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: Southside Water Treatment Plant						**2. Regulated Entity No.:** N/A			
3. Customer Name: City of Georgetown						**4. Customer No.:** 600412043			
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):**			1.26
9. Application Fee:	$1150		**10. Permanent BMP(s):**						
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			1			
13. County:	Williamson		**14. Watershed:**			South Fork San Gabriel River			

Application Distribution

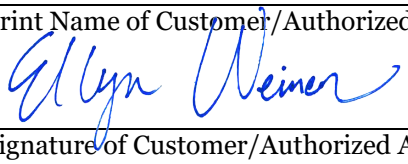
Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	1
Region (1 req.)	___	___	1 (Austin)
County(ies)	___	___	1 (Williamson)
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 _1_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. Ellyn Weimer, PE
Print Name of Customer/Authorized Agent  10-08-2024
Signature of Customer/Authorized Agent Date

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

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.

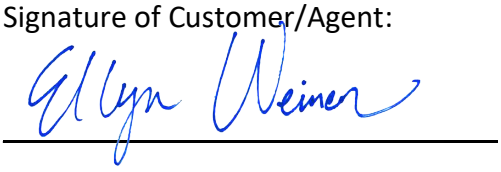
Signature

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: Ellyn Weimer, PE

Date: 10-08-2024

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Southside Water Treatment Plant
2. County: Williamson
3. Stream Basin: San Gabriel River
4. Groundwater Conservation District (If applicable): _____
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

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

7. Customer (Applicant):

   Contact Person: Chris Pousson
   Entity: City of Georgetown
   Mailing Address: 300-1 Industrial Ave
   City, State: Georgetown, Texas Zip: 78626
   Telephone: (512) 930-8162 FAX: (512) 930-3559
   Email Address: chris.pousson@georgetown.org

8. Agent/Representative (If any):

   Contact Person: Ellyn Weimer
   Entity: CDM Smith, Inc.
   Mailing Address: 8310-1 N Capital of Texas Hwy, Suite 250
   City, State: Austin, Tx Zip: 78731
   Telephone: 512-652-5329 FAX: _____
   Email Address: weimerej@cdmsmith.com

9. Project Location:

   ☒ The project site is located inside the city limits of Georgetown, TX.
   ☒ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of Georgetown, TX.
   ☐ 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.

    2706 S Austin Avenue, Georgetown, TX 78626

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: TCEQ to coordinate site visit with City of Georgetown

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: Water Treatment Plant

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.

Legend

Project Site

N

0 250 500 750 1,000 Feet

Attachment A: Road Map
Southside Water Treatment Plant
Williamson County

CDM Smith

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

The National Map
US Topo

ROUND ROCK QUADRANGLE
TEXAS - WILLIAMSON COUNTY
7.5-MINUTE SERIES

Project Site
Water Treatment

GEORGETOWN
ROUND ROCK
BRUSHY CREEK
CEDAR PARK
Rabbit Hill

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, September 2016 - November 2016
Roads.....U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2023
Hydrography.....National Hydrography Dataset, 2002 - 2020
Contours.....National Elevation Dataset, 2019
Boundaries.....Multiple sources; see metadata file 2021 - 2022

Wetlands.....FWS National Wetlands Inventory Not Available

UTM GRID AND 2023 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
MN
GN
3°17′ 58 MILS
0°40′ 12 MILS

U.S. National Grid
100,000 - m Square ID
PU
Grid Zone Designation 14R

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 MILES 1
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Leander NE
2 Georgetown
3 Weir
4 Leander
5 Hutto
6 Jollyville
7 Pflugerville West
8 Pflugerville East
ADJOINING QUADRANGLES

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

Legend

Edwards Aquifer
Contributing Zone
Recharge Zone
Transition Zone

TCEQ

ROUND ROCK, TX
2023

City of Georgetown

Southside Water Treatment Plant

Aboveground Storage Tank Facility Plan

The Southside Water Treatment project will construct a new emergency backup power generator. The project will also include the construction of all related electrical work and all related automation for SCADA connectivity, including automation transfer switches, duct banks, cabling, and wiring. Work also includes structural concrete foundations and walkways; civil site work including utility line relocations, pavement restoration, site clearing and restoration, grading and drainage; and other work included in the contract documents. Tertiary containment will also be installed around the generator fuel tank due to the proximity to the water well on the site.

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.

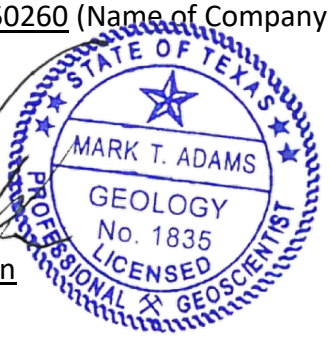
Print Name of Geologist: Mark T. Adams Telephone: (512) 347-9000

Date: 04/02/2024 Fax: (512) 306-0974

Representing: aci Group LLC TBPG License No. 50260 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:

4/2/2024



Regulated Entity Name: Southside Pump Station

Project Information

1. Date(s) Geologic Assessment was performed: 3/6/2024
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☒ AST
   - ☐ 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)

Soil Name	Group*	Thickness(feet)
DoC - Doss silty clay, moist, 1 to 5 percent slopes	D	0-6.66

** 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" = 10'
   Site Geologic Map Scale: 1" = 10'
   Site Soils Map Scale (if more than 1 soil type): 1" = 50'

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 _____ (#) 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.

aci consulting
austin • denver

GEOLOGIC ASSESSMENT
FOR THE SOUTHSIDE PUMP STATION
FOR THE GEORGETOWN GENERATORS PROJECT

Williamson County, Texas

March 2024

Submitted to:
Gupta Associates, Inc.
13717 Neutron Road
Suite #4406
Dallas, Texas 75244

Prepared by:
aci environmental consulting
1001 Mopac Circle
Austin, Texas 78746
TBPG Firm License No. 50260

aci project No.: 09-22-216

aci consulting
austin • denver

TABLE OF CONTENTS

LIST OF ATTACHMENTS

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March 2024

Geologic Assessment for the Southside Pump Station located in Williamson County, Texas

1.0 INTRODUCTION

The Texas Commission on the Environmental Quality (TCEQ) regulates activities that have the potential to pollute the Edwards Aquifer through the Edwards Aquifer Protection Program. Projects meeting a certain criterion over the Edwards Aquifer Recharge Zone must submit an Edwards Aquifer Protection Plan (EAPP).

The purpose of this report is to identify all potential pathways for contaminant movement to the Edwards Aquifer and provide sufficient geologic information so that the appropriate Best Management Practices (BMPs) can be proposed in the Edwards Aquifer Protection Plan (EAPP). This report complies with the requirements of Title 30, Texas Administrative Code (TAC) Chapter 213 relating to the protection of the Edwards Aquifer Recharge Zone. Per the Rules, the Geologic Assessment must be completed by a Geologist licensed according to the Texas Geoscience Practice Act.

2.0 PROJECT INFORMATION

The Southside Pump Station, hereafter referred to as the subject area or site, is located at 2706 South (S) Austin Avenue (Ave) in the City of Georgetown, Williamson County, Texas (**Attachment A, Figure 1**). Pedestrian investigations of the 0.2-acre tract were performed on March 6, 2024, by Anna Ozelius and Andrew McGlothlin, under the supervision of Mark Adams, P.G. with aci environmental consulting.

This report is intended to satisfy the requirements for a Geologic Assessment, which shall be included as a component of a Water Pollution Abatement Plan (WPAP). The site is approximately 0.2 acres in total. The proposed project would install back-up power generators to the existing pump station. The scope of the report consists of a site reconnaissance, field survey, and review of existing data and reports. Features identified during the field survey were ranked utilizing the Texas Commission on Environmental Quality (TCEQ) matrix for Edwards Aquifer Recharge Zone features. The ranking of the features will determine their viability as "sensitive" features.

3.0 INVESTIGATION METHODS

The following investigation methods and activities were used to develop this report:

- Review of existing files and literature to determine the regional geology and any known caves associated with the project area;
- Review of past geological field reports, cave studies, and correspondence regarding the existing geologic features on the project area, if available;
- Site reconnaissance by a registered professional geologist to identify and examine caves, recharge features, and other significant geological structures;
- Evaluation of collected field data and a ranking of features using the TCEQ Ranking Table 0585 for the Edwards Aquifer Recharge Zone; and
- Review of historic aerial photographs to determine if there are any structural features present, and to determine any past disturbances on the subject property.

4.0 SOILS AND GEOLOGY

The following includes a site-specific description of the soils, geologic stratigraphy, geologic structure, and karstic characteristics as they relate to the Edwards aquifer. Also included in this section is a review of historic aerials for presence of geologic changes or changes to manmade features in bedrock.

Soils

According to the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey (2024), one soil unit occurs within the subject area. A description of the unit according to the NRCS (2024) is as follows (**Attachment A, Figure 2**):

- *DoC – Doss silty clay moist, 1 to 5 percent slopes*

The Doss component makes up 85 percent of the map unit. Slopes are 1 to 5 percent. This component is on hillslopes on dissected plateaus. The parent material consists of residuum weathered from limestone. Depth to a root restrictive layer, bedrock, paralithic, is 11 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is moderate. This soil is not flooded. It is not

ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet the criteria for hydric soils. Hydrologic Soil Group: D.

Geologic Stratigraphy

According to the Geologic Map of the Georgetown Quadrangle, Texas, one geologic unit occurs within the subject area (**Attachment A, Figure 3**). This unit and a description by Collins (1997) is as follows:

- Edwards Limestone Formation (Ked)

"Limestone, dolomitic limestone, and marl. Massive to thin beds, chert, and fossiliferous; fossils include rudistids. Shallow subtidal to tidal-flat cycles. Honeycomb textures, voids in collapse breccias, and cavern systems. Accounts for most of the Edwards aquifer strata. Thickness is between 100 and 300 ft; thins northward."

Site-Specific Stratigraphic Column

Formation	Members	Thickness (Collins, 1997)
Edwards Limestone	N/A	100-300 feet

Geologic Structure

The geologic strata associated with the Edwards Aquifer include the Georgetown Limestone Formation of the Washita Group, the Edwards Limestone Group which is interfingered with the Comanche Peak Formation, followed by the Walnut formation, and finally the Glen Rose Formation of the Trinity Group. These Groups dip gently to the southeast and are a characterized by the Balcones Fault Escarpment, a zone of en echelon normal faults downthrown to the southeast. Locally, the dominant structural trend of faults within the area is 15°, as evidenced by the mapped fault patterns (**Attachment A, Figure 4**). Thus, all features that have a trend ranging from 0° to 30° are considered "on trend" and were awarded the additional 10 points in the Geologic Assessment Table.

The natural landscape has been notably impacted by the construction of the existing water storage tank and water treatment plant. In addition to these structures, the subject area contains subsurface infrastructure, concrete slabs, and utilities. Distinctions in local geology were not observed due to the disturbance of the natural landscape.

Karstic Characteristics

In limestone landscapes, karst is expressed by erratically developed cavernous porosity from dissolution of bedrock as water combined with weak acids moves through the subsurface. Karst terrains are typical of the Edwards Limestone, occurring across a vast region of Central Texas, including the Balcones Fault Escarpment. The features produced by karst processes include, but are not limited to, sinkholes, solution cavities, solution enlarged fractures, and caves. These features can eventually provide conduits for fluid movement such as surface water runoff, as "point recharge" to the Edwards Aquifer. Faults and manmade features within bedrock can also provide conduits for point recharge in many cases.

According to Edwards aquifer zone map produced by the TCEQ (2005), the entire subject area is within the northern segment of the Edwards aquifer Recharge Zone. Thus, all karst features identified as sensitive within the project limits have the potential to be point recharge features into the Edwards aquifer.

Review of Historic Aerials

Aerial photographs from the years 1941, 1953, 1964, 1976, 1981, 1990, 1995, 2004, 2010, 2016, 2022 were reviewed for the site and it was determined the subject area was undeveloped land on the floodplain of West Fork Smith Branch (**Attachment C**). A water tower was constructed in 1990 and an associated building appears in aerials from 2004. The project area has remained unchanged to present day.

5.0 GEORGETOWN WATER QUALITY ORDINANCE

On February 24, 2015, the City of Georgetown (CoGt) passed a finalized ordinance regarding water quality regulations over the Edwards Aquifer Recharge Zone (EARZ), which established setbacks or buffers around springs and streams in the EARZ as well as for occupied salamander sites. **aci environmental consulting** scientists surveyed the subject area as part of the Geologic Assessment (GA) and included obtained pertinent information on springs, streams, and Georgetown Salamander Critical Habitat Units (CHUs) as part of the assessment.

aci environmental consulting verified that the entire site is contained within the Edwards Aquifer Recharge Zone (EARZ), based on the mapped boundaries. There were no springs or mapped salamander sites or known surface or subsurface CHUs within the subject area. Additionally, there are no mapped flowlines or waterbodies within the site, according to the National Hydrography Dataset (NHD), nor are there any mapped wetlands within the site according to the National Wetland Inventory (NWI). One mapped NHD stream occurs off-site, just north of the project area and is associated with West Fork Smith Branch. The nearest CHU for the Georgetown Salamander occurs approximately 3.3 miles west of the project area, along an unnamed tributary to the South Fork San Gabriel River.

As there are no springs or waterways located within the project area, there are no buffers or setback required as part of the Georgetown Water Quality Ordinance.

6.0 SUMMARY OF FINDINGS

This report documents the findings of a geologic assessment conducted by **aci environmental consulting** personnel on March 6, 2024. In total, four manmade features in bedrock were recorded within the subject area. A comprehensive description and recommendation for these features can be found in **Attachment B**. Please note: Features numbers were not assigned in sequential order.

No naturally occurring geologic features were identified during the field investigation. All of the man-made features in bedrock located within the property parcel boundary are known to the project engineer and do not require any setbacks.

7.0 REFERENCES

Collins, E.W., 1997. *Geologic Map of the Round Rock Quadrangle, Texas.* Bureau of Economic Geology. Austin, Texas.

(TCEQ) Texas Commission on Environmental Quality. 2004. Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones. October 1, 2004. Austin, Texas.

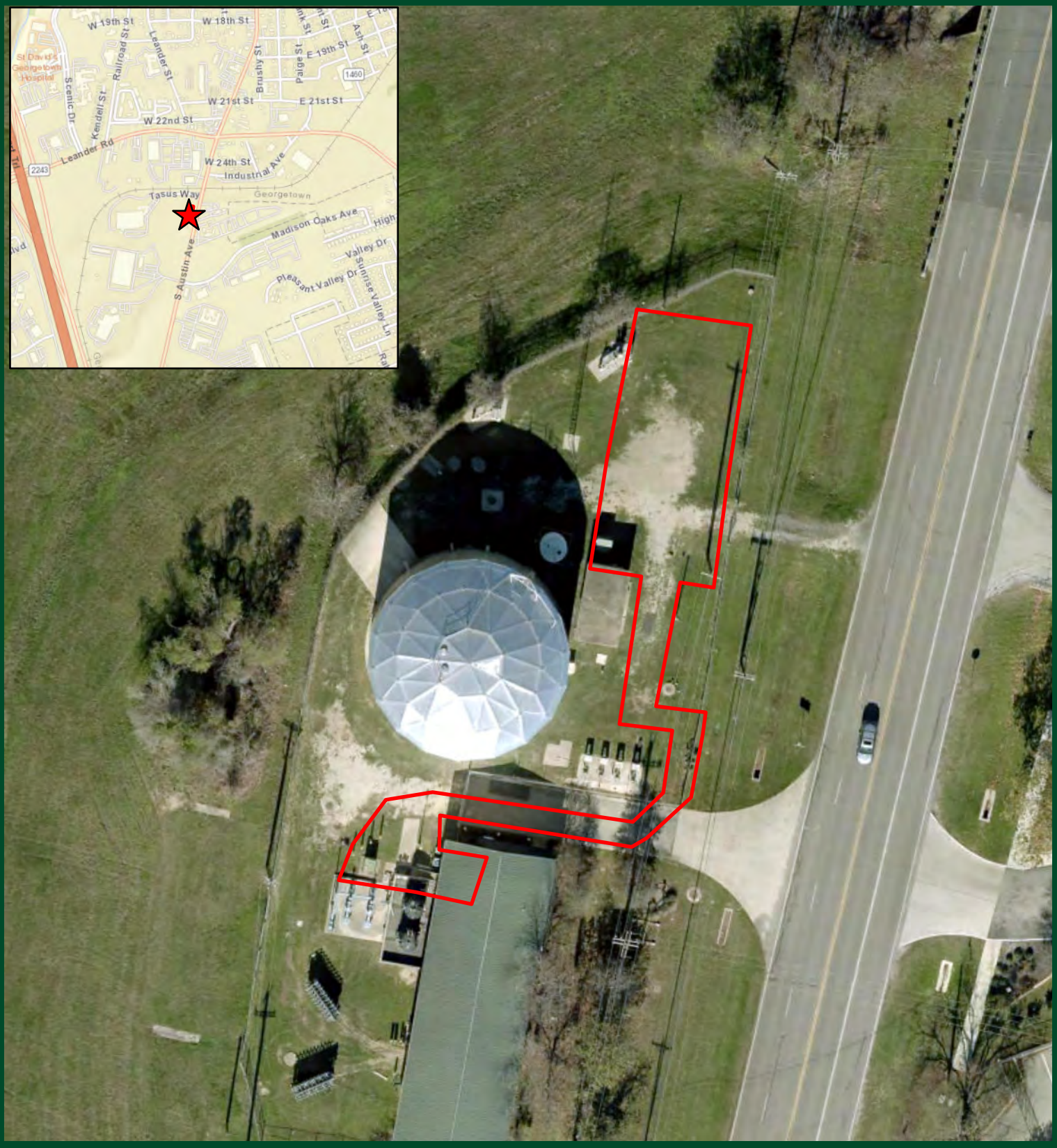
(TCEQ) Texas Commission on Environmental Quality. 2005. "Edwards Aquifer Protection Program, Chapter 213 Rules - Recharge Zone, Transition Zone, Contributing Zone, and Contributing Zone within the Transition Zone." Map. Digital data. September 1, 2005. Austin, Texas.

(USDA NRCS) U.S. Department of Agriculture Natural Resources Conservation Service. 2024. WebSoilSurvey.com. Soil Survey Area: Williamson County, Texas. Date accessed: March 5, 2024.

(USFWS) U.S. Fish and Wildlife Service. 2024. Critical Habitat Portal. Accessed March 6, 2024. Available at: http://ecos.fws.gov/crithab

ATTACHMENT A

Site Maps



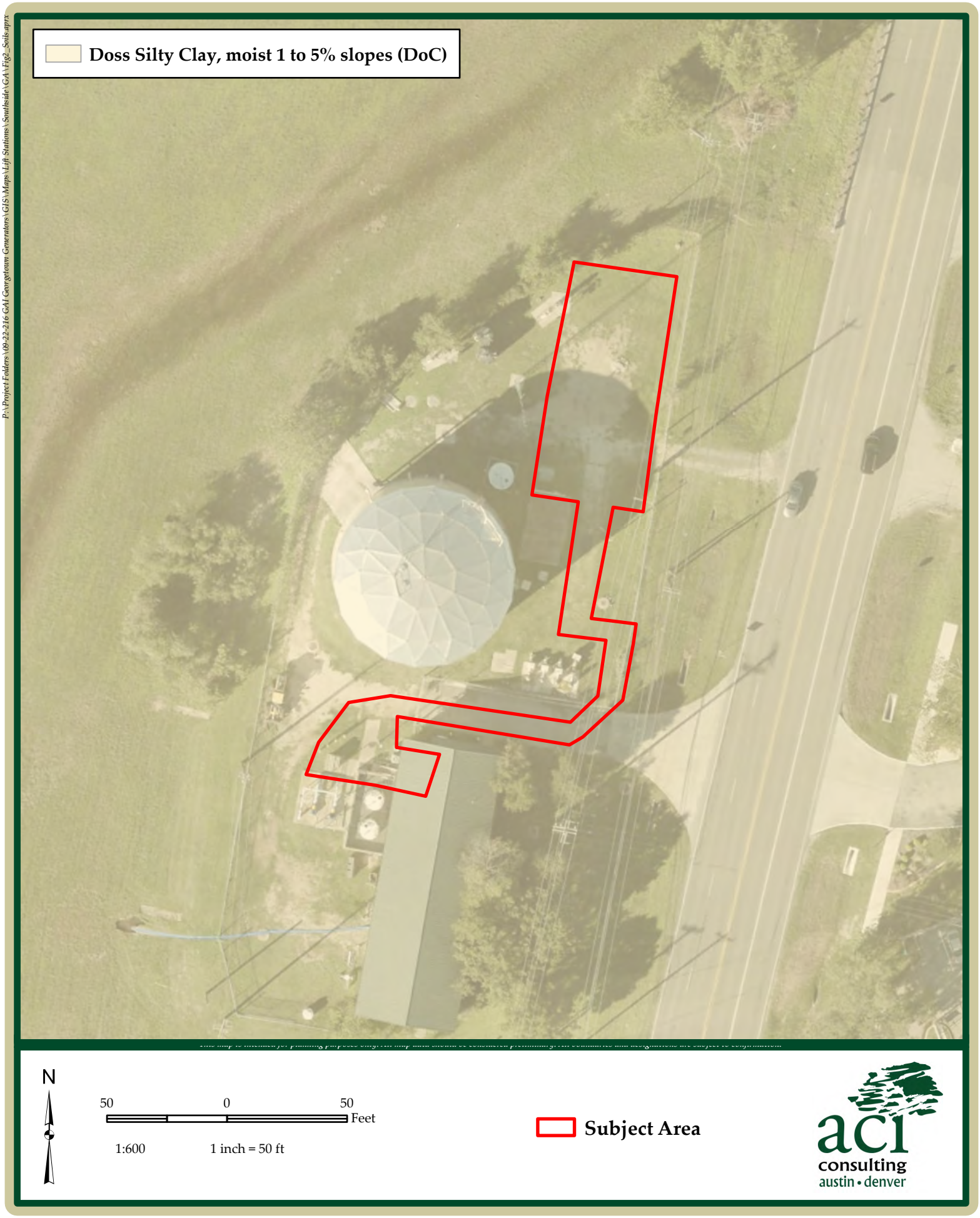
P:\Project Folders\09-22-216 GA\Georgetown Generators\GIS\Maps\Lift Stations\Southside\GA\Fig1_Aerial.aprx

Southside Pump Station

aci Project No.: 09-22-216

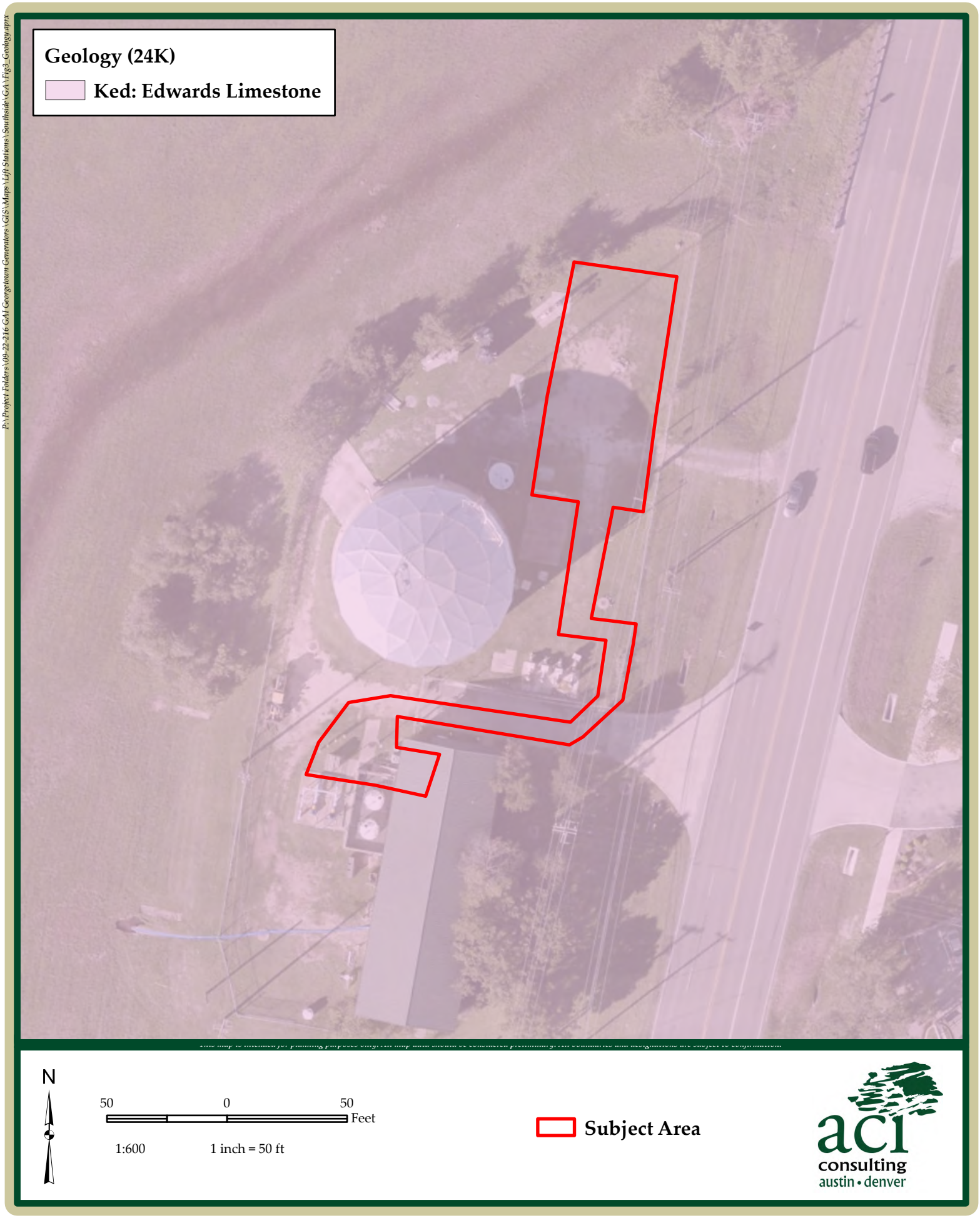
Figure 1: Site Location Map

March 2024



Southside Pump Station **aci Project No.: 09-22-216**

Figure 2: Site Soils Map **March 2024**

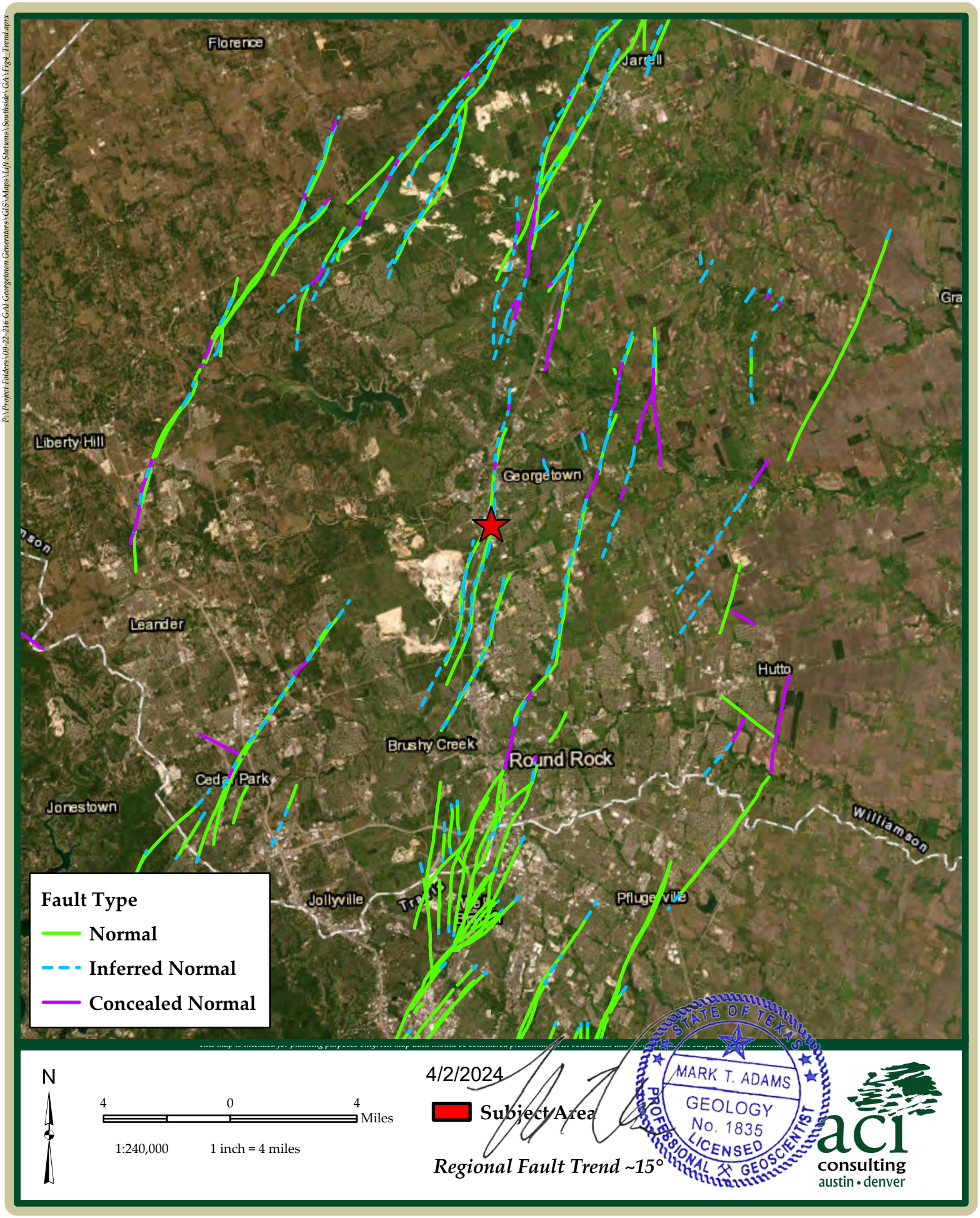


Southside Pump Station

aci Project No.: 09-22-216

Figure 3: Site Geology Map

March 2024



Southside Pump Station **aci Project No.: 09-22-216**

Figure 4: Regional Trend Map **March 2024**

ATTACHMENT B

Geologic Table
Geologic and Manmade Feature Map (Figure 5)
Feature Descriptions and Recommendations

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Southside Pump Station

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	
MM1	30.6198145	-97.6813413	MB	30	Ked	?	?	?	-	0	-	-	?	10	40		X	X		Hillside
MM17	30.6192521	-97.6816115	MB	30	Ked	?	?	?	-	0	-	-	?	10	40		X	X		Hillside
MM22	30.6195668	-97.6814178	MB	30	Ked	?	?	?	-	0	-	-	?	10	40		X	X		Hillside
MM24	30.6195819	-97.6812935	MB	30	Ked	?	?	?	-	0	-	-	?	10	40		X	X		Hillside

* DATUM: NAD 1983 State Plane 4203

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

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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

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

Date 4/2/2024

Sheet __1___ of __1____

STATE OF TEXAS
MARK T. ADAMS
GEOLOGY
No. 1835
LICENSED
PROFESSIONAL GEOSCIENTIST

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

P:\Project Folders\09-22-216 GAI Georgetown Generators\GIS\Maps\Lift Stations\Southside\GA\Fig5_Feature.aprx

Geology (24K)

Ked: Edwards Limestone

MM1

MM24

MM22

MM17

Zone AE

1% Annual Chance Flood Hazard
Regulatory Floodway
Special Floodway
Area of Undetermined Flood Hazard
0.2% Annual Chance Flood Hazard
Future Conditions 1% Annual Chance Flood Hazard
Area with Reduced Risk Due to Levee
Area with Risk Due to Levee
Ked: Edwards Limestone

N

10 5 0 10 Feet

1:120 1 inch = 10 ft

Subject Area

Man-made Features

4/2/2024

STATE OF TEXAS
MARK T. ADAMS
GEOLOGY
No. 1835
LICENSED
PROFESSIONAL GEOSCIENTIST

The project is entirely mapped within the Edwards Aquifer Recharge Zone.
There are no mapped flowlines according to the National Hydrography Dataset (NHD).
There are no mapped waterbodies according to the National Hydrography Dataset (NHD).
There are no mapped wetlands within the project area according to the National Wetland Inventory.

aci consulting
austin • denver

Southside Pump Station

Figure 5: Geological Feature Map

aci Project No.: 09-22-216

March 2024

MM-1

GPS: N. 30.6198145 W. -97.6813413

This feature is a manmade feature in bedrock (utility pole) with an unknown diameter extending below the surface for an unknown depth. The feature is located in the Edwards Limestone and is positioned on a hillside. Infill material is unknown. The feature has no trend, and a drainage area of less than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 10 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.

Recommendation: This feature needs to be brought to the attention of the engineer but does not require any protective setbacks.

Photo of MM-1

MM-17

GPS: N. 30.6192521 W. -97.6816115

This feature is a cluster of manmade features in bedrock that includes, a membrane process facility, bulk chemical storage area, backwash pump station and associated subsurface pipes, and bulkheads. These features are of unknown dimensions extending below the surface for an unknown depth. The features are located in the Edwards Limestone and are positioned on a hillside. Infill material is unknown. The feature has no trend, and a drainage area of less than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 10 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.

Recommendation: This feature needs to be brought to the attention of the engineer but does not require any protective setbacks.

Photo of MM-17

MM-22

GPS: N. 30.6195668 W. -97.6814178

This feature is a manmade feature in bedrock (control room building) with unknown dimensions extending below the surface for an unknown depth. The feature is located in the Edwards Limestone and is positioned on a hillside. Infill material is unknown. The feature has no trend, and a drainage area of less than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 10 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.

Recommendation: This feature needs to be brought to the attention of the engineer but does not require any protective setbacks.

Photo of MM-22

MM-24

GPS: N. 30.6195819 W. -97.6812935

This feature is a manmade feature in bedrock (utility pole) with an unknown diameter extending below the surface for an unknown depth. The feature is located in the Edwards Limestone and is positioned on a hillside. Infill material is unknown. The feature has no trend, and a drainage area of less than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 10 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.

Recommendation: This feature needs to be brought to the attention of the engineer but does not require any protective setbacks.

Photo of MM-24

ATTACHMENT C

Historic Aerial Photographs

Prepared for:

ACI ENVIRONMENTAL CONSULTING, LLC
1001 Mopac Circle
Austin, TX 78746

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Historical Aerial Photographs

Southside Water Treatment Plant

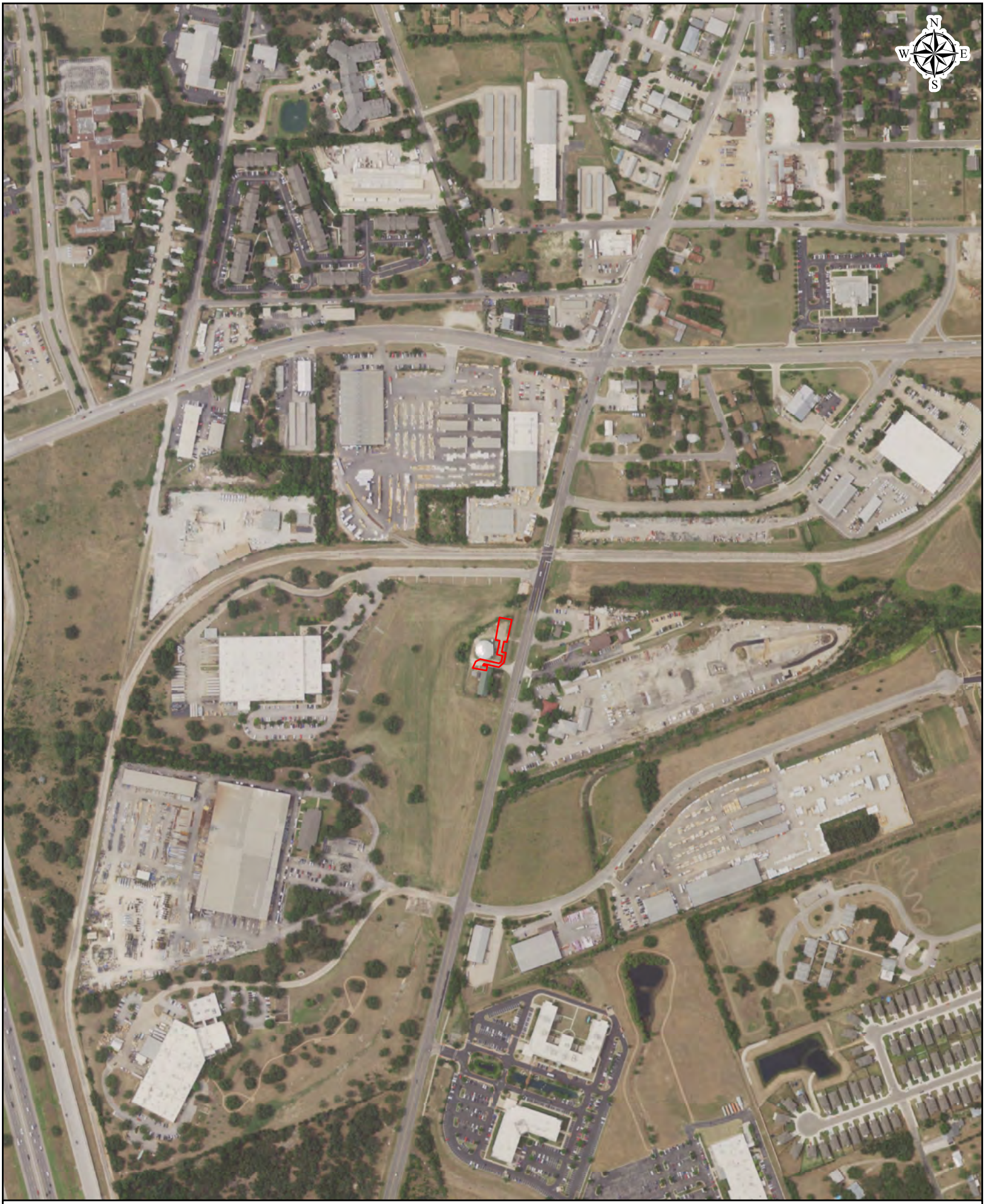
(09-22-

TX 78626

Williamson County

ES-143570

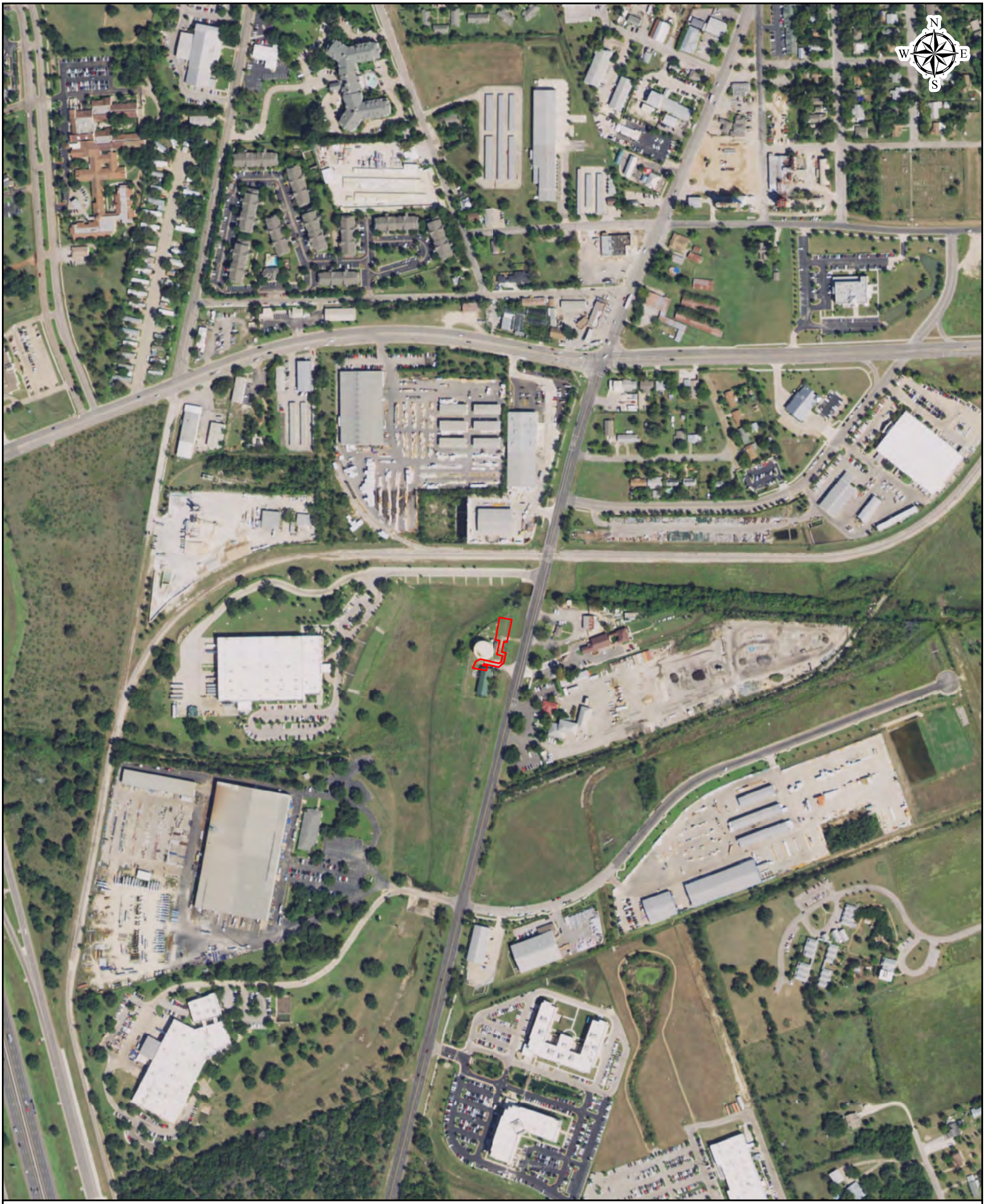
Friday, February 23, 2024



Date: 2022
Source: USDA

0 250 500 1,000 Feet

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP



Date: 2016
Source: USDA

0 250 500 1,000 Feet

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 2010
Source: USDA

0 250 500 1,000 Feet

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 2004
Source: USDA

0 250 500 1,000 Feet

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 1995
Source: USGS

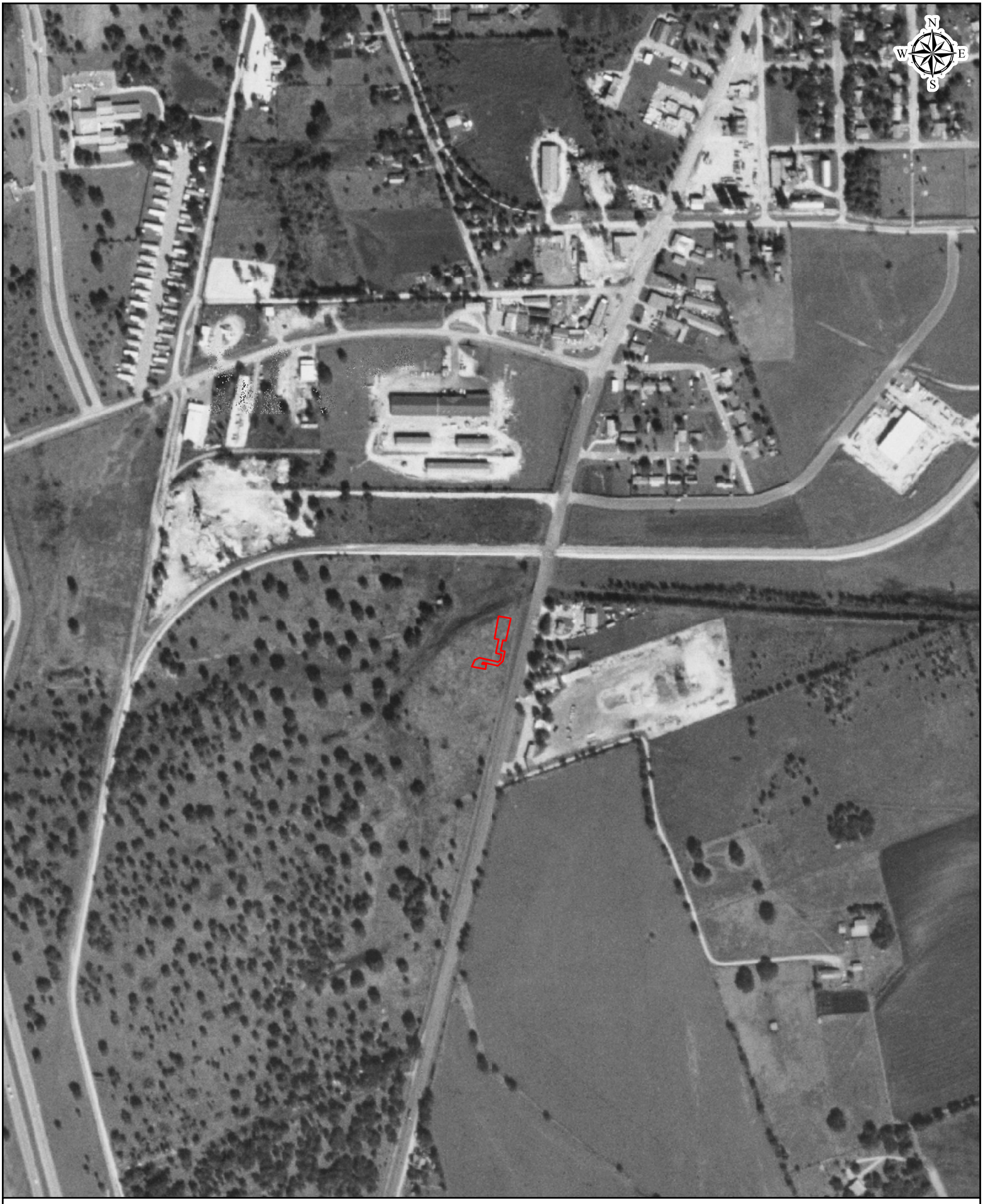
Feet
0 250 500 1,000

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 1990
Source: USGS

0 250 500 1,000 Feet

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP



Date: 1981
Source: USGS

0 250 500 1,000 Feet

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 1976
Source: TXDOT

0 250 500 1,000 Feet

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Date: 1964
Source: ASCS

0 250 500 1,000 Feet

BANKS ENVIRONMENTAL DATA
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Date: 1953
Source: AMS

0 250 500 1,000 Feet

BANKS ENVIRONMENTAL DATA
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Date: 1941
Source: ASCS

0 250 500 1,000 Feet

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AERIAL SOURCE DEFINITIONS

Acronym	Agency
NASA	National Aeronautics & Space Administration
AMS	Army Mapping Service
ASCS	Agricultural Stabilization & Conservation Service
SCS	Soil Conservation Service
USBR	United States Bureau of Reclamation
Fairchild	Fairchild Aerial Surveys
TXDOT	Texas Department of Transportation
BLM	Bureau of Land Management
USAF	United States Air Force
USCOE	United States Corps of Engineers
USDA	United States Department of Agriculture
USGS	United States Geological Survey
WALLACE	Wallace-Zingery Aerial Surveys
TNRIS	Texas Natural Resources Information System

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

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Aboveground Storage Tank Facility Plan Application

Texas Commission on Environmental Quality

For Permanent Storage on The Edwards Aquifer Recharge and Transition Zones And Relating to 30 TAC §213.5(e), 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.

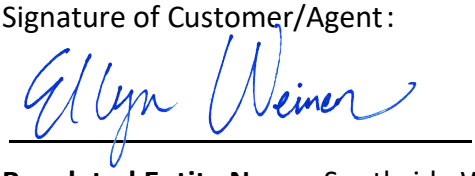
Signature

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 **Aboveground Storage Tank Facility Plan Application** is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Customer/Agent: Ellyn Weimer, PE

Date: 10-08-2024

Signature of Customer/Agent:



Regulated Entity Name: Southside Water Treatment Plant

Aboveground Storage Tank (AST) Facility Information

1. Tanks and substance stored:

Table 1 - Tank and Substance Storage

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
1	2520	Diesel	Welded Steel
2			
3			
4			

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
5			

Total x 1.5 = 3780 **Gallons**

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

   ☒ **Attachment A - Alternative Methods of Secondary Containment**. Alternative methods for providing secondary containment are proposed. Specifications that show equivalent protection for the Edwards Aquifer are attached.

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

Table 2 - Secondary Containment

Length (L) (Ft.)	*Width (W) (Ft.)*	*Height (H) (Ft.)*	*L x W x H = (Ft3)*	*Gallons*
47	10	13.5	6,345	47,460
49	21	1	1,029	7,697

Total: 55,157 **Gallons**

4. ☒ All piping, hoses, and dispensers will be located inside the containment structure.

   ☐ Some of the piping to dispensers or equipment will extend outside the containment structure.
   - ☐ The piping will be aboveground
   - ☐ The piping will be underground

5. ☒ The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of UL-2085 double-wall carbon steel .

6. ☒ **Attachment B - Scaled Drawing(s) of Containment Structure**. A scaled drawing of the containment structure that shows the following is attached:

   - ☐ Interior dimensions (length, width, depth and wall and floor thickness).
   - ☐ Internal drainage to a point convenient for the collection of any spillage.
   - ☒ Tanks clearly labeled.
   - ☐ Piping clearly labeled.
   - ☐ Dispenser clearly labeled.

Site Plan Requirements

Items 7 - 18 must be included on the Site Plan.

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

   Site Plan Scale: 1" = 20'.

8. 100-year floodplain boundaries:

   ☒ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
   ☐ No part of the project site is located within the 100-year floodplain.

   ☒ The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM 48491C0290E Effective 12/20/2019.

9. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.

   ☐ The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.

10. 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.

11. 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 C - Exception to the Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

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

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

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

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

16. ☐ Surface waters (including wetlands).

    ☒ N/A

17. ☐ Locations where stormwater discharges to surface water or sensitive features.

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

18. ☒ Legal boundaries of the site are shown.

Best Management Practices

19. ☒ Any spills must be directed to a point convenient for collection and recovery. Spills from storage tank facilities must be removed from the controlled drainage area for disposal within 24 hours of the spill.

    ☒ In the event of a spill, any spillage will be removed from the containment structure within 24 hours of the spill and disposed of properly.

    ☐ In the event of a spill, any spillage will be drained from the containment structure through a drain and valve within 24 hours of the spill and disposed of properly. The drain and valve system are shown in detail on the scaled drawing.

20. ☒ All stormwater accumulating inside the containment structure will be disposed of through an authorized waste disposal contractor.

    ☐ Containment area will be covered by a roof.

    ☒ Containment area will not be covered by a roof.

    ☐ A description of the alternate method of stormwater disposal is submitted for the executive director's review and approval and is attached.

21. ☒ **Attachment D - Spill and Overfill Control**. A site-specific description of the methods to be used at the facility for spill and overfill control is attached.

22. ☒ **Attachment E - Response Actions to Spills**. A site-specific description of the planned response actions to spills that will take place at the facility is attached.

Administrative Information

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

    ☐ The WPAP application for this project was approved by letter dated _____. A copy of the approval letter is attached at the end of this application.

    ☒ The WPAP application for this project was submitted to the TCEQ on <u>with this application</u>, but has not been approved.

    ☐ A WPAP application is required for an associated project, but it has not been submitted.

☐ There will be no building or structure associated with this project. In the event a building or structure is needed in the future, the required WPAP will be submitted to the TCEQ.

☐ The proposed AST is located on the Transition Zone and a WPAP is not required. Information requested in 30 TAC 213.5 subsection (b) (4)(B) and (C) and (5) is provided with this application. (Forms TCEQ-0600 Permanent Stormwater Section and TCEQ-0602 Temporary Stormwater Section or Stormwater Pollution Prevention Plan/SW3P).

24. ☒ This facility is subject to the requirements for the reporting and cleanup of surface spills and overfills pursuant to 30 TAC 334 Subchapter D relating to Release Reporting and Corrective Action.

25. ☒ 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.

26. ☒ Any modification of this AST Facility Plan application will require executive director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

National Flood Hazard Layer FIRMette

FEMA

97°41'13"W 30°37'26"N

97°40'35"W 30°36'55"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/14/2024 at 5:40 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

City of Georgetown

Southside Water Treatment Plant

Aboveground Storage Tanks Facility Plan

Alternative methods other than a containment structure sized to capture one and one-half times the storage capacity of the system for the three proposed fuel tanks are proposed. Th e proposed generator fuel tank is a double-wall subbase design carbon steel construction tank complying with UL-2085 Standard, as indicated by the National Fire Protection Association (NFPA) 30 – Flammable and Combustible Liquids Code. The inner tanks serve as the primary fuel storage container while the outer tank serves as secondary containment.
According to the Texas Administrative Code (TAC), double-wall tanks may be used to comply with the secondary containment requirements of TAC 30, §334.45, provided that the tanks meet the following additional provisions:

- The secondary wall of such double-wall tanks shall be structurally designed to contain and support the full-load capacity of the primary tank without failure.
- The double-wall tank (including both the primary and secondary tank walls) shall be protected from corrosion in accordance with one or more of the allowable methods included in TAC 30 §334.49 -Corrosion Protection.
- The double-wall tank shall be designed, installed, operated, and maintained in accordance with the applicable codes or standards of practice developed by a nationally recognized association or independent testing laboratory that has been reviewed and determined by the agency to be no less protective of human health and safety, and the environment than the standards described in accordance with procedures in TAC 30 §334.43 and TAC 30§334.45.

The subbase tank will include a welded steel containment basin, sized at a minimum of 110 percent of the tank capacity to prevent the escape of fuel into the environment in the event of a tank rupture. The generator fill ports will be equipped with a an overfill prevention valve as well as a leak detection system for the interstitial space to alert for any potential leaks. The tanks will also have a tank level indicator, with high and low-level switches to indicate fuel level at all times. Refer to **Attachment D** for spill and overfill response procedures. Specifications for the generator fuel tanks are attached to this document to show compliance with containment provisions in order to prevent leaks into the Edward's Aquifer.

A scaled drawing of the generators and fuel tanks is provided in **Attachment B.** Please note that the shop drawings for the generator and fuel tanks have not yet been submitted to the Engineer for review. Shop drawings of the generators and generator fuel tanks will be reviewed for compliance of the specified standards and provisions upon receival from Contractor. A sample cut sheet from a similar generator fuel tank is attached to Appendix B for reference.

SECTION 26 32 13 - ENGINE GENERATOR SET

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish and install diesel-fueled engine generator sets with all appurtenances as shown on the Drawings and specified herein.

1. Permanently Mounted Generators

    a. Pastor Pump Station

    b. Rabbit Hill Pump Station

    c. Southside Water Treatment Plant

    d. Domel #1 and Pump Station

    e. Westside Service Center

B. Provide each engine generator set as follows:

1. Each generator kW size shown on the drawings is a minimum size acceptable size with the kVA rating calculated at 0.8 power factor, even if the combined power factor of the loads shown on the drawings are calculated to be greater than 0.8.
2. The electrical system which includes the conductors, raceways, circuit breakers, switchgear bus and automatic transfer switch amperage have been sized based on the kW and kVA (based on 0.8 power factor) of the generator shown on the drawings.
3. No decrease in the kw/kVA or power factor of an engine generator set based on the loads shown or decrease of the size of engine generator set manufactured by a particular vendor will be allowed.
4. Provide each engine generator set that meets all the specified performance criteria. Increase the size of the engine generator set as required to meet the specified performance criteria.
5. If the engine generator size increases to supply current greater than the conductors, breakers or bus sizes shown, increase the conductors, raceways, breakers, bus and automatic transfer switch amperage, and all other associated equipment, to accommodate the larger generator size. All sizing of associated equipment shall be in accordance with the NEC. Submit all required changes specified above to the Engineer/Owner.
6. No changes will be allowed for any increase of the size of any power system component without approval.
7. No changes in the Contract Price will be allowed for the increase of size of any power system component to accommodate an increase in size of the engine generator set.

C. Provide fuel for startup and testing. At the completion of startup and testing, fill the respective generator tank.

1.2 RELATED WORK

A. Refer to Division 26 00 00 for related work and electrical coordination requirements.

1.3 SUBMITTALS

A. Submittals shall be made in accordance with the requirements of Division 1, Section 26 00 00, the Contract Documents and as specified herein the following:

1. The manufacturers' names and product designation or catalog numbers for the types of materials specified or shown on the Drawings.
2. Cut sheets for each individual item shall be submitted.
3. All cut sheets shall be clearly marked to indicate which products are being submitted for use on this project.
4. Unmarked cut sheets will cause the submittal to be rejected and returned for revision.

B. All shop drawing submittals and all O&M submittals shall be submitted in accordance with the requirements listed in Division 1. No change in Contract Price or Schedule will be allowed for delays due to unacceptable submittals.

C. Submittals shall also contain information on related equipment to be furnished under this Specification. Incomplete submittals not containing the required information on the related equipment will also be returned without review.

D. Time-current coordination curves for protective device relays, circuit breakers, and fuses submitted shall be included as a part of these submittals.

E. The original equipment manufacturer shall create all equipment shop drawings, including all wiring diagrams, in the manufacturer’s Engineering Department. All equipment shop drawings shall bear the original equipment manufacturer’s logo, drawing file numbers, and shall be maintained on file in the original equipment manufacturer’s archive file system. Photocopies of the Engineer’s ladder schematics are unacceptable as shop drawings.

F. Submit to the Owner/Engineer, complete shop drawings and product data for all components in one package in a single submittal. Submitting the engine-generator, fuel tank, sound enclosure and access platforms in separate packages will not be acceptable and will be returned without review. Failure to submit all components at once may cause a delay in the construction schedule because of a delay in receiving approval to release the equipment manufacture. Delays caused by incomplete submittals, incorrect submittals, submittals not meeting these specifications causing excessive resubmittals will not be an acceptable reason for extending the Contract Time or increasing the Contract Price.

G. Submit to the Owner/Engineer, shop drawings and product data, for the following:

1. Equipment outline drawings showing elevation and plan views, dimensions, weight, anchor details, and required operating clearances.
2. Conduit entrance drawings.
3. Product data sheets and catalog numbers for the engine, AC generator, battery charger, engine generator set control system, electronic governor system, control stations, meters, relays, pilot lights, circuit breaker, etc. List all options and accessories furnished

specifically for this project. Clearly mark each sheet to indicate which items apply and/or those items that do not apply.

4. Provide control systems engineering to produce custom unit elementary drawings showing interconnecting wiring and interlocking between components and to remotely mounted devices. Include and identify all connecting equipment and remote devices on the schematics. The notation "Remote Device" will not be acceptable. Show wire and terminal numbers. Indicate special identifications for electrical devices per the Drawings.
5. Provide plan and elevation drawings of each engine generator set, with dimensions, exterior and interior views, showing component layouts, controls, terminal blocks, etc.
6. Schematic diagram
7. Nameplate schedule
8. UL Listing of the completed assembly.
9. Component list with detailed component information, including original manufacturer's part number.
10. Conduit entry/exit locations
11. Assembly ratings including:

    a. Short-circuit rating
    b. Voltage
    c. Continuous current
    d. Alternator construction details including:

        1) Stator winding construction, conductor materials, temperature rating, verify VPI insulation
        2) Rotor construction details including conductor materials.

12. Major component ratings including:

    a. Voltage
    b. Continuous current
    c. Interrupting ratings

13. Number and size of cables per phase, neutral if present, ground and all cable terminal sizes. Verify the generator termination is able to terminate the conductors shown on the drawings.
14. Service and feeder connectors.
15. Submit calculations showing that the generator sizing is correct for the voltage and frequency variations specified.
16. Instruction and renewal parts books.
17. Sound enclosure and all items mounted to the sound enclosure (including lighting, electrical panels, and raceway).

    a. The sound enclosure drawings shall clearly show all access doors and hatches which shall determine the width of the access platform.
    b. Provide construction drawings showing structural features including materials of construction, insulation, attachment methods to the generator, etc.
    c. Provide cut sheets on all items. Cut sheets shall demonstrate that Section 26 05 33 Raceway Boxes, Enclosures and Fittings and 26 05 29 Electrical Support Hardware have been met marked as required to indicate the materials provided. Unmarked cut sheets will be rejected.
    d. Provide sound enclosure sound ratings showing the calculated decrease in dB ratings for the proposed enclosure.

18. Provide structural drawings on the access platform including all specified details.

    a. Show that the width of the platform allows the sound enclosure doors to open a minimum of 90 degrees. See structural specifications and drawings for more information.
    b. Show the location of the specified grounding pads.
    c. If a sound enclosure are provided with doors which are wider than shown on the drawings, the width of the access platform and the structural slab supporting the platform shall be modified with no increase in the Contract Price or Schedule allowed. Submit details of all required changes to the Engineer for review and approval.

19. Fuel tank and all associated instrumentation including engineering drawings showing dimensions, weights, capacity, materials of construction, finishes for steel components and cut sheets for all instrumentation components provided.
20. Cut sheets on all conductors provided showing that they are tinned and meet the requirements of Section 26 05 19 Low Voltage Wires and Cables.

H. Factory Test Reports. Submittals shall be made for factory tests specified herein.

I. Field Test Reports. Submittals shall be made for field tests specified herein.

J. Operation and Maintenance Manuals.

1. Operation and maintenance manuals shall include the following information:

    a. Manufacturer's contact address and telephone number for parts and service.
    b. Instruction books and/or leaflets
    c. Recommended renewal parts list
    d. Record Documents for the information required by the Submittals above.
    e. Operating instructions, including periodic engine generator set operational testing.
    f. Automatic and manual startup and shutdown sequences.

K. The manufacturer shall submit for approval, a training agenda for all training specified herein. Training agenda shall not be submitted until final approval of the Operation and Maintenance Manual.

L. If the generator size must be increased to meet the specified performance criteria, and the supporting components of the power system must be changed to support the increase in the generator size, submit a list of all changes required along with supporting calculations. Submittal of any required changes shall be made to the Engineer/Owner prior to proceeding with the changes.

1.4 REFERENCE CODES AND STANDARDS

A. All products and components shown on the Drawings and listed in this specification shall be designed and manufactured according to latest revision of the following standards (unless otherwise noted):

1. NEMA Standard ICS 2 – 2000 Industrial Control and Systems

2. NFPA 70 – National Electrical Code (NEC)
3. NFPA 70E – Standard for Electrical Safety in the Workplace
4. NFPA 110 for Level 1 Systems.
5. OSHA for rotating parts.
6. NEMA MG1 temperature limits.
7. UL508A
8. CSA282-M1989
9. IEC 8528 part 4
10. Mil – Std 461C part 9
11. IEC Std 801.2, 801.3, 801.5
12. IEEE587
13. ASTM D2794-93
14. ASTM D2247-92
15. UL 2085 – Standard for Protected Aboveground Tanks for Flammable and Combustible Liquids

B. All equipment components and completed assemblies specified in this Section of the Specifications shall bear the appropriate label of Underwriters Laboratories.

1.5 QUALITY ASSURANCE

A. The manufacturer of this equipment shall have produced similar equipment for a minimum period of ten years. When requested by the Engineer, an acceptable list of installations with similar equipment shall be provided demonstrating compliance with this requirement.

B. The manufacturer of the assembly shall be the manufacturer of the major components within the assembly. All assemblies shall be of the same manufacturer. Equipment that is manufactured by a third party and “brand labeled” shall not be acceptable.

C. All components and material shall be new and of the latest field proven design and in current production. Obsolete components or components scheduled for immediate discontinuation shall not be used.

D. For the equipment specified herein, the manufacturer shall be ISO 9001 2000 certified.

E. Equipment submitted shall fit within the space shown on the Drawings. Equipment which does not fit within the space is not acceptable.

1.6 JOBSITE DELIVERY, STORAGE AND HANDLING

A. Prior to jobsite delivery, complete all submittal requirements, and present to the Owner/Engineer upon delivery of the equipment, an approved copy of all such submittals. Delivery of incomplete constructed equipment, or equipment which failed any factory tests, will not be permitted.

B. Equipment shall be handled and stored in accordance with manufacturer's instructions. Two copies of these instructions shall be included with the equipment at time of shipment and shall be made available to the Contractor and Owner. The instructions shall include detailed assembly instructions including but not limited to wiring interconnection diagrams, rigging for lifting, skidding, jacking, and moving using rolling equipment to place the equipment, bolt torquing

4. Analog DC voltmeter and ammeter, 12-hour equalize charge timer, AC and DC fuses shall also be provided on the charger.

2.13 OUTDOOR WEATHER-PROTECTIVE HOUSING

A. Engine generator set housing shall be provided factory assembled to engine generator set base and radiator cowling and shall be of the sound-attenuated type. Housing shall provide ample airflow for engine generator set operation at rated load in the ambient conditions previously specified. The housing shall have hinged side access doors and rear control door. All doors shall be lockable. All sheet metal shall be primed for corrosion protection and finish painted with the manufacturer's standard color using a two-step electro-coating paint process, or equal meeting the performance requirements specified below. All surfaces of all metal parts shall be primed and painted. The painting process shall result in a coating, which meets the following requirements:

1. Primer thickness: 0.5-2.0 mils. Topcoat thickness, 0.8-1.2 mils.
2. Gloss, per ASTM D523-89, 80% plus or minus 5%. Gloss retention after one year shall exceed 50%.
3. Crosshatch adhesion, per ASTM D3359-93, 4B-5B.
4. Impact resistance, per ASTM D2794-93, 120-160 inch-pounds.
5. Salt Spray: per ASTM B117-90, 1000+ hours.
6. Humidity: per ASTM D2247-92, 1000+ hours.
7. Water Soak: per ASTM D2247-92, 1000+ hours.
8. Painting of hoses, hose clamps, wiring harnesses, and other non-metallic service parts shall not be acceptable. Fasteners used shall be corrosion resistant and designed to minimize marring of the painted surface when removed for normal installation or service work.

B. Sound Attenuation

1. Housing shall be sound attenuating type, producing a noise level not greater than the allowable limits at nearest property line (refer to drawings at each site). In no case shall the sound level at the nearest property line exceed 65 dbA.
2. Enclosure sound ratings shall be submitted.

2.14 FUEL STORAGE TANK

A. Provide a dual wall subbase fuel storage tank. The tank shall be sized to provide 24 hours usable capacity at 100% load. The tank shall be constructed of corrosion resistant steel and shall be double wall UL-2085 listed. The equipment, as installed, shall meet all local and regional requirements for above ground tanks. Provide the fuel tank with a continuous level transmitter, and a leak detector. The fuel level transmitted shall provide a 4-20mA signal to the Owner's SCADA system. The fuel tank shall be constructed to place the fill spout on the generator end so to facilitate access from the generator enclosure entry door on the side of the generator closest to the access road as shown on the Drawings.

2.15 VIBRATION ISOLATOR

A. Furnish and install spring type vibration-isolators between the sub-base tank and the engine generator set. A minimum of six isolators shall be used, properly sized for the engine generator set supplied.

B. Submit vibration isolator cut sheets.

2.16 SERVICE AND FEEDER LUGS AND CONNECTORS

A. Preparation for and connections to the incoming and outgoing cables, to be connected to the generator and auxiliary components including all lugs, terminators, etc., shall be in accordance with Section 26 05 19 for 600 Volt conductors and Section 26 05 13 for medium voltage conductors.

B. Submit generator termination compartment drawings to verify the termination complement(s) will accept the generator power cables shown on the drawings.

2.17 CIRCUIT BREAKERS

A. Furnish and install a generator mounted molded case circuit breaker of the rating and size as indicated on the drawing. The circuit breaker shall meet the specification in Section 26 28 16 Low Voltage Enclosed Circuit Breakers and Disconnect Switches. The Circuit breaker shall be one of the listed manufacturers and shall not be a special breaker which is not commonly available from stock.

B. Where shown on the Drawings, furnish and install two mounted main line circuit breakers, sized to carry the rated output current of the engine generator set.

C. The circuit breakers interrupting rating shall not be less than the maximum asymmetrical short circuit output of the generator.

D. Main circuit breaker shall have auxiliary position contacts wired to a terminal block within the control cabinet for monitoring by the Owner’s SCADA system.

2.18 PANELBOARD

A. Furnish and install a generator mounted panelboard, of a size, rating and capacity, as shown on the Drawings.

B. Panelboard and housing shall be NEMA 4X 316 stainless steel, manufactured in accordance with Section 26 24 16 Panelboards.

2.19 GENERATOR ACCESS PLATFORM

A. Provide with the engine generator set, a set of platforms made of aluminum to serve as access into the enclosure via any of the engine generator set enclosure doors which are provided. This is to include frontage for any double door or single personnel door. The platforms shall be on

both sides of the enclosure and meet all OSHA Code requirements for access, egress, and safety. The platforms shall include hand railings around the entire perimeter of the platforms and stairs and support weight of any personnel who may lean up against or fall into the railings. Handrails shall have openings where the sound enclosure doors are required to have full opening for access to the interior of the sound enclosure.

B. Platform width shall allow for full 90-degree opening of all generator enclosure doors. Platform approval drawings shall illustrate door openings to show adequate clearance is being provided so the doors open 90 degrees without touching the handrails. Stairs shall be included on both platforms and steps are to be as OSHA prescribed for riser distances. The platforms shall be designed such that all rain snow or sleet will easily pass through the aluminum grates on all horizontal surfaces. The platforms shall be provided by the same vendor as the engine generator set.

C. Platforms shall have lifting means permanently and shall be constructed with support legs on all sides so that no support is from the generator frame or sound enclosure, however they shall be bolted to the generator frame so that no movement away from the generator is possible without disconnecting the bolted connections. The platforms shall not be bolted to the sound enclosure, which shall be removable without unbolting the platforms from the generator frame.

D. The platforms shall be installed and leveled as necessary to provide a safe and level surface for all personnel. The platforms shall be anchored in such as way so that there is not a chance of swaying or other movement of the platforms while in use.

E. Provide two ground pads on each platform. The platform drawings shall show the location of the ground pads.

F. All fastener materials shall be 316 stainless steel.

2.20 SPARE PARTS

A. Provide the following spare parts in the quantities specified:

1. Two air cleaner elements of each type.
2. Two Fuses of each type.
3. One Radiator hoses of each type.
4. Two Fuel filters of each type.
5. Two Oil filters of each type.
6. One Belt of each type.

2.21 FACTORY TESTING

A. The generator shall be completely assembled, wired, and adjusted at the factory and shall be given the manufacturer’s routine shop tests and any other additional operational test to insure the workability and reliable operation of the equipment. The engine-generator shall be tested in its enclosure and sound measurements shall be included prove compliance with specified sound ratings as a part of the testing procedure.

LANDSCAPE & DRAINAGE SYMBOLS

SYMBOL	FEATURE
	BUILDING OR STRUCTURE FOOTPRINT
4" OAK	TREE, SIZE & TYPE
	TREE PROTECTION
	TREE TO BE REMOVED
	EDGE OF WOODS OR BRUSH
	WIRE FENCE
	DIRECTION OF FLOW FOR STORMWATER
SF SF	SILT FENCE
	CHAIN LINK FENCE
	ROCK BERM
	RE-VEGETATED AREA
	PROPOSED CONCRETE PAVEMENT
	EASEMENT
MS MS MS	MULCH SOCK

SURFACE ELEVATION SYMBOLS

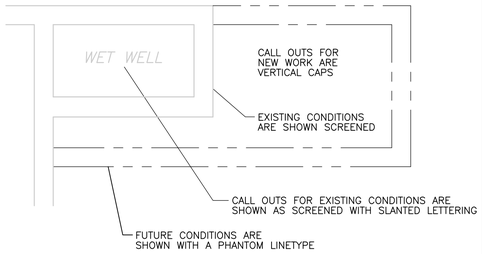
SYMBOL	FEATURE
84	DEPRESSION CONTOUR
84	EXISTING INTERMEDIATE CONTOUR LINE & ELEVATION DESIGNATION
85	EXISTING INDEX CONTOUR LINE & ELEVATION DESIGNATION
84	PROPOSED INTERMEDIATE CONTOUR LINE & ELEVATION DESIGNATION
85	PROPOSED INDEX CONTOUR LINE & ELEVATION DESIGNATION
365.7	SPOT ELEVATION
	EXISTING EMBANKMENT (REVERSE SYMBOLS FOR CHANNEL)
	PROPOSED EMBANKMENT (REVERSE SYMBOLS FOR CHANNEL)

ITEMS TO BE DEMOLISHED

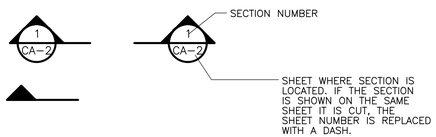
UNDERGROUND/OVERHEAD UTILITY SYMBOLS

SYMBOL	FEATURE
MH-14 WEST IE 27.35 EAST IE 32.50 — 8" WW	WASTEWATER & MANHOLE
MH-22 EAST IE 32.75 WEST IE 32.50 — 8" SD	STORM DRAIN & MANHOLE
W — FH	WATER LINE W/FIRE HYDRANT ASSEMBLY (INCLUDES VALVE)
ELEC	ELECTRICAL CABLE/DUCT
OE	OVERHEAD ELECTRIC
TEL	TELEPHONE
OT	OVERHEAD TELEPHONE
G	GAS LINE
LP	LIGHT POLE
PP — GW	POWER POLE W/GUY WIRE

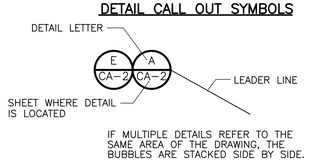
EXISTING OR FUTURE CONDITION DESIGNATION



SECTION CUT SYMBOLS



DETAIL CALL OUT SYMBOLS



IF MULTIPLE DETAILS REFER TO THE SAME AREA OF THE DRAWING, THE BUBBLES ARE STACKED SIDE BY SIDE.

DRAWING, SECTION & DETAIL TITLES

SUBTITLE OR DESCRIPTION (AS REQ'D)

PLAN
1/4" = 1'-0"

SUBTITLE OR DESCRIPTION (AS REQ'D)

ELEVATION
1/4" = 1'-0"

SECTION 1 / CA-2 — 3/4" = 1'-0"
SECTION NUMBER
SHEET WHERE SECTION CUT IS TAKEN *

DETAIL A / CA-2 — 3/4" = 1'-0"
DETAIL LETTER
SHEET WHERE DETAIL IS TAKEN *

* IF SECTION, DETAIL, SCHEMATIC OR DIAGRAM IS DRAWN ON THE SAME SHEET THAT IT IS TAKEN FROM, THE SHEET NUMBER IS REPLACED WITH A HYPHEN. IF THE SECTION IS REFERENCED ON MULTIPLE SHEETS, THE SHEET NUMBER SHOWN INDICATES THE FIRST SHEET THE SECTION IS TAKEN FROM.

TEXAS COMMISSION OF ENVIRONMENTAL QUALITY POLLUTION ABATEMENT PLAN (WPAP) GENERAL CONSTRUCTION NOTES

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

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

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

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

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

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

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

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

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

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

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

12 THE HOLDER OF ANY APPROVED EDWARDS AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE (AUSTIN) 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 PLAN'S ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;

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

GENERAL NOTES

1 CONTRACTOR SHALL PROVIDE "AS BUILT" DRAWINGS TO THE ENGINEER SO THAT THE REPRODUCIBLE OF THE ENGINEERING DRAWINGS MAY BE CORRECTED TO REFLECT "RECORD DRAWING" CONDITIONS.

2 THE CONTRACTOR WILL BE REQUIRED TO PROVIDE AND MAINTAIN ALL NECESSARY WARNING AND SAFETY DEVICES TO PROTECT WORKMEN AND THE PUBLIC SAFETY AND HEALTH UNTIL THE WORK HAS BEEN COMPLETED AND ACCEPTED BY THE CITY.

3 THE LOCATIONS OF EXISTING UTILITIES & STRUCTURES SHOWN ON THESE DRAWINGS ARE APPROXIMATE & ALL MAY NOT BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND VERIFY IN THE FIELD THE LOCATION OF ALL EXISTING UTILITIES & STRUCTURES PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION IN THE VICINITY OF UTILITIES, NOTIFY THE FOLLOWING AS APPLICABLE.

CITY OF GEORGETOWN	512-930-3555
VERIZON	512-869-2237 (RON McCORMICK AT GEORGETOWN)
GEORGETOWN ELECTRIC COMPANY	512-930-3555

4 TREES NOT SHOWN TO BE REMOVED SHALL NOT BE REMOVED WITHOUT ENGINEER'S APPROVAL. TREES APPROVED BY THE ENGINEER TO BE TRIMMED, SHALL BE CUT USING PROPER TOOLS AND THE TREE CUT SHALL BE PROPERLY SEALED.

5 NO WORK SHALL BE PERFORMED ON SATURDAYS, SUNDAYS, OR CITY HOLIDAYS WITHOUT WRITTEN PERMISSION BY OWNER. THE SPECIFIED CONTRACT TIMES WERE ESTABLISHED ASSUMING NO WEEKEND OR HOLIDAY WORK. SATURDAYS, SUNDAYS, AND HOLIDAYS WILL BE COUNTED IN DETERMINING THE NUMBER OF CONSECUTIVE CALENDAR DAYS USED TO COMPLETE THE PROJECT. WORKING HOURS ARE LIMITED TO 7:00 AM TO 6:00 PM, MONDAY THROUGH FRIDAY.

6 ELECTRICAL LINES ARE LOCATED CLOSE TO THE PROJECT. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE STATE LAW (VERNON'S ANNOTATED TEXAS STATUTES, ARTICLE 1436(C)) CONCERNING OPERATIONS IN THE VICINITY OF ELECTRICAL LINES AND THE NEED FOR EFFECTIVE PRECAUTIONARY MEASURES.

7 CONTRACTOR SHALL PARTICIPATE IN A PRE-CONSTRUCTION MEETING WITH THE OWNER, ENGINEER, AND OTHER AFFECTED PARTIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

8 NO BURNING OF TREES, BRUSH, RUBBISH, VEGETATION, OR OTHER OBJECTIONABLE MATTER WILL BE ALLOWED ON THE PROJECT SITE. ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF IN A MANNER ACCEPTABLE TO THE CITY OF GEORGETOWN. ALL EXCESS EXCAVATED MATERIALS SHALL BE HAULED OFF-SITE.

9 NO BLASTING WILL BE ALLOWED.

10 ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

11 CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF EACH SEDIMENTATION/EROSION CONTROL MEASURE ON THIS PROJECT.

12 UNSUITABLE MATERIAL, STUMPS, OR EXCESS EXCAVATED MATERIALS SHALL BE KNOWN AS "WASTE" AND SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BECOME HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT IN AN ENVIRONMENTALLY SOUND & LEGALLY APPROVED MANNER. THE CONTRACTOR SHALL NOTIFY THE CITY OF GEORGETOWN PRIOR TO OFFSITE DISPOSAL. THIS NOTIFICATION SHALL INCLUDE THE DISPOSAL LOCATION AND COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

13 EROSION CONTROL CONSTRUCTION SEQUENCE:

1 INSTALL EROSION CONTROL MEASURES AS INDICATED.
2 SITE VISIT BY CITY OF GEORGETOWN INSPECTOR.
3 AFTER INSPECTOR APPROVAL, BEGIN CONSTRUCTION.
4 UPON CONSTRUCTION COMPLETION, RESTORE ALL DISTURBED AREAS.
5 ARRANGE FOR FINAL INSPECTION.
6 REMOVE TEMPORARY EROSION CONTROL MEASURES.

14 ALL EXISTING UTILITIES, STRUCTURES, AND PIPES SHALL BE PROTECTED BY CONTRACTOR.

15 CARE SHALL BE TAKEN TO PROTECT EXISTING FACILITIES.

16 FINISHED GRADES SHALL SLOPE UNIFORMLY.

17 TRACK EQUIPMENT WILL NOT BE ALLOWED ON PAVED ROADWAYS WITHOUT APPROPRIATE PROTECTION FOR THE PAVEMENT AS APPROVED BY THE ENGINEER.

18 ALL BURIED PRESSURE PIPING AND FITTINGS (VALVES, BENDS, TEES, ETC.) SHALL BE RESTRAINED. MEGA-LUG SERIES 1100 RESTRAINTS, OR ENGINEER APPROVED EQUAL, MAY BE USED IN LIEU OF FACTORY RESTRAINED PIPE.

19 SURVEY CONTROL POINTS ARE SHOWN ON CIVIL SHEETS. THIS INFORMATION SERVES AS ONE-TIME BENCHMARK INFORMATION. CONTRACTOR TO PROVIDE ADDITIONAL LINES AND GRADES AS REQUIRED.

20 RESTRAINED JOINTS, DESIGNED PER AWWA GUIDELINES WITH FRICTION COEFFICIENT = 0.25, SHALL BE PROVIDED FOR ALL BURIED PRESSURE PIPE WITH FLEXIBLE JOINTS, INCLUDING AT ALL VERTICAL AND HORIZONTAL CHANGES IN DIRECTION, PIPE DIAMETER CHANGES, PLUGS, TEES, AND VALVES. CONCRETE THRUST BLOCKS MAY BE USED AS APPROVED BY THE ENGINEER.

21 ALL CONSTRUCTION MATERIAL/DEBRIS SHALL BE PLACED IN AN ON-SITE CONTAINER AND DISPOSED OF PROPERLY AT AN AUTHORIZED LANDFILL.

22 AT THE COMPLETION OF WORK AND IMMEDIATELY PRIOR TO FINAL INSPECTION, CLEANING OF THE ENTIRE PROJECT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SECTIONS CIP14, CIP17, G8, AND 017419.

23 CONTRACTOR SHALL FIELD VERIFY ALL EXISTING FACILITIES (SIGNS, UTILITIES, POLES, STRUCTURES, ETC). NOT ALL FACILITIES, ETC, ARE SHOWN.

24 ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE.

25 ANY EXISTING FENCES, WALLS, AND FACILITIES DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE.

26 ALL DISTURBED AREAS SHALL BE GRADED, HYDROMULCHED OR SODDED, AND RESTORED AT THE CONTRACTOR'S EXPENSE.

27 CONTRACTOR SHALL FOLLOW SEQUENCE OF CONSTRUCTION SPECIFIED IN SECTION CIP3 AND SHALL NOT DEVIATE WITHOUT WRITTEN AUTHORIZATION FROM ENGINEER.

28 UNLESS OTHERWISE NOTED, ALL FLEXIBLE COUPLINGS, FLANGE COUPLING ADAPTERS, ETC, SHALL BE RESTRAINED PER SPECIFICATIONS & DETAILS.

29 WHEN MAKING CONNECTIONS TO NEW OR EXISTING PIPING, CONTRACTOR SHALL PROVIDE ALL FITTINGS, ADAPTERS, CONNECTING PIECES, SLEEVES, FLEXIBLE COUPLINGS, ETC REQUIRED TO MAKE THE CONNECTIONS IN A MANNER SATISFACTORY TO THE ENGINEER REGARDLESS OF WHETHER OR NOT THESE COMPONENTS ARE SHOWN ON THE DRAWINGS.

30 WHEN CONNECTING TO EXISTING MANHOLES, FIELD VERIFY EXISTING INVERT ELEVATIONS AND MODIFY PROPOSED INVERT ELEVATIONS TO ACHIEVE CONTINUOUS DOWNWARD SLOPE.

31 ALL CONNECTIONS BETWEEN NEW AND/OR EXISTING PIPING, VALVES, FITTINGS, ETC, WHERE DISSIMILAR METALS WILL BE IN CONTACT SHALL BE PROTECTED BY INSULATING SYSTEMS AS APPROVED BY THE ENGINEER.

32 ALL CAPS/PLUGS ARE NOT SHOWN ON YARD PIPING PLAN SHEETS. CONTRACTOR IS RESPONSIBLE FOR ALL CAPS/PLUGS. ALL EXPOSED ENDS OF PIPES TO BE ABANDONED IN PLACE SHALL BE CAPPED/PLUGGED WITH CONCRETE OR MECHANICAL CAPS/PLUGS. RESTRAINED MECHANICAL CAPS OR PLUGS ARE REQUIRED FOR PIPES THAT WILL REMAIN IN SERVICE OR FOR FUTURE STUBOUTS.

33 PIPE ALIGNMENT BENDS OF 4 DEGREES AND LESS MAY BE MADE BY DEFLECTING THE JOINTS PER ENGINEERS APPROVAL. BENDS OF MORE THAN 4 DEGREES SHALL BE MADE WITH MANUFACTURER'S STANDARD FITTINGS PER ENGINEER'S APPROVAL.

34 LEAD IS NOT EXPECTED IN THE PAINT ON THIS PROJECT. IF LEAD IS DISCOVERED, THE CONTRACTOR SHALL COORDINATE AND PREPARE A CHANGE PROPOSAL TO HANDLE AND DISPOSE OF THE LEAD CONTAINING MATERIALS.

35 CONTRACTOR SHALL AVOID TREE CLEARING OF ACTIVE NESTS BETWEEN MARCH 1 AND OCTOBER 1 IF DISCOVERED. ACTIVE NESTS ARE UNLIKELY OUTSIDE OF THESE MONTHS, BUT SHOULD BE CONFIRMED BEFORE DISTURBING THEM.

00G02
- AREA CODE
- SEQUENTIAL SHEET NUMBER
- DISCIPLINE

00	GENERAL	G	GENERAL
10	PASTOR PUMP STATION	C	CIVIL
20	RABBIT HILL PUMP STATION	N	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAMS (P&ID)
30	SOUTHSIDE WATER TREATMENT PLANT	S	STRUCTURAL
40	DOMEL PUMP STATION	E	ELECTRICAL
50	WEST SIDE SERVICE CENTER	Z	STANDARD DETAILS

1" — ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

STATE OF TEXAS
ELLYN J. WEIMER
142405
LICENSED PROFESSIONAL ENGINEER
09-17-2024

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: E. WEIMER
DRAWN BY: S. SRIHARI
SHEET CHK'D BY: M. STIGGINS
APPROVED BY: E. WEIMER
DATE: AUGUST 2024

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CITY OF GEORGETOWN, TEXAS
SYSTEM RESILIENCY STAND-BY/BACK-UP POWER

CIVIL
GENERAL LEGEND AND NOTES

PROJECT NO. 742
FILE NAME: 00G02NFLG.DWG
SHEET NO. 00G02

ISSUE FOR BID

CONSTRUCTION GENERAL PERMIT
TPDES GENERAL PERMIT TXR150000

THE SWP3 MUST BE DEVELOPED AND IMPLEMENTED BY PRIMARY OPERATORS OF SMALL AND LARGE CONSTRUCTION ACTIVITIES AND INCLUDE, AT A MINIMUM, THE INFORMATION DESCRIBED IN THIS SECTION AND MUST COMPLY WITH THE CONSTRUCTION AND DEVELOPMENT EFFLUENT GUIDELINES IN PART IV. OF THE GENERAL PERMIT.

1. A SITE OR PROJECT DESCRIPTION, WHICH INCLUDES THE FOLLOWING INFORMATION:
A) A DESCRIPTION OF THE NATURE OF THE CONSTRUCTION ACTIVITY;
B) A LIST OF POTENTIAL POLLUTANTS AND THEIR SOURCES;
C) A DESCRIPTION OF THE INTENDED SCHEDULE OR SEQUENCE OF ACTIVITIES THAT WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE SITE, INCLUDING ESTIMATED START DATES AND DURATION OF ACTIVITIES;
D) THE TOTAL NUMBER OF ACRES OF THE ENTIRE PROPERTY AND THE TOTAL NUMBER OF ACRES WHERE CONSTRUCTION ACTIVITIES WILL OCCUR, INCLUDING AREAS WHERE CONSTRUCTION SUPPORT ACTIVITIES (DEFINED IN PART I.B. OF THIS GENERAL PERMIT) OCCUR;
E) DATA DESCRIBING THE SOIL OR THE QUALITY OF ANY DISCHARGE FROM THE SITE;
F) A MAP SHOWING THE GENERAL LOCATION OF THE SITE (E.G., A PORTION OF A CITY OR COUNTY MAP);
G) A DETAILED SITE MAP (OR MAPS) INDICATING THE FOLLOWING:
I. PROPERTY BOUNDARY(IES);
II. DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED BEFORE AND AFTER MAJOR GRADING ACTIVITIES;
III. AREAS WHERE SOIL DISTURBANCE WILL OCCUR (NOTE ANY PHASING), INCLUDING ANY DEMOLITION ACTIVITIES;
IV. LOCATIONS OF ALL CONTROLS AND BUFFERS, EITHER PLANNED OR IN PLACE;
V. LOCATIONS WHERE TEMPORARY OR PERMANENT STABILIZATION PRACTICES ARE EXPECTED TO BE USED;
VI. LOCATIONS OF CONSTRUCTION SUPPORT ACTIVITIES, INCLUDING THOSE LOCATED OFF-SITE;
VII. SURFACE WATERS (INCLUDING WETLANDS) EITHER AT, ADJACENT, OR IN CLOSE PROXIMITY TO THE SITE, AND ALSO INDICATE WHETHER THOSE WATERS ARE IMPAIRED; NOTE: SURFACE WATERS ADJACENT TO OR IN CLOSE PROXIMITY TO THE SITE MEANS ANY RECEIVING WATERS WITHIN THE SITE AND ALL RECEIVING WATERS WITHIN ONE MILE DOWNSTREAM OF THE SITE'S DISCHARGE POINT(S).
VIII. LOCATIONS WHERE STORMWATER DISCHARGES FROM THE SITE DIRECTLY TO A SURFACE WATER BODY OR A MUNICIPAL SEPARATE STORM SEWER SYSTEM;
IX. VEHICLE WASH AREAS; AND
X. DESIGNATED POINTS ON THE SITE WHERE VEHICLES WILL EXIT ONTO PAVED ROADS (FOR INSTANCE, THIS APPLIES TO CONSTRUCTION TRANSITION FROM UNSTABLE DIRT AREAS TO EXTERIOR PAVED ROADS). WHERE THE AMOUNT OF INFORMATION REQUIRED TO BE INCLUDED ON THE MAP WOULD RESULT IN A SINGLE MAP BEING DIFFICULT TO READ AND INTERPRET, THE OPERATOR SHALL DEVELOP A SERIES OF MAPS THAT COLLECTIVELY INCLUDE THE REQUIRED INFORMATION.
H) THE LOCATION AND DESCRIPTION OF SUPPORT ACTIVITIES AUTHORIZED UNDER THE PERMITTEE'S NOI, INCLUDING ASPHALT PLANTS, CONCRETE PLANTS, AND OTHER ACTIVITIES PROVIDING SUPPORT TO THE CONSTRUCTION SITE THAT IS AUTHORIZED UNDER THIS GENERAL PERMIT;
I) THE NAME OF RECEIVING WATERS AT OR NEAR THE SITE THAT MAY BE DISTURBED OR THAT MAY RECEIVE DISCHARGES FROM DISTURBED AREAS OF THE PROJECT;
J) A COPY OF THIS TPDES GENERAL PERMIT (AN ELECTRONIC COPY OF THIS TPDES GENERAL PERMIT OR A CURRENT LINK TO THIS TPDES GENERAL PERMIT ON THE TCEQ WEBPAGE IS ACCEPTABLE);
K) THE NOI AND THE ACKNOWLEDGEMENT OF PROVISIONAL AND NON-PROVISIONAL AUTHORIZATION FOR PRIMARY OPERATORS OF LARGE CONSTRUCTION SITES, AND THE TCEQ SITE NOTICE FOR SMALL CONSTRUCTION SITES AND FOR SECONDARY OPERATORS OF LARGE CONSTRUCTION SITES;
L) IF SIGNATORY AUTHORITY IS DELEGATED BY AN AUTHORIZED REPRESENTATIVE, THEN A COPY OF THE FORMAL NOTIFICATION TO TCEQ, AS REQUIRED BY 30 TAC 305.128 RELATING TO SIGNATORIES TO REPORTS MUST BE FILED IN THE SWP3 AND MADE AVAILABLE FOR REVIEW UPON REQUEST BY TCEQ OR LOCAL MS4 OPERATOR. FOR PRIMARY OPERATORS OF LARGE CONSTRUCTION ACTIVITIES, THE FORMAL NOTIFICATION TO TCEQ MUST BE SUBMITTED EITHER ELECTRONICALLY THROUGH STEERS, TCEQ'S ELECTRONIC REPORTING SYSTEM, OR, IF QUALIFYING FOR AN ELECTRONIC REPORTING WAIVER, BY PAPER ON A DELEGATION OF SIGNATORIES FORM. FOR OPERATORS OR SMALL CONSTRUCTION ACTIVITIES, THE FORMAL NOTIFICATION TO TCEQ MUST BE SUBMITTED BY PAPER ON A DELEGATION OF SIGNATORIES FORM.
M) STORMWATER AND ALLOWABLE NON-STORMWATER DISCHARGE LOCATIONS, INCLUDING STORM DRAIN INLETS ON SITE AND IN THE IMMEDIATE VICINITY OF THE CONSTRUCTION SITE WHERE CONSTRUCTION SUPPORT ACTIVITIES WILL OCCUR; AND
N) LOCATIONS OF ALL POLLUTANT-GENERATING ACTIVITIES AT THE CONSTRUCTION SITE AND WHERE CONSTRUCTION SUPPORT ACTIVITIES WILL OCCUR, SUCH AS THE FOLLOWING: PAVING OPERATIONS; CONCRETE, PAINT AND STUCCO WASHOUT AND WATER DISPOSAL; SOLID WASTE STORAGE AND DISPOSAL; AND DEWATERING OPERATIONS.

2. A DESCRIPTION OF THE BMPS THAT WILL BE USED TO MINIMIZE POLLUTION IN RUNOFF. THE DESCRIPTION MUST IDENTIFY THE GENERAL TIMING OR SEQUENCE FOR INSTALLATION AND IMPLEMENTATION. AT A MINIMUM, THE DESCRIPTION MUST INCLUDE THE FOLLOWING COMPONENTS:
A) GENERAL REQUIREMENTS
I. EROSION AND SEDIMENT CONTROLS MUST BE DESIGNED TO RETAIN SEDIMENT ON-SITE TO THE EXTENT PRACTICABLE WITH CONSIDERATION FOR LOCAL TOPOGRAPHY, SOIL TYPE, AND RAINFALL.
II. CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED ACCORDING TO GOOD ENGINEERING PRACTICES, AND THE MANUFACTURER'S OR DESIGNER'S SPECIFICATIONS.
III. CONTROLS MUST BE DEVELOPED TO MINIMIZE THE OFFSITE TRANSPORT OF LITTER, CONSTRUCTION DEBRIS, CONSTRUCTION MATERIALS, AND OTHER POLLUTANTS REQUIRED OF PART IV.D.
B) EROSION CONTROL AND STABILIZATION PRACTICES
THE SWP3 MUST INCLUDE A DESCRIPTION OF TEMPORARY AND PERMANENT EROSION CONTROL AND STABILIZATION PRACTICES FOR THE CONSTRUCTION SITE, WHERE SMALL OR LARGE CONSTRUCTION ACTIVITY WILL OCCUR. THE EROSION CONTROL AND STABILIZATION PRACTICES SELECTED BY THE PERMITTEE MUST BE COMPLIANT WITH THE REQUIREMENTS FOR SEDIMENT AND EROSION CONTROL, LOCATED IN PART IV. OF THIS PERMIT. THE DESCRIPTION OF THE SWP3 MUST ALSO INCLUDE A SCHEDULE OF WHEN THE PRACTICES WILL BE IMPLEMENTED. SITE PLANS MUST ENSURE THAT EXISTING VEGETATION AT THE CONSTRUCTION SITE IS PRESERVED WHERE IT IS POSSIBLE.
I. EROSION CONTROL AND STABILIZATION PRACTICES MAY INCLUDE BUT ARE NOT LIMITED TO: ESTABLISHMENT OF TEMPORARY OR PERMANENT VEGETATION, MULCHING, GEOTEXTILES, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PROTECTION OF EXISTING TREES AND VEGETATION, SLOPE TEXTURING, TEMPORARY VELOCITY DISSIPATION DEVICES, FLOW DIVERSION MECHANISMS, AND OTHER SIMILAR MEASURES.
II. THE FOLLOWING RECORDS MUST BE MAINTAINED AND EITHER ATTACHED TO OR REFERENCED IN THE SWP3, AND MADE READILY AVAILABLE UPON REQUEST TO THE PARTIES LISTED IN PART III.D.1 OF THIS GENERAL PERMIT:
(A) THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
(B) THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
(C) THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
III. EROSION CONTROL AND STABILIZATION MEASURES MUST BE INITIATED IMMEDIATELY IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING FOURTEEN (14) CALENDAR DAYS. STABILIZATION MEASURES THAT PROVIDE A PROTECTIVE COVER MUST BE INITIATED IMMEDIATELY IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED. THE TERM "IMMEDIATELY" IS USED TO DEFINE THE DEADLINE FOR INITIATING STABILIZATION MEASURES. IN THE CONTEXT OF THIS REQUIREMENT, "IMMEDIATELY" MEANS AS SOON AS PRACTICABLE, BUT NO LATER THAN THE END OF THE NEXT WORK DAY, FOLLOWING THE DAY WHEN THE EARTH-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. EXCEPT AS PROVIDED IN (A) THROUGH (D) BELOW, THESE MEASURES MUST BE COMPLETED AS SOON AS PRACTICABLE, BUT NO MORE THAN FOURTEEN (14) CALENDAR DAYS AFTER THE INITIATION OF SOIL STABILIZATION MEASURES:
(A) WHERE THE IMMEDIATE INITIATION OF VEGETATIVE STABILIZATION MEASURES AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED DUE TO FROZEN CONDITIONS, NON-VEGETATIVE CONTROLS MUST BE IMPLEMENTED UNTIL THAWING CONDITIONS (AS DEFINED IN PART I.B. OF THIS GENERAL PERMIT) ARE PRESENT, AND VEGETATIVE STABILIZATION MEASURES CAN BE INITIATED AS SOON AS PRACTICABLE.
(B) IN ARID AREAS, SEMI-ARID AREAS, OR DROUGHT-STRICKEN AREAS, AS THEY ARE DEFINED IN PART I.B. OF THIS GENERAL PERMIT, WHERE THE IMMEDIATE INITIATION OF VEGETATIVE STABILIZATION MEASURES AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED OR IS PRECLUDED BY ARID CONDITIONS, OTHER TYPES OF EROSION CONTROL AND STABILIZATION MEASURES MUST BE INITIATED AT THE SITE AS SOON AS PRACTICABLE. WHERE VEGETATIVE CONTROLS ARE INFEASIBLE DUE TO ARID CONDITIONS, AND WITHIN FOURTEEN (14) CALENDAR DAYS OF A TEMPORARY OR PERMANENT CESSATION OF CONSTRUCTION ACTIVITY IN ANY PORTION OF THE SITE, THE OPERATOR SHALL IMMEDIATELY INSTALL NON-VEGETATIVE EROSION CONTROLS IN AREAS OF THE CONSTRUCTION SITE WHERE CONSTRUCTION ACTIVITY IS COMPLETE OR HAS CEASED. IF NON-VEGETATIVE CONTROLS ARE INFEASIBLE, THE OPERATOR SHALL INSTALL TEMPORARY SEDIMENT CONTROLS AS REQUIRED IN PART III.F.2.(B)III.(C) BELOW.
(C) IN AREAS WHERE NON-VEGETATIVE CONTROLS ARE INFEASIBLE, THE OPERATOR MAY ALTERNATIVELY UTILIZE TEMPORARY PERIMETER CONTROLS. THE OPERATOR MUST DOCUMENT IN THE SWP3 THE REASON WHY STABILIZATION MEASURES ARE NOT FEASIBLE, AND MUST DEMONSTRATE THAT THE PERIMETER CONTROLS WILL RETAIN SEDIMENT ON SITE TO THE EXTENT PRACTICABLE. THE OPERATOR MUST CONTINUE TO INSPECT THE BMPS AT THE FREQUENCIES ESTABLISHED IN PART III.F.8.(C) FOR UNSTABILIZED SITES.
(D) THE REQUIREMENT FOR PERMITTEES TO INITIATE STABILIZATION IS TRIGGERED AS SOON AS IT IS KNOWN WITH REASONABLE CERTAINTY THAT CONSTRUCTION ACTIVITY AT THE SITE OR IN CERTAIN AREAS OF THE SITE WILL BE STOPPED FOR 14 OR MORE ADDITIONAL CALENDAR DAYS. IF THE INITIATION OR COMPLETION OF VEGETATIVE STABILIZATION IS PREVENTED BY CIRCUMSTANCES BEYOND THE CONTROL OF THE PERMITTEE, THE PERMITTEE MUST EMPLOY AND IMPLEMENT ALTERNATIVE STABILIZATION MEASURES IMMEDIATELY. WHEN CONDITIONS AT THE SITE CHANGES THAT WOULD ALLOW FOR VEGETATIVE STABILIZATION, THEN THE PERMITTEE MUST INITIATE OR COMPLETE VEGETATIVE STABILIZATION AS SOON AS PRACTICABLE.
IV. FINAL STABILIZATION MUST BE ACHIEVED PRIOR TO TERMINATION OF PERMIT COVERAGE.
V. TCEQ DOES NOT EXPECT THAT TEMPORARY OR PERMANENT STABILIZATION MEASURES TO BE APPLIED TO AREAS THAT ARE INTENDED TO BE LEFT UN-VEGETATED OR UN-STABILIZED FOLLOWING CONSTRUCTION (E.G., DIRT ACCESS ROADS, UTILITY POLE PADS, AREAS BEING USED FOR STORAGE OF VEHICLES, EQUIPMENT, OR MATERIALS).
C) SEDIMENT CONTROL PRACTICES
THE SWP3 MUST INCLUDE A DESCRIPTION OF ANY SEDIMENT CONTROL PRACTICES USED TO REMOVE ERODED SOILS FROM STORMWATER RUNOFF, INCLUDING THE GENERAL TIMING OR SEQUENCE FOR IMPLEMENTATION OF CONTROLS. CONTROLS SELECTED BY THE PERMITTEE MUST BE COMPLIANT WITH THE REQUIREMENTS IN PART IV. OF THIS PERMIT.
I. SITES WITH DRAINAGE AREAS OF TEN (10) OR MORE ACRES
(A) SEDIMENTATION BASIN(S) OR IMPOUNDMENTS
(1) A SEDIMENTATION BASIN OR SIMILAR IMPOUNDMENT IS REQUIRED, WHERE FEASIBLE, FOR A COMMON DRAINAGE LOCATION THAT SERVES AN AREA WITH TEN (10) OR MORE ACRES DISTURBED AT ONE TIME. A SEDIMENTATION BASIN OR IMPOUNDMENT MAY BE TEMPORARY OR PERMANENT, AND MUST PROVIDE SUFFICIENT STORAGE TO CONTAIN A CALCULATED VOLUME OF RUNOFF FROM A 2-YEAR,24-HOUR STORM FROM EACH DISTURBED ACRE DRAINED. WHEN CALCULATING THE VOLUME OF RUNOFF FROM A 2-YEAR, 24-HOUR STORM EVENT, IT IS NOT REQUIRED TO INCLUDE THE FLOWS FROM OFFSITE AREAS AND FLOW FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE ALREADY UNDERGONE PERMANENT STABILIZATION, IF THESE FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREAS OF THE SITE AND THE SEDIMENT BASIN OR SIMILAR IMPOUNDMENT. CAPACITY CALCULATIONS SHALL BE INCLUDED IN THE SWP3. SEDIMENTATION BASINS MUST BE DESIGNED FOR AND APPROPRIATE FOR CONTROLLING RUNOFF AT THE SITE AND EXISTING DETENTION OR RETENTION PONDS AT THE SITE MAY NOT BE APPROPRIATE.
(2) WHERE RAINFALL DATA IS NOT AVAILABLE, OR A CALCULATION CANNOT BE PERFORMED, THE SEDIMENTATION BASIN MUST PROVIDE AT LEAST 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE.
(3) IF A SEDIMENTATION BASIN OR IMPOUNDMENT IS NOT FEASIBLE, THEN THE PERMITTEE SHALL PROVIDE EQUIVALENT CONTROL MEASURES UNTIL FINAL STABILIZATION OF THE SITE. IN DETERMINING WHETHER INSTALLING A SEDIMENT BASIN OR IMPOUNDMENT IS FEASIBLE, THE PERMITTEE MAY CONSIDER FACTORS SUCH AS SITE SOILS, SLOPE, AVAILABLE AREA, PUBLIC SAFETY, PRECIPITATION PATTERNS, SITE GEOMETRY, SITE VEGETATION, INFILTRATION CAPACITY, GEOTECHNICAL FACTORS, DEPTH TO GROUNDWATER, AND OTHER SIMILAR CONSIDERATIONS. THE PERMITTEE SHALL DOCUMENT THE REASON THAT THE SEDIMENT BASINS OR IMPOUNDMENTS ARE NOT FEASIBLE, AND SHALL UTILIZE EQUIVALENT CONTROL MEASURES, WHICH MAY INCLUDE A SERIES OF SMALLER SEDIMENT BASINS OR IMPOUNDMENTS.
(4) UNLESS INFEASIBLE, WHEN DISCHARGING FROM SEDIMENTATION BASINS AND IMPOUNDMENTS, THE PERMITTEE SHALL UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE.
(B) PERIMETER CONTROLS: AT A MINIMUM, SILT FENCES, VEGETATIVE BUFFER STRIPS, OR EQUIVALENT SEDIMENT CONTROLS ARE REQUIRED FOR ALL DOWN SLOPE BOUNDARIES OF THE CONSTRUCTION AREA, AND FOR THOSE SIDE SLOPE BOUNDARIES DEEMED APPROPRIATE AS DICTATED BY INDIVIDUAL SITE CONDITIONS.
II. CONTROLS FOR SITES WITH DRAINAGE AREAS LESS THAN TEN (10) ACRES:
(A) SEDIMENT TRAPS AND SEDIMENT BASINS MAY BE USED TO CONTROL SOLIDS IN STORMWATER RUNOFF FOR DRAINAGE LOCATIONS SERVING LESS THAN TEN (10) ACRES. AT A MINIMUM, SILT FENCES, VEGETATIVE BUFFER STRIPS, OR EQUIVALENT SEDIMENT CONTROLS ARE REQUIRED FOR ALL DOWN SLOPE BOUNDARIES OF THE CONSTRUCTION AREA, AND FOR THOSE SIDE SLOPE BOUNDARIES DEEMED APPROPRIATE AS DICTATED BY INDIVIDUAL SITE CONDITIONS.
(B) ALTERNATIVELY, A SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 2-YEAR, 24-HOUR STORM FROM EACH DISTURBED ACRE DRAINED MAY BE UTILIZED. WHERE RAINFALL DATA IS NOT AVAILABLE OR A CALCULATION CANNOT BE PERFORMED, A TEMPORARY OR PERMANENT SEDIMENT BASIN PROVIDING 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED MAY BE PROVIDED. IF A CALCULATION IS PERFORMED, THEN THE CALCULATION SHALL BE INCLUDED IN THE SWP3.
(C) IF SEDIMENTATION BASINS OR IMPOUNDMENTS ARE USED, THE PERMITTEE SHALL COMPLY WITH THE REQUIREMENTS IN PART IV.F. OF THIS GENERAL PERMIT.

3. DESCRIPTION OF PERMANENT STORMWATER CONTROLS
A DESCRIPTION OF ANY STORMWATER CONTROL MEASURES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORMWATER DISCHARGES THAT MAY OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED MUST BE INCLUDED IN THE SWP3. PERMITTEES ARE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF STORMWATER MANAGEMENT MEASURES, AS FOLLOWS:
A) PERMITTEES AUTHORIZED UNDER THE PERMIT FOR SMALL CONSTRUCTION ACTIVITIES ARE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF STORMWATER CONTROL MEASURES PRIOR TO FINAL STABILIZATION OF THE SITE; OR
B) PERMITTEES AUTHORIZED UNDER THE PERMIT FOR LARGE CONSTRUCTION ACTIVITIES ARE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF STORMWATER CONTROL MEASURES PRIOR TO FINAL STABILIZATION OF THE SITE AND PRIOR TO SUBMISSION OF AN NOT.

4. OTHER REQUIRED CONTROLS AND BMPS
A) PERMITTEES SHALL MINIMIZE, TO THE EXTENT PRACTICABLE, THE OFF-SITE VEHICLE TRACKING OF SEDIMENTS AND DUST. THE SWP3 SHALL INCLUDE A DESCRIPTION OF CONTROLS UTILIZED TO CONTROL THE GENERATION OF POLLUTANTS THAT COULD BE DISCHARGED IN STORMWATER FROM THE SITE.
B) THE SWP3 MUST INCLUDE A DESCRIPTION OF CONSTRUCTION AND WASTE MATERIALS EXPECTED TO BE STORED ON-SITE AND A DESCRIPTION OF CONTROLS TO MINIMIZE POLLUTANTS FROM THESE MATERIALS.
C) THE SWP3 MUST INCLUDE A DESCRIPTION OF POTENTIAL POLLUTANT SOURCES IN DISCHARGES OF STORMWATER FROM ALL AREAS OF THE CONSTRUCTION SITE WHERE CONSTRUCTION ACTIVITY, INCLUDING CONSTRUCTION SUPPORT ACTIVITIES, WILL BE LOCATED, AND A DESCRIPTION OF CONTROLS AND MEASURES THAT WILL BE IMPLEMENTED AT THOSE SITES TO MINIMIZE POLLUTANT DISCHARGES.
D) PERMITTEES SHALL PLACE VELOCITY DISSIPATION DEVICES AT DISCHARGE LOCATIONS AND ALONG THE LENGTH OF ANY OUTFALL CHANNEL (I.E., RUNOFF CONVEYANCE) TO PROVIDE A NON-EROSIVE FLOW VELOCITY FROM THE STRUCTURE TO A WATER COURSE, SO THAT THE NATURAL PHYSICAL AND BIOLOGICAL CHARACTERISTICS AND FUNCTIONS ARE MAINTAINED AND PROTECTED.
E) PERMITTEES SHALL DESIGN AND UTILIZE APPROPRIATE CONTROLS IN ACCORDANCE WITH PART IV. OF THIS PERMIT TO MINIMIZE THE OFFSITE TRANSPORT OF SUSPENDED SEDIMENTS AND OTHER POLLUTANTS IF IT IS NECESSARY TO PUMP OR CHANNEL STANDING WATER FROM THE SITE.
F) PERMITTEES SHALL ENSURE THAT ALL OTHER REQUIRED CONTROLS AND BMPS COMPLY WITH ALL OF THE REQUIREMENTS OF PART IV. OF THIS GENERAL PERMIT.
G) FOR DEMOLITION OF ANY STRUCTURE WITH AT LEAST 10,000 SQUARE FEET OF FLOOR SPACE THAT WAS BUILT OR RENOVATED BEFORE JANUARY 1, 1980, AND THE RECEIVING WATERBODY IS IMPAIRED FOR POLYCHLORINATED BIPHENYLS (PCBS):
I. IMPLEMENT CONTROLS TO MINIMIZE THE EXPOSURE OF PCB-CONTAINING BUILDING MATERIALS, INCLUDING PAINT, CAULK, AND PRE-1980 FLUORESCENT LIGHTING FIXTURES TO PRECIPITATION AND TO STORMWATER; AND
II. ENSURE THAT DISPOSAL OF SUCH MATERIALS IS PERFORMED IN COMPLIANCE WITH APPLICABLE STATE, FEDERAL, AND LOCAL LAWS.

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ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

ELLYN J. WEIMER
STATE OF TEXAS
142405
LICENSED PROFESSIONAL ENGINEER
09-17-2024

REV. NO.	DATE	DRWN	REMARKS

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SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

CIVIL

GENERAL CONSTRUCTION NOTES

PROJECT NO. 742
FILE NAME: 00G03NFNT

SHEET NO.
00G03

ISSUE FOR BID

ABBREVIATIONS

#	NUMBER
&	AND
<	ANGLE
@	AT
2S1W	TWO SPEED, ONE WINDING
2S2W	TWO SPEED, TWO WINDING
2S2W	TWO SPEED, TWO WINDING
A	AIR (COMPRESSED)
A, AMP	AMPERE
A/C	AIR CONDITIONING
AA	AERATION AIR
AB	ANCHOR BOLT
ABA	AEROBIC BASIN AERATOR
ABC	ASBESTOS CEMENT
ABDN	ABANDON
ABS	ACRYLONITE–BUTADIENE–STYRENE
ABV	ABOVE
ACCU	AIR CONDITIONING CONDENSING UNIT
ACCV	AIR CUSHION CHECK VALVE
ACMU	ACOUSTICAL MASONRY UNIT
ACP	ASBESTOS CEMENT PIPE
ACT	ACOUSTICAL TILE
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJUST
ADPT	ADAPTER
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGG	AGGREGATE
AHP	AIR HORSEPOWER
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT, AIR INSTRUMENT
AL	ALUMINUM
AL VT	ALUM VENT
ALS	ALUM SOLUTION
ALSS	ALUM SYSTEM
ALT	ALTERNATE (ING)
ALT	ALTITUDE
ALU	ALUMINUM SULFATE
ALUM	ALUM (CHEMICAL)
AMG	AMMONIA GAS
AML	AMMONIA LIQUID
ANOD	ANODIZE
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APPROX	APPROXIMATE (LY)
AR	ACID RESISTANT
ARCH	ARCHITECT (URAL) (URE)
ARND	AROUND
ARV	AIR RELEASE VALVE
AS	ACTIVATED SLUDGE, AIR SUPPLY
ASPH	ASPHALT
ASSOC	ASSOCIATION
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
ATC	AUTOMATIC TEMPERATURE CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	ACID VENT
AVG	AVERAGE
AW	ACID WASTE
AWG	AMERICAN WIRE GAUGE
AWL	AVERAGE WATER LEVEL
AX	CURRENT TRANSDUCER
B TO B	BACK TO BACK
BCP	BLOWER CONTROL PANEL
BCV	BALL CHECK VALVE
BD	BOARD
BDD	BACKDRAFT DAMPER
BEL	BELOW
BEV	BEVEL (ED)
BF	BLIND FLANGE
BFP	BELT FILTER PRESS
BFV	BUTTERFLY VALVE
BGO	BURIED GEAR OPERATOR
BHP	BRAKE HORSEPOWER
BITUM	BITUMINOUS
BL	BASELINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCHMARK
BOT	BOTTOM
BP	BOOSTER PUMP
BPRV	BACK PRESSURE REGULATING VALVE
BRG	BEARING
BRK	BRICK
BRS	BRASS
BRZ	BRONZE
BS	BLENDED SLUDGE
BS	BOTH SIDES
BSMT	BASEMENT
BSP	BLACK STEEL PIPE
BTU	BRITISH THERMAL UNIT
BTWN	BETWEEN
BUR	BUILT UP ROOF (ING)
BV	BALL VALVE
BWR	BACKWASH RETURN
BWS	BACKWASH SUPPLY
BWW	BACKWASH WATER
BYP	BYPASS
C TO C	CENTER TO CENTER
CA	COMPRESSED AIR
CAB	CABINET
CAD	COMPRESSED AIR, DRIED
CAP	CAPACITY
CAPC	COAGULANT AID POLYMER (CONCENTRATED)
CAPD	COAGULANT AID POLYMER (DILUTED)
CARP	CARPET
CATV	CABLE TV
CB	CATCH BASIN
CB	CIRCUIT BREAKER
CC	CLOSED LOOP COOLING SYSTEM
CC	COOLING COIL, CONTROL CONDUIT
CCC	CENTRAL CONTROL CONSOLE
CCS	CHLORINE CYLINDER SCALE
CCW	COUNTER CLOCKWISE
CD	CONDENSATE DRAIN
CDM	CLARIFIER DRIVE MECHANISMS
CEM	CEMENT
CENT	CENTRIFUGAL
CF	COMPRESSIBLE FILLER
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CG	CHLORINE GAS (PRESSURE)
CGFB	CEMENTITIOUS GLASS FIBER BOARD
CGV	CHLORINE GAS (VACUUM)
CH	CONCRETE HARDENER
CHAM	CHAMFER
CHAN	CHANNEL
CHKD	CHECKERED
CHL	CHLORINATOR
CHR	CHLOROPRENE RUBBER (NEOPRENE)
CI	CAST IRON
CIGL	CAST IRON PIPE GLASS LINED
CIP	CAST IN PLACE
CIR	CIRCLE
CIRC	CIRCUMFERENTIAL
CIS	CAST IRON SOIL PIPE
CIU	CAST IRON PIPE UNLINED
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTERLINE
CL2	CHLORINE SYSTEM
CL2G	CHLORINE (GAS)
CL2L	CHLORINE (LIQUID)
CL2S	CHLORINE SOLUTION
CL2V	CHLORINE VENT
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CLJ	CONTROL JOINT
CLKG	CAULKING
CLR	CLEAR
CLW	CLARIFIED WATER (CLARIFIER EFFLUENT)
CM	CORRUGATED METAL
CMON	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNITS
CND	CONDUIT
CNR	CONDENSATE RETURN
CNS	CONDENSATE SUPPLY
CO	CLEAN OUT
COL	COLUMN
COMB	COMBINATION
COMB	COMBUSTION
COMP	COMPRESSIBLE
COMP JT	COMPRESSION JOINT
CONC	CONCRETE
COND	CONDUCTIVITY
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COR	CORNER(S)
CORR	CORRUGATED
CPLG	COUPLING
CPP	CONCRETE PRESSURE PIPE
CPT	CONTROL POWER TRANSFORMER
CPVC	CHLORINATED POLYVINYLCHLORIDE PIPE
CR	CHLORINE RESIDUAL
CR	CONTROL RELAY
CRS	COURSE (S)
CS	CARBON STEEL
CS	CONTROL SWITCH
CSK	COUNTERSINK
CSL	CONDITIONED SLUDGE
CSM	CHLORINE SULPHONILE POLYETHYLENE (HYPALON)
CSMP	CAUSTIC METERING PUMPS
CSTG	CASTING
CT	CERAMIC TILE
CT	CURRENT TRANSFORMER
CTG	COATING
CTR	CENTER (ED)
CTU	CENTRAL TELEMETRY UNIT
CU	COPPER
CU	CUBIC
CU FT	CUBIC FOOT (FEET)
CU YD	CUBIC YARD
CUH	CABINET UNIT HEATER
CUP	COPPER PIPE
CV	CHECK VALVE
CV–A	CHECK VALVE (AIR CUSHION)
CV–H	CHECK VALVE (HYDRAULIC CUSHION)
CVR	CONVECTOR
CW	CLOCKWISE
CW	COAGULATED WATER
CWO	CLEARWELL OVERFLOW
CWR	COOLING WATER RETURN
CWS	COOLING WATER SUPPLY
d	PENNY
DAF	DISSOLVED AIR FLOTATION
DAL	DISSOLVED ALUM
DAP	DIAPHRAGM AIR PURGE
DAV	DIAPHRAGM AIR VENT
DB	DECIBEL
DB	DRY BULB
DC	DIRECT CURRENT
DCU	DISTRIBUTED CONTROL UNIT
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DG	DIGESTER GAS
DI	DIGITAL OR DISCRETE INPUT
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIGL	DUCTILE IRON GLASS LINED
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DIR	DIRECTION
DISCH	DISCHARGE
DISP	DISPENSER
DIV	DIVISION
DIW	DEIONIZED WATER
DL	DEAD LOAD
DN	DOWN
DO	DISSOLVED OXYGEN
DO	DITTO
DOI	DOOR INTERLOCK
DP	DAMPROOFING
DR	DRAIN
DR	DRIVE
DRW	DECANT RETURN WATER
DSCL	DEWATERED SLUDGE CAKE
DT	DRAIN TANK
DV	DIAPHRAGM VALVE
DW	PROCESS STRUCTURE DRAIN WATER
DWG	DRAWING
DWL	DOWEL
DWTR	DEWATER(ED)
E	EMERGENCY WATER
EAT	ENTERING AIR TEMPERATURE
EB	EXPANSION BOLT
EC	EMPTY CONDUIT
ECC	ECCENTRIC
ED–F	EQUIPMENT DRAIN (FLUSH TYPE)
ED–O	EQUIPMENT DRAIN (EXTENDED TYPE–OPEN)
ED–S	EQUIPMENT DRAIN (EXTENDED TYPE–SEALED)
EDH	ELECTRIC DUCT HEATER
EF	EACH FACE
EFF	EFFLUENT
EFM	EFFLUENT FLOW METER
EG	EMERGENCY GENERATION SYSTEM
EG	EXHAUST GRILLE
EGC	EQUIPMENT GROUNDING CONDUCTOR
EGO	ELEVATED GEAR OPERATOR
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
EMERG	EMERGENCY
EMG	EMERGENCY GENERATOR
ENGR	ENGINEER
ENT	ENTERING, ENTRANCE
EOP	EDGE OF PAVEMENT
EP	ELECTRICAL PANEL
EP	ELECTROPNEUMATIC
EPDM	ETHYLENE PROPYLENE RUBBER
EQ	EQUAL (LY)
EQPT	EQUIPMENT
EQUIV	EQUIVALENT
ER	EXHAUST REGISTER
ES	EACH SIDE
ES	ELECTRIC SUPPLY
ESMT	EASEMENT
ESP	EFFLUENT SAMPLE PUMPS
EST	ESTIMATE (D)
ETC	ETCETERA
EUH	ELECTRIC UNIT HEATER
EV	EVAPORATOR VENT
EVA	ELECTRICAL GEAR ACTUATOR
EVAP	EVAPORATOR (ION)
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXA	EXHAUST AIR
EXH	EXHAUST
EXP	EXPANSION
EXP	EXPOSED
EXP JT	EXPANSION JOINT
EXST	EXISTING
F	FAHRENHEIT OR FILTRATE
f'c	CONCRETE COMPRESSION STRESS
f'm	MASONRY PRISM STRESS
FAB	FABRICATE (OR, ED)
FAM	FIRST ANOXIC MIXERS
FAP	FILTRATE AIR PURGE
FAPC	FILTER AND POLYMER (CONCENTRATED)
FAPD	FILTER AND POLYMER (DILUTED)
FB	FLOOR BOX (BUSHING TYPE)
FBO	FURNISHED BY OTHERS
FBR	FULL VOLTAGE REVERSING
FC	FAIL CLOSED
FC	FLEX CONNECTION
FCA	FLANGED COUPLING ADAPTOR
FCC	FILTER CONTROL CONSOLE
FD	FLOOR DRAIN
FDMPR	FIRE DAMPER
FDN	FOUNDATION
FE	FILTER EFFLUENT
FE	FIRE EXTINGUISHER
Fe CL3	FERRIC CHLORIDE
FES	FERROUS SULFATE
FF	FACTORY FINISH
FF	FAR FACE
FGL	FIBERGLASS
FH	FIRE HYDRANT
FHMS	FLATHEAD MACHINE SCREW
FHWS	FLATHEAD WOOD SCREW
FI	FILTER INFLUENT
FIG	FIGURE
FIN	FINISH(ED)
FINW	FINISHED WATER
FL	FIRE LINE
FL	FLASHING
FL	FLOOR
FLD	FUSIBLE LINK DAMPER
FLEX	FLEXIBLE
FLG	FLANGE(D)
FLG	FLOORING
FLM	FLASH MIXER
FLP	FAIL LAST POSITION
FLR	FILLER
FLW	FILTERED WATER
FM	FORCE MAIN
FO	FAIL OPEN
FO	FUEL OIL
FOB	FLAT ON BOTTOM
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOT	FLAT ON TOP
FOV	FUEL OIL VENT
FP	FILTER PRESS
FPM	FEET PER MINUTE
FPT	FEMALE PIPE THREAD
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRR	FLUORINE RUBBER(viton)
FS	FINE SCREEN
FSC	FERRIC SULFATE (CONCENTRATED)
FSD	FERRIC SULFATE (DILUTED)
FT	FEET/FOOT
FTG	FOOTING/FITTING
FTR	FINNED TUBE RADIATION
FTW	FILTER TO WASTE
G	NATURAL GAS
GA	GAGE
GALV	GALVANIZED
GALVS	GALVANIZED STEEL
GALVSP	GALVANIZED STEEL PIPE
GAS	GAS LINE
GC	GROOVED COUPLING (SHOULDERED ENDS)
GCR	GRIT CONCENTRATOR
GEC	GROUNDING ELECTRODE CONDUCT
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GI	GALVANIZED IRON
GL	GLASS
GLB	GLASS BLOCK
GND	GROUND
GOV	GLOBE VALVE
GP	GLASS PIPE
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
GR	GRADE
GRAV	GRAVITY
GRC	GRIT REMOVAL CHAMBER
GRP	GRIT REMOVAL PUMPS
GRS	GALVANIZED RIGID STEEL
GRTG	GRATING
GSC	GRIT SCREEN
GSKT	GASKET
GV	GATE VALVE
GYP	GYPSUM
HAS	HEADED ANCHOR STUD
HB	HOSE BIBB
HC	HEATING COIL
HCL	HYDROCHLORIC ACID
HD	HEAVY DUTY
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
HDWD	HARDWOOD
HDWR	HARDWARE
HEX	HEXAGON
HFAC	HARNESSED FLANGED ADAPTOR COUPLING
HGR	HANGER
HGT	HEIGHT
HH	HANDHOLE
HM	HOLLOW METAL
HOA	HAND–OFF–AUTO
HOR	HORIZONTAL
HP	HIGH POINT
HP	HORSE POWER
HPA	HIGH PRESSURE AIR
HR	HANDRAIL
HS	HIGH SERVICE
HS	HIGH STRENGTH
HSM	HIGH SERVICE MAIN
HTHW	HIGH TEMPERATURE HOT WATER
HVA	HYDRAULIC VALVE ACTUATOR
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HW	POTABLE HOT WATER
HWA	HIGH WATER ALARM
HWL	HIGH WATER LEVEL
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HWW	HIGH PRESSURE WASHWATER
Hz	HERTZ
IA	INSTRUMENT AIR
IAW	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IFM	INFLUENT FLOW METERS
IIR	ISOBUTENE ISOPRENE (BUTYL) RUBBER
IN	INCH
INF	INFLUENT
INSTR	INSTRUMENT (TATION)
INSUL	INSULATION
INT	INTERIOR
IPB	IRON PIPE BOUNDARY
IRB	IRON ROD BOUNDARY
IRP	INTERNAL RECYCLE PUMPS
IRR	IRRIGATION LINE
ISOL	ISOLATOR, ISOLATION
JB	JUNCTION BOX
JC	JANITOR'S CLOSET
JCT	JUNCTION
JT	JOINT
JT FLR	JOINT FILLER
KGV	KNIFE GATE VALVE
KO	KNOCKOUT
L	LINE OR STRUCTURAL ANGLE DESIGNATION
LA	LIGHTNING ARRESTER
LAB	LABORATORY
LAD	LADDER
LAM	LAMINATED
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LB	POUND
LBS	POUNDS
LCP	LOCAL CONTROL PANEL
LCW	LABORATORY COLD WATER
LE	LEVEL ELEMENT
LF	LINEAR FEET
LG	LONG
LHW	LABORATORY HOT WATER
LIME	LIME, DRY
LKR	LOCKER
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNTL	LINTEL
LOC	LOCATION/LOCATED
LONG	LONGITUDINAL
LP	LIGHT POLE
LP	LOW POINT
LP	LOW PRESSURE
LPA	LOW PRESSURE AIR
LPNL	LIGHTING PANEL
LPV	LUBRICATED PLUG VALVE
LR	LONG RADIUS
LS	LIFT STATION
LSM	LOW SERVICE MAIN
LSYS	LIME SYSTEM
LT	LEFT
LT	LIGHT (S)
LV	LIME VENT
LVG	LEAVING
LW	LIGHTWEIGHT
LWA	LOW WATER ALARM
LWL	LOW WATER LEVEL
LWT	LEAVING WATER TEMPERATURE
MAS	MASONRY
MATL	MATERIAL
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MB	MACHINE BOLTS
MBH	THOUSAND BTU PER HOUR
MBS	MANUAL BAR SCREEN
MC	STEEL MISCELLANEOUS CHANNEL
MCC	MOTOR CONTROL CENTER
MCJ	MASONRY CONTROL JOINT
ME	METHANOL
MEAS	MEASURE
MECH	MECHANICAL
MEMB	MEMBRANE
MEW	MOTORIZED EFFLUENT WEIRS
MFD	MANUFACTURED
MFG	MANUFACTURING
MFR	MANUFACTURER
MG/L	MILLIGRAMS PER LITER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MHS	METAL HOSE
MIN	MINIMUM
MIS	MECHANICAL INFLUENT SCREEN
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
ML	MIXED LIQUOR
MO	MASONRY OPENING
MOD	MOTOR OPERATED DAMPER
MON	MONUMENT
MOT	MOTOR
MPH	MILES PER HOUR
MR	MOISTURE RESISTANT
MRPP	METAL REINFORCED PLASTIC PIPE
MSG	MOTORIZED SLUICE GATES
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MV	MUD VALVE
N	NORTH
N2	NITROGEN
NACL	SODIUM CHLORITE
NBR	NITRILE RUBBER
NC	NORMALLY CLOSED
NCDPP	NON–CLOG DRY PIT PUMP
NEC	NATIONAL ELECTRIC CODE
NEUT	NEUTRAL
NF	NEAR FACE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN OR NUMBER
NOM	NOMINAL
NOS	NATIONAL OCEANOGRAPHIC SURVEY
NPOL	NONIONIC POLYMER
NPT	AMERICAN NATIONAL TAPER PIPE THREAD
NPW	(NON–POTABLE) WATER
NR	NATURAL RUBBER
NRS	NON–RISING STEM
NSG	NON–SHRINK GROUT
NTS	NOT TO SCALE
O/E	OR EQUAL
O2	OXYGEN (GAS)
OA	OUTSIDE AIR
OC	ON CENTER OR ODOR CONTROL
OCB	ODOR CONTROL BLOWER
OCS	ODOR CONTROL SCRUBBER
OCW	OZONE SYSTEM COOLING WATER
OD	OUTSIDE DIAMETER
OE	OVERHEAD ELECTRIC
OF	OUTSIDE FACE
OFF	OFFICE
OG	OZONE OFF GAS
OH	OVERHEAD (DOOR)
OL	OVERLOAD
OPER	OPERATOR
OPNG	OPENING
OPP	OPPOSITE
OPP HD	OPPOSITE HAND
OPT	OPTION(AL)
OS	OXIDIZED SLUDGE
OT	OVERHEAD TELEPHONE
OTV	OVERHEAD TELEVISION
OV	OVER
OVF	OVERFLOW
OVHD	OVERHEAD
OZA	OZONATED AIR
OZE	OZONE EXHAUST
PA	PLANT AIR
PA	POLYAMIDE
PAC	PLANT AIR COMPRESSOR
PACS	POWDER ACTIVATED CARBON SLURRY
PAG	AIRGAP PROTECTED WATER
PB	POLYBUTYLENE
PB	PUSHBUTTON
PBAV	PLASTIC BALL VALVE
PBTPS	PECAN BRANCH TRANSFER PUMP STATION
PC	POINT OF CURVE (ATURE)
PC	POLYCARBONATE
PCC	POINT OF COMPLEX CURVATURE
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PCF	POUND PER CUBIC FOOT
PCTFE	POLYCHLOROTRIFLUORETHYLENE
PCV	PRESSURE CONTROL VALVE
PD	PUMP DISCHARGE
PE	PLAIN END
PE	PLANT EFFLUENT
PEFL	PRIMARY EFFLUENT
PEP	PLANT EFFLUENT PUMP
PERF	PERFORATED
PERIM	PERIMETER
PF	PHENOL–FORMALDEHYDE
PF	POWER FACTOR
PFM	POWER FACTOR METER
PGA	PURGE AIR (LIME SILOS)
PGC	PISTA GRIT CHAMBERS
pH	HYDROGEN ION CONCENTRATION
PH	PHASE
PHC	PHOSPHATE (CONCENTRATED)
PHD	PHOSPHATE (DILUTED)
PHW	PROTECTED HOT WATER
PI	POINT OF INTERSECTION
PINF	PRIMARY INFLUENT
PIP	POLYETHYLENE PIPE
PJF	PREMOLDED JOINT FILLER
PL	PILOT LIGHT
PL	PLATE
PL	PLATE DESIGNATION
PL	PROPERTY LINE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLK	PLANK
PLP	POLYPHOSPHATE
PLS	PLASTIC LINED STEEL
PLT	PLANT
PLW	PLANT WATER
PLYWD	PLYWOOD
PM	PRESSED METAL
PNL	PANEL
POJ	PUSH ON JOINT
POLYE	POLYETHYLENE
POLYP	POLYPROPYLENE
POM	POLYOXYMETHYLENE
POT	POINT OF TANGENCY
POTH	POTASSIUM HYDROXIDE
POTP	POTASSIUM PERMANGANATE
PP	POWER POLE
PPM	PARTS PER MILLION
PR	PAIR
PR	PRETREATED WATER SYSTEM, PAIR
PRC	POINT OF REVERSE CURVE
PRCST	PRECAST
PREFAB	PRE–FABRICATED
PRESS	PRESSURE
PREST	PRESSURE TREATED
PRIM	PRIMARY
PRMLD	PREMOLDED
PRV	PRESSURE RELIEF VALVE
PRW	PRESSURE WASTE
PS	PRIMARY SLUDGE
PS	PUMP STATION
PSC	PRIMARY SCUM
PSE	PNEUMATIC SCUM EJECTORS
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PSP	PLANT SITE PUMP
PT	POINT
PT	POTENTIAL TRANSFORMER
PTD	PAINTED
PTFE	POLYTETRAFLUOROETHYLENE
PTW	PROTECTED WATER
PUD	PERFORATED UNDERDRAIN
PUE	PUBLIC UTILITY EASEMENT
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVRV	PRESSURE VACUUM RELIEF VALVE
PW	POTABLE WATER
PWD	PRIMARY WATER DRAIN
PWL	PEAK WATER LEVEL
PWM	POTABLE WATER METER
QT	QUARRY TILE
QTB	QUARRY TILE BASE
QTY	QUALITY OR QUANTITY
R	RISER(S)
R+S	BACKER ROD & SEALANT
R/W	RIGHT–OF–WAY
RA	RETURN AIR
RAD	RADIUS
RAS	RETURN ACTIVATED SLUDGE
RB	RUBBER BASE
RC	REINFORCED CONCRETE
RCC	REINFORCED CONCRETE CYLINDER
RCP	REINFORCED CONCRETE PIPE
RCW	RECYCLE WATER
RCWM	RECLAIMED WATER MAIN
RD	ROOF DRAIN
RDWD	REDWOOD
RECT	RECEPTACLE
RED	REDUCER
REF	REFERENCE/REFER
REF	ROOF EXHAUST FAN
REG	REGISTER
REINF	REINFORCE (D, ING)
REQD	REQUIRED
RESID	RESIDUAL
REV	REVISION
RF	ROOF FAN
RFG	ROOFING
RG	RETURN GRILLE
RGH	ROUGH
RH	RELATIVE HUMIDITY
RH	RUBBER HOSE
RIS	RUBBER IN SHEAR
RJ	RESTRAINED JOINT
RJ	RUSTIFICATION JOINT
RL	RAIN LEADER
RLCI	RUBBER LINED CAST IRON
RLDI	RUBBER LINED DUCTILE IRON
RLG	RAILING
RM	ROOM
RMS	ROOT MEAN SQUARE
RND	ROUND
RO	ROUGH OPENING
ROT	ROTAMETER
ROW	RIGHT OF WAY
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RR	RETURN REGISTER
RS	RAW SEWAGE
RSL	RAW SLUDGE
RSM	RETURN ACTIVATED SLUDGE METER
RSP	RETURN ACTIVATED SLUDGE PUMPS
RST	RIGID STEEL
RT	RIGHT
RT	RUBBER TILE
RT	RUNNING TIME METER
RTU	REMOTE THERMAL UNIT
RVNR	REDUCE VOLTAGE NON–REVERSING
RW	RAW WATER
RWL	RAIN WATER LEADER
S	SIGN
S	STEEL S–SHAPE DESIGNATION
S02G	SULFUR DIOXIDE (GAS)
S02S	SULFUR DIOXIDE SOLUTION
SA	SUPPLY AIR
SAC	SULFURIC ACID (CONCENTRATED)
SAN	SANITARY
SAT	SUSPENDED ACOUSTICAL TILE
SB	SEAMLESS BASE
SCB	SCREENING CONVEYOR BELT
SCJ	SLAB CONTROL JOINT
SCL	SCRUBBING LIQUID
SCR	SCREENING DEVICE
SCRN	SCREEN(ED)
SCV	SILENT CHECK VALVE
SD	STORM DRAIN
SD	SUPPLY DIFFUSER
SE	SECONDARY
SEC	SECONDS
SECT	SECTION
SEF	SECONDARY EFFLUENT
SEJ	SLAB EXPANSION JOINT
SF	SEAMLESS FLOORING
SF	SUPPLY FAN
SF	SILT FENCE
SFP	SLUDGE FEED PUMP
SFR	SYNTHETIC FIBER REINFORCED
SG	SLUICE GATE
SG	SUPPLY GRILLE
SG–C	SLUICE GATE – MANUAL CRANK OPERATOR
SG–HW	SLUICE GATE – HAND WHEEL OPERATOR
SG–M	SLUICE GATE – MOTOR OPERATOR
SGFT	STRUCTURAL GLAZED FACING TILE
SGR	SLUDGE GRINDER
SH	SHIELDED
SHC	SODIUM HYDROXIDE (CONCENTRATED)
SHD	SODIUM HYDROXIDE (DILUTED)
SHP	SOLIDS HANDLING PUMP
SHR	SODIUM HYDROXIDE (RECIRCULATED)
SHT	SHEET
SIM	SIMILAR
SJ	SOLDERED JOINT
SK	SINK
SL	SLUDGE
SLG	SLIDE GATE
SLG–C	SLIDE GATE – MANUAL CRANK OPERATOR
SLG–HW	SLIDE GATE – HAND WHEEL OPERATOR
SLG–M	SLIDE GATE – MOTOR
SLNT	SEALANT
SLV	SLEEVE
SMPP	SUMP PUMPS
SN	SOLID NEUTRAL OR SUPERNATANT
SOFL	SODIUM FLUORIDE
SOJ	SLIP ON JOINT
SOLN	SOLUTION
SOLV	SOLENOID VALVE
SP	SUBMERSIBLE PUMP
SPEC	SPECIFICATION, SPECIFIED
SPL	SAMPLE
SPL	SAMPLE LINE
SPR	SPRING
SPR	SPRINKLER LINE
SPTG	SEPTAGE
SPW	SPRAY WATER
SQ	SQUARE
SR	SLUDGE RETURN
SR	SUPPLY REGISTER
SS	SANITARY SEWER
SSC	SHAFTLESS SCREW CONVEYOR
SSED	STANDARD SERVICE EQUIPMENT DRAIN
SSIL	SODIUM SILICATE
SSK	SERVICE SINK
SSL	SECONDARY SLUDGE
SST	STAINLESS STEEL
ST PR	STATIC PRESSURE OR SPACE (D)
STA	STATION
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP (S)
STL	STEEL
STOR	STORAGE
STRUC	STRUCTURE (S, URAL)
STWY	STAIRWAY
SUPT	SUPERINTENDENT
SUSP	SUSPENDED
SW	SWITCH
SWBD	SWITCHBOARD
SWD	SIDE WATER DEPTH
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
T	TREAD(S)
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TAN	TANGENCY
TAS	THICKENED ACTIVATED SLUDGE
TD	TEMPERATURE DIFFERENCE
TD	TRENCH DRAIN
TDC	TIME DELAY ON CLOSING
TDD	TIME DELAY AFTER DEENERGIZATION–OFF DELAY
TDE	TIME DELAY AFTER ENERGIZATION–ON DELAY
TDO	TIME DELAY ON OPENING
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERATURE
TEMP	TEMPERED
TEMP	TEMPORARY
TER	TERRAZZO
TERB	TERRAZZO BASE
TF	TOP FACE
TF	TRANSFER FAN
TFP	TRANSFER PUMP
TG	TRANSFER GRILLE
THD	THREADED
THK	THICK(NESS)
THR	THRESHOLD
TKBD	TACKBOARD
TKD	TANK DRAIN
TM	TELEMETER OR TIME
TOB	TOP OF BERM/BANK
TOC	TOP OF CURB/CONCRETE
TOIL	TOILET
TOP EL	TOP OF PIPE ELEVATION
TOPG	TOPPING
TOS	TOP OF SLAB
TOW	TOP OF WALL
TOXS	THICKENED OXIDIZED SLUDGE
TP	TURNING POINT
TPRP	THERMOPLASTIC REINFORCED PIPE
TPS	THICKENED PRIMARY SLUDGE
TR	TRIANGULATION POINT
TRNSN	TRANSITION
TRNSV	TRANSVERSE
TS	STRUCTURAL TUBING (STEEL UNLESS NOTED)
TSL	TOP OF SLAB OR THICKENED SLUDGE
TUBV	TIME UNION BALL VALVE
TURB	TURBIDITY
TV	TELEVISION
TWAS	THICKENED WASTE ACTIVATED SLUDGE
TWF	THROUGH WALL FLASHING
TYP	TYPICAL
U	HEAT TRANSFER COEFFICIENT
UC	UNDERCUT
UD	UNDERDRAIN
UGND	UNDERGROUND
UGTC	UNDERGROUND TELEPHONE CABLE
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UN	UNION
UNO	UNLESS NOTED OTHERWISE
UPVC	UN–PLASTICISED POLYVINYL CHLORIDE
UR	URINAL
V	VOLTS
VA	VENT AIR
VA–H	HYDRAULIC VALVE OPERATOR
VA–M	MOTOR VALVE OPERATOR
VA–P	PNEUMATIC VALVE OPERATOR
VA–S	SOLENOID VALVE OPERATOR
VAC	VACUUM
VAR	VARIOUS/VARIABLE
VAV	VARIABLE AIR VOLUME
VB	VALVE BOX
VB	VAPOR BARRIER
VBR	VACUUM BREAKER
VC	VICTAULIC COUPLING (SHOULDERED ENDS)
VC	VITRIFIED CLAY
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE
VD	VOLUME DAMPER
VE	VACUUM EXHAUST
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIB	VIBRATION
VIPA	VIRGIN ISOPROPHYL ALCOHOL
VNBA	VIRGIN N. BUTYL ACETATE
VOL	VOLUME
VS	VARIABLE SPEED
VSD	VARIABLE SPEED DRIVE
VT	VENT
VTR	VENT THRU ROOF
W	WATER
W	WIDE
W/	WITH
W/A	WHERE APPLICABLE
W/O	WITHOUT
WAP	WALL PIPE
WAS	WASTE ACTIVATED SLUDGE
WB	WET BULB
WBW	WASTE BACKWASH WATER
WC	WATER CLOSET
WD	WIDTH
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WG	WASTE GAS
WH	WATER HEATER
WHDM	WATTHOUR DEMAND METER
WHDR	WATTHOUR DEMAND RECORDER
WHM	WATTHOUR METER
WIPA	WASTE ISOPROPYL ALCOHOL
WJ	WELDED JOINT
WL	WATER LEVEL
WL	WATER LINE
WM	WATER MAIN
WM	WATTMETER
WNBA	WASTE N. BUTYL ACETATE
WNC	WASTE NON–CHLORINATED
WOAS	WASTE OXYGEN ACTIVATED SLUDGE
WP	WELDED PIPE
WP	WORKING POINT
WPG	WATERPROOFING
WR	WASHWATER RECOVERY
WS	WATER SURFACE OR WATERSTOP
WSD	WASHWATER DRAIN
WSH	WASHWATER
WSL	WASTE SLUDGE
WSM	WASTE ACTIVATED SLUDGE METER
WSP	WASTE ACTIVATED SLUDGE PUMPS
WSV	WALL SLEEVE
WT	STEEL TEE–SHAPE DESIGNATION
WT	WEIGHT
WTHPRF	WEATHERPROOF
WTP	WATER TREATMENT PLANT
WW	WASTEWATER
WWB	WET WEATHER STORAGE/EQUALIZATION BASIN
WWF	WELDED WIRE FABRIC
WWP	WET WEATHER PUMP
WWTP	WASTEWATER TREATMENT PLANT
WX	WATT TRANSDUCER
XFER	TRANSFER
XFMER	TRANSFORMER
XP	EXPLOSION PROOF
YD	YARD
YR	YEAR
ZOPH	ZINC ORTHOPHOSPHATE

STATE OF TEXAS
ELLYN J. WEIMER
142405
LICENSED PROFESSIONAL ENGINEER
09-17-2024

1"
ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: E. WEIMER
DRAWN BY: S. SRIHARI
SHEET CHK'D BY: M. STIGGINS
APPROVED BY: E. WEIMER
DATE: AUGUST 2024

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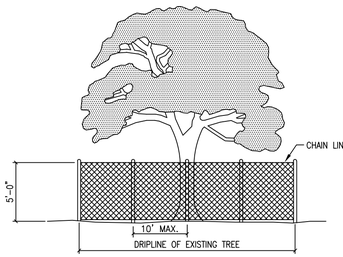
CITY OF GEORGETOWN, TEXAS
SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

CIVIL
STANDARD ABBREVIATIONS

PROJECT NO. 742
FILE NAME: 00G04NFAB.DWG
SHEET NO.
00G04

ISSUE FOR BID



NOTES:

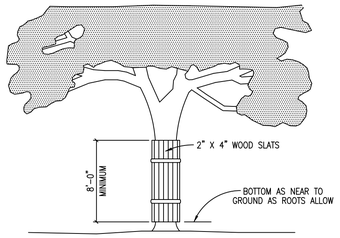
1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES; WILL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND WILL BE MAINTAINED THROUGHOUT 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 REVIEWED 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 PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING 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
TREE PROTECTION – CHAIN LINK FENCE

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: EC09 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

DETAIL A
NTS



NOTES:

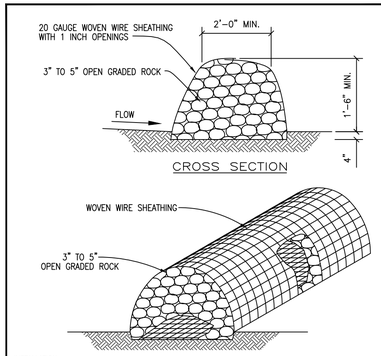
1. WHERE ANY EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN FOUR FEET (4'-0") TO A TREE TRUNK; PROTECT THE TRUNK WITH STRAPPED-ON-PLANKING TO A HEIGHT OF EIGHT FEET (8'-0"), OR TO THE LIMITS OF LOWER BRANCHING IN ADDITION TO THE REDUCED FENCING PROVIDED.
2. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO (2) DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE, AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
3. PRIOR EXCAVATION OR GRADE 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 CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
5. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
6. NO LANDSCAPE TOPSOIL DRESSING 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. PRUNING 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
TREE PROTECTION – WOOD SLATS

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: EC10 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

DETAIL B
NTS



INSTALLATION:
- LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCIRCLE THE FINISHED SIZE OF THE BERM.
- PLACE THE ROCK ALONG THE CENTER OF THE WIRE TO THE DESIGNATED HEIGHT.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE.
- SECURE WITH TIE WIRE.
- THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROX. 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
- THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

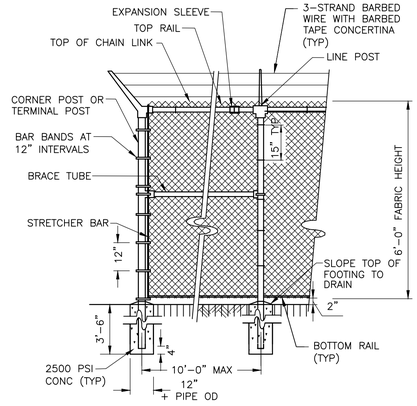
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
- REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
ROCK BERM DETAIL

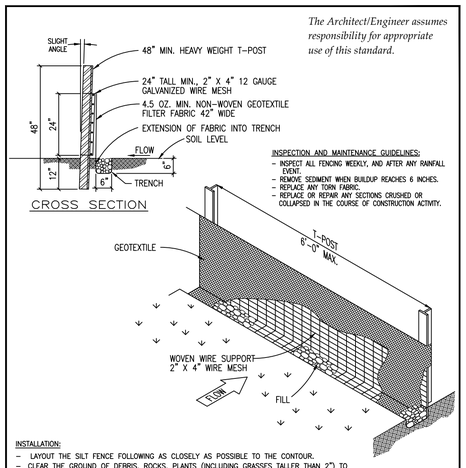
REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: EC03 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

DETAIL C
NTS



CHAIN LINK FENCE

DETAIL D
NTS



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

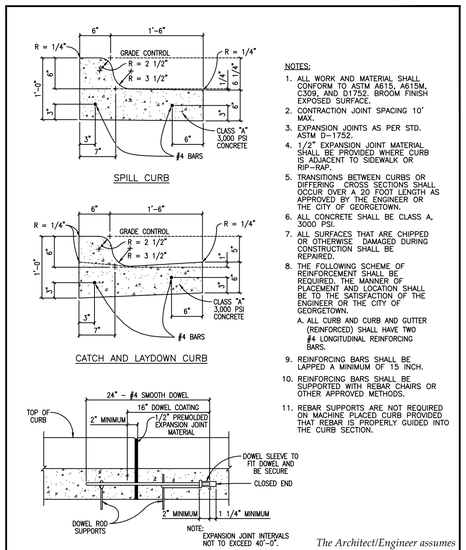
INSTALLATION:
- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS, PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
SILT FENCE DETAIL

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: EC02 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

DETAIL E
NTS



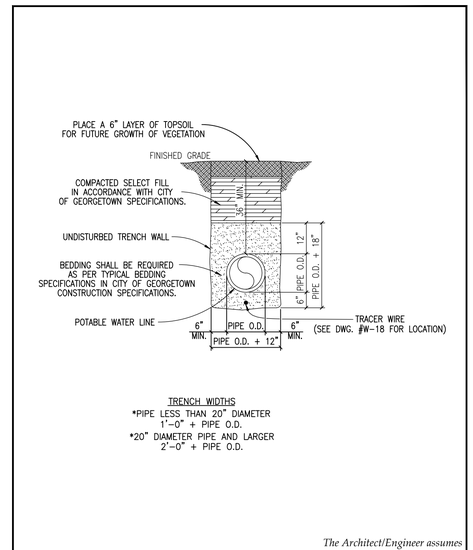
NOTES:
1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP-RAP.
5. TRANSITIONS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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CURB AND GUTTER DETAILS

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: SD06 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

DETAIL F
NTS

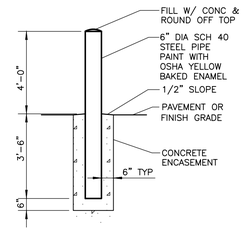


The Architect/Engineer assumes responsibility for appropriate use of this standard.

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

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: W02 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

DETAIL G
NTS



BOLLARD

DETAIL H
NTS

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: E. WEIMER
DRAWN BY: S. SRIHARI
SHEET CHK'D BY: M. STIGGINS
APPROVED BY: E. WEIMER
DATE: SEPTEMBER 2024

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CONSULTING ENGINEERING
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Dallas, Texas 75244
Tel: 972-490-7661
www.gaiconsulting.com

GEORGETOWN TEXAS more than welcome

CITY OF GEORGETOWN, TEXAS

SYSTEM RESILIENCY STAND-BY/BACK-UP POWER

CIVIL

CIVIL STANDARD DETAILS I

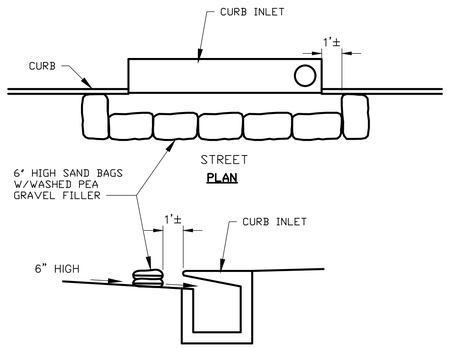
1" — ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

STATE OF TEXAS
ELLYN J. WEIMER
142405
LICENSED PROFESSIONAL ENGINEER
09-17-2024

PROJECT NO. 742
FILE NAME: 00C01SDDT.DWG

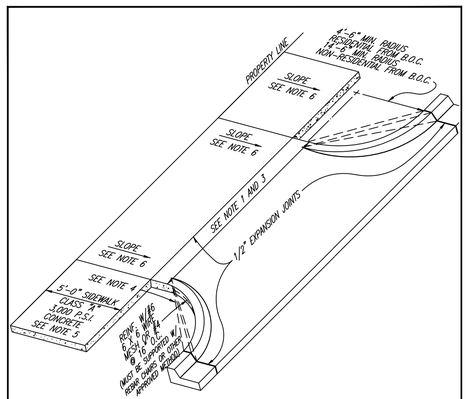
SHEET NO.
00C01

ISSUE FOR BID



CURB INLET PROTECTION

DETAIL A
NTS



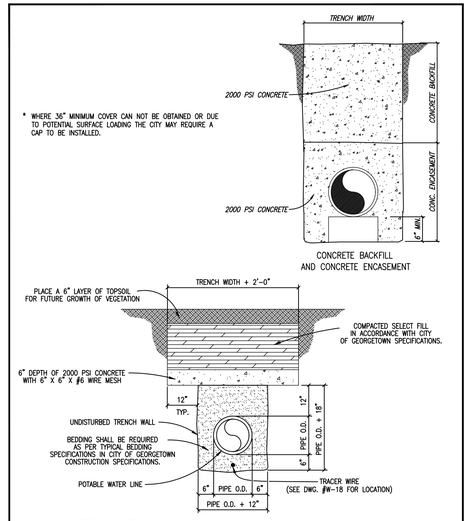
NOTES:

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 TO 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 TO BE APPROVED BY CITY ENGINEER PRIOR TO FINAL DESIGN.
6. SLOPE 1/8" PER FOOT USUAL, NOT TO EXCEED 1/4" PER FOOT.
7. DRIVEWAY APPROACH THICKNESS TO BE A MIN. OF 6".

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
CONCRETE DRIVEWAY APPROACH TYPICAL	DRAWING NAME: SD15
	SCALE: NTS · DATE: 1/2003 · DRAWN BY: MRS · APPROVED BY: TRB

DETAIL B
NTS



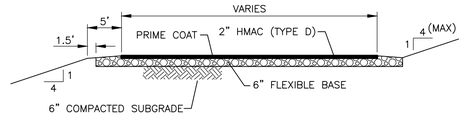
TRENCH WIDTHS

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

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

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
CONCRETE TRENCH CAP DETAIL	DRAWING NAME: W02A
	SCALE: NTS · DATE: 1/2003 · DRAWN BY: MRS · APPROVED BY: TRB

DETAIL C
NTS

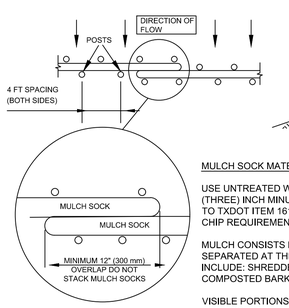


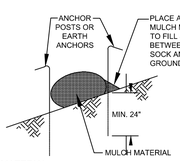
NOTE:

1. ASPHALT ROAD SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTIONS SD1 HOT MIX ASPHALTIC CONCRETE PAVEMENT AND SD4 FLEXIBLE BASE.
2. NEW OR REPAIR INSTALLATIONS TO BE CENTER–CROWNED OR SLOPED TO MATCH EXISTING PAVEMENT

ASPHALT ROAD

DETAIL D
NTS





MULCH SOCK MATERIAL

USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1,6,2,B, WOOD CHIP REQUIREMENTS).

MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

VISIBLE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches), IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS, EARTH ANCHORS ARE ALSO ACCEPTABLE.
2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
7. THE CROSS SECTIONAL AREA OF THE MULCH SOCK SHALL EQUAL OR EXCEED THE CROSS SECTIONAL AREA OF AN 18-INCH DIAMETER CIRCLE.

MULCH SOCK

DETAIL E
NTS

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.

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

DETAIL F
NTS

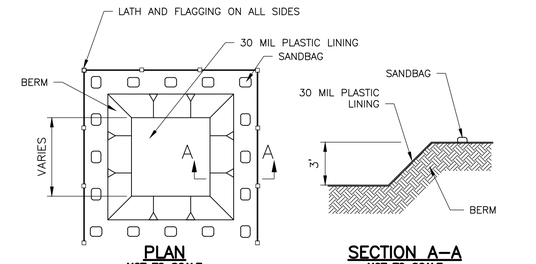
NOTE: THIS SECTION IS INTENDED TO ASSIST THOSE PERSONS PREPARING WATER POLLUTION ABATEMENT PLANS (WPAP) OR STORM WATER POLLUTION PREVENTION PLANS (SW3P) THAT COMPLY WITH FEDERAL, STATE AND/OR LOCAL STORM WATER REGULATIONS.

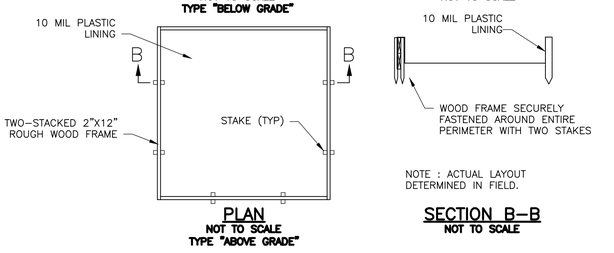
1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. 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 (VENTURA 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 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	REVISION NOTE: ADOPTED 6/21/2006
EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES	DRAWING NAME: EC01A
	SCALE: NTS · DATE: 1/2003 · DRAWN BY: MRS · APPROVED BY: TRB

DETAIL G
NTS





NOTE :

1. BASED ON SITE CONDITIONS, THE CONTRACTOR MAY SELECT BELOW OR ABOVE GRADE CONCRETE WASHOUT AREA.

CONCRETE WASHOUT AREA

DETAIL H
NTS

1" ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

ELLYN J. WEIMER
142405
LICENSED PROFESSIONAL ENGINEER
09-17-2024

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: E. WEIMER
DRAWN BY: S. SRIHARI
SHEET CHK'D BY: M. STIGGINS
APPROVED BY: E. WEIMER
DATE: AUGUST 2024

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GEORGETOWN TEXAS more than welcome

CITY OF GEORGETOWN, TEXAS

SYSTEM RESILIENCY STAND-BY/BACK-UP POWER

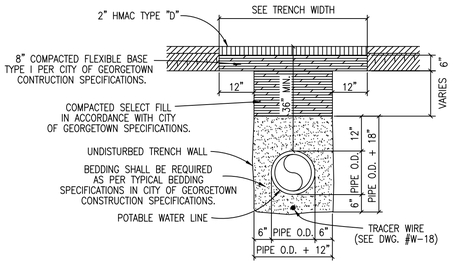
CIVIL

CIVIL STANDARD DETAILS II

PROJECT NO. 742
FILE NAME: 00C02SDDT.DWG

SHEET NO. 00C02

ISSUE FOR BID



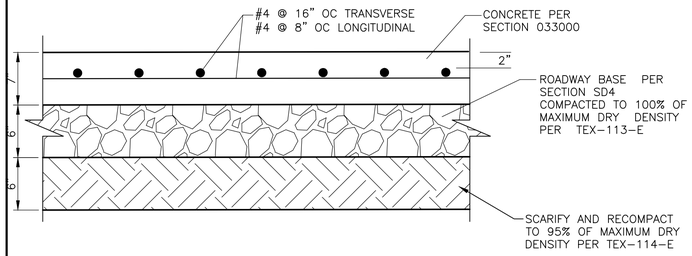
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

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).

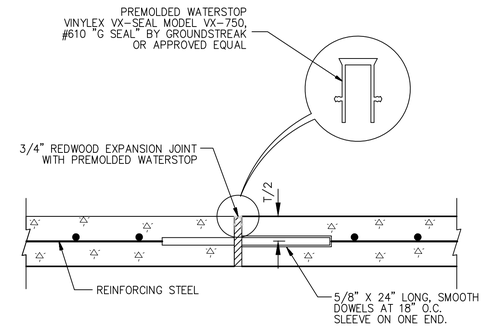
The Architect/Engineer assumes responsibility for appropriate use of this standard.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS	TRENCH AND EMBEDMENT AND PAVEMENT REPLACEMENT DETAIL UNDER EXISTING ROADWAY	DRAWING NAME: W17
		SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

DETAIL A
NTS

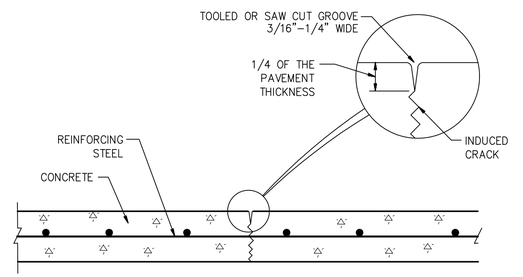


TYPICAL CONCRETE PAVING SECTION
DETAIL B
NTS

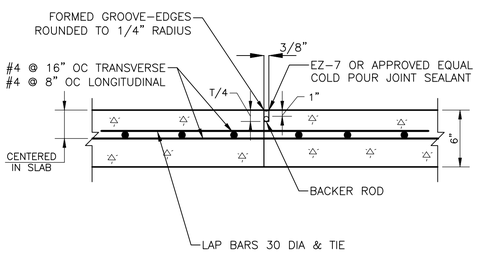


EXPANSION JOINT
DETAIL C
NTS

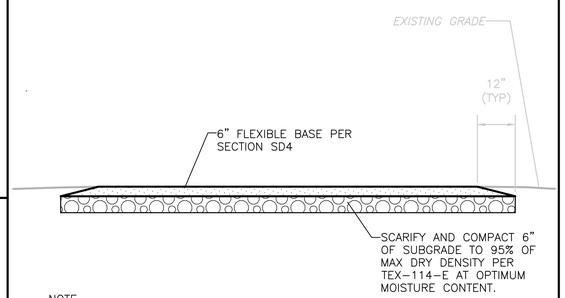
NOTES:
1. TOOLED OR SAW CUT CONTRACTION JOINTS SHALL BE AT REGULAR INTERVALS THROUGHOUT THE PAVEMENT AT EVEN INTERVALS BETWEEN EXPANSION JOINTS AS INDICATED ON THE PLAN. FOR SIDEWALKS LESS THAN 6 FEET WIDE, THE JOINT SPACING SHALL EQUAL THE SIDEWALK WIDTH.
2. JOINTS SHALL BE SPACED SO THAT THE RESULTING PANELS ARE SQUARE. IN NO CASE SHOULD THE LENGHT OF A PANEL EXCEED 1.5 TIMES THE WIDTH.



CONTRACTION JOINT
DETAIL D
NTS



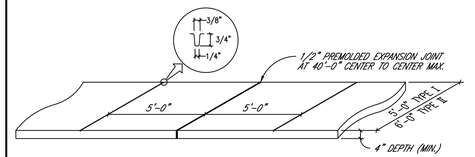
CONSTRUCTION JOINT
DETAIL E
NTS



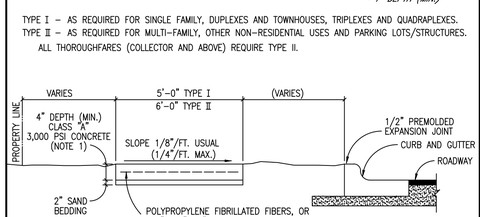
NOTE

1 REMOVE MINIMUM 6" OF EXISTING VEGETATION AND TOPSOIL, SCARIFY AND COMPACT SUBGRADE. PROVIDE 6" FLEXIBLE BASE SURFACING AS NOTED.

GRAVEL ACCESS ROAD
DETAIL F
NTS



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.

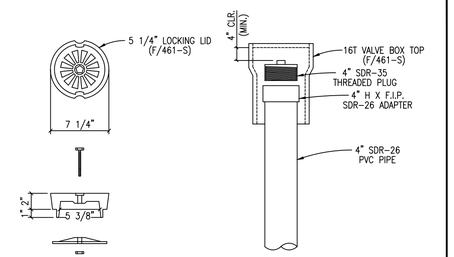


NOTES:
1. STANDARD LOCATION OF SIDEWALK SHALL BE IN CONFORMANCE WITH THE UDC.
2. SIDEWALK SHALL CONFORM TO CURRENT TDLR/TAS STANDARDS.
3. ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND ENGINEER OF RECORD.
4. ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT 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	REVISION NOTE: REVISED 6/25/2015 WBD; ADOPTED 6/21/2006 TRB
GEORGETOWN TEXAS	SIDEWALK SECTION AND JOINT DETAIL	DRAWING NAME: SD14
		SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

DETAIL G
NTS



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	REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS	SEWER CLEAN-OUT DETAIL	DRAWING NAME: WW12
		SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

DETAIL H
NTS

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: E. WEIMER
DRAWN BY: S. SRIHARI
SHEET CHK'D BY: M. STIGGINS
APPROVED BY: E. WEIMER
DATE: SEPTEMBER 2024

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CITY OF GEORGETOWN, TEXAS
GEORGETOWN TEXAS more than welcome

SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

CIVIL

CIVIL STANDARD DETAILS III

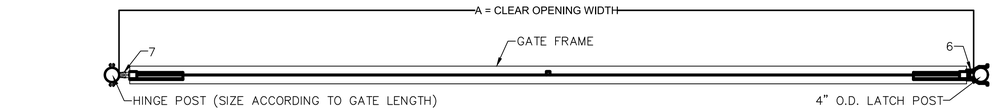
1" ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

STATE OF TEXAS
ELLYN J. WEIMER
142405
LICENSED PROFESSIONAL ENGINEER
09-17-2024

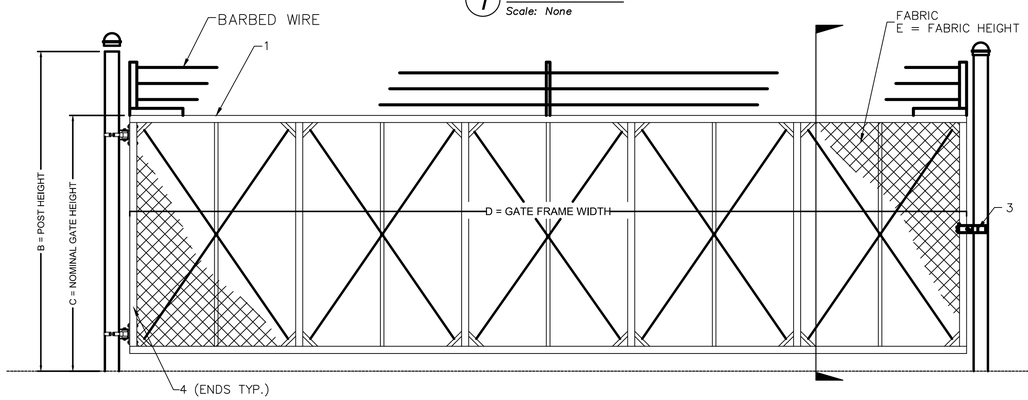
PROJECT NO. 742
FILE NAME: 00C03SDDT.DWG

SHEET NO.
00C03

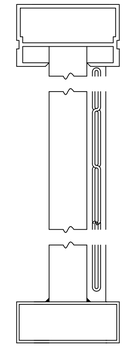
ISSUE FOR BID



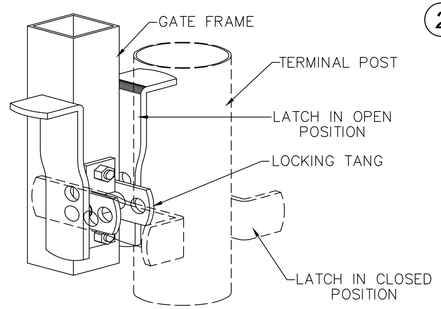
1 PLAN VIEW
Scale: None



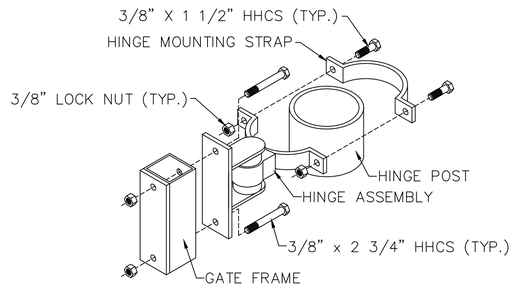
2 ELEVATION
Scale: None



ENLARGED SECTION
Scale: None



6 LATCH ASSEMBLY
Scale: None



7 HINGE ASSEMBLY
Scale: None

CRITICAL DIMENSION CHART		
A	CLEAR OPENING WIDTH	A (15')
B	POST HEIGHT	E (6 + 1'-6" = 7' - 6")
C	NOMINAL GATE HEIGHT	C (7')
D	GATE FRAME WIDTH	VARIES DEPENDING ON HARDWARE
E	FABRIC HEIGHT	C (7' - 1'-0" = 6')

NOTES:
1. HANGER POST SIZE WILL VARY DEPENDING ON THE CLEAR OPENING WIDTH
2. RELOCATE SIGN ON EXISTING GATE TO NEW SWING GATE
3. PROVIDE DUAL PAD LOCK FOR LATCH ASSEMBLY
4. SEE DETAIL F SHEET 00S02 FOR STRUCTURAL POST FOUNDATION.

HEAVY DUTY SWING GATE

COMPONENT REFERENCES

MARK	DESCRIPTION	NOTES:
1	TOP PRIMARY MEMBER	
2	1" x 2" ALUM. TUBE	CENTERED BETWEEN 2x2'S
3	2" x 2" ALUM. TUBE	
4	STANDARD PRIMARY	TYP. AT ENDS OF GATE
5	2" x 5" ALUM. TUBE	
6	LATCH ASSEMBLY	1 REQUIRED
7	HINGE ASSEMBLY	1 REQUIRED

1" ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

STATE OF TEXAS
ELLYN J. WEIMER
142405
LICENSED PROFESSIONAL ENGINEER
09-17-2024

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: E. WEIMER
DRAWN BY: S. SRIHARI
SHEET CHK'D BY: M. STIGGINS
APPROVED BY: E. WEIMER
DATE: AUGUST 2024

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TBPE Firm Registration No. F-3043

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Tel: 972-490-7661
www.gaiconsulting.com

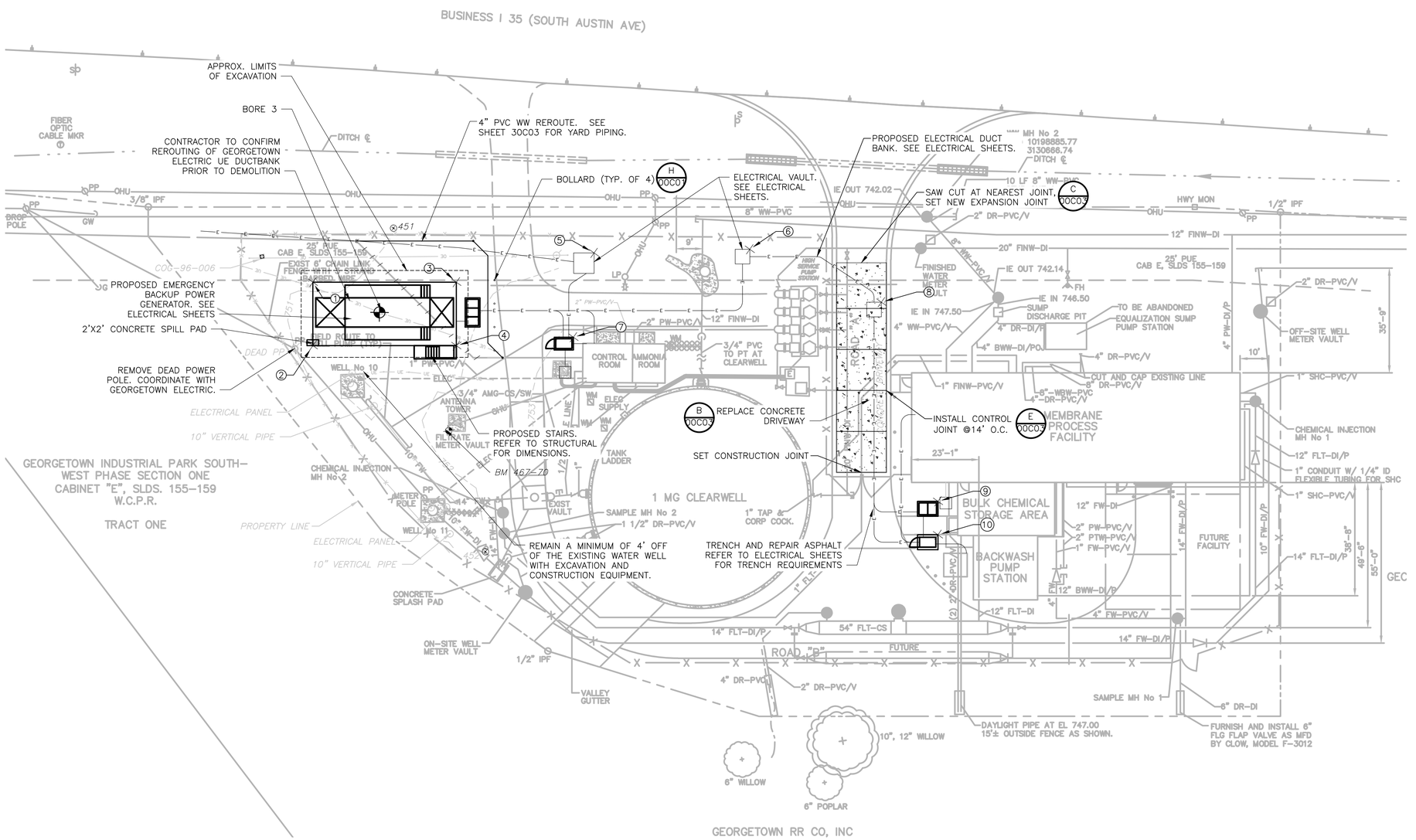
GEORGETOWN TEXAS
more than welcome

CITY OF GEORGETOWN, TEXAS
SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

CIVIL
CIVIL STANDARD DETAILS IV

PROJECT NO. 742
FILE NAME: 00C04SDDT.DWG
SHEET NO. 00C04

ISSUE FOR BID



N

1" = 20'
10 0 20

HORIZONTAL CONTROL POINTS

POINT NO.	DESCRIPTION	ELEVATION	NORTHING	EASTING
BM-467-70	SQUARE CUT ON THE NORTHWEST CORNER OF A CONCRETE ANTENNA BASE. ±115' WEST OF STATE HIGHWAY SPUR 26. ±90' SOUTHWEST FROM THE MOST NORTH FENCE CORNER	752.41	10200283.0	3130998.0
451	TPT-IRSC IC LVLD	750.94	10200289.97	3131068.92
452	TPT-IRSC IC LVLD	751.16	10200277.57	3130954.70

POINT TABLE

POINT NO.	ELEVATION	NORTHING	EASTING	DESCRIPTION
1	755.30	10200320.21	3131055.36	CORNER OF GENERATOR PAD
2	755.30	10200323.84	3131034.00	CORNER OF GENERATOR PAD
3	755.30	10200271.90	3131047.13	CORNER OF GENERATOR PAD
4	755.30	10200275.54	3131025.77	CORNER OF GENERATOR PAD
5	EG	10200223.85	3131049.09	CORNER OF VAULT
6	EG	10200171.23	3131041.39	CORNER OF VAULT
7	EG	10200235.65	3131021.89	CORNER OF VAULT
8	EG	10200129.94	3131016.05	CORNER OF VAULT
9	EG	10200122.32	3130945.75	CORNER OF VAULT
10	EG	10200124.23	3130934.49	CORNER OF VAULT

NOTES:

1. CONTRACTOR TO REGRADE AROUND NEW GENERATOR PAD IN ORDER TO PROVIDE DRAINAGE IN THE DIRECTION OF EXISTING FLOW (WEST).
2. CONTRACTOR TO HYDROSEED AND RE-VEGETATE LIMITS OF EXCAVATION AREAS. ANY OTHER AREAS DISTURBED AS A RESULT OF CONSTRUCTION MUST BE HYDROSEEDED AND RE-VEGETATED AT THE CONTRACTOR'S EXPENSE.
3. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH WORK.
4. BEARINGS ARE BASED ON THE TEXAS COORDINATE SYSTEM OF 1983, CENTRAL ZONE, NAD 83 (2011). ALL DISTANCES SHOWN HEREON ARE SURFACE VALUES REPRESENTED IN U.S. SURVEY FEET BASED ON A GRID-TO-SURFACE COMBINED ADJUSTMENT FACTOR OF 1.00012
5. VERTICAL POSITIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM (NAVD) 88, USING GEOID 18.
6. THE PROPOSED WORK IS WITHIN THE FEMA 100-YEAR FLOODPLAIN (FIRM PANEL 48491C0485F EFFECTIVE 12/20/2019). THE BFE IS 752.3' AT THIS LOCATION.
7. CONTRACTOR SHALL PHASE WORK TO ALLOW THE INSTALLATION OF THE 4" PVC WW LINE BEFORE THE INSTALLATION OF THE ELECTRICAL DUCT BANKS. FIELD VERIFY TIE IN ELEVATIONS OF THE 4" WW LINE BEFORE INSTALLATION.

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: E. WEIMER
DRAWN BY: S. SRIHARI
SHEET CHK'D BY: M. STIGGINS
APPROVED BY: E. WEIMER
DATE: SEPTEMBER 2024

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CITY OF GEORGETOWN, TEXAS

SYSTEM RESILIENCY STAND-BY/BACK-UP POWER

CIVIL

SOUTHSIDE WATER TREATMENT PLANT SITE LAYOUT

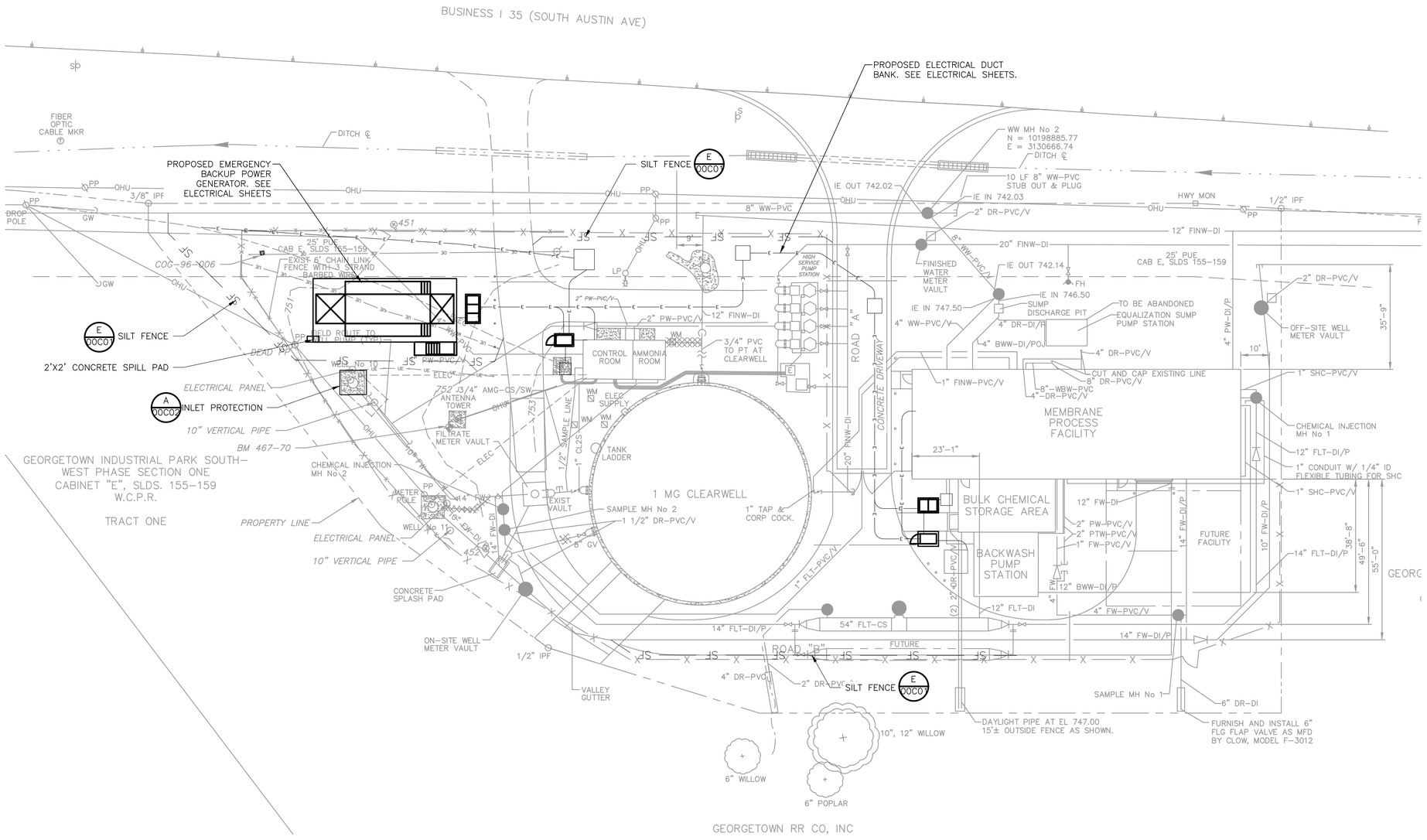
PROJECT NO. 742
FILE NAME: 30C01STPL

SHEET NO. 30C01

STATE OF TEXAS
ELLYN J. WEIMER
142405
LICENSED PROFESSIONAL ENGINEER
09-17-2024

1" ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

ISSUE FOR BID



NOTES:

1. CONTRACTOR TO COORDINATE LAYDOWN AREA WITH OWNER AS NEEDED.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE WORK SITE FREE FROM SOIL, SEDIMENT, AND DEBRIS. CONTRACTOR SHALL NOT REMOVE SOIL, SEDIMENT, OR DEBRIS FROM ANY AREA OR VEHICLE BY MEANS OF WATER; ONLY SHOVELING AND SWEEPING SHALL BE ALLOWED.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE.
4. CONTRACTOR SHALL PROVIDE A CONCRETE WASHOUT IF CONCRETE TRUCKS WILL BE WASHING OUT ON SITE.
5. CONTRACTOR SHALL MAINTAIN A SECURITY FENCE (TEMPORARY AND/OR PERMANENT) AROUND THE SITE AT ALL TIMES.

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: E. WEIMER
DRAWN BY: S. SRIHARI
SHEET CHK'D BY: M. STIGGINS
APPROVED BY: E. WEIMER
DATE: SEPTEMBER 2024

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CITY OF GEORGETOWN, TEXAS

SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

CIVIL
SOUTHSIDE WATER TREATMENT PLANT
TEMPORARY EROSION CONTROL PLAN,
SITE CLEARING AND TREE PROTECTION PLAN

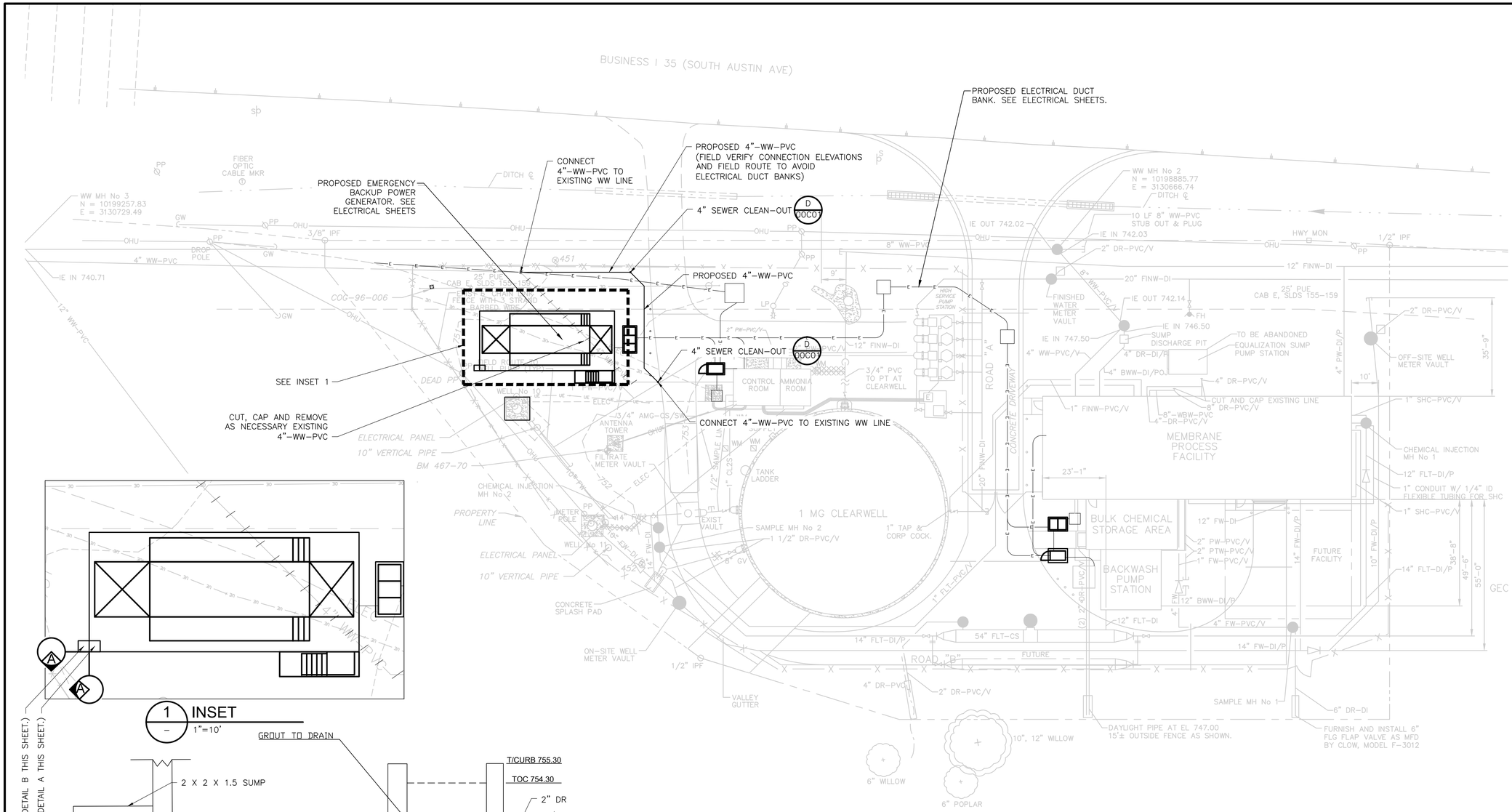
ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

STATE OF TEXAS
ELLYN J. WEIMER
142405
LICENSED PROFESSIONAL ENGINEER
09-17-2024

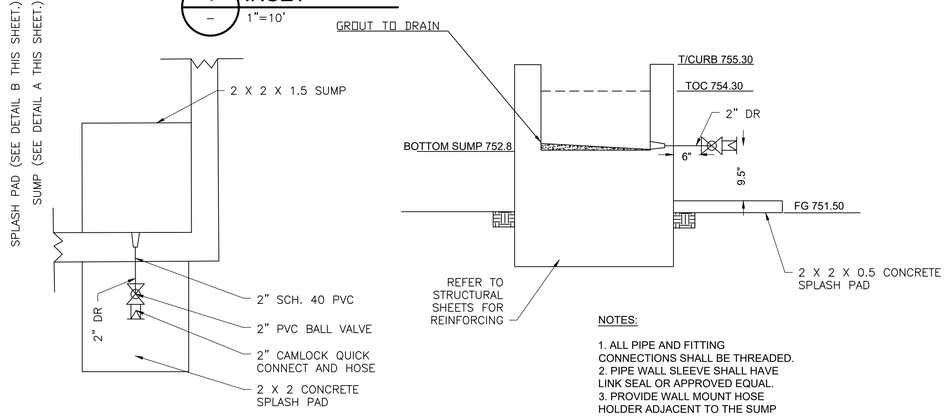
PROJECT NO. 742
FILE NAME: 30C02ERPL

SHEET NO.
30C02

ISSUE FOR BID



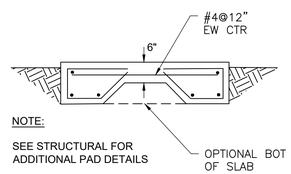
1 INSET
1"=10'



NOTES:

1. ALL PIPE AND FITTING CONNECTIONS SHALL BE THREADED.
2. PIPE WALL SLEEVE SHALL HAVE LINK SEAL OR APPROVED EQUAL.
3. PROVIDE WALL MOUNT HOSE HOLDER ADJACENT TO THE SUMP OUTLET.

A SUMP SECTION
NTS



NOTE:

SEE STRUCTURAL FOR ADDITIONAL PAD DETAILS

B CONCRETE SPLASH PAD
NTS

NOTES:

1. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH WORK.

1" ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

STATE OF TEXAS
ELLYN J. WEIMER
142405
LICENSED PROFESSIONAL ENGINEER
09-17-2024

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: E. WEIMER
DRAWN BY: S. SRIHARI
SHEET CHK'D BY: M. STIGGINS
APPROVED BY: E. WEIMER
DATE: SEPTEMBER 2024

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CITY OF GEORGETOWN, TEXAS
SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

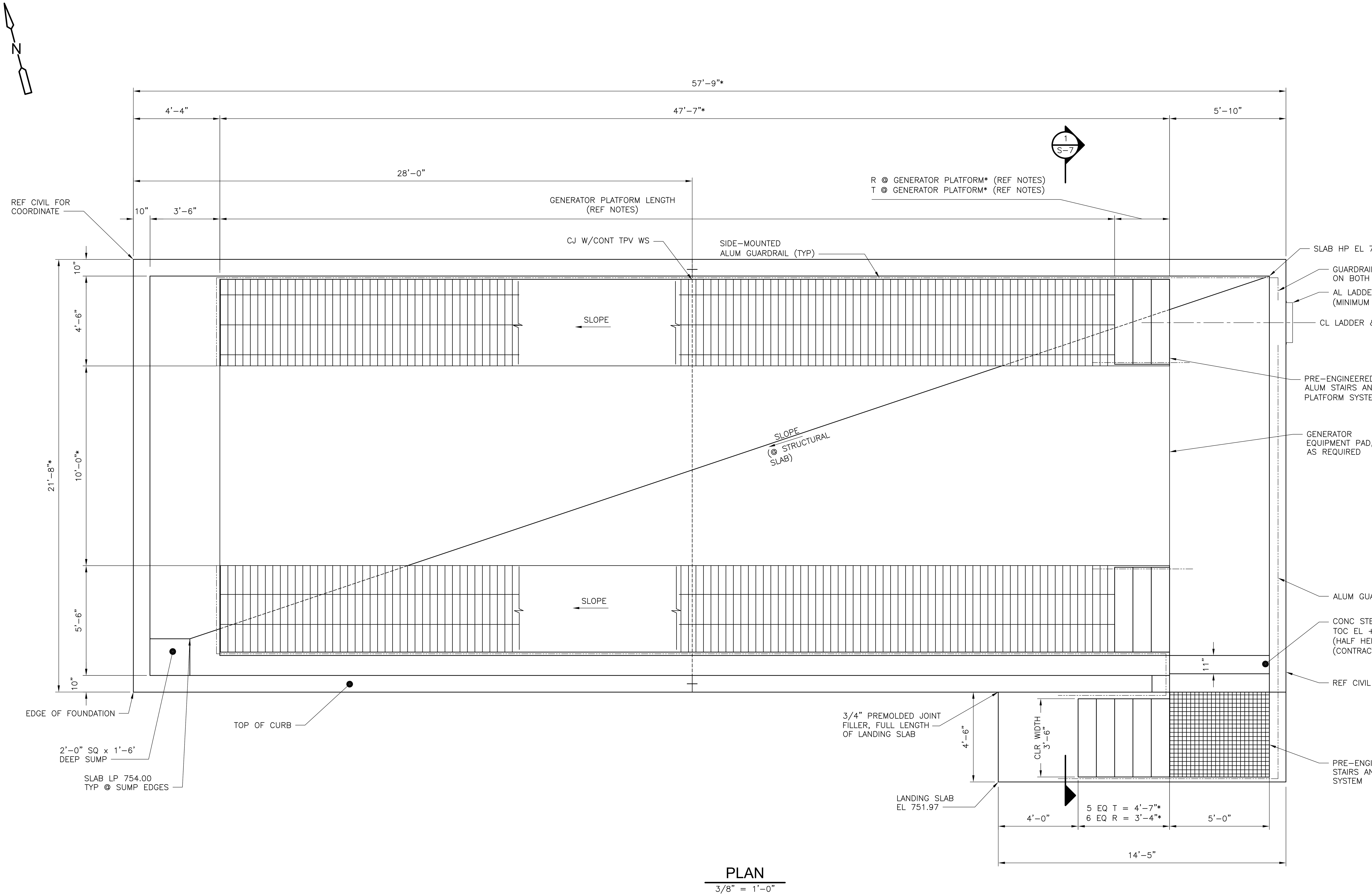
CIVIL
SOUTHSIDE WATER TREATMENT PLANT
YARD PIPE PLAN

PROJECT NO. 742
FILE NAME: 30C03YPPL
SHEET NO. 30C03

ISSUE FOR BID

NOTES:

1. COORDINATE REQUIRED SLAB OPENING SIZES WITH APPROVED EQUIPMENT SUBMITTALS. PROVIDE ADDITIONAL REINFORCEMENT AROUND OPENINGS PER STANDARD DETAIL REQUIREMENTS.
2. COORDINATE OVERALL FOUNDATION SIZE WITH APPROVED EQUIPMENT SUBMITTALS.
3. ALL EQUIPMENT ANCHORAGE SHALL BE PER MANUFACTURER'S REQUIREMENTS.
4. * DENOTES DIMENSION TO BE COORDINATED WITH APPROVED EQUIPMENT MANUFACTURER, PRIOR TO FABRICATION AND CONSTRUCTION.
5. COORDINATE TOP OF PLATFORM WITH APPROVED GENERATOR MANUFACTURER SUBMITTAL SUCH THAT COMPLETE ACCESS IS PROVIDED PER GENERATOR MANUFACTURER REQUIREMENTS.
6. WATERSTOP TO BE EARTHSHIELD THERMOPLASTIC VULCANIZATE (TPV), SERIES EYJP636, OR APPROVED EQUAL, COMPATIBLE FOR EXPOSURE TO DIESEL AT ATMOSPHERIC TEMPERATURES.
7. WATER-CURING REQUIRED AT THIS STRUCTURE. REFERENCE SPECIFICATIONS FOR REQUIREMENTS.
8. PROVIDE SHORING TO SUPPORT EXISTING TRANSFORMER SLAB DURING EXCAVATION AND CONSTRUCTION OF NEW ADJACENT GENERATOR SLAB. REFERENCE CIVIL FOR LOCATION AND SPECIFICATIONS FOR REQUIREMENTS.



PLAN
3/8" = 1'-0"

1" ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

STATE OF TEXAS SAMUEL V. GIL 126797 LICENSED PROFESSIONAL ENGINEER 9/17/2024

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: V. PLONSKI
DRAWN BY: C. PALMER
SHEET CHK'D BY: N. KARASIK
APPROVED BY: S. GIL
DATE: SEPTEMBER 2024

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GEORGETOWN TEXAS more than welcome

CITY OF GEORGETOWN, TEXAS
SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

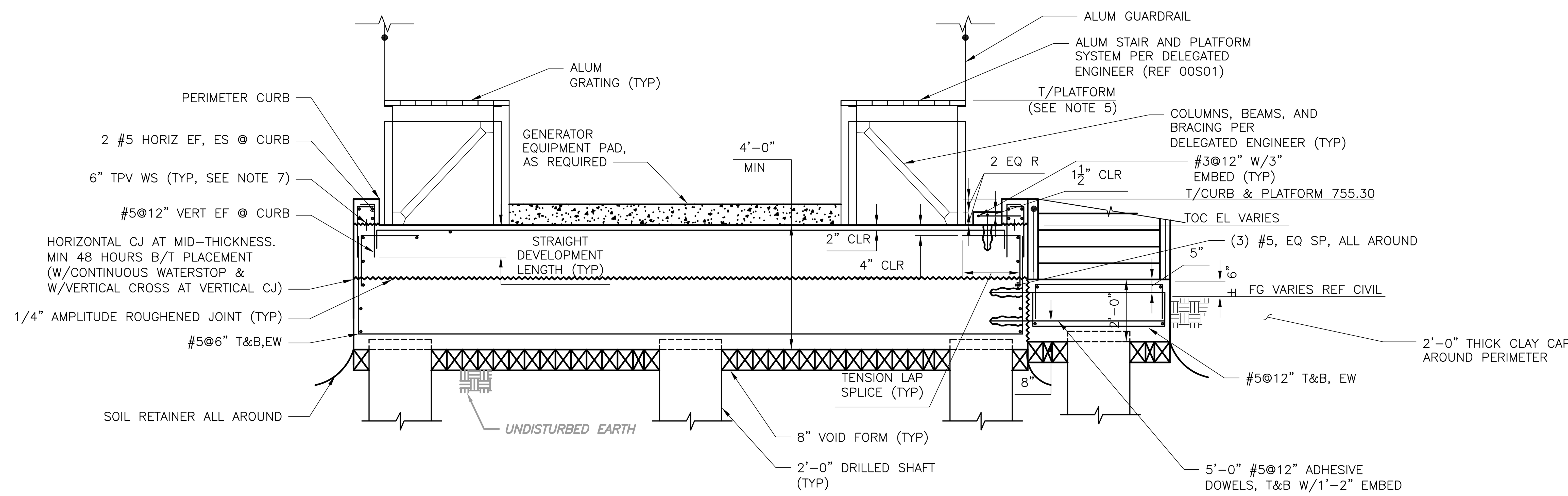
STRUCTURAL
PLAN
SOUTHSIDE WTP GENERATOR

PROJECT NO. 742
FILE NAME: S003PSPL
SHEET NO.
30S02

ISSUE FOR BID

NOTES:

1. COORDINATE REQUIRED SLAB OPENING SIZES WITH APPROVED EQUIPMENT SUBMITTALS. PROVIDE ADDITIONAL REINFORCEMENT AROUND OPENINGS PER STANDARD DETAIL REQUIREMENTS.
2. COORDINATE OVERALL FOUNDATION SIZE WITH APPROVED EQUIPMENT SUBMITTALS.
3. ALL EQUIPMENT ANCHORAGE SHALL BE PER MANUFACTURER'S REQUIREMENTS.
4. * DENOTES DIMENSION TO BE COORDINATED WITH APPROVED EQUIPMENT MANUFACTURER, PRIOR TO FABRICATION AND CONSTRUCTION. COORDINATE PLATFORM TO BE PROVIDED BY GENERATOR MANUFACTURER WITH REQUIRED OVERALL WIDTH.
5. COORDINATE TOP OF PLATFORM WITH APPROVED GENERATOR MANUFACTURER SUBMITTAL SUCH THAT COMPLETE ACCESS IS PROVIDED PER GENERATOR MANUFACTURER REQUIREMENTS.
6. WATERSTOP TO BE EARTHSHIELD THERMOPLASTIC VULCANIZATE (TPV). SERIES EYJP636. OR APPROVED EQUAL, COMPATIBLE FOR EXPOSURE TO DIESEL AT ATMOSPHERIC TEMPERATURES. WATERSTOP TO BE CONTINUOUS AROUND THE PERIMETER AND FOLLOW BOTTOM OF SUMP PROFILE. AT CONTRACTOR'S OPTION, IT IS PERMITTED TO CAST THE EXTERIOR WALLS OF SUMP MONOLITHICALLY WITH MAIN SLAB.



SECTION 1/–
3/8" = 1'-0"

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: V. PLONSKI
DRAWN BY: C. PALMER
SHEET CHK'D BY: N. KARASIK
APPROVED BY: S. GIL
DATE: SEPTEMBER 2024

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GEORGETOWN TEXAS
more than welcome

CITY OF GEORGETOWN, TEXAS
SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

STRUCTURAL
SECTION
SOUTHSIDE WTP GENERATOR

PROJECT NO. 742
FILE NAME: S003PSPL
SHEET NO.
30S03

ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

STATE OF TEXAS
SAMUEL V. GIL
126797
LICENSED
PROFESSIONAL ENGINEER
9/17/2024

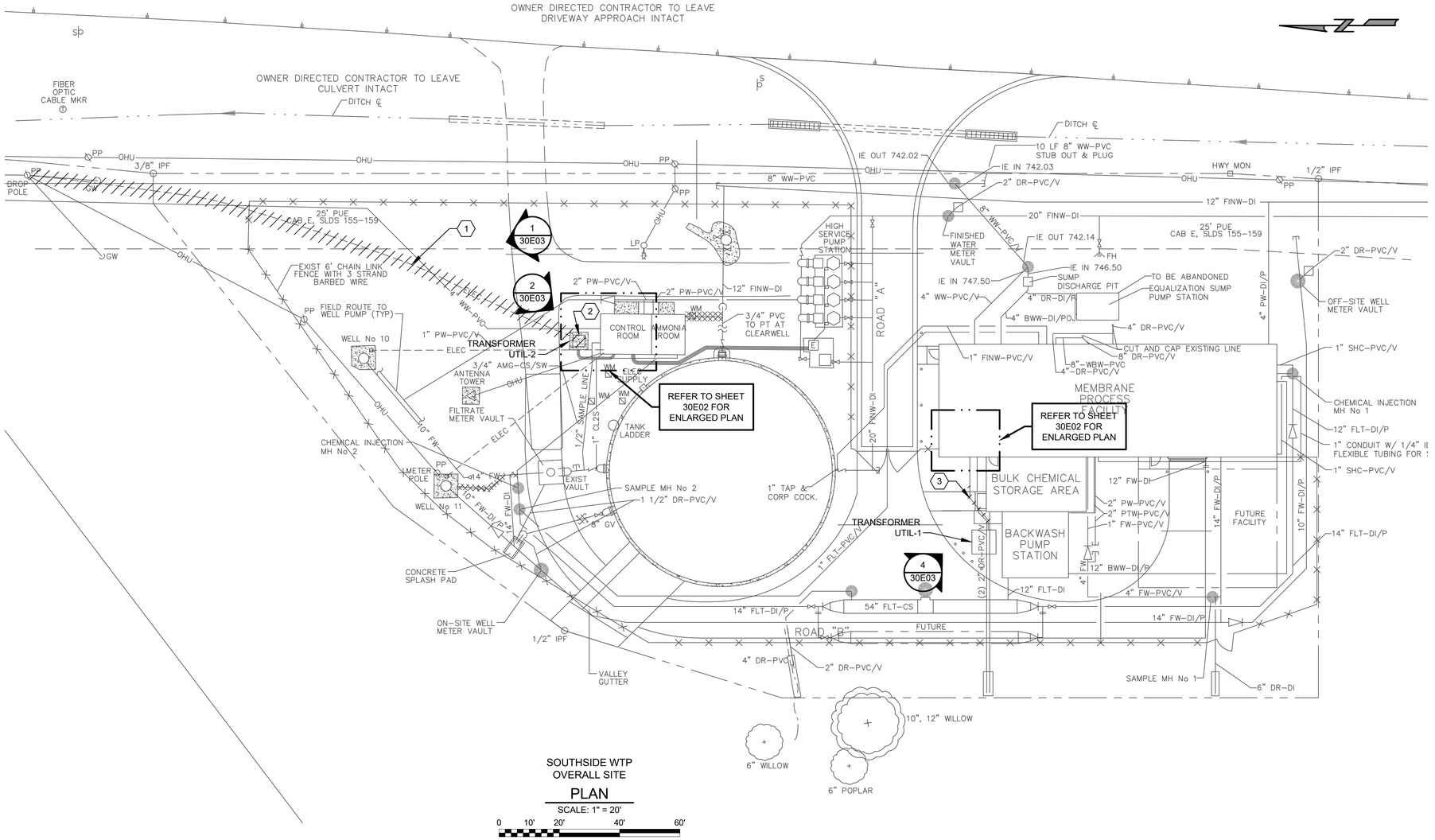
ISSUE FOR BID

GENERAL NOTES:

1. FIELD VERIFY THE LOCATIONS AND DEPTH OF ALL EXISTING UTILITIES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER.

NOTES:

1. COORDINATE WITH UTILITY FOR DEMOLITION AND RELOCATION OF UNDERGROUND PRIMARY FEEDER TO EXISTING TRANSFORMER UTIL-2
2. COORDINATE WITH UTILITY FOR RELOCATION OF TRANSFORMER UTIL-2. DEMOLISH EXISTING TRANSFORMER PAD AND PROTECT EXISTING SECONDARY DUCTBANK FOR INSTALLATION OF NEW HANDHOLE.
3. SELECTIVELY DEMOLISH DUCTBANK FROM TRANSFORMER UTIL-1 TO MCC-1 AND DP-2. PROTECT DUCTBANK TO TRANSFORMER FOR REROUTE TO NEW SWITCHBOARD. PROTECTED DUCTBANK TO BUILDING FOR REROUTE TO NEW HANDHOLE.



SOUTHSIDE WTP
OVERALL SITE
PLAN
SCALE: 1" = 20'
0 10' 20' 40' 60'

1" ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

STATE OF TEXAS
ANDREW A. REED
123384
LICENSED PROFESSIONAL ENGINEER
09/11/24

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: K. ADDAMO
DRAWN BY: D. PALMER
SHEET CHK'D BY: A. REED
APPROVED BY: A. REED
DATE: SEPTEMBER 2024

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GEORGETOWN TEXAS more than welcome

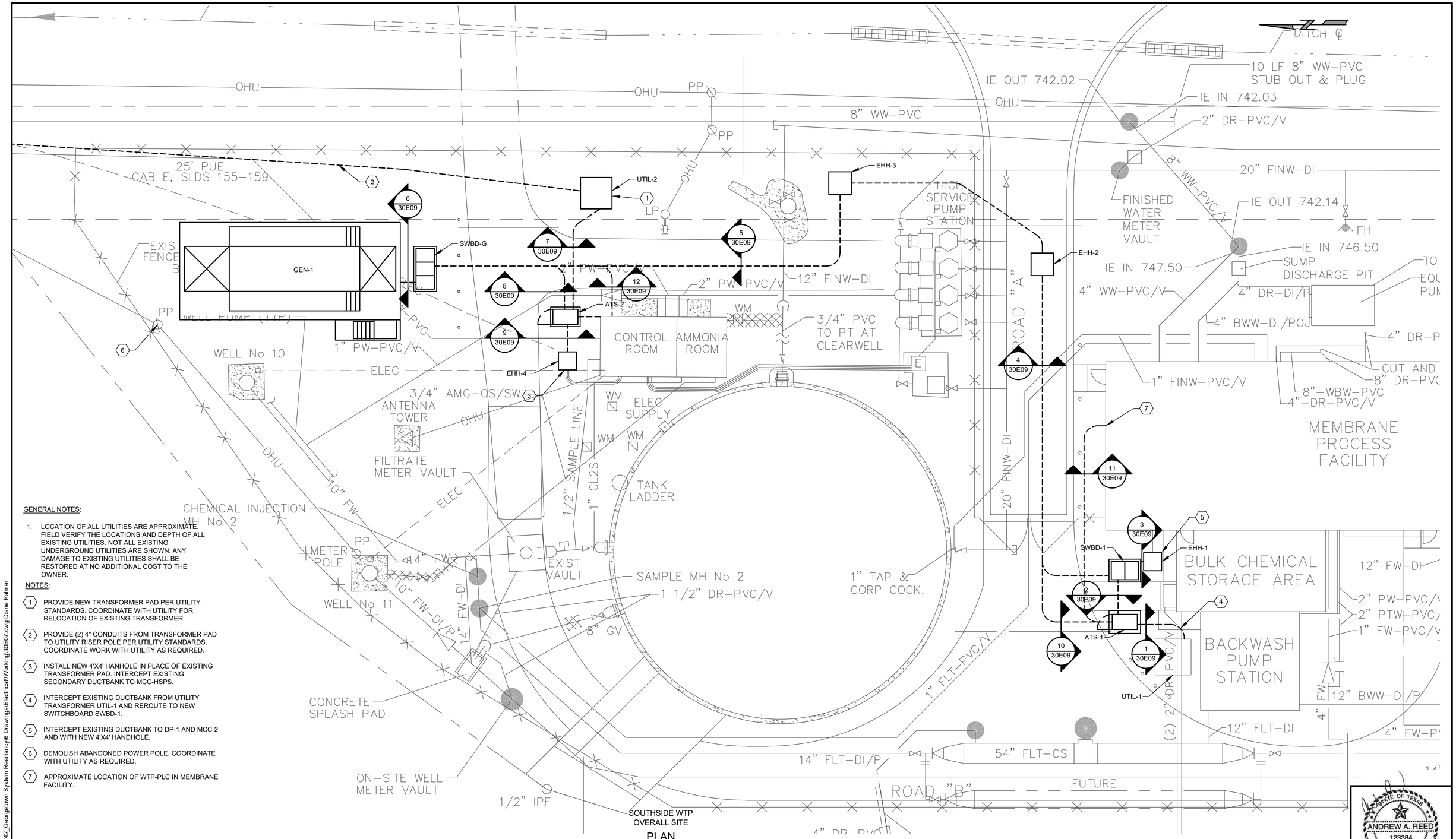
CITY OF GEORGETOWN, TEXAS
SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

ELECTRICAL
SOUTHSIDE WTP
EXISTING OVERALL SITE PLAN

PROJECT NO. 742
FILE NAME: 30E01

SHEET NO.
30E01
49 OF 82

ISSUE FOR BID



GENERAL NOTES:

1. LOCATION OF ALL UTILITIES ARE APPROXIMATE. FIELD VERIFY THE LOCATIONS AND DEPTH OF ALL EXISTING UTILITIES. NOT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN. ANY DAMAGE TO EXISTING UTILITIES SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER.

NOTES:

1. PROVIDE NEW TRANSFORMER PAD PER UTILITY STANDARDS. COORDINATE WITH UTILITY FOR RELOCATION OF EXISTING TRANSFORMER.
2. PROVIDE (2) 4" CONDUITS FROM TRANSFORMER PAD TO UTILITY RISER POLE PER UTILITY STANDARDS. COORDINATE WORK WITH UTILITY AS REQUIRED.
3. INSTALL NEW 4'X4' HANHOLE IN PLACE OF EXISTING TRANSFORMER PAD. INTERCEPT EXISTING SECONDARY DUCTBANK TO MCC-HSPS.
4. INTERCEPT EXISTING DUCTBANK FROM UTILITY TRANSFORMER UTIL-1 AND REROUTE TO NEW SWITCHBOARD SWBD-1.
5. INTERCEPT EXISTING DUCTBANK TO DP-1 AND MCC-2 AND WITH NEW 4'X4' HANDHOLE.
6. DEMOLISH ABANDONED POWER POLE. COORDINATE WITH UTILITY AS REQUIRED.
7. APPROXIMATE LOCATION OF WTP-PLC IN MEMBRANE FACILITY.

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: K. ADDAMO
DRAWN BY: D. PALMER
SHEET CHK'D BY: A. REED
APPROVED BY: A. REED
DATE: SEPTEMBER 2024

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GEORGETOWN TEXAS more than welcome

CITY OF GEORGETOWN, TEXAS

SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

ELECTRICAL

SOUTHSIDE WTP
OVERALL SITE PLAN - MODIFICATION

STATE OF TEXAS
ANDREW A. REED
123384
LICENSED PROFESSIONAL ENGINEER
09/17/24

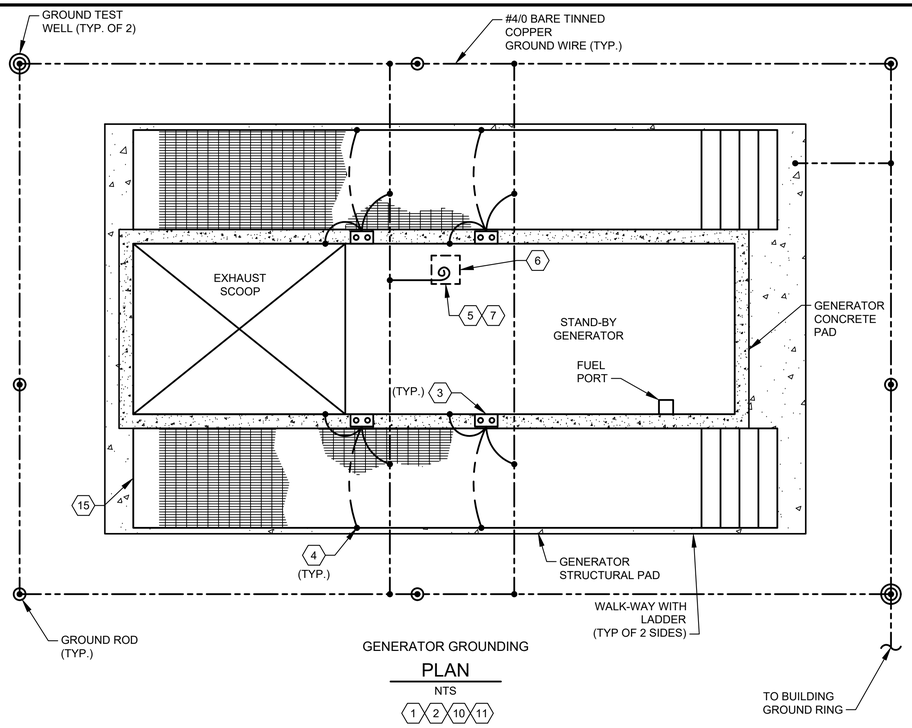
ONE INCH AT FULL SIZE
IF NOT ONE INCH SCALE ACCORDINGLY

PROJECT NO. 742
FILE NAME: 30E07

SHEET NO.
30E07
55 OF 82

ISSUE FOR BID

9/18/2024 4:37 PM W:\Miscellaneous\742_Georgetown System Resiliency\6 Drawings\Electrical\Working\30E07.dwg Diane Palmer

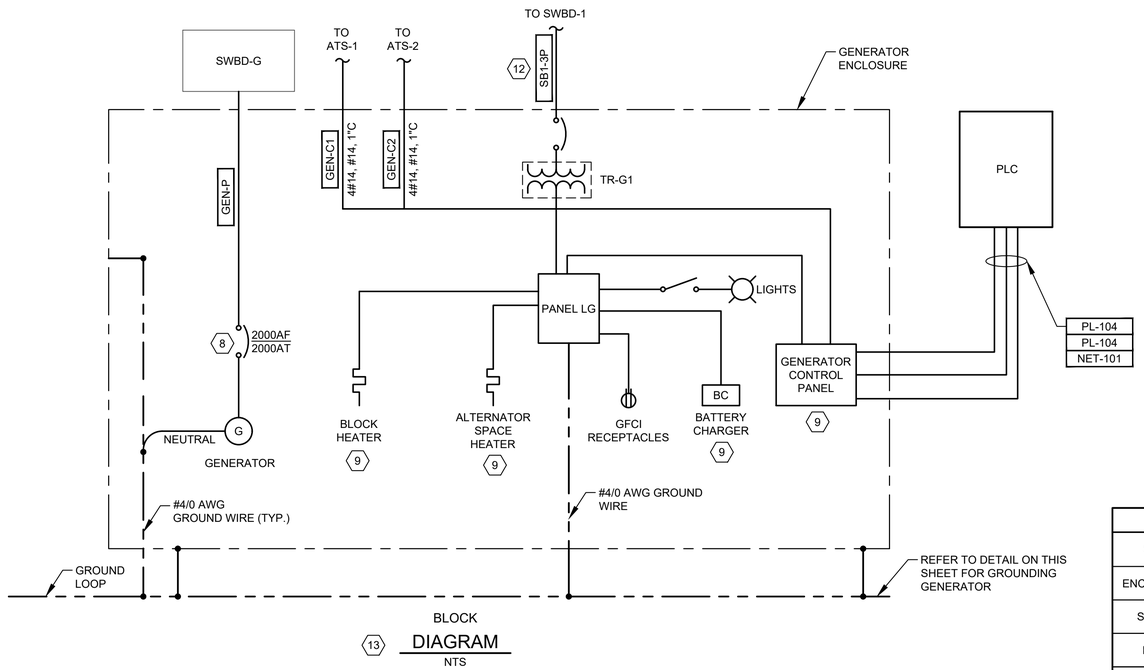


GENERATOR GROUNDING

PLAN

NTS

1 2 10 11



BLOCK

13 DIAGRAM

NTS

NOTES:

1. SIZES AND CLEARANCES SHOWN SHALL BE COORDINATED WITH THE SELECTED GENERATOR MANUFACTURER AND LOCAL AUTHORITY HAVING JURISDICTION FOR FINAL DIMENSIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE PAD SIZE AND EQUIPMENT LOCATION BASED ON FINAL SIZING REQUIREMENT.
2. TIE REBAR TO GROUND GRID SYSTEM.
3. PROVIDE GROUND PAD IN VERTICAL FACE OF HOUSE KEEPING PAD.
4. BOND PAD TO GENERATOR AND ACCESS PLATFORM WITH 4/0 AW'G GREEN INSULATED CABLE. ATTACH WITH NEMA 2-HOLE LONG BARREL LUGS.
5. PROVIDE PIG TAIL GROUNDING ELECTRODE CONDUCTOR FOR GENERATOR. VERIFY INTERNAL EQUIPMENT GROUNDING REQUIREMENTS.
6. ENTRY FOR CONDUIT INTO GENERATOR, LOCATION APPROXIMATE. ADJUST AS REQUIRED PER MANUFACTURER'S SHOP DRAWINGS. COORDINATE WITH STRUCTURE GRADE BEAM PLACEMENT.
7. TIE DUCTBANK REBAR INTO SLAB REBAR AS SPECIFIED.
8. BREAKER TO BE PROVIDED BY GENERATOR MANUFACTURER AND SET ACCORDING TO THE POWER SYSTEM STUDY REQUIREMENTS.
9. GENERATOR MANUFACTURER SHALL BE RESPONSIBLE FOR SIZING THE BREAKERS, WIRES AND CONDUITS FOR GENERATOR CONTROL PANEL, HEATERS AND BATTERY CHARGERS.
10. APPROXIMATE PAD SIZE REFER TO DRAWINGS FOR DETAILS. SEE STRUCTURAL FOR CONSTRUCTION DETAILS.
11. DRAWING MAY NOT REPRESENT SUBMITTED AND APPROVED EQUIPMENT.
12. FROM MCC LOCATED IN THE ELECTRICAL BUILDING.
13. BLOCK DIAGRAM SHOWN AS MINIMUM REQUIRED CONFIGURATION.
14. NOT USED.
15. 48" WIDE ALUMINUM PLATFORMS PROVIDED BY GENERATOR MANUFACTURER.

PANELBOARD: LG						**MAINS**			**LOCATION:** GENERATOR ENCLOSURE							
VOLTAGE: 120/240 V, 1PH, 3W						TYPE: CB			**ENCLOSURE:** NEMA 4X 316SS							
WITHSTAND RATING: 22 kA						RATING: 80 A			**BUS SIZE:** 100 A					**SPD:**	TYPE 2, INTEGRATED	
MOUNTING: SURFACE									**BUS TYPE:** TIN-PLATED COPPER							
NOTES	CKT NO.	BRKR AMPS / POLES	WIRE SIZE	COND SIZE	DESCRIPTION	L1 (VA)	L2 (VA)		L1 (VA)	L2 (VA)	DESCRIPTION	COND SIZE	WIRE SIZE	BRKR AMPS / POLES	CKT NO.	NOTES
	1	30	10	3/4	JACKET WATER HEATER	2500			136		INTERIOR LIGHTING	3/4	12	20	2	
	3						2500			720	RECEPTACLES	3/4	12	20	4	2
	5	20	12	3/4	ALTERNATOR HEATER	300			136		EXTERIOR LIGHTING	3/4	12	20	6	
	7	20	12	3/4	BATTERY CHARGER						SPARE			20	8	
	9	20			CONTROL PANEL HEATER	100					SPARE			20	10	
	11	20			SPARE						SPARE			20	12	
	13														14	
	15														16	
	17														18	
					SUBTOTAL VA BY PHASE	2900	2500		272	720						
					TOTAL VA BY PHASE	3172	3220									
					TOTAL VA	6392										
					L-L VOLTAGE	240										
					TOTAL AMPS (AVERAGE PER LEG)	26.6										

GENERAL NOTES:

* CONDUIT SIZE SHOWN IS THE MINIMUM SIZE REQUIRED FOR INDIVIDUAL CIRCUITS. MULTIPLE CIRCUITS MAY BE COMBINED IN A SINGLE CONDUIT FOR FIELD ROUTING PROVIDED NEC MAXIMUM CONDUIT FILL IS NOT EXCEEDED.
* EACH SINGLE PHASE 120V CIRCUIT SHALL HAVE A SEPARATE NEUTRAL WIRE.

KEYED NOTES

1. 30 mA GFCI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)
2. 5 mA GFCI CIRCUIT BREAKER
3.
4.
5.
6.

GENERATOR INFORMATION	
SIZE	1250KW, 480, 3PH, 4W
ENCLOSURE	WEATHER PROOF, 47'L X 10'W X 13.5'H
SOUND	SOUND ATTENUATED, 65' DBA AT 25'
FUEL	UL-2085 DIESEL FUEL TANK, 24HR AT FULL LOAD
WEIGHT	120,000 LBS

STATE OF TEXAS
ANDREW A. REED
123384
LICENSED
PROFESSIONAL ENGINEER
09/17/24

REV. NO.	DATE	DRWN	REMARKS

DESIGNED BY: K. ADDAMO
DRAWN BY: D. PALMER
SHEET CHK'D BY: A. REED
APPROVED BY: A. REED
DATE: SEPTEMBER 2024

GAI
Gupta & Associates, Inc.
CONSULTING ENGINEERING
Texas Registration No. F-2593
13717 Neutron Road
Dallas, Texas 75244
Tel: 972-490-7661
www.gaiconsulting.com

GEORGETOWN TEXAS
more than welcome

CITY OF GEORGETOWN, TEXAS

SYSTEM RESILIENCY
STAND-BY/BACK-UP POWER

ELECTRICAL

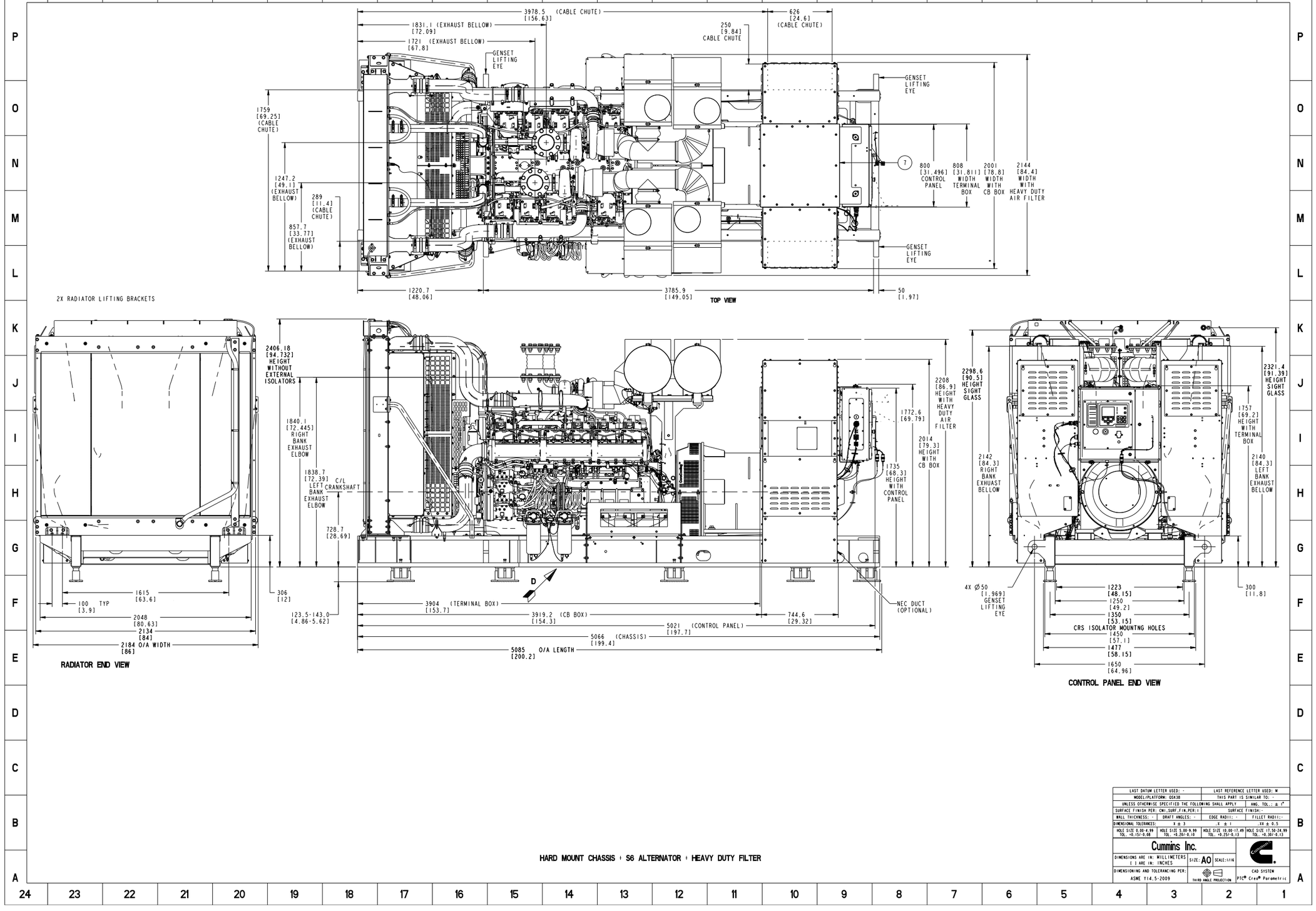
SOUTHSIDE WTP
GENERATOR DETAILS

PROJECT NO. 742
FILE NAME: 30E10

SHEET NO.
30E10
58 OF 82

ISSUE FOR BID

9/18/2024 4:36 PM W:\Miscellaneous\742_Georgetown System Resiliency\6 Drawings\Electrical\Working\30E10.dwg Diane Palmer



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Part Number: **A062V279** Part Revision: **D**

Part Name: **OUTLINE,GENSET**

Drawing Category: **Outline** State: **Released**

City of Georgetown

Southside Water Treatment Plant

Aboveground Storage Tanks Facility Plan

In order to prevent spill and overfill of hydrocarbon products or hazardous substances the following spill and overfill control actions will be taken:

1. The use of UL-2085 listed double-wall subbase design carbon steel construction tanks sized with a minimum of 110 percent of the tank capacity to prevent the escape of fuel into the environment in the event of a tank rupture will be provided to contain spills and overflows.
2. The generator fill ports will be equipped with a an overfill prevention valve and tank level indicators, with high and low-level switches to indicate fuel level at all times in order to ensure minimal risk of overfill.
3. Each Generator fuel tank will be equipped with a leak detection system for the interstitial space to alert for any potential leaks.
4. In case of failure of double-wall subbase system, a tertiary concrete containment system will be placed around the tank and sized with a minimum capacity of 150 percent of the tank capacity to prevent the escape of fuel into the environment. This system was imposed due to the proximity of the existing water well on site.
5. In order to avoid overfills there will always be an attendant present during deliveries.
6. Standard Operating Procedures (SOP) will be developed for filling the fuel storage tanks to minimize the risk of overfilling and spilling. The SOP will be shared with operators and delivery personnel.
7. Operators will continue to be trained on the proper methods of filling tanks and monitoring the tank levels. Instrumentation and control training will be provided by the system supplier.

City of Georgetown

Southside Water Treatment Plant

Aboveground Storage Tanks Facility Plan

In the event of any spill of hydrocarbon products or hazardous substances the following spill response actions will be taken:

1. The nature and extent of the spill will be assessed, and measures will be taken to protect self and all personnel.
2. City of Georgetown Fire Department will be notified of the nature and extent of the spill via telephone (911 or 512-930-3473).
3. TCEQ Spill Reporting 24-hour Hotline will be notified of the nature and extent of the spill via telephone (800-832-8224).
4. The source of the spill will be stopped and confined before spill response cleanup activities take place.
5. Spills will be reported prior to any spill response activities.
6. Absorbent materials will be used to contain small scale spill incidents immediately.
7. Absorbent containment booms will be used to contain the discharge of larger scale spill incidents immediately.
8. Any spill response action will follow applicable OSHA health and safety regulations.
9. Any water materials generated by spill response actions will be properly stored and disposed in accordance with local, state, and federal regulations.
10. Onsite personnel will be trained to follow the spill response actions for the site.

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.

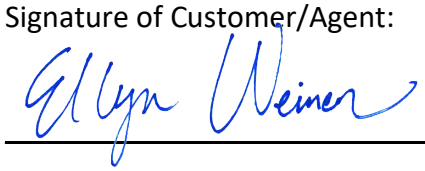
Signature

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: Ellyn Weimer, PE

Date: 10-08-2024

Signature of Customer/Agent:



Regulated Entity Name: Southside Water Treatment Plant

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: N/A

   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: stormwater will flow from the project site thence to West Fork of Smith Branch.

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.

City of Georgetown

Southside Water Treatment Plant

Aboveground Storage Tank Facility Plan

In the event of any spill of hydrocarbon products or hazardous substances of reportable quantities the following spill response actions will be taken:

1. The nature and extent of the spill will be assessed, and measures will be taken to protect self and all personnel.
2. City of Georgetown Fire Department will be notified of the nature and extent of the spill via telephone (911 or 512-930-3473).
3. TCEQ Spill Reporting 24-hour Hotline will be notified of the nature and extent of the spill via telephone (800-832-8224).
4. The source of the spill will be stopped and confined before spill response cleanup activities take place.
5. Spills will be reported prior to any spill response activities.
6. Absorbent materials will be used to contain small scale spill incidents immediately.
7. Absorbent containment booms will be used to contain the discharge of larger scale spill incidents immediately.
8. Any spill response action will follow applicable OSHA health and safety regulations.
9. Any water materials generated by spill response actions will be properly stored and disposed in accordance with local, state, and federal regulations.
10. Onsite personnel will be trained to follow the spill response actions for the site.

City of Georgetown

Southside Water Treatment Plant

Aboveground Storage Tank Facility Plan

Potential sources of contamination related to this project include:

- Sediment from spoil piles transported during stormwater events
- Accidental leakage of fuels from vehicles or equipment during construction activities

All necessary actions to minimize impacts of contamination will be taken before, during, and after the proposed project and in coordination with Attachment A, Spill Response Actions. Other than a potential incidental leak from construction vehicles or equipment, all additional runoff will be from natural sources.

City of Georgetown

Southside Water Treatment Plant

Aboveground Storage Tank Facility Plan

The sequence for the construction of the proposed project improvements at the Southside Water Treatment Plant site is planned as follows:

- Following issuance of notice-to-proceed, Contractor installs silt fencing, tree protection, and stabilized construction entrance.
- Contractor clears site areas and prepares site for construction.
- Contractor constructs temporary construction access roads.
- Contractor performs excavation for new structures.
- Contractor constructs the concrete slab for new generator.
- Contractor installs electrical duct banks and routing.
- Contractor installs electrical improvements in the buildings and structures.
- Contractor installs concrete pavement.
- Contractor completes site construction and initiates site clean-up.
- Contractor inspects and maintains temporary erosion and sedimentation controls throughout the term of the project.
- Contractor restores disturbed soil areas with loaming and hydro-seeding.

City of Georgetown

Southside Water Treatment Plant

Aboveground Storage Tank Facility Plan

Temporary erosion and sedimentation control measures will include:

- Silt fencing;
- Rock berms;
- Concrete wash down area;
- Tree protection;
- Stabilized Construction Entrance (SCE);
- Inlet protection

Silt fencing shall be placed downgradient from the proposed site areas to control and filter any stormwater that may be generated from the proposed project site. Silt fencing shall also be placed around the perimeter of any storm drain inlets located on or downgradient of the proposed project area when installed. No significant runon from upgradient stormwater flows are anticipated due to the silt fencing. The silt fencing will further serve to control any stormwater generated by the proposed project site before it is allowed to discharge as stormwater-sediment flow from the site.

Rock berms shall be placed downgradient of proposed site areas to control and filter any concentrated stormwater that may be generated from the proposed project site.

A concrete wash out area will be placed on site in order to wash out trucks onto a designated area and not into storm drains or streams. It will also prevent excess concrete to be dumped onsite.

Tree protection will be placed around the critical root zone (CRZ) of protected trees on the proposed project site. This control measure will prevent erosion near the roots and protect the roots from being damaged by construction activities.

A stabilized construction entrance will be installed at the entrance of the construction area to minimize the tracking of sediments from the project site. All access to the construction site will use this SCE.

The area will remain vegetated where possible.

These temporary erosion and sedimentation control measures are indicated on the site drawings and will be put in place before the start of construction and shall remain in place for the duration of site construction activities.

City of Georgetown

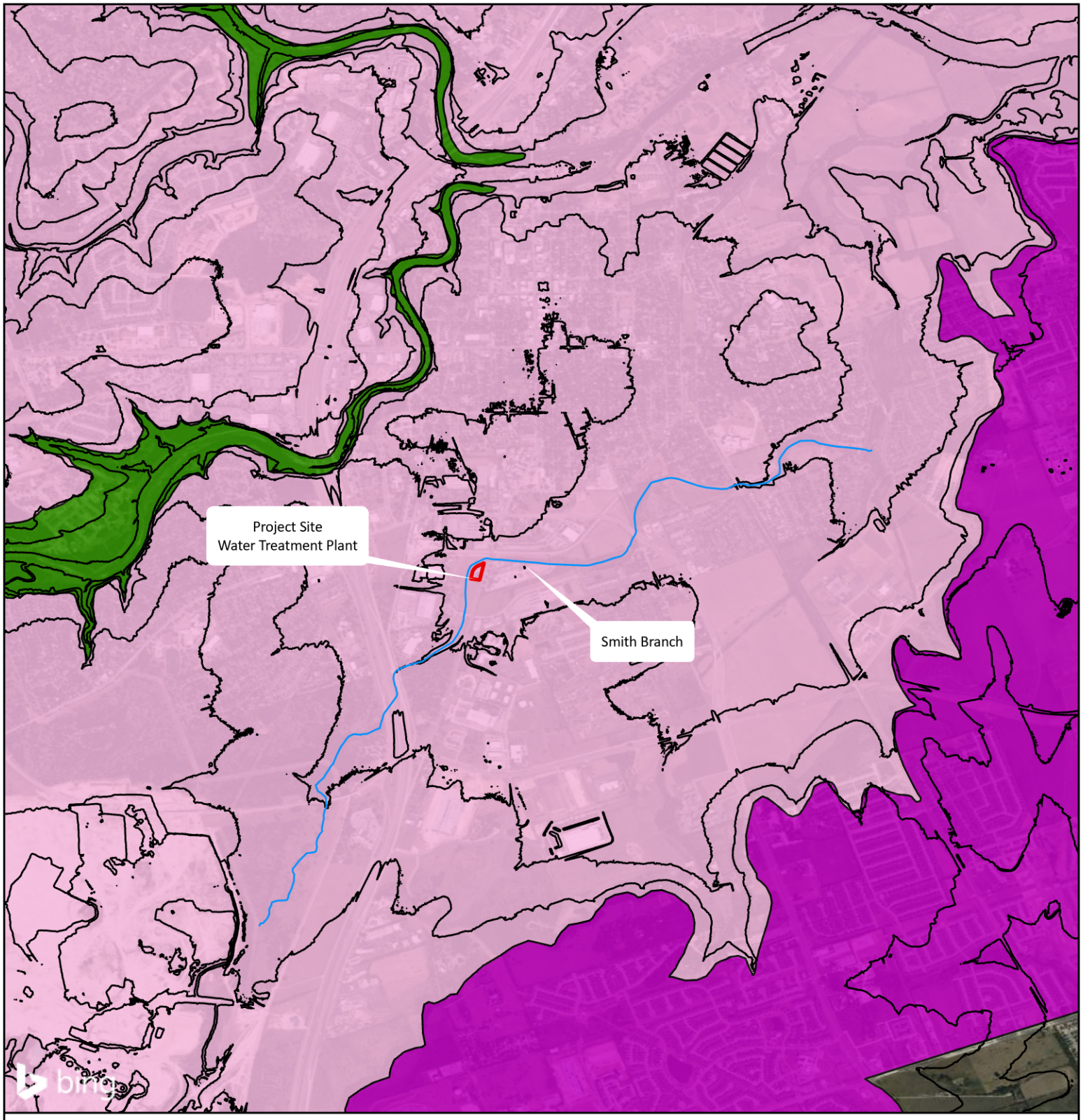
Southside Water Treatment Plant

Aboveground Storage Tank Facility Plan

Structural Practices that will be used to limit the runoff discharge of sediments and pollutants from exposed areas of the proposed project include the following practices:

- Silt fencing;
- Rock berms;
- Concrete wash down area;
- Stabilized Construction Entrance (SCE);

These practices are described in Attachment D, Temporary BMPs and Measures. No temporary structural facilities, such as sedimentation ponds, will be constructed or used during construction activities.



Legend

- Countours
- Project Site

Edwards Aquifer

- Recharge Zone
- Transition Zone
- Contributing Zone
- Contributing Zone within the Transition Zone
- Smith Branch

N

0 0.25 0.5 0.75 1 Miles

Attachment G: Drainage Area Map
Southside Water Treatment Plant
Williamson County

CDM Smith

City of Georgetown

Southside Water Treatment Plant

Aboveground Storage Tank Facility Plan

Silt fencing, rock berms, inlet protection, and the stabilized construction entrance shall be inspected once per week and following every significant rainfall event (of at least 0.1 inch or greater). If such inspections reveal that additional measurements are needed to prevent movement of sedimentation to offsite areas, the Contractor shall promptly install additional erosion control devices as may be required.

Silt fences shall be maintained and repaired as follows:

- Remove accumulated sediment once build up reaches 6 inches
- Replace torn or damaged filter fabric
- Make any other repairs or adjustments, as needed, to ensure the silt fencing is functioning properly

Rock berms shall be maintained and repaired as follows:

- Remove accumulated sediment once build up reaches 6 inches
- Repair any loose wire sheathing or reshape as needed
- Make any other repairs or adjustments, as needed, to ensure the rock berm is functioning properly

Inlet Protections shall be maintained and repaired as follows:

- Repair any damaged fabric, or patch with a two (2) foot minimum overlap
- Replace any damaged sandbags
- Removed accumulated sediment once build up reaches 3 inches
- Check placement of device to prevent gaps between device and curb

The stabilized construction entrance will also be inspected following precipitation events and stone will be replaced if silt accumulation is found to hinder the role of this BMP to minimize the off-site tracking of sediment.

Concrete washout areas shall be inspected daily and after every significant rainfall event (of at least 0.1 inch or greater) to check for leaks, identify any plastic linings and sidewalls have been damaged by construction activities or if they are over 75% capacity. When the washout area is over 75% capacity the wash water shall be removed or allowed to evaporate to avoid overflows. The hardened cement solids shall be removed and recycled.

Note that the inspections of the temporary BMPs will be documents in an inspection report. The inspect reports will document maintenance activities, sediment removal, and modifications to the sediment and erosion controls as necessary.

City of Georgetown

Southside Water Treatment Plant

Aboveground Storage Tank Facility Plan

Temporary soil stabilization practices will include minimizing soil disturbance during construction and hydroseeding of temporary vegetation in disturbed areas. These temporary soil stabilization practices will be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. These interim measures will be inspected, maintained, and will remain in place for the duration of the construction phase of the project. These control measures will be planned and implemented in accordance with the Edwards Aquifer Technical Guidance Manual.

Permanent soil stabilization and site restoration will occur prior to project completion. Permanent soil stabilization measures will include the loaming, hydroseeding, and re-vegetation of the disturbed areas using a native grass mix that is properly monitored and managed until long-term vegetation stabilization has occurred.

Recharge and Transition Zone Exception Request Form

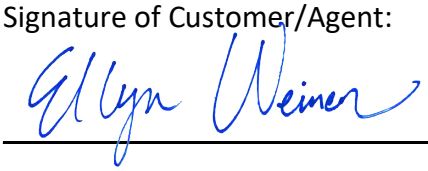
Texas Commission on Environmental Quality
30 TAC §213.9 Effective June 1, 1999

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 **Recharge and Transition Zone Exception Request Form** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Ellyn Weimer, PE
Date: 10-08-2024
Signature of Customer/Agent:



Regulated Entity Name: Southside Water Treatment Plant

Exception Request

1. ☒ **Attachment A - Nature of Exception**. A narrative description of the nature of each exception requested is attached. All provisions of 30 TAC §213 Subchapter A for which an exception is being requested have been identified in the description.
2. ☒ **Attachment B - Documentation of Equivalent Water Quality Protection**. Documentation demonstrating equivalent water quality protection for the Edwards Aquifer is attached.

Administrative Information

3. ☒ 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.
4. ☒ The applicant understands that no exception will be granted for a prohibited activity in Chapter 213.
5. ☒ The applicant understands that prior approval under this section must be obtained from the executive director for the exception to be authorized.

City of Georgetown

Southside Water Treatment Plant

WPAP Exception

The City of Georgetown is requesting an exception to the WPAP for the Southside Water Treatment Plant Improvements. The proposed improvements include construction of a new emergency response generator and associated structural pad. The project will also include the construction of all related electrical work, duct banks, cabling, wiring, and utility relocations, which are considered exempt from a WPAP according to TAC 213.

The reason for the WPAP exception request is due to the site's overall impervious cover increasing by a negligible amount of 1.6% or about 1,012 square feet due to the improvements. Currently, the site's overall impervious cover, is 42.1% (0.53 acres), and the site's overall impervious cover after the proposed improvements have been constructed is 43.7% (0.55 acres). The impervious cover increase is only due to the proposed pad for the generator, all other improvements will be buried. Since the impervious cover is increasing by a negligible amount, post-construction stormwater controls will include hydroseeding and re-vegetation of disturbed areas using a native grass mix that will act as linear vegetation strips in the long run to protect surface water quality.

City of Georgetown

Southside Water Treatment Plant

Exception Request

Water quality protection will be ensured on the Southside Water Treatment Plant site. The project site is on relatively flat land. The site's topography minimizes the potential for off-site runoff to flow onto and across the project site.

The sites overall impervious cover will be increasing by a negligible 1.5% due to the improvements. Currently, the site's overall impervious cover is 42.1% (0.53 acres), and the site's overall impervious cover after the proposed improvements have been constructed is 43.6% (0.55 acres). The impervious cover increase is only due to the pad for the generator, all other improvements will be buried.

Water Quality Impacts (Post Development)

The volume of on-site generated stormwater runoff is determined from the size of the drainage area, average annual rainfall, and percent impervious cover.

Pv = DA x Pd x Rv

Where: Pv = annual runoff volume (cubic feet)
DA = drainage area (sq ft)
Pd = average annual precipitation depth (in)
Rv = runoff coefficient = $0.546(IC)^2 + 0.328\ (IC) + 0.030$

Runoff Coefficients (Rv):

Rv = $0.546\ (0.53)^2 + 0.328\ (0.53) + 0.030 = \underline{0.36}$ (pre-development)

Rv = $0.546\ (0.55)^2 + 0.328\ (0.55) + 0.030 = \underline{0.38}$ (post-development)

Existing Annual Runoff Volume (PreV)

Pv = 6.30*(43,560) x 32/12 x 0.36 = 263,450 cf/yr

Proposed Annual Runoff Volume (PostV)

Pv = 6.30*(43,560) x 32/12 x 0.38 = 278,078 cf/yr (a 14,637 cf/yr increase)

Water Quality Impacts

Required Load Reduction

L=27.2(An*P)*
P=precipitation (inches)
An= net increase in Impervious Area (acres)

Total Load Reduction

L = 27.2(0.02*32) = 17.4 lbs/year TSS*

The project's design calculations estimate the water quantity and water quality impacts that will be caused by the proposed project's construction. The pad will add negligible increase in loading from the site that will be handled by hydroseeding and reloaming the site using a native grass mix that will act as a linear vegetation strip in the long run to protect surface water quality.

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

I Chris Pousson,
Print Name

CIP Manager,
Title - Owner/President/Other

of Georgetown,
Corporation/Partnership/Entity Name

have authorized Ellyn Weimer
Print Name of Agent/Engineer

of CDM Smith, Inc
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

10-25-21
Date

THE STATE OF Texas §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Chris Pousson 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 25 day of October, 2021.

Cindy Gilbert
NOTARY PUBLIC

CINDY GILBERT
Notary ID #2953478
My Commission Expires
January 21, 2023

Cindy Gilbert
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 1/21/2023

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Southside Water Treatment Plant
Regulated Entity Location: 2706 S Austin Avenue, Georgetown, TX 78626
Name of Customer: City of Georgetown
Contact Person: Chris Pousson Phone: (512) 930-8162
Customer Reference Number (if issued):CN 600412043
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☒ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	$
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	1 Tanks	$ 650
Piping System(s)(only)	Each	$
Exception	1 Each	$ 500
Extension of Time	Each	$

Signature: Glynn Weiner 10-08-2024

TCEQ-0574 (Rev. 02-24-15)

Date: _____

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

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 600412043		**RN**

SECTION II: Customer Information

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

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

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

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

City of Georgetown

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
		74-6000974	89592372

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☒ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☐ 21-100 ☒ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☒ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	300-1 Industrial Ave						
	City	Georgetown	**State**	TX	**ZIP**	78626	**ZIP + 4**	8445

16. Country Mailing Information *(if outside USA)* | **17. E-Mail Address** *(if applicable)*

18. Telephone Number | **19. Extension or Code** | **20. Fax Number** *(if applicable)*

(512) 930-3555		(512) 930-3559

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Southside Water Treatment Plant

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	2706 S Austin Ave							
	City	Georgetown	**State**	TX	**ZIP**	78626	**ZIP + 4**	
24. County	Williamson							

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

25. Description to Physical Location:					
26. Nearest City			**State**	**Nearest ZIP Code**	
Georgetown			TX	78628	

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.6897		**28. Longitude (W) In Decimal:**	-97.6398	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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)
4941		211310	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Water Treatment Plant

34. Mailing Address:								
	City		**State**		**ZIP**		**ZIP + 4**	
35. E-Mail Address:								

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
( ) -		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

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

SECTION IV: Preparer Information

40. Name:	James Gallagher	**41. Title:**	Civil Engineer

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(312 **)** 780-7807		**( ) -**	gallagherjp@cdmsmith.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:	CDM Smith Inc	**Job Title:**	Water Resources Engineer
Name *(In Print):*	Ellyn Weimer	**Phone:**	**(** 512 **)** 652- **5329**
Signature:	Ellyn Weimer	**Date:**	10-08-2024