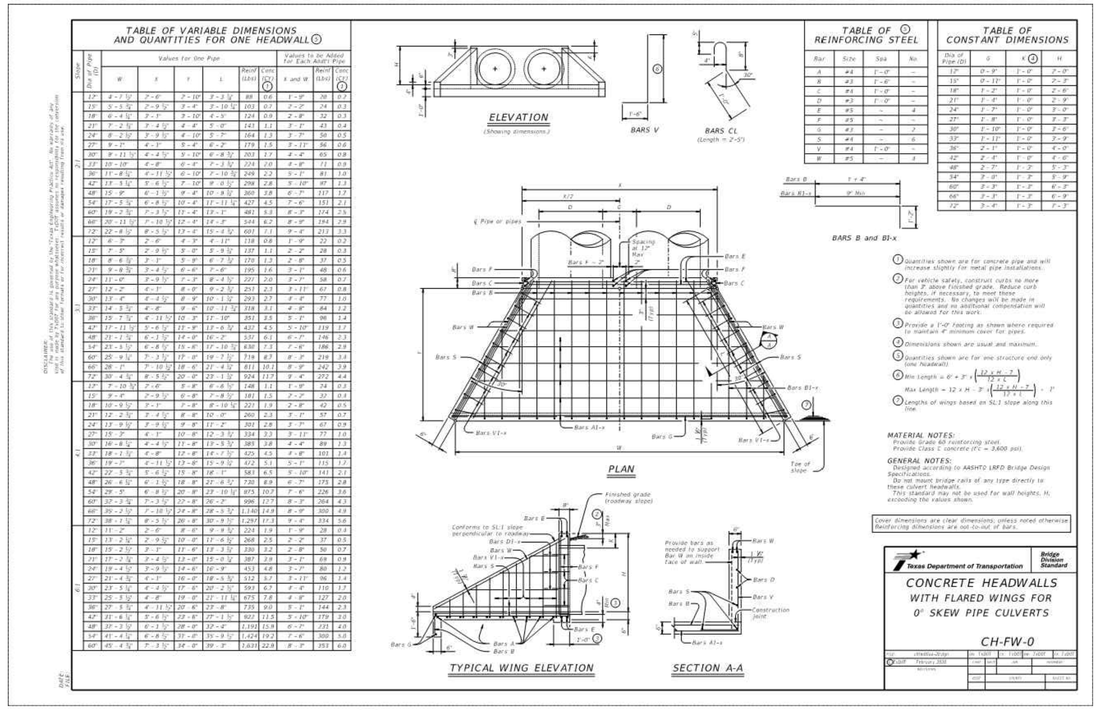
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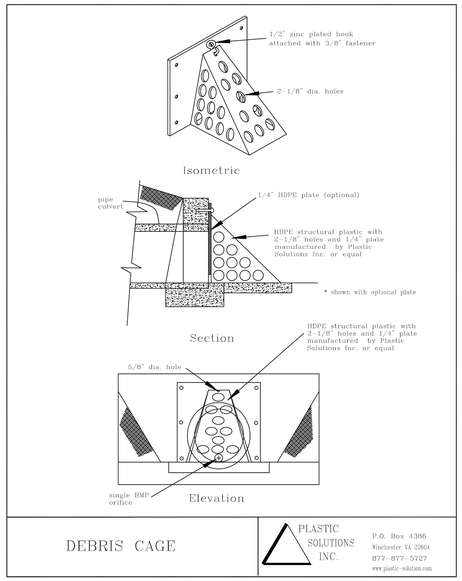
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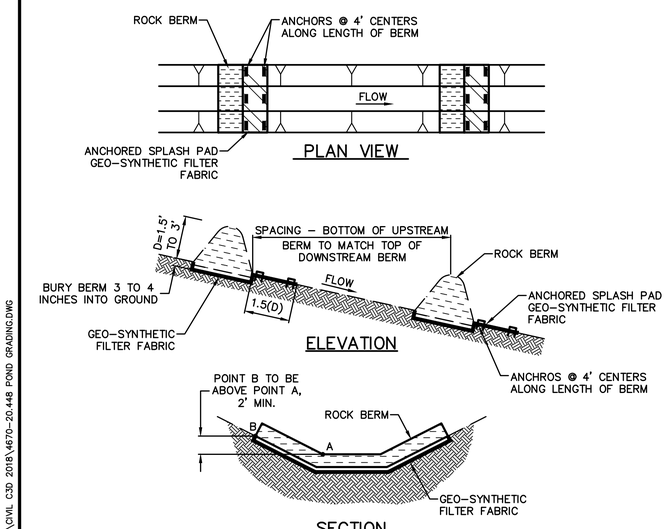
1 TxDOT HEADWALL CH-FW-0

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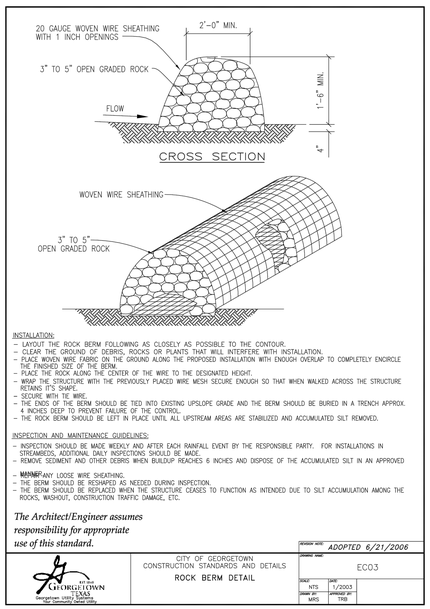
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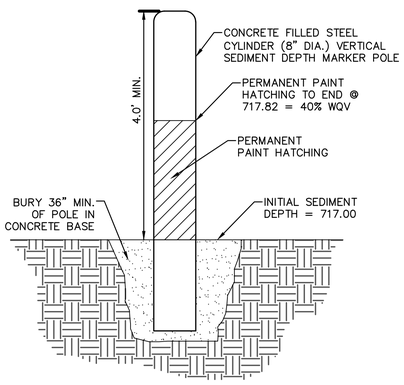
3 CHECK DAMS

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4 ROCK BERM

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5 VERTICAL SEDIMENT DEPTH MARKER DETAIL

NOT TO SCALE

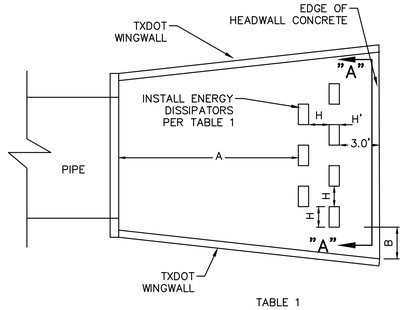


TABLE 1

PIPE DIAMETER (INCHES)	NUMBER OF ROWS OF DISSIPATORS	NUMBER OF DISSIPATORS IN FRONT ROW	H (INCHES)	A (INCHES)	B (INCHES)
60"	3	6	15	30.25	31.63
48"	3	6	12	23.75	26.25

TYPE B HEADWALL PLAN VIEW

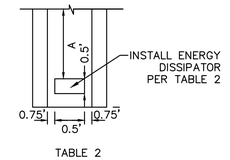
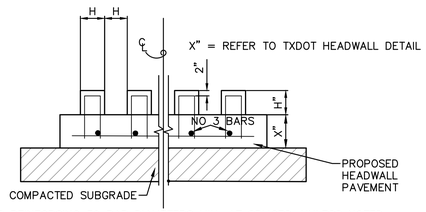


TABLE 2

PIPE DIAMETER (INCHES)	NUMBER OF ROWS OF DISSIPATORS	NUMBER OF DISSIPATORS IN FRONT ROW	H (INCHES)	A (INCHES)
24"	1	1	6	14.75

SLOPED END HEADWALL PLAN VIEW



1. LAP REINFORCING 30 BAR DIAMETERS MIN. AT SPLICES, UNLESS NOTED
2. CHAMFER EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED
3. PLACE REINFORCING WITH THE CENTER OF THE OUTSIDE BARS 2 INCHES FROM THE SURFACE OF THE CONCRETE

SECTION "A-A"

6 FLUME/ENERGY DISSIPATOR DETAIL

NOT TO SCALE

Pacheco Koch
8701 N. MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008000

REVISIONS

NO.	DATE	DESCRIPTION	BY

AVIATION DRIVE EXTENSION
CIVIL INFRASTRUCTURE
GEORGETOWN, WILLIAMSON COUNTY, TEXAS
100% SUBMITTAL

POND DETAILS

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DESIGN	DRAWN	DATE
DMS/KCM	DMS/KCM	AUGUST 2021

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GABION TECHNICAL SPECIFICATIONS

GALVANIZED GABIONS AND GALVANIZED GABIONS WITH PVC COATING

1.0 DESCRIPTION:

1.1 GABION STRUCTURES CONSIST OF RECTANGULAR, COMPARTMENTED, WOVEN WIRE MESH BASKETS FILLED WITH STONE USED TO BUILD EARTH RETAINING AND EROSION CONTROL STRUCTURES SUCH AS: RETAINING WALLS, CHANNEL LININGS, HEADWALLS AND FLEXIBLE APRONS FOR PIPES, SLOPE PROTECTION, BRIDGE REVETMENTS AND WEIRS.

2.0 MATERIALS:

2.1 GABIONS SHALL BE PREFABRICATED IN ACCORDANCE WITH ASTM A975–97 TO THE SIZE CALLED FOR ON THE PLANS, OR AS OTHERWISE APPROVED. GABIONS SHALL CONSIST OF GALVANIZED WIRE OR GALVANIZED WIRE WITH AN ADDITIONAL PVC COATING WOVEN INTO A UNIFORM, HEXAGONAL–SHAPED DOUBLE TWIST PATTERN WITH OPENINGS APPROXIMATELY 3–1/4" X 4–1/2". THE MESH SHALL BE FABRICATED IN SUCH A MANNER AS TO BE NON–RAVELING AND TO PROVIDE THE REQUIRED FLEXIBILITY AND STRENGTH.

ALL WIRE USED FOR GABIONS, INCLUDING LACING WIRE, SHALL HAVE A TENSILE STRENGTH OF 54,039 P.S.I. TO 85,259 P.S.I. IN ACCORDANCE WITH ASTM A641–98, CLASS 3, SOFT TEMPER. THE ZINC COATING SHALL MEET THE REQUIREMENTS OF ASTM A641–98, CLASS 3, SOFT TEMPER COATING AND SHALL BE A MINIMUM QUANTITY OF 0.70 oz/ft² FOR WIRE 0.0877" IN DIAMETER, 0.80 oz/ft² FOR WIRE 0.106" IN DIAMETER, 0.85 oz/ft² FOR WIRE 0.120" AND 0.134" IN DIAMETER AND 0.90 oz/ft² FOR WIRE 0.150" IN DIAMETER.

WIRE USED FOR GALVANIZED OVERLAPPING RINGS SHALL BE 0.120" DIAMETER WIRE PER ASTM A641–98 WITH A TENSILE STRENGTH OF 230,000 P.S.I. TO 273,000 P.S.I. PER ASTM A764–95.

WIRE USED FOR STAINLESS STEEL OVERLAPPING RINGS SHALL BE 0.120" DIAMETER STAINLESS STEEL WIRE PER ASTM A313–98, TYPE 302, CLASS I WITH A TENSILE STRENGTH OF 222,000 P.S.I. TO 253,000 P.S.I.

MESH WIRE, SELVEDGE WIRE AND LACING WIRE DIAMETERS FOR GALVANIZED GABIONS AND GALVANIZED GABIONS WITH A PVC COATING SHALL BE IN ACCORDANCE WITH THE NOMINAL DIAMETERS AS LISTED IN TABLE 1. TOLERANCES OF ALL WIRE DIAMETERS SHOWN SHALL BE +/– 0.004". ALL TESTING OF WIRE DIAMETERS SHALL BE PRIOR TO FABRICATION.

TABLE 1 - NOMINAL GABION WIRE DIAMETERS

	Galvanized Wire	*Galvanized Wire with PVC Coating*
Mesh Wire	0.120" (US 11 gauge)	0.106" (US 12 gauge)
Selvedge Wire	0.150" (US 9 gauge)	0.134" (US 10 gauge)
Lacing Wire	0.087" (US 13-112 gauge)	0.087" (US 13-1/2 gauge)

POLYVINYL CHLORIDE (PVC) USED TO COAT GABION WIRE SHALL MEET THE FOLLOWING SPECIFICATIONS: COLOR– GRAY; NOMINAL THICKNESS– 0.020 INCHES; MINIMUM THICKNESS – 0.015 INCHES; UV RESISTANCE – 3000 HOURS USING APPARATUS TYPE E WHEN TESTED ACCORDING TO ASTM D1499 AND ASTM G23; SALT SPRAY TEST– 3000 HOURS WHEN TESTED ACCORDING TO ASTM B117; ABRASION RESISTANCE –WEIGHT LOSS NOT MORE THAN 12% ACCORDING TO ASTM D1242. THE PVC COATING SHALL BE UNIFORMLY APPLIED AND SHALL BE FREE FROM CRACKS, SPLITS, STRETCHED OR STRESSED AREAS.

ASSEMBLED GABIONS WILL FORM A RECTANGULAR UNIT WITH A MINIMUM THICKNESS OF TWELVE INCHES (12"). THE BASE AND SIDES ARE TO, BE WOVEN INTO A SINGLE UNIT. THE BOTTOM OF THE END PANELS SHALL BE FACTORY CONNECTED TO THE BODY IN SUCH A MANNER THAT THE STRENGTH AND FLEXIBILITY AT THE POINT OF CONNECTION IS APPROXIMATELY EQUAL TO THAT OF THE MESH. THE LID FOR SPECIALLY FABRICATED GABIONS MAY BE SEPARATE CONSTRUCTION. THE GABION SHALL BE DIVIDED INTO CELLS OF APPROXIMATELY EQUAL SIZE BY FACTORY CONNECTED DIAPHRAGM PANELS USING MESH OF THE SAME TYPE AND GAUGE AS THE BODY OF THE GABION. THE DIAPHRAGM PANELS SHALL BE SECURED IN PROPER POSITION ON THE BASE IN SUCH A MANNER THAT NO ADDITIONAL TYING IS NECESSARY. THE LENGTH OF THE CELL SHALL NOT EXCEED ITS HORIZONTAL WIDTH. ALL PERIMETER EDGES OF THE WIRE MESH FORMING THE BODY, END AND DIAPHRAGM PANELS SHALL HAVE A HEAVIER GAUGE SELVEDGE WIRE WOVEN INTO THE EDGE OF THE MESH PANEL. ALL CUT EDGES OF THE MESH PANELS FORMING THE BODY, TOPS OF ENDS AND DIAPHRAGMS SHALL BE SECURELY ATTACHED TO A HEAVIER GAUGE SELVEDGE WIRE BY A MINIMUM OF TWO COMPLETE TURNS OF THE WIRE MESH AROUND THE SELVEDGE WIRE.

LACING WIRE SHALL BE SUPPLIED FOR SECURELY FASTENING THE GABIONS DURING ALL STEPS OF ASSEMBLY AND CONSTRUCTION. LACING WIRE SHALL BE INCLUDED WITH THE GABIONS IN SUFFICIENT QUANTITY FOR TYING GABIONS IN ACCORDANCE WITH THE SPECIFICATIONS. NO OTHER WIRE EXCEPT OF THE TYPE SUPPLIED WITH THE GABIONS MAY BE USED.

HIGH TENSILE OVERLAPPING RINGS MAY BE USED AS AN ALTERNATE FASTENING METHOD IN PLACE OF THE TIE WIRE LACING METHOD WHEN USED IN ACCORDANCE WITH THESE SPECIFICATIONS. GALVANIZED RINGS SHALL BE USED FOR GALVANIZED GABIONS; STAINLESS STEEL–RINGS SHALL BE USED FOR PVC COATED GABIONS. INTERLOCKING FASTENERS AND SPIRAL FASTENERS MAY NOT BE USED. GABIONS FURNISHED BY A MANUFACTURER SHALL BE OF UNIFORM SIZE AND SUBJECT TO DIMENSION TOLERANCE LIMITS OF +/–5%.

THE GABIONS SHALL BE CERTIFIED BY A NOTARIZED, SWORN AFFIDAVIT FROM THE MANUFACTURER SHOWING COMPLIANCE WITH THE SPECIFICATION REQUIREMENTS.

2.2 GABION ROCK USED TO FILL THE GABIONS SHALL BE CLEAN, HARD, DURABLE, 4" TO 8" WELL–GRADED CRUSHED LIMESTONE. NOT MORE THAN 15% OF THE ROCK (BY WEIGHT) SHALL PASS A 4" OPENING. FOR 12" GABIONS, 4" TO 6" WELL–GRADED CRUSHED LIMESTONE MAY BE USED. THE ROCK SHALL BE CLEAN AND SHALL BE STORED AND HANDLED IN A MANNER TO PREVENT CONTAMINATION. PRIOR TO PLACING THE ROCK, SAMPLES SHALL BE DELIVERED TO SITE AND SHALL BE APPROVED FOR GRADATION AND APPEARANCE BY THE ENGINEER.

2.3 GEOTEXTILE FABRIC FOR USE AS A FILTER MEDIA, WHEN SPECIFIED ON THE PLANS, SHALL BE PLACED ALONG THE GABION STRUCTURE AS SHOWN IN THE PLANS. THE FABRIC TO BE USED SHALL BE GEO–SYNTHETIC FILTER MABRIC, NEEDLE PUNCHED (8 oz/sy) OR APPROVED EQUAL

2.4 GRANULAR FILTER MEDIA, WHEN SPECIFIED ON THE PLANS, SHALL BE PLACED TO THE LIMITS AS SHOWN ON THE PLANS. GRANULAR FILTER MEDIA SHALL CONSIST OF 1–1/2" CRUSHED GRAVEL, NO FINES, TO BE USED BELOW FILTER FABRIC TO FILL IN VOIDS AND PROVIDE SMOOTH BEDDING SURFACE.

3.0 CONSTRUCTION:

3.1 GENERAL – THE GABIONS SHALL BE INSTALLED IN ACCORDANCE– WITH THE SIZE, TYPE, AND ALIGNMENT AS SHOWN ON THE PLANS. PVC COATED GABIONS SHALL BE USED IN THE AREAS AS SPECIFIED AND SHOWN ON THE PLANS. THE PLACEMENT OF THE GABIONS SHALL BE IN CLOSE CONFORMITY TO THE LINES AND GRADES SHOWN ON THE PLANS AND SHALL BE IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS.

3.2 GEOTEXTILE FABRIC PLACEMENT – AFTER EXCAVATION TO THE SUBGRADE ELEVATION HAS BEEN PERFORMED, THE GEOTEXTILE FABRIC (WHEN SPECIFIED) SHALL BE PLACED TO THE LIMITS AS SHOWN ON THE PLANS. CARE SHALL BE TAKEN NOT TO PLACE THE FABRIC IN A MANNER EXCEEDING THE LIMITS SHOWN ON THE PLANS. WHERE SPLICES OCCUR, ADJACENT PIECES OF GEOTEXTILE SHALL BE OVERLAPPED A MINIMUM OF EIGHTEEN INCHES (18"). FABRIC SHALL BE SECURED, WHEN NECESSARY, BY PINS OR OTHER SUITABLE MEANS BEFORE PLACING THE GABIONS. EXCESS FABRIC PROTRUDING PAST THE FINISHED GABIONS SHALL BE CUT OFF.

3.3 GABION ASSEMBLY – GABIONS ARE ASSEMBLED IN THE FOLLOWING STEPS: (1.) UNFOLD THE BASKETS ON A HARD, FLAT SURFACE AND STAMP OUT ALL KINKS. (2.) FOLD UP THE FRONT, BACK, AND END PANELS AND FASTEN THE PANELS TOGETHER WITH THE PROJECTING HEAVY GAUGE SELVAGE WIRE BY TWISTING THE SELVEDGE WIRE AROUND THE SELVEDGE WIRE OF THE OTHER PANEL TWO COMPLETE TURNS. (3.) FOLD THE INNER DIAPHRAGM PANELS UP AND SECURE IN THE SAME MANNER. (4.) TIE ALL EDGES OF THE DIAPHRAGMS AND END PANELS TO THE SIDES OF THE GABION BY THE TYING METHOD AS SPECIFIED BELOW.

3.4 TYING METHOD– PROPER TYING OF GABIONS AT ALL STEPS IN THE ASSEMBLY AND CONSTRUCTION OF THE GABION STRUCTURE IS CRITICAL TO THE PERFORMANCE OF THE FINISHED GABION STRUCTURE.

1. GABIONS MUST BE TIED IN THE SPECIFIED MANNER AT EACH STEP OF CONSTRUCTION:

   A.) INITIAL ASSEMBLY
   B.) TYING TO ADJACENT GABIONS ALONG ALL CONTACTING EDGES
   C.) TYING OF LID TO SIDES
   D.) TYING OF LID TO TOP OF DIAPHRAGMS
   E.) RE–TYING OF CUT GABIONS

2. ALL TYING OF GABIONS SHALL BE PERFORMED IN THE FOLLOWING MANNER (SEE FIGURE 1 – ATTACHED): (1.) CUT A LENGTH OF LACING WIRE APPROXIMATELY FIVE FEET LONG. (2.) SECURE THE LACING WIRE ONTO THE GABION AT THE END BY LOOPING AND TWISTING THE TIE WIRE TOGETHER. (3.) PROCEED TYING WITH DOUBLE LOOPS (MADE AT THE SAME POINT) EVERY FIVE INCHES APART, THE BASKET PIECES SHOULD BE PULLED TIGHTLY TOGETHER DURING THE TYING OPERATION. (4.) SECURE THE OTHER END OF THE LACING WIRE BY AGAIN LOOPING AND TWISTING THE WIRE AROUND ITSELF, NO OTHER WIRE EXCEPT OF THE TYPE SUPPLIED WITH THE GABIONS MAY BE USED FOR TYING THE GABIONS.

3. OVERLAPPING RINGS MAY BE USED AS AN ALTERNATE TO THE SPECIFIED LACING WIRE METHOD WHERE AT LEAST ONE–HALF INCH (1/2") OVERLAP OF THE RINGS CAN BE MADE. SPACING OF THE RINGS SHALL NOT EXCEED SIX INCHES (6"). IN THE EVENT A ONE–HALF INCH (1/2") OVERLAP OF THE RING CANNOT BE OBTAINED, SUCH AS END TO END ATTACHMENT OF GABIONS, THE SPECIFIED LACING WIRE METHOD SHALL BE USED.

3.5 GABION PLACEMENT – AFTER EACH GABION HAS BEEN ASSEMBLED, IT SHALL BE PLACED IN POSITION EMPTY AND SHALL BE TIED TO ADJACENT GABIONS ALONG ALL CONTACTING EDGES IN ORDER TO FORM A CONTINUOUSLY CONNECTED STRUCTURAL UNIT.

3.6 FILLING GABIONS – IT IS CRITICAL TO THE PERFORMANCE OF THE FINISHED GABION STRUCTURE THAT GABIONS ARE FILLED TO THEIR MAXIMUM DENSITY WITH VOIDS IN THE GABION MINIMIZED.

WHEN THE ASSEMBLED EMPTY GABIONS HAVE BEEN INSTALLED AND TIED TOGETHER, THE GABIONS SHALL BE FILLED IN THE FOLLOWING MANNER:

1. THE GABIONS SHALL BE HAND PLACED AND FILLED IN LAYERS OR LIFTS NOT EXCEEDING TWELVE INCHES (12"). CARE SHALL BE TAKEN WHEN PLACING THE ROCK INTO THE GABIONS TO INSURE THAT THE GABIONS ARE NOT DAMAGED OR BENT. DO NOT DROP ROCK FROM A HEIGHT GREATER THAN THREE FEET (3'). SUITABLE SIZED AND APPROPRIATE MACHINERY WILL HELP PREVENT DAMAGE TO THE GABIONS DURING THE FILLING OPERATION. EDGES OF GABIONS AND DIAPHRAGMS MAY BE PROTECTED WHEN NECESSARY BY TYING STEEL REINFORCEMENT TO THE EDGES OF THE GABIONS OR OTHER SUITABLE GUARD MECHANISMS TO PREVENT DAMAGE OR DEFORMATION OF THE GABIONS.

2. AFTER A TWELVE INCH (12") LAYER OF ROCK HAS BEEN PLACED IN THE CELL, SUFFICIENT HAND MANIPULATION FOR THE ROCK SHALL BE PERFORMED TO MINIMIZE VOIDS AND RESULT IN A MAXIMUM DENSITY OF ROCK IN THE GABION.

3. GABIONS THAT ARE THREE FEET (3') HIGH SHALL HAVE A LOOPED INNER TIE WIRE INSTALLED IN EACH CELL CONNECTING THE FRONT AND BACK FACES OF ANY UNSUPPORTED OR EXPOSED FACE AT THE VERTICAL THIRD POINTS, OR 12" AND 24" FROM THE BASE OF THE GABIONS (SEE FIGURE 2 ATTACHED). INDIVIDUAL CELLS MAY NOT BE FILLED TO A HEIGHT GREATER THAN TWELVE INCHES (12") ABOVE ANY ADJACENT CELL UNLESS LOOPED INNER TIE WIRES ARE INSTALLED IN BOTH DIRECTIONS.

   GABIONS THAT ARE EIGHTEEN INCHES (18") HIGH THAT ARE INSTALLED WITH AN EXPOSED OUTER FACE SUCH AS A RETAINING WALL SHALL HAVE A LOOPED INNER TIE WIRE INSTALLED CONNECTING THE FRONT AND BACK FACES. THE INNER TIE SHALL BE INSTALLED AT HALF THE VERTICAL HEIGHT OR 9" FROM THE BASE OF THE GABION. INDIVIDUAL CELLS MAY NOT BE FILLED TO A HEIGHT GREATER THAN NINE INCHES (9") ABOVE AN ADJACENT CELL UNLESS LOOPED INNER TIE WIRES ARE INSTALLED IN BETH DIRECTIONS. INNER TIE WIRES ARE NOT REQUIRED FOR 18" GABIONS INSTALLED AS MATTRESS APPLICATIONS.

4. EACH GABION SHALL BE FILLED TO ITS MAXIMUM DENSITY, WHICH LS SLIGHTLY HIGHER THAN THE SIDES AND THE SURFACE SMOOTHLY LEVELED MINIMIZING VOIDS.

3.7 CLOSING GABIONS – AFTER THE ROCK HAS BEEN LEVELED, .THE LIDS SHALL BE PRIED DOWN AND OVER WITH A BAR OR LID DOSING TOOL UNTIL THE EDGE OF THE LID AND THE EDGE OF THE GABION ARE TOGETHER. CARE SHALL BE TAKEN SO THAT THE MESH IS NOT DEFORMED. IT SHOULD REQUIRE A LIGHT STRETCHING IN ORDER TO BRING THE TWO GABION PIECES TOGETHER. THE HEAVY PROJECTING SELVAGE WIRE OF THE LID SHALL THEN BE TWISTED AROUND THE HEAVY SELVAGE WIRE ON THE SIDES TWO (2) COMPLETE TURNS. THE LID SHALL THEN BE TIED TO THE SIDES OF THE GABIONS AND THE TOPS OF THE DIAPHRAGMS IN THE SPECIFIED TYING METHOD. THE LIDS OF THE GABIONS SHALL ALSO BE TIED TO ADJACENT GABIONS ALONG ALL CONTACTING EDGES TO INSURE THE FORMATION OF A CONTINUOUS, CONNECTING STRUCTURAL UNIT. SPECIAL ATTENTION SHALL BE GIVEN THAT ALL PROJECTING SHARP ENDS OF WIRE ARE TURNED IN ON THE COMPLETED GABION STRUCTURE.

3.8 CUTTING GABIONS – GABLONS MAY BE CUT TO FORM CURVES OR BEVELS. OVERLAP THE CUT PIECES AND RE–TIE IN THE SPECIFIED MANNER. RE–TYING SHALL BE IN A MANNER SO AS TO PRODUCE A CLOSED CELL WHEN COMPLETED. EXCESS MESH WIRE SHALL BE CUT OFF OR SHALL BE TIGHTLY AND NEATLY LACED DOWN. CARE SHALL BE TAKEN THAT ALL PROJECTING WIRE ENDS ARE TURNED INWARDS OR CUT OFF.

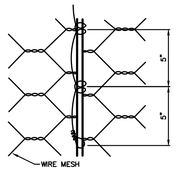
4.0 QUALITY CONTROL

4.1 PROPER TYING OF GABIONS DURING ALL STEPS OF CONSTRUCTION AND GABIONS BEING FILLED TO THEIR MAXIMUM DENSITY WITH A MINIMUM AMOUNT OF VOIDS IS CRITICAL TO THE PERFORMANCE OF THE FINISHED GABION STRUCTURE. THEREFORE, COMPLIANCE WITH THE TECHNICAL SPECIFICATIONS WILL BE CLOSELY AND THOROUGHLY INSPECTED. ANY WORK NOT MEETING THE IMPLIED QUALITY WILL BE REJECTED.

5.0 MEASUREMENT AND PAYMENT

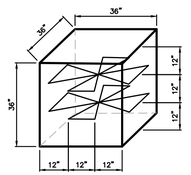
5.1 MEASUREMENT OF GABION STRUCTURES SHALL BE BASED ON THE VOLUME IN CUBIC YARDS OF GABIONS INSTALLED AND FILLED TO THEIR MAXIMUM DENSITY WITH A MINIMUM OF VOIDS AND SHALL INCLUDE THE VOLUME OF EMBEDDED ITEMS WHEN APPLICABLE. GABION STRUCTURES SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD. THE UNIT PRICE SHALL INCLUDE FULL COMPENSATION FOR PLACING ALL MATERIALS (GABIONS, ROCK, GEOTEXTILE AND/OR GRANULAR FILTER MEDIA) AND FOR FURNISHING ALL TOOLS, LABOR, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY TO COMPLETE AND INSTALL THE GABION STRUCTURE IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS.

5.2 EXCAVATION AND SITE PREPARATION WILL BE PAID FOR SEPARATELY.



GABIONS MUST BE TIED IN THIS MANNER AT EACH STEP OF CONSTRUCTION:
1. INITIAL ASSEMBLY
2. TYING TO ADJACENT GABIONS ALONG ALL CONTACTING EDGES
3. TYING OF LID TO SIDES
4. TYING OF LID TO ALL DIAPHRAGMS
5. RE–TYING OF THE CUT GABION

FIGURE 1: TYING METHOD

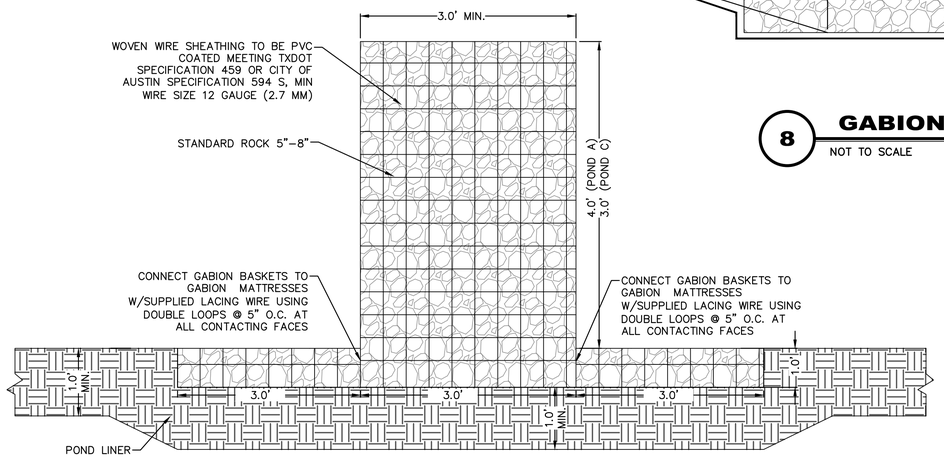


INNER TIE WIRES SHALL BE PLACED HORIZONTALLY IN EACH CELL EVERY 12" OF VERTICAL HEIGHT CONNECTING THE FRONT AND BACK FACES AND ANY UNSUPPORTED FACE LENGTHWISE.

FIGURE 2: TIE WIRE INSTALLATION METHOD

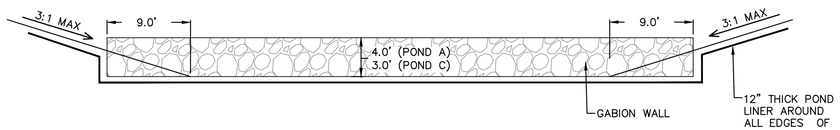
7 GABION SPECIFICATIONS

NOT TO SCALE



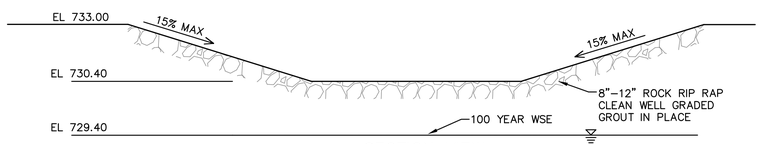
7 GABION FOREBAY SECTION DETAIL

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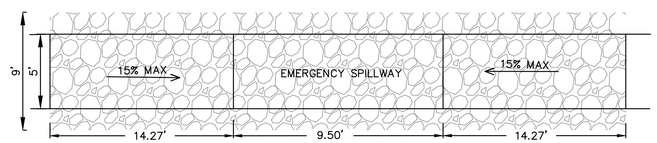


8 GABION FOREBAY SIDE VIEW

NOT TO SCALE



SECTION VIEW



PLAN VIEW

9 POND C EMERGENCY SPILLWAY

NOT TO SCALE

K.JONES
8/19/2021 7:09 PM
M:\DWG-46\4670-20.448\DWG\CIVIL C3D 2018\4670-20.448 POND GRADING.DWG

PK FILE: 4670–20.448 CITY FILE: 2020–55–CON

Pacheco Koch
8701 N. MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
TX REG. ENGINEERING FIRM F–469
TX REG. SURVEYING FIRM LS–10008000

REVISIONS

NO.	DATE	DESCRIPTION	BY

AVIATION DRIVE EXTENSION
CIVIL INFRASTRUCTURE
GEORGETOWN, WILLIAMSON COUNTY, TEXAS
100% SUBMITTAL

POND DETAILS

STATE OF TEXAS
KEVIN C. MINKLER
124843
LICENSED PROFESSIONAL ENGINEER
08/23/2021

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN C. MINKLER, P.E. 124843 ON 08/23/2021. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
DMS/KCM	DMS/KCM	AUGUST 2021

SHEET NO.

70

PROPERTY	TEST METHOD	UNIT	SPECIFICATION
PERMEABILITY	ASTM D-2434	CM/SEC	1 X 10^{-6}
PLASTICITY INDEX OF CLAY	ASTM D-423 & D-424	%	NOT LESS THAN 15
LIQUID LIMIT OF CLAY	ASTM D-2216	%	NOT LESS THAN 30
CLAY PARTICLES PASSING	ASTM D-422	%	NOT LESS THAN 30
CLAY COMPACTION	ASTM D-2216	%	95% OF STANDARD PROCTOR DENSITY

CLAY LINER SPECIFICATIONS (CAO, 2004)

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Aviation Drive Extension & Titan NortPark III
Date Prepared: 8/2/2022

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

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

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

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

County =	Williamson	
Total project area included in plan * =	32.68	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	20.48	acres
Total post-development impervious cover fraction * =	0.63	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	17826	lbs.

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

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

AVIATION DRIVE EXTENSION & TITAN NORTHPARK III TSS REMOVAL CALCULATIONS

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Ultimate Titan NorthPark 35
Date Prepared: 5/27/2021

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

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

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

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

County =	Williamson	
Total project area included in plan * =	104.66	acres
Predevelopment impervious area within the limits of the plan * =	0.90	acres
Total post-development impervious area within the limits of the plan* =	73.26	acres
Total post-development impervious cover fraction * =	0.70	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	62984	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 3

ULTIMATE TITAN NORTHPARK 35 TSS REMOVAL CALCULATIONS

Water Quality Summary	Acreage	Impervious Cover	Required TSS Removal (Lm) (lbs)	BMP Practice	Removal Efficiency	Water Quality Volume Required (cu. Ft.)	Grassy Swale Length (ft) (10' Wide, 3:1 side slope)
Water Quality Area - A	88.03	70%	57045	Extended Detention w/Grassy Swale	86.38%	542908	331
Water Quality Area - E	1.83	62%	1017	Jellyfish	86.00%	-	-
Water Quality Area - C	14.80	70%	9591	Extended Detention w/Grassy Swale	86.38%	91278	345
Total	**104.66**	**70%**	**67653**		**86.37%**		
Total Project Requirement	**104.66**	**70%**	**62984**				
Check			OKAY				

WATER QUALITY SUMMARY TABLE

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Aviation Drive Extension
Date Prepared: 2/13/2025

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$
Drainage Basin/Outfall Area No. = WQ A

P= 32

Total drainage basin/outfall area =	87.76	acres	510670
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres	
Post-development impervious area within drainage basin/outfall area =	58.80	acres	
Post-development impervious fraction within drainage basin/outfall area =	0.67		
$L_{M\ THIS\ BASIN}$ =	51180	lbs.	54435 28.93(A_N x P) (revised per City of Georgetown 85% TSS removal requirement)

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Extended Detention w/ Grassy Swale
Removal efficiency = 86.38 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

P= 32

A_C =	87.76	acres	
A_I =	58.80	acres	
	47.22	Current IC Area	TNP B9 & Sienna Peak Dr
	11.58	Proposed IC Area	
A_P =	28.96	acres	
	18.64	Current PC Area	PC of B9 and undeveloped Lot 2, Block A Phase 7
	10.32	Proposed PC Area	
L_R =	56669	lbs	

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

Desired $L_{M\ THIS\ BASIN}$ = 54435 lbs. **85% TSS Removal Per Georgetown Requirements**

F = 0.96

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

Rainfall Depth = 2.80 inches
Post Development Runoff Coefficient = 0.48
On-site Water Quality Volume = 425559 cubic feet 9.769482302 Ac-Ft

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

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

Storage for Sediment = 85112
Total Capture Volume (required water quality volume(s) x 1.20) = 510670 cubic feet 11.72337876 Ac-Ft

Below available WQ volume. Pond is designed for 542,927 cubic feet at the WQ Elevation

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

8. Extended Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = 510670 cubic feet

15. Grassy Swales Designed as Required in RG-348 Pages 3-51 to 3-54

Design parameters for the swale:

Drainage Area to be Treated by the Swale = A = 87.76 acres
Impervious Cover in Drainage Area = 61.43 acres
Rainfall intensity = i = 1.1 in/hr
Swale Slope = 0.005 ft/ft
Side Slope (z) = 3.00
Design Water Depth = y = 3.00 ft
Weighted Runoff Coefficient = C = 0.62

A_{CS} = cross-sectional area of flow in Swale = 54.07 sf
P_W = Wetted Perimeter = 28.00 feet
R_H = hydraulic radius of flow cross-section = A_{CS}/P_W = 1.93 feet
n = Manning's roughness coefficient = 0.2

15A. Using the Method Described in the RG-348

Manning's Equation: $Q = \frac{1.49}{n} A_{CS} R_H^{2/3} S^{0.5}$

$b = \frac{0.134 \times Q}{y^{1.67} S^{0.5}} - zy$ = 9.02 feet

Q = CiA = 59.56 cfs

To calculate the flow velocity in the swale:

V (Velocity of Flow in the swale) = Q/A_{CS} = 1.10 ft/sec

To calculate the resulting swale length:

L = Minimum Swale Length = V (ft/sec) * 300 (sec) = 330.50 feet

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters must be modified and the solver rerun.

19. BMPs Installed in a Series Designed as Required in RG-348 Pages 3-32

Michael E. Barrett, Ph.D., P.E. recommended that the coefficient for E_2 be changed from 0.5 to 0.65 on May 3, 2006

$E_{TOT} = [1 - ((1 - E_1) X (1 - 0.65E_2) x (1 - 0.25E_3))] X 100 =$ 86.38 percent NET EFFICIENCY OF THE BMPs IN THE SERIES

EFFICIENCY OF FIRST BMP IN THE SERIES = E_1 = 75.00 percent

EFFICIENCY OF THE SECOND BMP IN THE SERIES = E_2 = 70.00 percent

EFFICIENCY OF THE THIRD BMP IN THE SERIES = E_3 = 0.00 percent

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
(A_I AND A_P VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT}$ X P X (A_I X 34.6 X A_P X0.54) = 72676.06 lbs

⚠ POND A TSS REMOVAL CALCULATIONS

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Aviation Drive Extension
Date Prepared: 5/4/2021

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$
Drainage Basin/Outfall Area No. = WQ C

P= 32

Total drainage basin/outfall area =	14.80	acres	
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres	
Post-development impervious area within drainage basin/outfall area =	10.36	acres	
Post-development impervious fraction within drainage basin/outfall area =	0.70		
$L_{M\ THIS\ BASIN}$ =	9017	lbs.	9591 28.93(A_N x P) (revised per City of Georgetown

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Extended Detention w/ Grassy Swale
Removal efficiency = 86 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

P= 32

A_C =	14.80	acres
A_I =	10.36	acres
A_P =	4.44	acres
L_R =	9975	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 9591 lbs. **85% TSS Removal Per Georgetown Requirements**

F = 0.96

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

Rainfall Depth = 2.80 inches
Post Development Runoff Coefficient = 0.51
On-site Water Quality Volume = 76065 cubic feet 1.746212533 Ac-Ft

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

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

Storage for Sediment = 15213
Total Capture Volume (required water quality volume(s) x 1.20) = 91278 cubic feet 2.09545504 Ac-Ft

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

8. Extended Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = 91278 cubic feet

15. Grassy Swales Designed as Required in RG-348 Pages 3-51 to 3-54

Design parameters for the swale:

Drainage Area to be Treated by the Swale = A = 106.30 acres
Impervious Cover in Drainage Area = 74.41 acres
Rainfall intensity = i = 1.1 in/hr
Swale Slope = 0.005 ft/ft
Side Slope (z) = 3.00
Design Water Depth = y = 3.20 ft
Weighted Runoff Coefficient = C = 0.62

A_{CS} = cross-sectional area of flow in Swale = 62.72 sf
P_W = Wetted Perimeter = 30.24 feet
R_H = hydraulic radius of flow cross-section = A_{CS}/P_W = 2.07 feet
n = Manning's roughness coefficient = 0.2

15A. Using the Method Described in the RG-348

Manning's Equation: $Q = \frac{1.49}{n} A_{CS} R_H^{2/3} S^{0.5}$

$b = \frac{0.134 \times Q}{y^{1.67} S^{0.5}} - zy$ = 10.00 feet

Q = CiA = 72.15 cfs

To calculate the flow velocity in the swale:

V (Velocity of Flow in the swale) = Q/A_{CS} = 1.15 ft/sec

To calculate the resulting swale length:

L = Minimum Swale Length = V (ft/sec) * 300 (sec) = 345.10 feet

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters must be modified and the solver rerun.

19. BMPs Installed in a Series Designed as Required in RG-348 Pages 3-32

Michael E. Barrett, Ph.D., P.E. recommended that the coefficient for E_2 be changed from 0.5 to 0.65 on May 3, 2006

$E_{TOT} = [1 - ((1 - E_1) X (1 - 0.65E_2) x (1 - 0.25E_3))] X 100 =$ 86.38 percent NET EFFICIENCY OF THE BMPs IN THE SERIES

EFFICIENCY OF FIRST BMP IN THE SERIES = E_1 = 75.00 percent

EFFICIENCY OF THE SECOND BMP IN THE SERIES = E_2 = 70.00 percent

EFFICIENCY OF THE THIRD BMP IN THE SERIES = E_3 = 0.00 percent

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
(A_I AND A_P VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT}$ X P X (A_I X 34.6 X A_P X0.54) = 12256.22 lbs

⚠ POND C TSS REMOVAL CALCULATIONS

Pacheco Koch
8701 N. MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008000

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/4/2021	POND REVISIONS	

AVIATION DRIVE EXTENSION
CIVIL INFRASTRUCTURE
GEORGETOWN, WILLIAMSON COUNTY, TEXAS
100% SUBMITTAL

TSS CALCULATIONS

STATE OF TEXAS * KEVIN C. MINKLER * 124843 * LICENSED PROFESSIONAL ENGINEER
11/22/2021

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN C. MINKLER, P.E. 124843 ON 11/22/2021. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
DMS/KCM	DMS/KCM	NOVEMBER 2021

SHEET NO.
71

SFORERO
2/13/2025 1:44 PM
M:\DWG-46\4670-20.448\DWG\CIVIL C3D 2018\4670-20.448 POND GRADING.DWG

PK FILE: 4670-20.448 CITY FILE: 2020-55-CON

STA 0+97.06 POND A OUTFALL
1-48" 11.25° BEND
FL 48"=688.59
N=10226448.45
E=3137147.89

STA 0+00.00 POND A OUTFALL
FL 48"=687.00
WITH ENERGY DISSIPATORS (DETAIL 6, SHEET 69)
950 SF 8"-10" ROCK RIP RAP
CLEAN WELL GRADED
GROUTED IN PLACE
N=10226465.64
E=3137243.41

PROPOSED SWALE
@ 1.0% MIN.

PROPOSED PRIVATE
DRAINAGE EASEMENT

MATCH LINE A-A

0 10 20 40 60
HORIZONTAL SCALE IN FEET

LEGEND
ROCK CHECK DAM

PROPOSED SWALE
@ 1.0% MIN.

PROPOSED PRIVATE
DRAINAGE EASEMENT

MATCH LINE A-A

PROPOSED SWALE
@ 1.0% MIN.

ASPHALT DRIVEWAY

24" RCP

PERMANENT ROCK
CHECK DAM
SEE DETAIL CHECK
DAMS SHEET 69

CONCRETE HEAD
W/WINGWALL
HW=687.11
FL 24"(NC)=688.

Pacheco Koch
8701 N. MOPAC EXPY, SUITE 320
AUSTIN, TX 78759
T: 512.485.0831
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008000

REVISIONS

NO.	DATE	DESCRIPTION	BY

AVIATION DRIVE EXTENSION
CIVIL INFRASTRUCTURE
GEORGETOWN, WILLIAMSON COUNTY, TEXAS
100% SUBMITTAL

POND A OUTFALL GRADING PLAN

STATE OF TEXAS
KEVIN C. MINKLER
124843
LICENSED
PROFESSIONAL
ENGINEER
08/23/2021

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN C. MINKLER, P.E. 124843 ON 08/23/2021. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DESIGN	DRAWN	DATE
DMS/KCM	DMS/KCM	AUGUST 2021

SHEET NO.
72

DSANCHEZ
9/21/2021 3:57 PM
M:\DWG-46\4670-20.448\DWG\CIVIL C3D 2018\4670-20.448 POND GRADING.DWG

PK FILE: 4670-20.448 CITY FILE: 2020-55-CON

Attachment J – Schedule of Interim and Permanent Soil Stabilization Practices

Seeding of the disturbed areas will be on-going after completion of the rough grading process. Temporary seeding will be utilized until permanent landscaping is installed. Seeding will occur on any areas that are undisturbed for a period of 14 days. If construction progress is stopped for a period of 14 days, soil stabilization practices must be initiated by the contractor. Permanent landscaping will be provided as soon as final grades are achieved and the final paving and building operations are completed.

Owner Authorization Form

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

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

Land Owner Authorization

I, Valentina Rucker of ZT GROUP INT'L INC
Land Owner Name (Individual) Firm (applicable to Legal Entities)

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

1809 TITAN DR, GEORGETOWN, TX 78628
(Legal description of the property referenced in the application)

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

TITAN NP35 PHASE II LLC
(Applicant Name / Plan Holder (Legal Entity or Individual))

to conduct:

WPAP Modification
(Description of the proposed regulated activities)

on the property described above or at:

1809 TITAN DR, GEORGETOWN, TX 78628
(If applicable to a precise location for the authorized regulated activities)

Land Owner Acknowledgement

I, Valentina Rucker of ZT GROUP INT'L INC
Land Owner Name (Individual) Firm (applicable to Legal Entities)

understand that while TITAN NP35 PHASE II LLC
Applicant Name / Plan Holder (Legal Entity or Individual)

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

I, Valentina Rucker of ZT GROUP INT'L INC
Land Owner Name (Individual) Firm (applicable to Legal Entities)

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

I, Valentina Rucker of ZT GROUP INT'L INC
Land Owner Name (Individual) Firm (applicable to Legal Entities)

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

Land Owner Signature

Valentina Rucker
Land Owner Signature

2/11/2025
Date

THE STATE OF § New Jersey

County of § Hudson

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 February 11 day of 2025

PATRICIA KENNY
COMMISSION # 50172552
NOTARY PUBLIC-NEW JERSEY
Comm Expires Sept. 28, 2026

Patricia Kenny
NOTARY PUBLIC

Patricia Kenny
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 9/28/25

Attached: (Mark all that apply)

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

Applicant Acknowledgement

I, BEN F. SPENCER of TITAN NP35 PHASE II LLC
Applicant Name (Individual) Firm (applicable to Legal Entities)

acknowledge that ZT GROUP INT'L INC
Land Owner Name (Legal Entity or Individual)

has provided TITAN NP35 PHASE II LLC
Applicant Name (Legal Entity or Individual)

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

I understand that TITAN NP35 PHASE II LLC
Applicant Name (Legal Entity or Individual)

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

Applicant Signature

Applicant Signature

5-6-25
Date

THE STATE OF § NEW MEXICO

County of § BERNALILLO

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 6TH day of MAY

NOTARY PUBLIC

STATE OF NEW MEXICO
NOTARY PUBLIC
E. AIMEE GONZALEZ E.
Commission # 1067801
My Comm. Exp. 12-19-2028

E. AIMEE GONZALEZ E.
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 12/19/2028

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

I BEN F. SPENCER,
Print Name

MANAGER,
Title - Owner/President/Other

of TITAN NP35 PHASE II LLC,
Corporation/Partnership/Entity Name

have authorized Hollis Scheffler, P.E.
Print Name of Agent/Engineer

of Westwood Professional Services
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

4.30.25
Date

THE STATE OF NEW MEXICO §

County of BERNALILLO §

BEFORE ME, the undersigned authority, on this day personally appeared BEN F. SPENCER 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 30th day of APRIL, 2025

STATE OF NEW MEXICO
NOTARY PUBLIC
E. AIMEE GONZALEZ E.
Commission # 1067801
My Comm. Exp. 12-19-2028

NOTARY PUBLIC

E. AIMEE GONZALEZ E.
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 12/19/2028

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Titan NorthPark 35
Regulated Entity Location: Georgetown, Texas; Williamson, County
Name of Customer: Joe Iannacone
Contact Person: Hollis Scheffler, P.E. Phone: 512-485-0831
Customer Reference Number (if issued):CN 605804855
Regulated Entity Reference Number (if issued):RN 111023883

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	17.9 Acres	$ 6500
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____

Date: 05/28/2025

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	***Fee***
Extension of Time Request	$150

TCEQ Core Data Form

TCEQ Use Only

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 605804855		RN 111023883

SECTION II: Customer Information

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

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

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

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

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

Titan NorthPark35, LLC

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
85-1714807			

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

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

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

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

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

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

15. Mailing Address:

4903 Woodrow Ave							
City	Austin	**State**	TX	**ZIP**	78756	**ZIP + 4**	

16. Country Mailing Information (if outside USA)	17. E-Mail Address (if applicable)
	jiannacone@titan-development.com

18. Telephone Number	19. Extension or Code	20. Fax Number (if applicable)
(210) 338-5220		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

Titan NorthPark 35

23. Street Address of the Regulated Entity: *(No PO Boxes)*	1809 Titan Drive							
	City	Georgetown	**State**	TX	**ZIP**	78726	**ZIP + 4**	
24. County	Williamson							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	The property is located northwest of the Aviation Drive & IH35 intersection in Georgetown, Texas.

26. Nearest City	**State**	**Nearest ZIP Code**

27. Latitude (N) In Decimal:	30.68297°N		**28. Longitude (W) In Decimal:**	97.66901°W	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	40	58.68	97	40	8.42

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

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

Industrial

34. Mailing Address:	**6901 McAllister Fwy, Ste. 1120**							
	City	**San Antonio**	**State**	**TX**	**ZIP**	**78216**	**ZIP + 4**	

35. E-Mail Address:	**jiannacone@titan-development.com**

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(210) 338-5220		**( ) -**

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

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

SECTION IV: Preparer Information

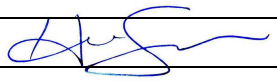
40. Name:	Hollis Scheffler, P.E.	**41. Title:**	Senior Project Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 485-0831		( ) -	hollis.scheffler@westwoodps.com

SECTION V: Authorized Signature

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

Company:	Westwood PS	**Job Title:**	Senior Project Manager
Name *(In Print):*	Hollis Scheffler	**Phone:**	(512) 485- **831**

Signature:		Date:	5/7/2025