

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: South Lake Raw Water Facilities and Intake					2. Regulated Entity No.:				
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):		3.594	
9. Application Fee:	\$4,000		10. Permanent BMP(s):						
11. SCS (Linear Ft.):			12. AST/UST (No. Tanks):						
13. County:	Williamson		14. Watershed:			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_
County(ies)	—	—	_1_
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input type="checkbox"/> _1_ Georgetown <input type="checkbox"/> Jerrell <input type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)	—	—	—	—	—
Region (1 req.)	—	—	—	—	—
County(ies)	—	—	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Trinity-Glen Rose	<input type="checkbox"/> Edwards Aquifer Authority	<input type="checkbox"/> Kinney	<input type="checkbox"/> EAA <input type="checkbox"/> Medina	<input type="checkbox"/> EAA <input type="checkbox"/> Uvalde
City(ies) Jurisdiction	<input type="checkbox"/> Castle Hills <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Helotes <input type="checkbox"/> Hill Country Village <input type="checkbox"/> Hollywood Park <input type="checkbox"/> San Antonio (SAWS) <input type="checkbox"/> Shavano Park	<input type="checkbox"/> Bulverde <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Garden Ridge <input type="checkbox"/> New Braunfels <input type="checkbox"/> Schertz	NA	<input type="checkbox"/> 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

Ellyn Weimer

10-30-2023

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: 10-30-2023

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: South Lake Raw Water Facilities and Intake

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 _____.

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.

The South Lake Raw Water Electrical and Chemical Facilities is located at 2044 Cedar Breaks Road, Georgetown, Texas, 78628.

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: April 9, 2018 (Please contact City of Georgetown for access to site before inspection)

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: Raw Water Electrical and Chemical Facilities

Prohibited Activities

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

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
- (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
- (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
- (4) The use of sewage holding tanks as parts of organized collection systems; and
- (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
- (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

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

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

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

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

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

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

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

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



**Attachment A: Road Map
South Lake Raw Water Facilities and Intake
Williamson County, Texas**



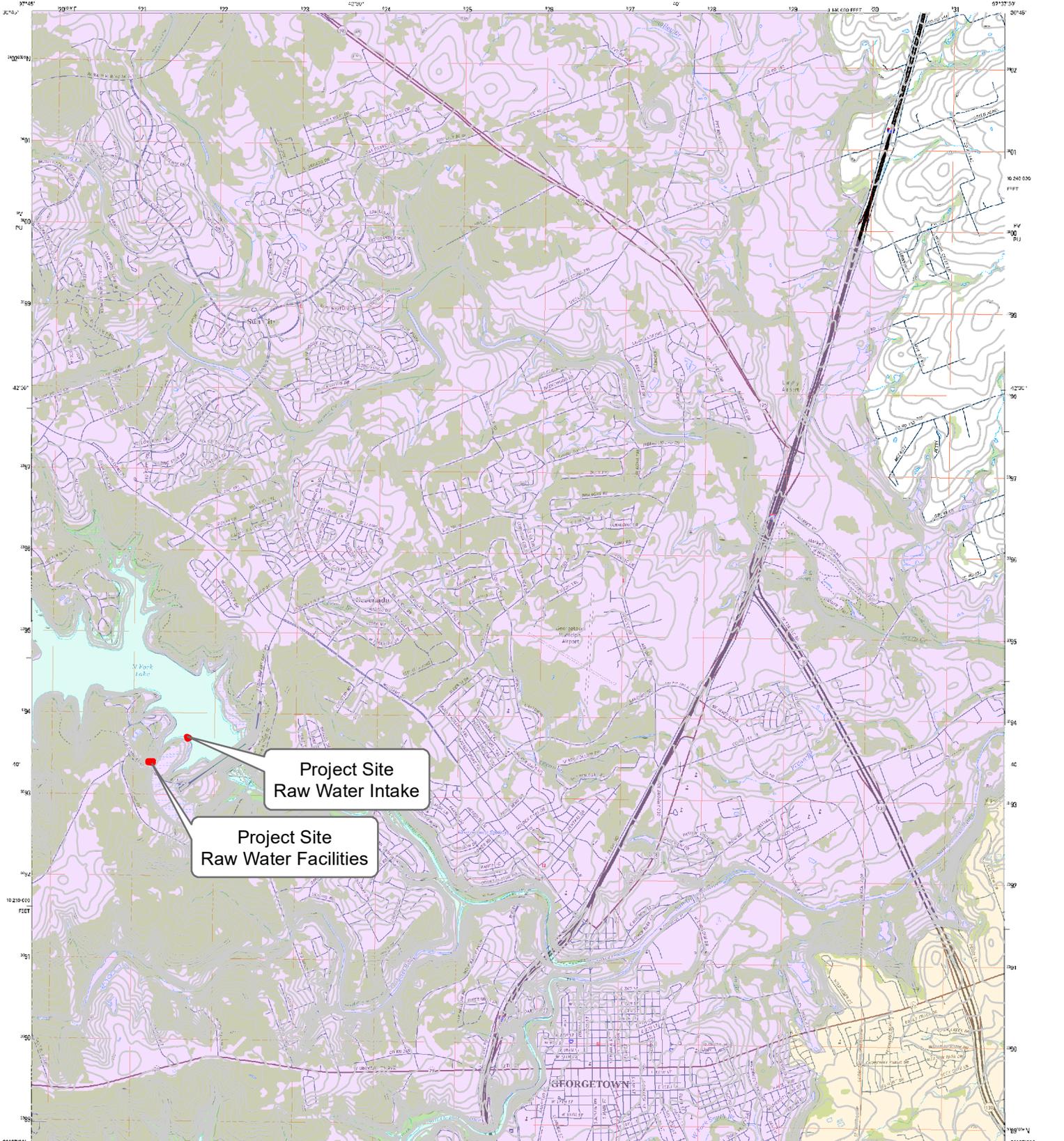
Attachment B: Edwards Aquifer Recharge Zone Map South Lake Raw Water Facilities and Intake Williamson County, Texas



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



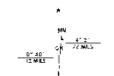
GEORGETOWN QUADRANGLE
TEXAS-WILLIAMSON CO.
7.5-MINUTE SERIES



**Project Site
Raw Water Intake**

**Project Site
Raw Water Facilities**

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
North American Datum of 1983 (NAD83). Elevation and
contour data were derived from a vertical datum of 1983
mean sea level. Texas Coordinate System of 1983 (Central
Zone)



ROADS		RAILROADS	
Expressway	Local Collector	Interstate	Other
Secondary / Hwy	Local Road	US Route	State Route
Front	4WD		
Blue State Route			



City of Georgetown

South Lake Raw Water Facilities and Intake

Water Pollution Abatement Plan

The South Lake Raw Water Facilities and Intake project will provide chemical and electrical buildings and associated tanks that will aid the raw water intake and piping that runs from Lake Georgetown to the South Lake Water Treatment Plant. The Intake is located solely on the contributing zone and is less than 5 acres of soil disturbance and is exempt from permitting. The associated 42-inch raw water line and electrical conduit is also exempt over the recharge zone as it is not deemed a regulated activity. The South Lake Water Treatment Plant is already permitted and under construction (EAPP ID 11002763). The electrical and chemical facility is located at 2044 Cedar Breaks Road, adjacent to the existing Round Rock Lake Georgetown Pump Station. The site is 3.594 acres. The impervious cover of the proposed site is 0.23 acres (6%). Permanent best management practices (BMPs) for the site include revegetating and hydroseeding disturbed areas that will act as linear vegetation filter strips in the long term.

**GEOLOGIC ASSESSMENT
FOR THE APPROXIMATELY 0.09-ACRE
SOUTH LAKE RAW WATER FACILITIES AND INTAKE**

Williamson County, Texas

September 2023

Submitted to:

CDM Smith, Inc.
9430 Research Blvd., Suite 1-200
Austin, Texas 78759

Prepared by:

aci Group, LLC
1001 Mopac Circle
Austin, Texas 78746
TBPG Firm License No. 50260

aci project #: 05-20-006

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

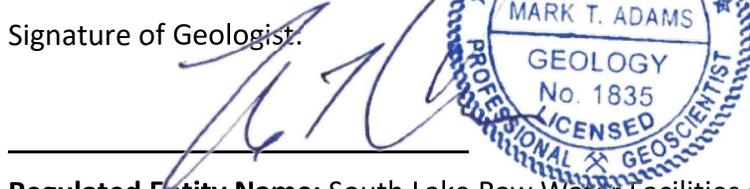
Telephone: (512) 347-9000

Date: 9/19/2023

Fax: (512) 306-0974

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

Signature of Geologist:



Regulated Entity Name: South Lake Raw Water Facilities and Intake

Project Information

1. Date(s) Geologic Assessment was performed: 08/10/2021

2. Type of Project:

WPAP

AST

SCS

UST

3. Location of Project:

Recharge Zone

Transition Zone

Contributing Zone within the Transition Zone

4. **Attachment A - Geologic Assessment Table.** Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.
5. Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Eckrant-Rock outcrop association, 8 to 30 percent slopes (ErG)	D	0-1.6
Eckrant-Rock outcrop association, 1 to 10 percent slopes (ErE)	D	6.66

Soil Name	Group*	Thickness(feet)

* 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" = 500'
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.

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September 2023

Geologic Assessment for the South Lake Raw Water Facilities and Intake 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 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 South Lake Raw Water Facilities and Intake project consists of the Raw Water Intake Pump Station (IPS) and Electrical and Chemical Substation (ECS). These buildings are located east of Cedar Breaks Road, along the proposed Raw Water Alignment, in the City of Georgetown Full Purpose jurisdiction, in Williamson County, Texas (**Attachment A, Figure 1**). Pedestrian investigations of the 0.06-acre ECS and 0.03-acre IPS areas were performed on August 10, 2021, by Marcos Cardenas, Sarah King, Andrew Marlow, and Erin Mathison, under the supervision of Mark Adams, P.G. with **aci 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 0.09 acres in total. The proposed site use is for the development of the South Lake Raw Water project. 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 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 (2023), two soil units occur within the project alignment (**Attachment A, Figure 2**):

- ErG—Eckrant-Rock outcrop association, 8 to 30 percent slopes
The Eckrant component makes up 65 percent of the map unit. Slopes are 8 to 30 percent. This component is on ridges on dissected plateaus. The parent material consists of residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 4 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 or ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 6 percent. This soil does not meet hydric criteria. Hydric Soil Group: D

Rock outcrop (27%), Brackett (4%), Kerrville (2%), Krum (1%), and Tarpley (1%) make up the remaining 35% of the soil map unit.

- ErE—Eckrant-Rock outcrop association, 1 to 10 percent slopes
The Eckrant component makes up 58 percent of the map unit. Slopes are 1 to 10 percent. This component is found on ridges of dissected plateaus. The parent material consists of residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 4 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 or ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 6 percent. This soil does not meet hydric criteria. Hydrologic Soil Group: D.

Rock outcrop (16%), Tarpley (11%), Real (6%), Brackett (5%), and Pratley (4%) components make up the remaining 42% of the map unit.

Geologic Stratigraphy

According to the *Geologic Map of the Georgetown Quadrangle, Texas*, one geologic unit, Edwards Limestone (Ked) occurs within the project alignment (**Attachment A, Figure 3**). A description of the Edwards Limestone (Ked) unit by Collins (1997) is as follows:

- Edwards Limestone (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 collapsed breccias, and cavern systems. Accounts for most of the Edwards aquifer strata. Thickness is between 100ft to 300ft; thins northward.”

Site-Specific Stratigraphic Column

Formation	Members	Thickness (Collins, 1997)
Edwards Limestone	Edwards Limestone	Approximately 80-130 feet (mapped from contours)

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 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 geology on the site and surrounding tracts up to the border of Lake Georgetown is all Edwards Limestone (Ked), however the Comanche Peak (Kc) is present along the border of Lake Georgetown, suggesting the site is within the lower section of the Edwards Limestone (Collins 1997).

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 (**Attachment A, Figure 3**). 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 1941, 1953, 1962, 1974, 1981, 1988, 1995, 2004, 2010, 2016, and 2020. The general area appeared to be undeveloped or used for agricultural purposes since before the first aerial image dated 1941 (**Attachment C**). Minor changes in vegetation occur on and surrounding the site between the 1941 and 1962 aerial images. In the 1962 aerial, an easement of some sort appears to the north of the site. Lake Georgetown and Cedar Breaks Park first appears to the north and east of the site in the 1981 aerial. Minor changes to the existing structures, roads, and Cedar Breaks Park are visible between the 1981 and 2020 aerials, including changes in the water level of Lake Georgetown.

5.0 SUMMARY OF FINDINGS

This report documents the findings of a geologic assessment conducted by **aci consulting** personnel on August 10, 2021. A total of two features were identified within the limits of the project. Both features identified are manmade features in bedrock. Comprehensive descriptions for each feature can be found in **Attachment B**. The manmade features in bedrock are associated with infrastructure for the existing water utilities and have been designated as sensitive to call the attention of the project engineers.

6.0 REFERENCES

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

(SCS) Soil Conservation Survey. 1983. Soil Survey of Williamson County, Texas. United States Department of Agriculture. Texas Agriculture Experiment Station.

(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.

(TWDB) Texas Water Development Board. 2023. Water Data Interactive Groundwater Data Viewer. Accessed on September 18, 2023. Available at:
<http://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer>

(USDA NRCS) U.S. Department of Agriculture Natural Resources Conservation Service. 2023. WebSoilSurvey.com. Soil Survey Area: Williamson County, Texas. Date accessed: September 18, 2023.

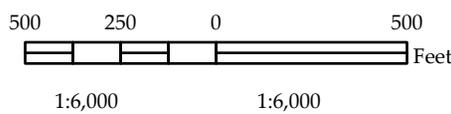
ATTACHMENT A

Site Maps

P:\Project Folders\05-20-006 South Lake Georgetown Water Project\GIS\maps\Task 4 - CA and Kost Survey\Raw Waterline Buildings - CA\Figure 1.mxd



This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.



-  RW Electrical and Chemical Plant
-  RW Intake and Pump Station



South Lake Raw Water Facilities and Intake
Figure 1: Site Location Map

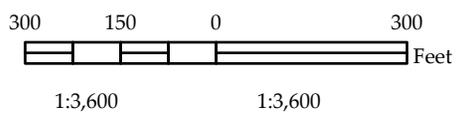
P:\Project Folders\05-20-006 South Lake Georgeham Water Project\GIS\maps\Task 4 - CA and Kost Survey\Raw Waterline\Raw Waterline Buildings - CA\Figure 2.aprx

Soils

- ErE - Eckrant-Rock outcrop association, 1 to 10 percent slopes
- ErG - Eckrant-Rock outcrop association, 8 to 30 percent slopes
- W - Water



This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.



-  RW Electrical and Chemical Plant
-  RW Intake and Pump Station



South Lake Raw Water Facilities and Intake
Figure 1: Site Location Map

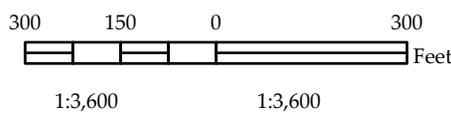
P:\Project Folders\05-20-006 South Lake Georgetown Water Project\GIS\maps\Task 4 - CA and Kost Survey\Raw Waterline Buildings - CA\Figure 3.aprx

Geologic Units

-  Ked - Edwards Limestone
-  Wa - Water



This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.



-  RW Electrical and Chemical Plant
-  RW Intake and Pump Station

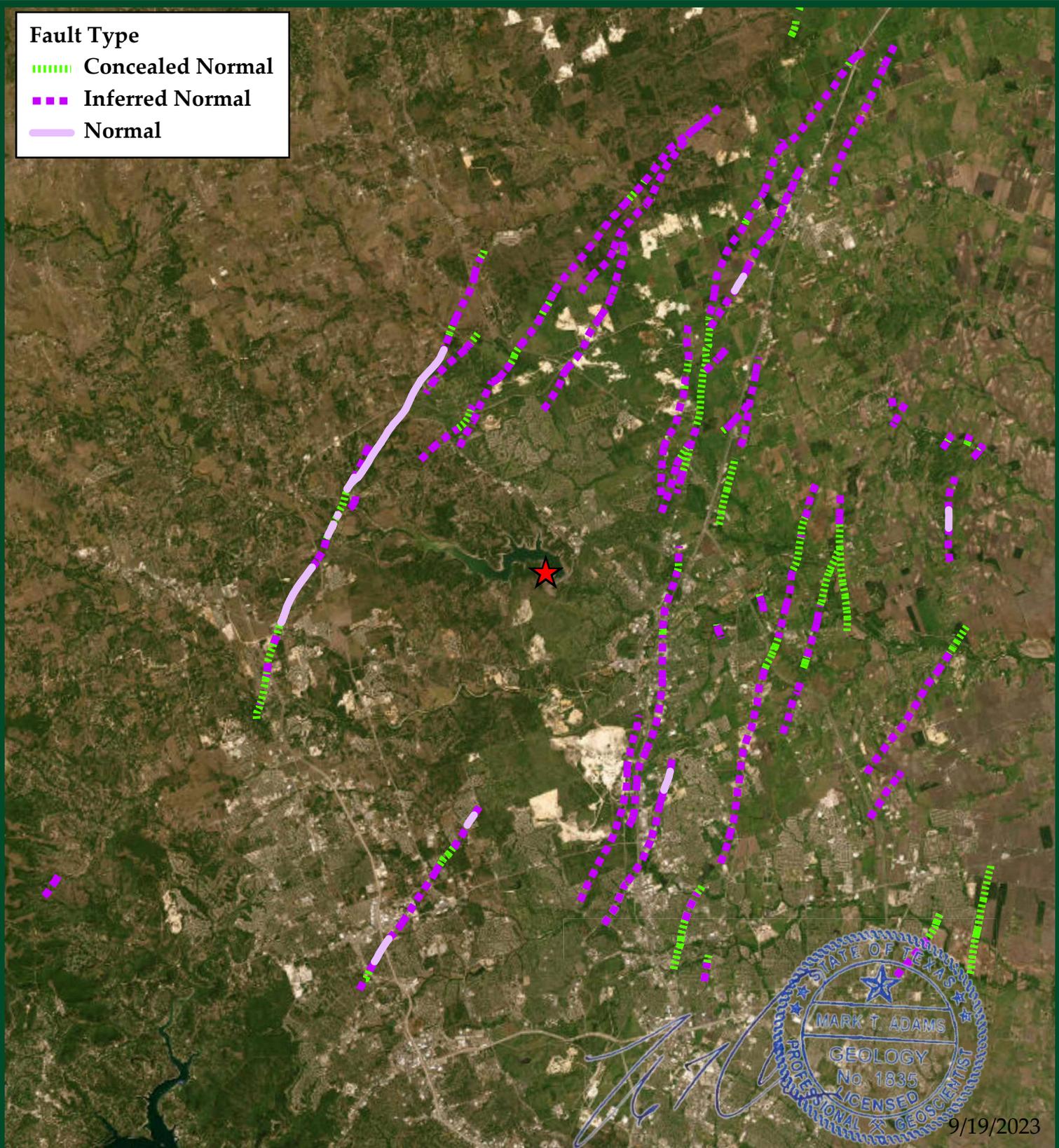


South Lake Raw Water Facilities and Intake
Figure 3: Site Geology Map

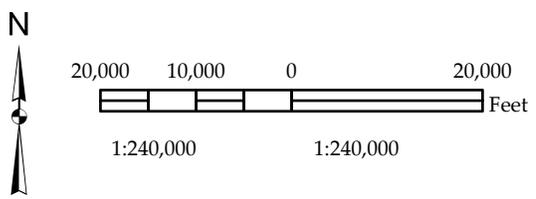
P:\Project Folders\05-20-006 South Lake Raw Water\Map Project\figs\maps\Task 4 - CA and Karst Survey\Raw Waterline Buildings - GA\Figure 4.aprx

Fault Type

-  Concealed Normal
-  Inferred Normal
-  Normal



9/19/2023



 **South Lake Raw Water Facilities & Intake**
Regional Trend ~15°



ATTACHMENT B

Geologic Table Geologic and Manmade Feature Maps (Figures 5.1 & 5.2) Feature Descriptions and Recommendations



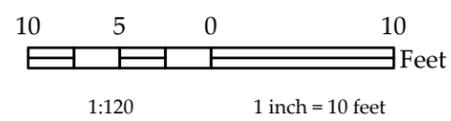
Ked - Edwards Limestone
 Edwards Aquifer Recharge Zone

RWL-08 RWL-07

The entire subject area is within the FEMA Flood Hazard Zone A.
 There are no mapped flowlines (NHD), waterbodies (NHD), or wetlands (NWI) within the subject area.

This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.

Williamson County TX, Maxar, Microsoft



RW Electrical and Chemical Plant
 Man-made Feature In Bedrock



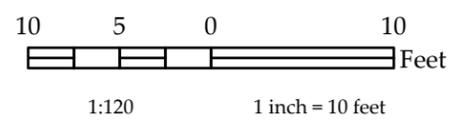
P:\Project Folders\05-20-006 South Lake Georgetown Water Project\gis\maps\Task 4 - CA and Karst Survey\Raw Waterline Buildings - CA Figure 5.2.aprx



- NHD Waterbodies
- Ked - Edwards Limestone
- Wa - Water
- Edwards Aquifer Contributing Zone

The entire subject area is within the FEMA Flood Hazard Zone A.
 There are no mapped flowlines (NHD) or wetlands (NWI) within the subject area.

This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.



RW Intake and Pump Station

No geologic or manmade features were encountered.

[Handwritten Signature]



South Lake Raw Water Facilities and Intake
 Figure 5.2 Geologic and Manmade Feature Map

9/19/2023

aci Project No.: 05-20-006
 September 2023

RWL-07

GPS: 30.666931, -97.734528

This feature is a manmade feature in bedrock, a raw water pipeline within the proposed ECS boundary. A manhole and metal water valve cover were located within an approximately 8 ft diameter concrete pad. A water line tie in is located directly adjacent to the concrete structure. The feature is within the floodplain (FEMA Flood Hazard Zone A) in the Edwards Limestone Formation. The infill material beneath the feature was not determined during the inspection. The depth of the manhole and pipeline was not determined during inspection; however, this feature has been designated as sensitive in order to call the attention of the project engineers.

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



View of RWL 07.

RWL-08

GPS: 30.666931, -97.734589

This feature is a manmade feature in bedrock, a pad mounted automatic gate motor and associated underground electrical wires within the proposed ECS boundary. This motor is located above a 2 ft by 2 ft concrete pad with underground electrical utilities adjacent to the pad. The feature is within the floodplain (FEMA Flood Hazard Zone A) in the Edwards Limestone Formation. The infill material beneath the feature was not determined during the inspection. The depth of the concrete pad or the electric utilities was not determined during the inspection; however, this feature has been designated as sensitive in order to call the attention of the project engineers.

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



View of RWL-08.

ATTACHMENT C

Historic Aerial Photographs

Prepared for:

ACI CONSULTING
1001 Mopac Circle
Austin, TX 78746

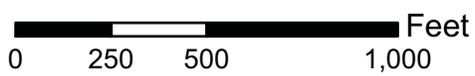


Historical
Aerial
Photographs

South Lake Georgetown
Water Project
TX
Williamson County
PO #: 05-20-006
ES-139049
Wednesday, March 9, 2022



Date: 2020
Source: USDA





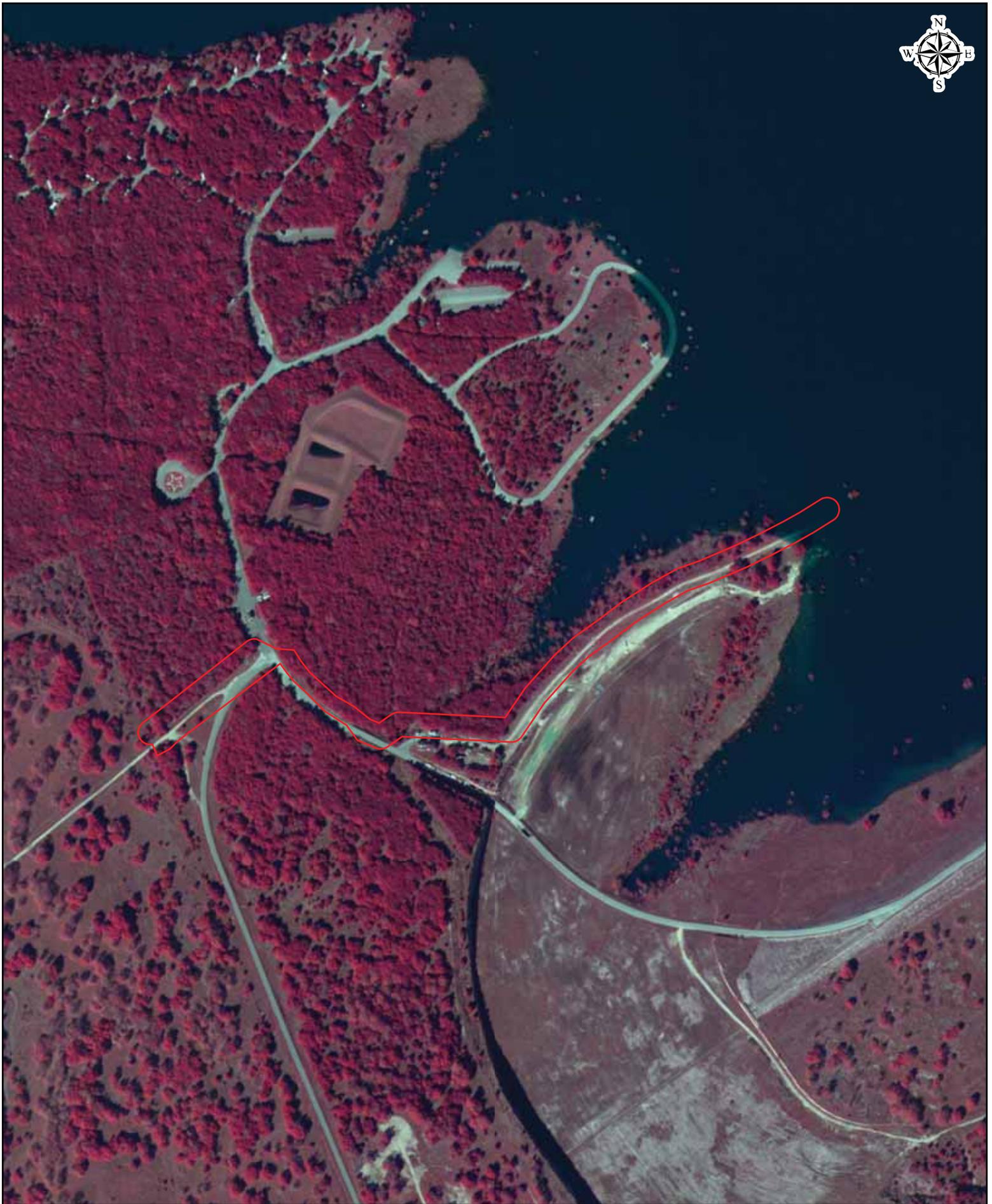
Date: 2016
Source: USDA



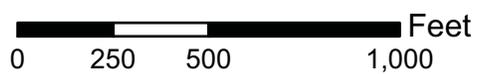


Date: 2010
Source: USDA





Date: 2004
Source: USDA





Date: 1995
Source: USGS





Date: 1981
Source: USGS

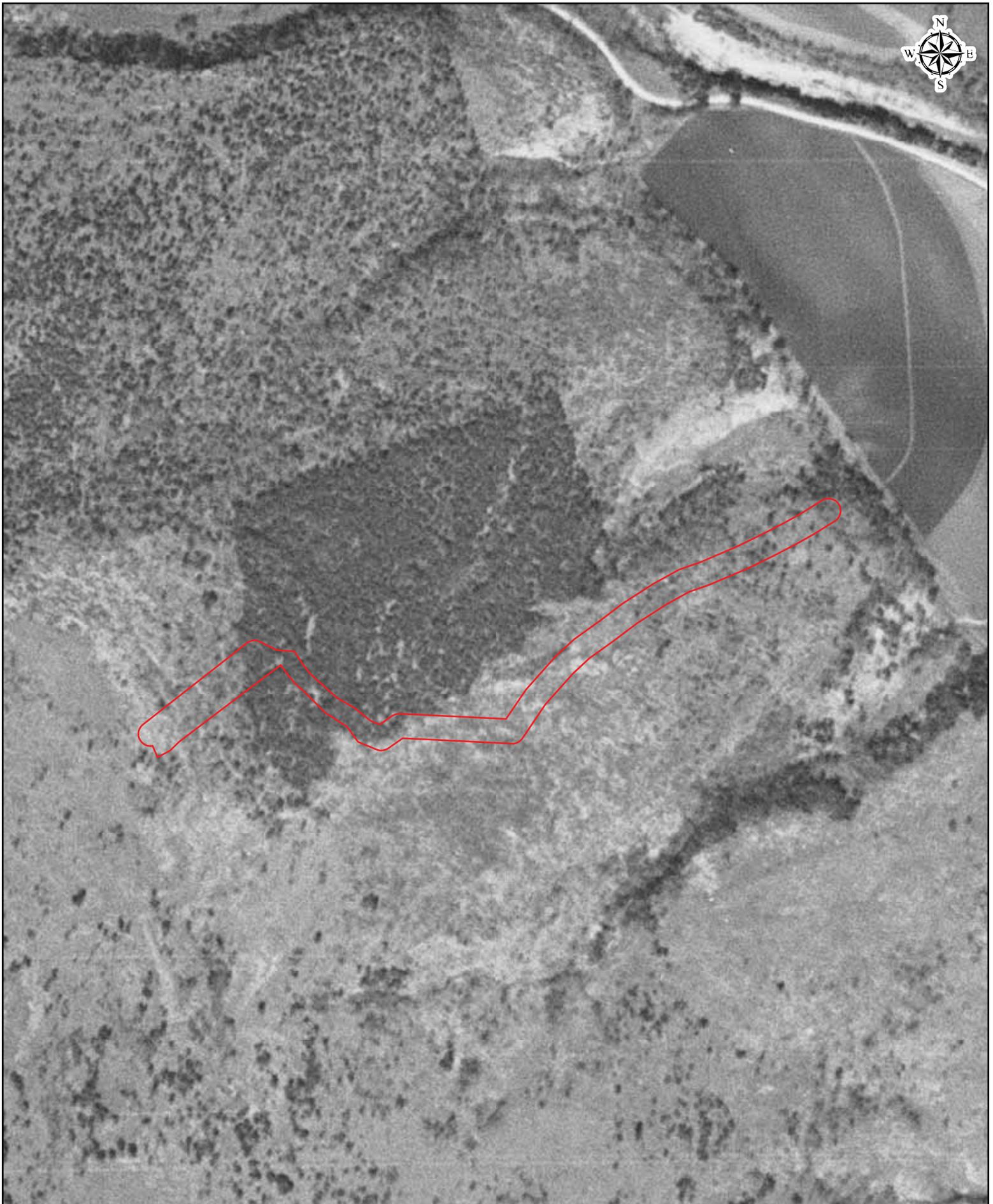
0 250 500 1,000 Feet





Date: 1962
Source: USGS





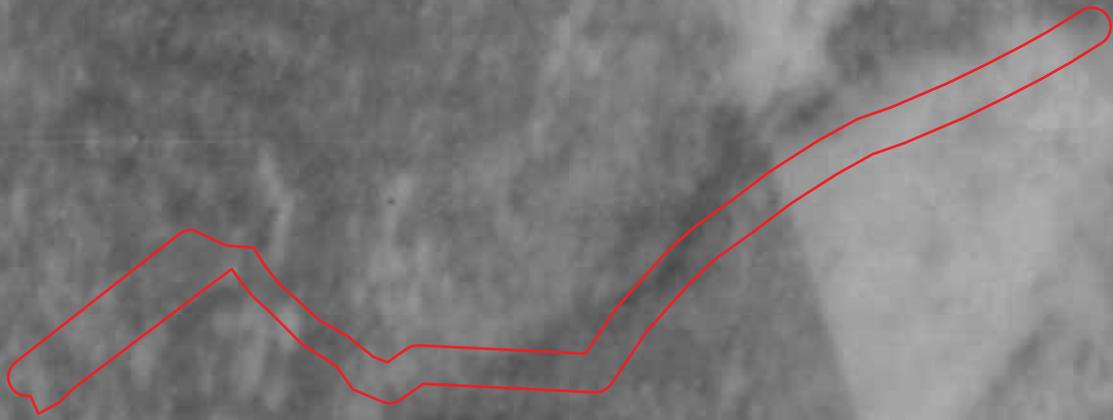
Date: 1953
Source: AMS





CXB -

8-7



Date: 1941
Source: ASCS



HISTORICAL AERIAL PHOTOGRAPHS	
ES- 139049	March 9, 2022



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

HISTORICAL AERIAL PHOTOGRAPHS	
ES- 139049	March 9, 2022



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Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Ellyn Weimer, PE

Date: 10-30-2023

Signature of Customer/Agent:



Regulated Entity Name: South Lake Raw Water Facilities and Intake

Regulated Entity Information

1. The type of project is:

- Residential: Number of Lots: _____
- Residential: Number of Living Unit Equivalents: _____
- Commercial
- Industrial
- Other: Raw Water Electrical and Chemical Facilities

2. Total site acreage (size of property): 3.594

3. Estimated projected population: NA

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

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	5,403	÷ 43,560 =	0.124
Parking		÷ 43,560 =	
Other paved surfaces	4,606	÷ 43,560 =	0.106
Total Impervious Cover	10,009	÷ 43,560 =	0.23

Total Impervious Cover 0.23 ÷ Total Acreage 3.594 X 100 = 6% Impervious Cover

5. **Attachment A - Factors Affecting Surface Water Quality.** A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.
6. Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

For Road Projects Only

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

7. Type of project:

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

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

- Concrete
- Asphaltic concrete pavement
- Other: _____

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

Width of R.O.W.: _____ feet.

L x W = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.

10. Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

L x W = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.

Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____ % impervious cover.

11. A rest stop will be included in this project.
- A rest stop will not be included in this project.

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

_____ % Domestic	_____ Gallons/day
_____ % Industrial	_____ Gallons/day
_____ % Commingled	_____ Gallons/day
TOTAL gallons/day <u>NA</u>	

15. Wastewater will be disposed of by:

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

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

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

Sewage Collection System (Sewer Lines):

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

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

The SCS was previously submitted on _____.

The SCS was submitted with this application.

The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

The sewage collection system will convey the wastewater to the _____ (name) Treatment Plant. The treatment facility is:

Existing.

Proposed.

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = 10'.

18. 100-year floodplain boundaries:

Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM 48491C0290E Effective 9/26/2008

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

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

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

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

The wells are not in use and have been properly abandoned.

The wells are not in use and will be properly abandoned.

The wells are in use and comply with 16 TAC §76.

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

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

All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.

No sensitive geologic or manmade features were identified in the Geologic Assessment.

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

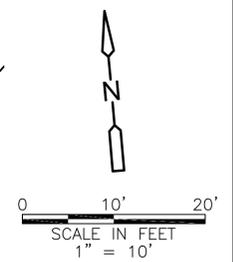
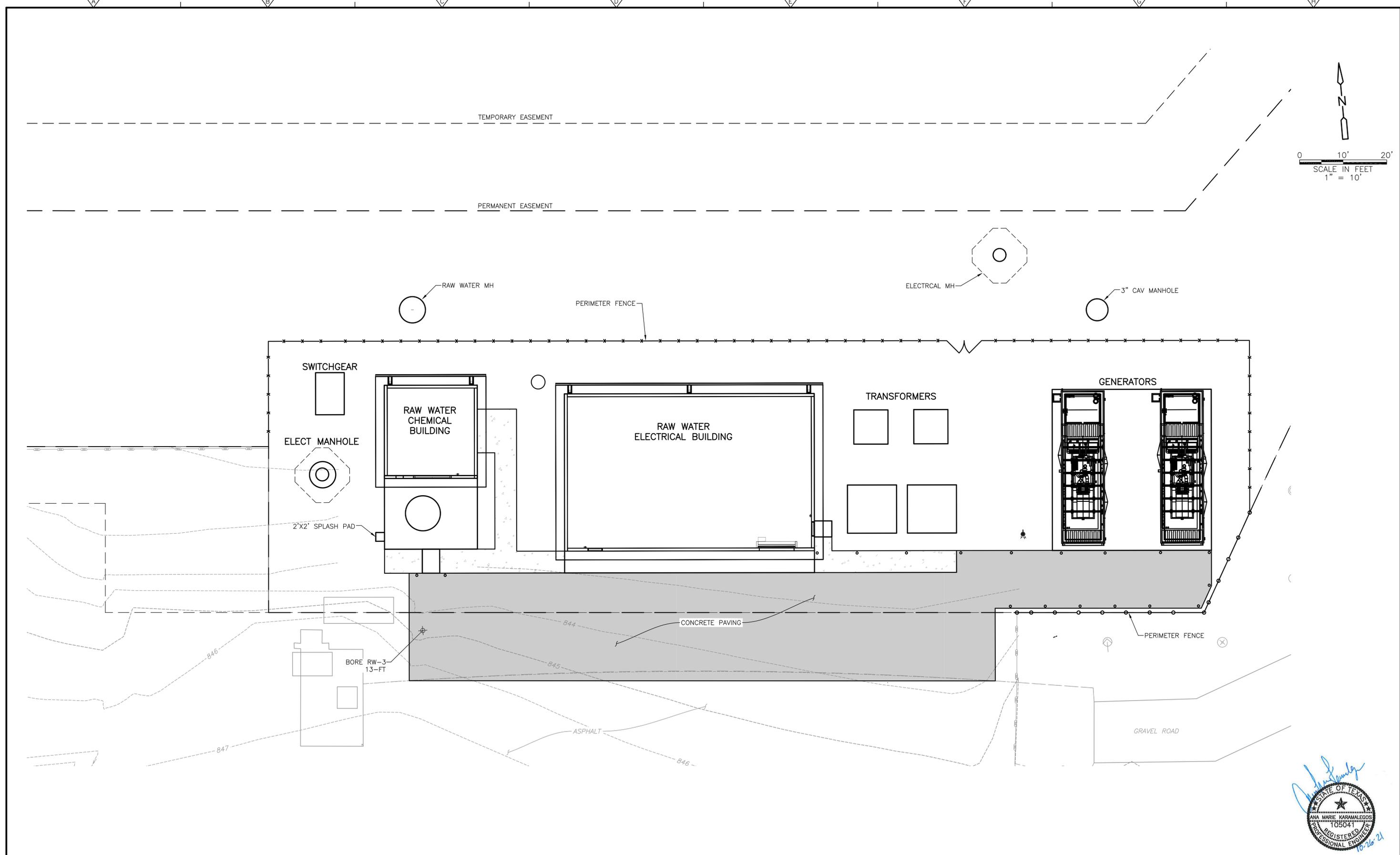
- 22. The drainage patterns and approximate slopes anticipated after major grading activities.
- 23. Areas of soil disturbance and areas which will not be disturbed.
- 24. Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 25. Locations where soil stabilization practices are expected to occur.
- 26. Surface waters (including wetlands).
 - N/A
- 27. Locations where stormwater discharges to surface water or sensitive features are to occur.
 - There will be no discharges to surface water or sensitive features.
- 28. Legal boundaries of the site are shown.

Administrative Information

- 29. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
- 30. Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

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 ana.karamalegos.dwg To PDF.plt

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	RSM	AMK	CONFORMED DRAWING

DESIGNED BY: A. KARAMALEGOS
 DRAWN BY: D. SANDEFUR
 SHEET CHK'D BY: A. HINDS
 CROSS CHK'D BY: A. WOEKLE
 APPROVED BY: A. KARAMALEGOS
 DATE: OCTOBER 2021

CDM Smith
 9430 RESEARCH BLVD., SUITE 1-200
 AUSTIN, TX 78759
 TEL: (512) 346-1100
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

RAW WATER ELECTRICAL
 AND CHEMICAL BUILDINGS
 PROPOSED SITE PLAN

PROJECT NO. 2048-248929
 FILE NAME:
 SHEET NO.
 C-12



City of Georgetown
South Lake Raw Water Facilities and Intake
Water Pollution Abatement Plan

The construction activities associated with the South Lake Raw Water Facilities and Intake project have the potential to create additional total suspended solids (TSS) loadings during the construction. This potential increase in loading will be mitigated with the use of silt fencing and rock berms that will be placed downgradient of the active construction areas and placement of a stabilized construction entrance (SCE) at the entrance of the construction area. Silt fencing will also be placed around storm drain inlets when installed. These measures will help minimize TSS impacts during storm events.

The Electrical and Chemical Facilities site's overall impervious cover will be 0.23 acres (6%) due to the construction of electrical and chemical facilities. **Table 1** below shows a breakdown of the impervious cover calculations. Currently, there is no impervious cover on the site due to it being undeveloped land. Post-construction stormwater controls will include loaming, hydroseeding, and re-vegetation that acts as a vegetated filter strip in the long term. The total removal of TSS due to the impervious cover is 85% and these measures will protect surface water quality before discharging offsite to Lake Georgetown and the San Gabriel Watershed. See Attachment B – Volume and Character of Stormwater for TSS loading calculations.

Table 1. Impervious Cover Summary – Raw Water Electrical and Chemical Facilities

	Area (sq. ft.)	Area (acres)
Total Site:	156,554	3.594
Pavement	4,028	0.092
Chemical Facility	1,037	0.024
Electrical Building	2,647	0.061
Generators	1,345	0.031
Transformers	374	0.009
Gravel Sidewalk	578	0.013
Total IC:	10,009	0.230

City of Georgetown
South Lake Raw Water Facilities and Intake
Water Pollution Abatement Plan

The South Lake Raw Water Facilities and Intake site is currently undeveloped land. The project site is on relatively flat land and high elevation ground. The site's topography and site boundaries minimize the potential for off-site runoff to flow onto and across the project site.

The project construction will add 0.23 acres (6%) impervious cover to the site. This increase will be due to the construction of the chemical and electrical building and pavement associated with the project.

Site-generated runoff that discharges from the site will generally flow in a northeast direction through a vegetated area acting as vegetated filter strips thence offsite to dense vegetation and thence to Lake Georgetown.

Impervious Cover Impact

The South Lake Raw Water Facilities and Intake site is 3.594 acres. The proposed project will add 0.23 acres of impervious cover to the site.

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.

$$Pv = DA \times Pd \times Rv$$

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):

$$Rv = 0.546 (0)^2 + 0.328 (0) + 0.030 = \underline{0.030} \text{ (pre-development)}$$

$$Rv = 0.546 (0.06)^2 + 0.328 (0.06) + 0.030 = \underline{0.052} \text{ (post-development)}$$

Existing Annual Runoff Volume (PreV)

$$Pv = 3.594 * (43,560) \times 32/12 \times 0.030 = 12,524 \text{ cf/yr}$$

Proposed Annual Runoff Volume (PostV)

$$Pv = 3.594 * (43,560) \times 32/12 \times 0.052 = 21,709 \text{ cf/yr}$$

Increase in annual runoff volume is:

$$(21,709 - 12,524) / 12,524 \times 100 = 73.3\% \text{ increase}$$

Water Quality Impacts

Required Load Reduction

$$L=27.2*(An*P)$$

P=Precipitation (inches)

An=Net Increase in Impervious Area (acres)

Total Required Load Reduction

$$L = 27.2*(0.23*32) = 200.2 \text{ lbs/yr TSS}$$

The project's design calculations estimate the water quantity and water quality impacts that will be caused by the proposed project's construction. These impacts will be addressed through adequate best management practices (BMPs) including revegetating and hydroseeding disturbed areas that will act as linear vegetated filter strips in the long run.

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: 10-30-2023

Signature of Customer/Agent:



Regulated Entity Name: South Lake Raw Water Facilities and Intake

Project Information

Potential Sources of Contamination

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

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

The following fuels and/or hazardous substances will be stored on the site: _____

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

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

- Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
- Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
- Fuels and hazardous substances will not be stored on the site.
- 2. **Attachment A - Spill Response Actions.** A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. **Attachment B - Potential Sources of Contamination.** A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

- 5. **Attachment C - Sequence of Major Activities.** A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.
 - For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.
 - For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
- 6. Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: stormwater will flow from the project site to Lake Georgetown thence to the San Gabriel River.

Temporary Best Management Practices (TBMPs)

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

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

- A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
 - A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
 - A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
 - A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
8. The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
- Attachment E - Request to Temporarily Seal a Feature.** A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
 - There will be no temporary sealing of naturally-occurring sensitive features on the site.
9. **Attachment F - Structural Practices.** A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.
10. **Attachment G - Drainage Area Map.** A drainage area map supporting the following requirements is attached:
- For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
 - For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
 - For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
 - There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

- There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
11. **Attachment H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
- N/A
12. **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
13. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
14. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
15. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
16. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

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

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

18. Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
19. Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
21. If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
22. Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

City of Georgetown
South Lake Raw Water Facilities and Intake
Water Pollution Abatement Plan

No hazardous substances or hydrocarbons will be stored or used in excess on the construction site. Reportable contaminant quantities will be determined and based on 30 TAC §327. 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 512-930-3600).
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.

City of Georgetown
South Lake Raw Water Facilities and Intake
Water Pollution Abatement 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
South Lake Raw Water Facilities and Intake
Water Pollution Abatement Plan

The sequence for the construction of the proposed South Lake Raw Water Facilities and Intake 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. (3.594 acres)
- Contractor constructs temporary construction access roads.
- Contractor performs excavation for buildings and concrete pads
- Contractor constructs the buildings, concrete slabs and pads.
- Contractor installs yard piping.
- Contractor installs all the process mechanical equipment, piping and electrical improvements in the buildings and structures.
- Contractor installs concrete pavement.
- Contractor completes site construction and initiates site clean-up. (3.594 acres)
- 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
South Lake Raw Water Facilities and Intake
Water Pollution Abatement Plan

Temporary erosion and sedimentation control measures will include:

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

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 runoff 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.

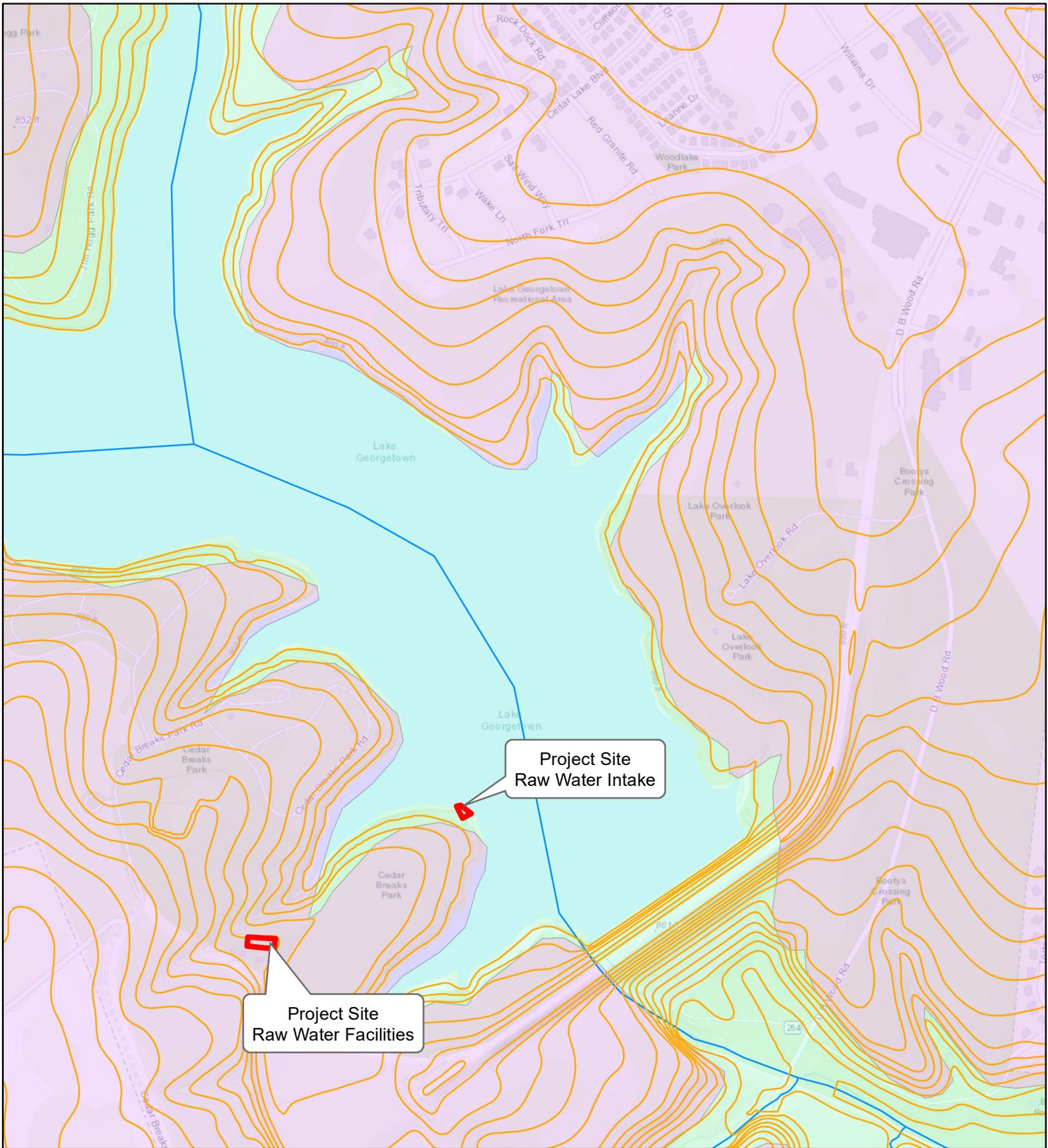
These temporary erosion and sedimentation control measures are indicated on the site drawings and will be put in place before the start of construction and shall remain in place for the duration of site construction activities.

City of Georgetown
South Lake Raw Water Facilities and Intake
Water Pollution Abatement 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:

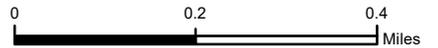
- Silt fencing;
- Rock berms;
- Concrete wash down area;
- Stabilized Construction Entrance (SCE);

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**
- Contours
 - Rivers/Streams
- Edwards Aquifer Zones**
- TYPE**
- Edwards Aquifer Contributing Zone
 - Edwards Aquifer Recharge Zone
 - Edwards Aquifer Transition Zone

Attachment G: Drainage Area Map
South Lake Raw Water Facilities and Intake
Williamson County, Texas



City of Georgetown
South Lake Raw Water Facilities and Intake
Water Pollution Abatement Plan

Silt fencing, rock berms, 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

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.

City of Georgetown
South Lake Raw Water Facilities and Intake
Water Pollution Abatement 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, eventually resembling linear vegetation filter strips in the long term.

Permanent Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Ellyn Weimer, PE

Date: 10-30-2023

Signature of Customer/Agent



Regulated Entity Name: South Lake Raw Water Facilities and Intake

Permanent Best Management Practices (BMPs)

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

- 1. Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.
 N/A
- 2. These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.
 The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

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

N/A

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

N/A

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

The site will be used for low density single-family residential development and has 20% or less impervious cover.

The site will be used for low density single-family residential development but has more than 20% impervious cover.

The site will not be used for low density single-family residential development.

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

Attachment A - 20% or Less Impervious Cover Waiver. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.

The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

The site will not be used for multi-family residential developments, schools, or small business sites.

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

- A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
 - No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
 - Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.
7. **Attachment C - BMPs for On-site Stormwater.**
- A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.
 - Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.
8. **Attachment D - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.
- N/A
9. The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.
- The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.
 - Attachment E - Request to Seal Features.** A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.
10. **Attachment F - Construction Plans.** All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:
- Design calculations (TSS removal calculations)
 - TCEQ construction notes
 - All geologic features
 - All proposed structural BMP(s) plans and specifications
- N/A

11. **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan.** A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:
- Prepared and certified by the engineer designing the permanent BMPs and measures
 - Signed by the owner or responsible party
 - Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
 - A discussion of record keeping procedures
- N/A
12. **Attachment H - Pilot-Scale Field Testing Plan.** Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.
- N/A
13. **Attachment I - Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.
- N/A

Responsibility for Maintenance of Permanent BMP(s)

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

14. The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
- N/A
15. A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.
- N/A

City of Georgetown
South Lake Raw Water Facilities and Intake
Water Pollution Abatement Plan

The South Lake Raw Water Facilities and Intake site is currently undeveloped land. The project site is on relatively flat land and high elevation ground. The site's topography and site boundaries minimize the potential for off-site runoff to flow onto and across the project site. The stormwater flows discharge towards Lake Georgetown thence to the San Gabriel River Watershed. Temporary and permanent erosion and sedimentation controls specified by this Water Pollution Abatement Plan will provide adequate treatment of upgradient and on-site stormwater flows.

City of Georgetown
South Lake Raw Water Facilities and Intake
Water Pollution Abatement Plan

There is a small potential for stormwater flows from the South Lake Raw Water Facilities and Intake construction. Site-generated runoff that discharges from the site will generally flow in a northeast direction through a vegetated area acting as vegetated filter strips thence offsite to dense vegetation and thence to Lake Georgetown. There is a 6% increase in impervious cover and the loaming that will act as a linear vegetated filter strip will be sufficient as an added water quality benefit for the site. The on-site stormwater will be filtered by silt fence as the main temporary BMPs to protect the San Gabriel Watershed during construction. Re-vegetation and hydroseeding disturbed areas that will act as a linear vegetation filter strip in the long terms will serve as the primary permanent stormwater control.

City of Georgetown
South Lake Raw Water Facilities and Intake
Water Pollution Abatement Plan

There is a potential for stormwater from the proposed construction area to reach Lake Georgetown and thence the San Gabriel River after leaving the site. Areas will be hydroseeded and re-vegetated and will act as a linear vegetation strip in the long run that will provide erosion and sediment control. The project will add 6% impervious cover to the site. The permanent BMPs described will provide sufficient reduction in erosion, runoff velocities, and TSS loading to surface streams.

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 City of Georgetown,
Corporation/Partnership/Entity Name

have authorized Ellyn Weimer, PE
Print Name of Agent/Engineer

of CDM Smith
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:

[Signature]
Applicant's Signature

9-23-22
Date

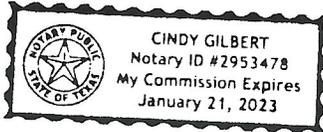
THE STATE OF Texas §
County of Williamson §

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 23 day of Sept., 2022

Cindy Gilbert
NOTARY PUBLIC

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: South Lake Raw Water Facilities and Intake

Regulated Entity Location: 2044 Cedar Breaks Road, Georgetown, Texas 78628

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

San Antonio Regional Office

Mailed to: TCEQ - Cashier

Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

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

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
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	3.594 Acres	\$ 4,000
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: 

Date: 10-30-2023

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

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

<i>Project</i>	<i>Fee</i>
Exception Request	\$500

Extension of Time Requests

<i>Project</i>	<i>Fee</i>
Extension of Time Request	\$150



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.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> 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)	
<input type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)			
<i>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).</i>			
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)		<i>If new Customer, enter previous Customer below:</i>	
City of Georgetown			
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits) 74-6000974	10. DUNS Number (if applicable) 89592372
11. Type of Customer:	<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input checked="" type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship		<input type="checkbox"/> Other:
12. Number of Employees		13. Independently Owned and Operated?	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input checked="" type="checkbox"/> 501 and higher		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following			
<input checked="" type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator <input type="checkbox"/> Other: <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant			
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)	

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.)

South Lake Raw Water Facilities and Intake

23. Street Address of the Regulated Entity:

2044 Cedar Breaks Road

(No PO Boxes)

City	Georgetown	State	TX	ZIP	78628	ZIP + 4	
-------------	------------	--------------	----	------------	-------	----------------	--

24. County

Williamson

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

25. Description to Physical Location:

The South Lake Raw Water Electrical and Chemical Facility is located along Cedar Breaks Road approximately 610 feet south of the intersection of Cedar Breaks and Crockett Gardens Road.

26. Nearest City**State****Nearest ZIP Code**

Georgetown

TX

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:

30.6671

28. Longitude (W) In Decimal:

-97.7347

Degrees

Minutes

Seconds

Degrees

Minutes

Seconds

29. Primary SIC Code**30. Secondary SIC Code****31. Primary NAICS Code****32. Secondary NAICS Code**

(4 digits)

(4 digits)

(5 or 6 digits)

(5 or 6 digits)

4941

211310

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

Raw Water Facility

34. Mailing Address:

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.

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

SECTION IV: Preparer Information

40. Name:	Samantha Agniel	41. Title:	Environmental Engineer
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(713) 423-7340		() -	agnielsj@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, PE	Phone:	(512) 652- 5329
Signature:		Date:	10-30-2023

Weimer, Ellyn J.

From: Karamalegos, Ana
Sent: Wednesday, October 11, 2023 2:53 PM
To: Weimer, Ellyn J.; Woelke, Allen
Subject: Fwd: [EXTERNAL] Update on South Shore WTP

Follow Up Flag: Follow up
Flag Status: Flagged

From: Blank, Scott W CIV USARMY CESWF (USA) <Scott.W.Blank@usace.army.mil>
Sent: Wednesday, October 11, 2023 1:54 PM
To: Chris Pousson <chris.pousson@georgetown.org>
Subject: [EXTERNAL] Update on South Shore WTP

[EXTERNAL EMAIL] This email originated from outside of City of Georgetown. DO NOT click links or open attachments unless you recognize and/or trust the sender.

I have been told to let you know that everything is approved and that they are working on the temporary construction easement and they should have it out NLT 27 October 2023. Hope this helps.

Scott W. Blank
Lake Manager
Lake Georgetown
U.S. Army Corps of Engineers
500 Lake Overlook Drive
Georgetown, Texas 78633
Office: 512/819-9046
Fax: 512/863-4769

Remember to be SAFE and wear a LIFEJACKET!!

Official Sites: <https://www.swf-wc.usace.army.mil/georgetown>

Facebook: <http://www.facebook.com/pages/Fort-Worth-District-US-Army-Corps-of-Engineers/188083711219308>

County: Williamson
Parcel : Parcel 1 Easement
Project: Wood Avant Investments, Ltd (South Lake)

EXHIBIT _____
PROPERTY DESCRIPTION

DESCRIPTION OF A 0.107 ACRE (4,655 SQUARE FOOT) PARCEL OF LAND SITUATED IN THE JOSEPH FISH SURVEY, ABSTRACT NO. 232 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF THE REMAINDER OF THAT CALLED 2,139.32 ACRE TRACT OF LAND DESCRIBED IN A SPECIAL WARRANTY DEED TO WOOD AVANT INVESTMENTS, LTD RECORDED IN DOCUMENT NO. 2020167463 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 0.107 ACRE (4,655 SQUARE FOOT) PARCEL OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a calculated point, (Grid Coordinates determined as N=10,215,748.14 E=3,111,987.77), in the northerly boundary line of said remainder of the 2,139.32 acre tract, being the southerly boundary line of that called 18.522 acre tract of land described in a Special Warranty Deed to City of Georgetown recorded in Document No. 2018097168 of the Official Public Records of Williamson County, Texas, same being the northerly boundary line of that called 11.99 acre 80' wide Road Easement (Parcel 8) described in Volume 715, Page 121 of the Deed Records of Williamson County, Texas, for the northwesterly corner and **POINT OF BEGINNING** of the herein described parcel and from which a capped iron rod with plastic cap stamped "Inland-5050" found, being an angle point in the common boundary line of said 18.522 acre tract and said remainder of the 2,139.32 acre tract bears S 50°22'34" W, at a distance of 4.62 feet;

- 1) **THENCE**, with the common boundary line of said 18.522 acre tract and said remainder of the 2,139.32 acre tract, same being said northerly Road Easement line, **N 50°22'34" E** for a distance of **25.00** feet to a calculated point;

THENCE, departing said 18.522 acre tract, through the interior of said remainder of the 2,139.32 acre tract, the following two (2) courses:

- 2) **S 39°49'26 E** for a distance of **55.31** feet to a calculated angle point;
- 3) **N 50°24'42" E** for a distance of **110.08** feet to a calculated point, in the easterly boundary line of said remainder of the 2,139.32 acre tract, same being the easterly line of said 11.99 acre Road Easement, also being the westerly boundary line of that called 249.00 acre tract of land (Schedule "A" Tract No. 105-1) described in a Declaration of Taking to United States of America recorded in Volume 550, Page 553 of the Deed Records of Williamson County, Texas, same being the westerly line of that called 11.158 acre (120' wide Road Easement Exhibit "A" Tract "A") described in Document No. 2015073475, of the Official Public Records of Williamson County, Texas, for the northeasterly corner of the herein described parcel, and from which a nail in cedar post found, being the common corner of said 18.522 acre tract and said remainder of the 2,139.32 acre tract, same being in the westerly boundary line of said 249.00 acre tract bears N 22°29'46" W at a distance of 57.94 feet;
- 4) **THENCE**, with the common boundary line of said 249.00 acre tract and said remainder of the 2,139.32 acre tract, **S 22°29'46" E** for a distance of **26.12** feet to a 60d nail found in the southerly line of said 80 foot wide road easement, for the southeasterly corner of the herein described parcel;

THENCE, departing said 249.00 acre tract, through the interior of said remainder of the 2,139.32 acre tract, the following two (2) courses:

County: Williamson
Parcel : Parcel 1 Easement
Project: Wood Avant Investments, Ltd (South Lake)

- 5) with said southerly line of 80 foot wide road easement, **S 50°24'42" W** for a distance of **127.22** feet to the calculated southwesterly corner hereof;
- 6) departing said road easement, **N 39°52'47" W** for a distance of **80.26** feet to the **POINT OF BEGINNING**, containing 0.107 acres (4,655 square feet) of land, more or less.

NOTE: This parcel is accompanied by a 4,202 Square Foot, 30' wide T.C.E. (Temporary Construction Easement) being coincident with, and northerly and westerly of the above described course 2 through 3 as shown on the accompanying sketch.

This property description is accompanied by a separate parcel plat.

All bearings recited herein are based on the Texas State Plane Coordinate System, Central Zone No. 4203, NAD 83.

THE STATE OF TEXAS §
 § KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF WILLIAMSON §

That I, M. Stephen Truesdale, a Registered Professional Land Surveyor, do hereby certify that the above description is true and correct to the best of my knowledge and belief and that the property described herein was determined by a survey made on the ground under my direct supervision.

WITNESS MY HAND AND SEAL at Round Rock, Williamson County, Texas.

M. Stephen Truesdale

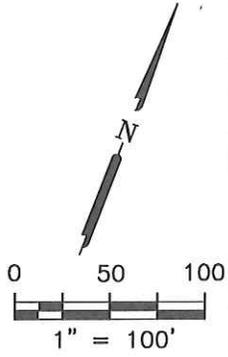
7 APR 2022

M. Stephen Truesdale
Registered Professional Land Surveyor No. 4933
Licensed State Land Surveyor
Inland Geodetics, LLC
Firm Registration No: 100591-00
1504 Chisholm Trail Road, Suite 103
Round Rock, TX 78681



**EXHIBIT
PLAT TO ACCOMPANY DESCRIPTION**

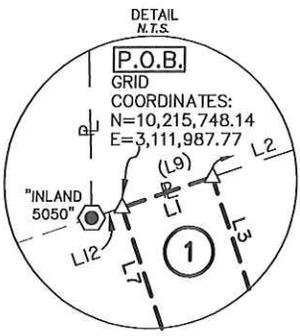
UNITED STATES OF AMERICA
ARMY CORPS OF ENGINEERS
419.64 AC.
TRACT No. 201
VOL. 528, PG. 183
D.R.W.C.T.



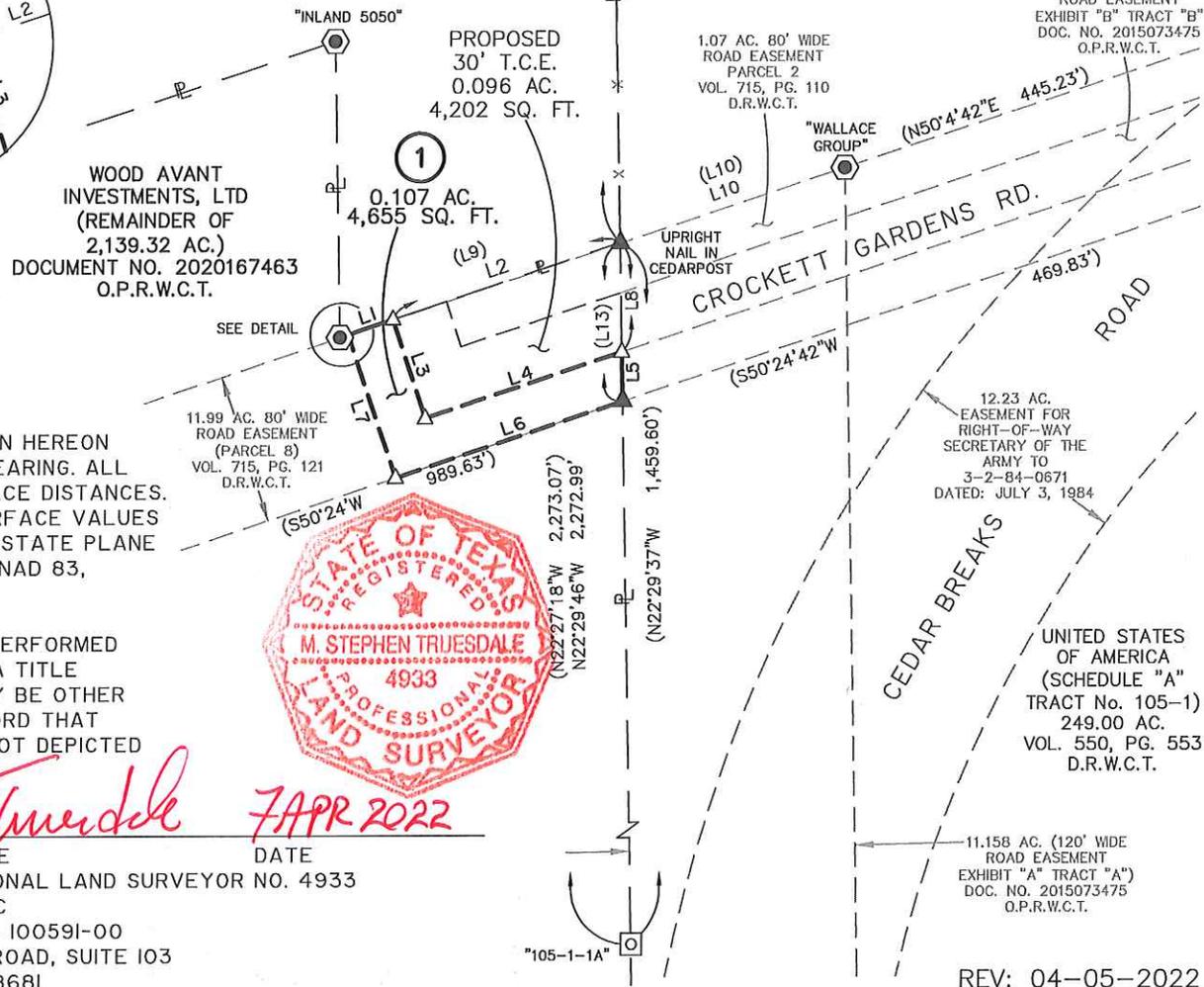
LEGEND	
	CALCULATED POINT
	1/2" IRON ROD W/ PLASTIC CAP FOUND (AS NOTED)
	60d NAIL FOUND
	CORPS OF ENGINEERS MONUMENT
	PROPERTY LINE
()	RECORD INFORMATION
D.R.W.C.T.	DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
O.R.W.C.T.	OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS
O.P.R.W.C.T.	OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
	DISTANCE BREAK

NO.	DIRECTION	DISTANCE
L1	N50°22'34"E	25.00'
L2	N50°22'34"E	127.34'
L3	S39°49'26"E	55.31'
L4	N50°24'42"E	110.08'
L5	S22°29'46"E	26.12'
L6	S50°24'42"W	127.22'
L7	N39°52'47"W	80.26'
L8	N22°29'46"W	57.94'
(L9)	(S50°22'34"W)	(156.96')
L10	N50°33'09"E	125.50'
(L10)	(N50°24'42"E)	(125.55')
L12	S50°22'34"W	4.62'
(L13)	(N22°29'W)	(83.70')

*JOSEPH FISH SURVEY
ABSTRACT NO. 232*



CITY OF GEORGETOWN
18.522 ACRES
DOC. NO. 2018097168
O.P.R.W.C.T.



1) ALL BEARINGS SHOWN HEREON ARE BASED ON GRID BEARING. ALL DISTANCES ARE SURFACE DISTANCES. COORDINATES ARE SURFACE VALUES BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, CENTRAL ZONE.

2) THIS SURVEY WAS PERFORMED WITHOUT BENEFIT OF A TITLE ABSTRACT. THERE MAY BE OTHER INSTRUMENTS OF RECORD THAT AFFECT THIS TRACT NOT DEPICTED HEREON.

M. Stephen Truesdale
DATE

M. STEPHEN TRUESDALE
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 4933
INLAND GEODETICS, LLC
FIRM REGISTRATION NO. 100591-00
1504 CHISHOLM TRAIL ROAD, SUITE 103
ROUND ROCK, TEXAS 78681

PARCEL PLAT SHOWING PROPERTY OF
WOOD AVANT INVESTMENTS, LTD

SCALE 1"=100'	PROJECT CITY OF GEORGETOWN WATER TREATMENT PLANT	COUNTY WILLIAMSON
------------------	--	----------------------

EASEMENT
0.107 ACRES
4,655 SQ. FT.

PAGE 3 OF 3

REV: 04-05-2022

Deed Report

Wed Apr 06 11:51:14 2022

Deed Name: PARCEL 1-WOOD-AVANT-DESC-REV

Starting Coordinates: Northing 10218411.55, Easting 3111415.80

Bearing	Distance	Type	Radius	Arc Len	Delta	Tangent	Description
N 50°22'34" E	25.00	LINE					
S 39°49'26" E	55.31	LINE					
N 50°24'42" E	110.08	LINE					
S 22°29'46" E	26.12	LINE					
S 50°24'42" W	127.22	LINE					
N 39°52'47" W	80.26	LINE					

Ending Coordinates: Northing 10218411.55, Easting 3111415.80

Area: 4654.57 S.F., 0.1069 Acres

Total Perimeter Distance> 423.99

Closure Error Distance> 0.0027 Error Bearing> S 82°20'58" W

Closure Precision> 1 in 158804.6

Deed Report

Wed Apr 06 09:31:48 2022

Deed Name: PARCEL 1-WOOD-AVANT-SKETCH-REV

Starting Coordinates: Northing 10218073.25, Easting 3111562.56

Bearing	Distance	Type	Radius	Arc Len	Delta	Tangent	Description
N 50°22'34" E	25.00	LINE					
S 39°49'26" E	55.31	LINE					
N 50°24'42" E	110.08	LINE					
S 22°29'46" E	26.12	LINE					
S 50°24'42" W	127.22	LINE					
N 39°52'47" W	80.26	LINE					

Ending Coordinates: Northing 10218073.25, Easting 3111562.57

Area: 4654.57 S.F., 0.1069 Acres

Total Perimeter Distance> 423.99

Closure Error Distance> 0.0027 Error Bearing> S 82°20'58" W

Closure Precision> 1 in 158804.6

County: Williamson
Parcel : Parcel 2 Easement
Project: United States of America (South Lake)

EXHIBIT _____
PROPERTY DESCRIPTION

DESCRIPTION OF A 3.594 ACRE (156,563 SQUARE FOOT) PARCEL OF LAND SITUATED IN THE JOSEPH FISH SURVEY, ABSTRACT NO. 232 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF THAT CALLED 249.00 ACRE TRACT OF LAND (SCHEDULE "A" TRACT NO. 105-1) DESCRIBED IN A DECLARATION OF TAKING TO UNITED STATES OF AMERICA RECORDED IN VOLUME 550, PAGE 553 OF THE DEED RECORDS OF WILLIAMSON COUNTY, TEXAS, AND ALSO BEING A PORTION OF THAT CALLED 333.00 ACRE TRACT OF LAND DESCRIBED IN A GENERAL WARRANTY DEED TO UNITED STATES OF AMERICA RECORDED IN VOLUME 516, PAGE 349 OF THE DEED RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 3.594 ACRE (156,563 SQUARE FOOT) PARCEL OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a calculated point, (Grid Coordinates determined as N=10,215,791.75 E=3,112,127.26), being in the westerly boundary line of said 249.00 acre tract and the westerly line of a 1.07 acre 80 foot wide road easement recorded in Volume 715, Page 110 of the Deed Records of Williamson County, Texas, same being the easterly boundary line of the remainder of that called 2,139.32 acre tract of land described in a Special Warranty Deed to Wood Avant Investments, LTD recorded in Document No. 2020167463 of the Official Public Records of Williamson County, Texas, and from which a nail in cedar post found, being the common corner of that called 18.522 acre tract described in a Special Warranty Deed to City of Georgetown recorded in Document No. 2018097168 of the Official Public Records of Williamson County, Texas, and said remainder of the 2,139.32 acre tract, same being in the westerly boundary line of said 249.00 acre tract bears N 22°29'46" W at a distance of 57.94 feet;

THENCE, departing the easterly boundary line of said remainder of the 2,139.32 acre tract, being said westerly line of the 80 foot wide road easement, through the interior of said 249.00 acre tract, and said 333.00 acre tract, the following thirty one (31) courses:

- 1) **N 50°24'42" E** for a distance of **657.96** feet to a calculated angle point;
- 2) **S 39°14'20" E** for a distance of **25.00** feet to a calculated point of curvature to the left;
- 3) along said curve to the left, having a delta angle of **31°28'23"**, a radius of **642.26** feet, an arc length of **352.80** feet and a chord which bears **S 46°10'31" E**, for a distance of **348.38** feet a calculated point of non tangency;
- 4) **N 49°59'56" E** for a distance of **66.19** feet to a calculated angle point;
- 5) **S 85°00'04" E** for a distance of **619.81** feet to a calculated angle point;
- 6) **N 46°03'03" E** for a distance of **39.88** feet to a calculated point of curvature to the right;
- 7) along said curve to the right, having a delta angle of **09°13'32"**, a radius of **1,090.00** feet, an arc length of **175.51** feet and a chord which bears **N 39°10'45" E**, for a distance of **175.32** feet a calculated point of non tangency;
- 8) **N 43°47'31" E** for a distance of **246.66** feet to a calculated point of curvature to the right;
- 9) along said curve to the right, having a delta angle of **19°35'48"**, a radius of **860.00** feet, an arc length of **294.14** feet and a chord which bears **N 53°35'25" E**, for a distance of **292.71** feet a calculated point of non tangency;
- 10) **N 63°23'19" E** for a distance of **828.65** feet to a calculated ell corner;

County: Williamson
Parcel : Parcel 2 Easement
Project: United States of America (South Lake)

- 11) **N 26°36'05" W** for a distance of **44.62** feet to a calculated angle point;
- 12) **N 51°59'35" E** for a distance of **300.36** feet to the calculated northeasterly corner of the herein described parcel (currently inundated);
- 13) **S 37°51'41" E** for a distance of **60.14** feet to the calculated angle point (currently inundated);
- 14) **S 26°35'59" E** for a distance of **74.99** feet to the calculated southeasterly corner of the herein described parcel (currently inundated);
- 15) **S 63°23'19" W** for a distance of **242.87** feet to a calculated angle point;
- 16) **S 26°36'41" E** for a distance of **5.00** feet to a calculated angle point;
- 17) **S 63°23'19" W** for a distance of **891.95** feet to a calculated point of curvature to the left;
- 18) along said curve to the left, having a delta angle of **19°35'48"**, a radius of **825.00** feet, an arc length of **282.17** feet and a chord which bears **S 53°35'25" W**, for a distance of **280.80** feet a calculated point of non tangency;
- 19) **S 43°47'31" W** for a distance of **246.66** feet to a calculated point of curvature to the left;
- 20) along said curve to the left, having a delta angle of **14°11'37"**, a radius of **1,053.96** feet, an arc length of **261.09** feet and a chord which bears **S 36°42'08" W**, for a distance of **260.43** feet a calculated point of non tangency;
- 21) **S 29°36'40" W** for a distance of **25.98** feet to a calculated angle point,
- 22) **N 85°00'04" W** for a distance of **214.70** feet to a calculated angle point;
- 23) **N 04°59'57" E** for a distance of **38.00** feet to a calculated angle point;
- 24) **N 85°00'04" W** for a distance of **167.67** feet to a calculated angle point;
- 25) **N 04°59'56" E** for a distance of **10.00** feet to a calculated angle point;
- 26) **N 85°00'04" W** for a distance of **209.42** feet to a calculated angle point;
- 27) **S 49°59'56" W** for a distance of **52.04** feet to a calculated angle point;
- 28) **N 63°24'51" W** for a distance of **26.11** feet to a calculated angle point;
- 29) **S 49°59'56" W** for a distance of **10.89** feet to a calculated point of curvature to the right;
- 30) along said curve to the right, having a delta angle of **29°37'13"**, a radius of **742.47** feet, an arc length of **383.84** feet and a chord which bears **N 47°13'01" W**, for a distance of **379.58** feet a calculated point of non tangency;
- 31) **S 50°24'42 W**, in part with the southerly line of said 1.07 acre roadway easement, for a distance of **639.89** feet to a 60d nail found, being in the common boundary line of said remainder of the 2,139.32 acre tract and said 249.00 acre tract, for the southwesterly corner of said 80 foot wide road easement and of the herein described parcel;

County: Williamson
Parcel : Parcel 2 Easement
Project: United States of America (South Lake)

32) **THENCE**, with said common boundary line, **N 22°29'46" W** for a distance of **26.12** feet to the **POINT OF BEGINNING**, containing 3.594 acres (156,563 square feet) of land, more or less.

NOTE: This parcel is accompanied by 3 T.C.E.'s (Temporary Construction Easement):

1. A 19,603 Square Foot, 30' wide easement being coincident with, parallel, and northerly of the above described course 1 as shown on the accompanying sketch.
2. A 50,268 Square Foot, 20' wide easement being coincident with, parallel, and northerly of the above described in part course 5, through 11 and in part course 12 as shown on the accompanying sketch.
3. And A 15,760 Square Foot, 40' wide easement being coincident with, parallel, and westerly of the above described course 30 as shown on the accompanying sketch.

This property description is accompanied by a separate parcel plat.

All bearings recited herein are based on the Texas State Plane Coordinate System, Central Zone No. 4203, NAD 83.

THE STATE OF TEXAS §
 § KNOW ALL MEN BY THESE PRESENTS:
 COUNTY OF WILLIAMSON §

That I, M. Stephen Truesdale, a Registered Professional Land Surveyor, do hereby certify that the above description is true and correct to the best of my knowledge and belief and that the property described herein was determined by a survey made on the ground under my direct supervision.

WITNESS MY HAND AND SEAL at Round Rock, Williamson County, Texas.

M. Stephen Truesdale

7 APR 2022

M. Stephen Truesdale
 Registered Professional Land Surveyor No. 4933
 Licensed State Land Surveyor
 Inland Geodetics, LLC
 Firm Registration No: 100591-00
 1504 Chisholm Trail Road, Suite 103
 Round Rock, TX 78681

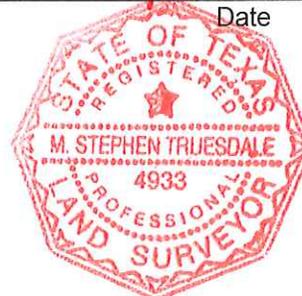
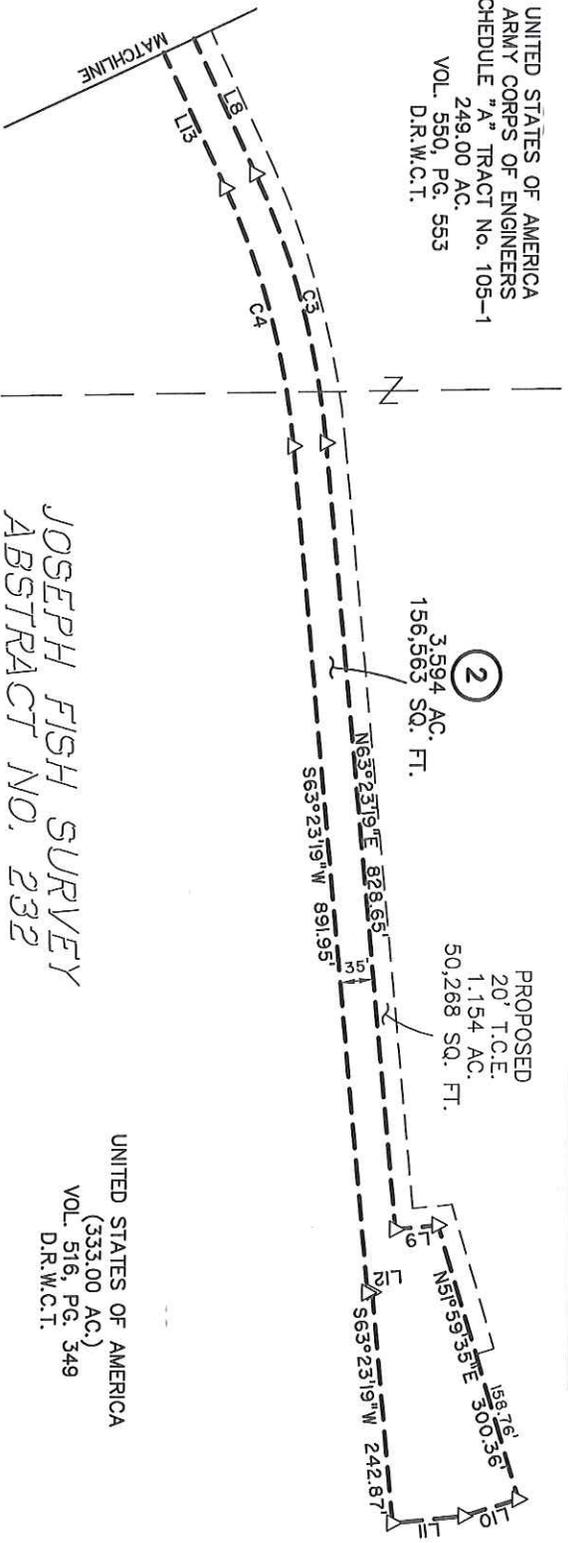


EXHIBIT
PLAT TO ACCOMPANY DESCRIPTION

NUMBER	DELTA	RADIUS	LENGTH	CHORD	CHORD BEARING
C3	19°35'48"	860.00'	294.14'	292.71'	N53°35'25"E
C4	19°35'48"	825.00'	282.17'	280.80'	S53°35'25"W

UNITED STATES OF AMERICA
ARMY CORPS OF ENGINEERS
SCHEDULE "A" TRACT No. 105-1
249.00 AC.
VOL. 550, PG. 553
D.R.W.C.T.



JOSEPH FISH SURVEY
ABSTRACT NO. 232

UNITED STATES OF AMERICA
(333.00 AC.)
VOL. 516, PG. 349
D.R.W.C.T.

NO.	DIRECTION	DISTANCE
L8	N43°47'31"E	246.66'
L9	N26°36'05"W	44.62'
L10	S37°51'41"E	60.14'
L11	S26°36'59"E	74.99'
L12	S26°36'41"E	5.00'
L13	S43°47'31"W	246.66'

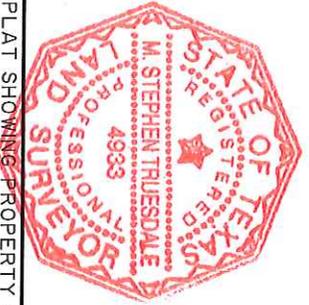
1) ALL BEARINGS SHOWN HEREON ARE BASED ON GRID BEARING. ALL DISTANCES ARE SURFACE DISTANCES. COORDINATES ARE SURFACE VALUES BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, CENTRAL ZONE.
2) THIS SURVEY WAS PERFORMED WITHOUT BENEFIT OF A TITLE ABSTRACT. THERE MAY BE OTHER INSTRUMENTS OF RECORD THAT AFFECT THIS TRACT NOT DEPICTED HEREON.

I HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECT AND THAT THE PROPERTY SHOWN HEREON WAS DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY DIRECT SUPERVISION.

M. Stephen Truesdale
M. STEPHEN TRUESDALE

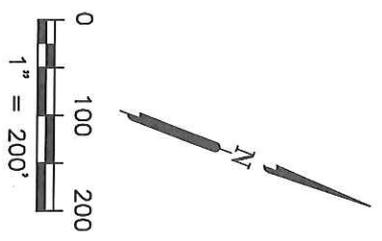
DATE *7 APR 2022*

REGISTERED PROFESSIONAL LAND SURVEYOR NO. 4933
INLAND GEODETICS, LLC
FIRM REGISTRATION NO. 100591-00
1504 CHISHOLM TRAIL ROAD, SUITE 103
ROUND ROCK, TEXAS 78681



PARCEL PLAT SHOWING PROPERTY OF

UNITED STATES OF AMERICA



LEGEND	
	CALCULATED POINT
	1/2" IRON ROD W/ PLASTIC CAP FOUND (AS NOTED)
	60d NAIL FOUND
	CORPS OF ENGINEERS MONUMENT
	PROPERTY LINE
	RECORD INFORMATION
	DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
	OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS
	OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
	DISTANCE BREAK

REV: 04-05-2022

SCALE 1"=200'
PROJECT CITY OF GEORGETOWN WATER TREATMENT PLANT
COUNTY WILLIAMSON

EASEMENT
3,594 ACRES
156,563 SQ. FT.
PAGE 5 OF 5

INLAND GEODETICS
PROFESSIONAL LAND SURVEYORS
1504 CHISHOLM TRAIL RD. STE. 103
ROUND ROCK, TX. 78681
PH. (512) 238-1200 FAX (512) 238-1251
FIRM REGISTRATION NO. 100591-00

Deed Report

Wed Apr 06 10:54:41 2022

Deed Name: PARCEL 2-USA-SKETCH

Starting Coordinates: Northing 10225047.10, Easting 3116349.02

Bearing	Distance	Type	Radius	Arc Len	Delta	Tangent	Description
N 50°24'42" E	657.96	LINE					
S 39°14'20" E	25.00	LINE					
S 46°10'31" E	348.38	CURVE L	642.26	352.80	31°28'23"	180.97	
							Rad-In: N 59°33'41" E Rad-Out: N 28°05'18" E
N 49°59'56" E	66.19	LINE					
S 85°00'04" E	619.81	LINE					
N 46°03'03" E	39.88	LINE					
N 39°10'45" E	175.32	CURVE R	1090.00	175.51	9°13'32"	87.94	
							Rad-In: S 55°26'01" E Rad-Out: S 46°12'29" E
N 43°47'31" E	246.66	LINE					
N 53°35'25" E	292.71	CURVE R	860.00	294.14	19°35'48"	148.52	
							Rad-In: S 46°12'29" E Rad-Out: S 26°36'41" E
N 63°23'19" E	828.65	LINE					
N 26°36'05" W	44.62	LINE					
N 51°59'35" E	300.36	LINE					
S 37°51'41" E	60.14	LINE					
S 26°35'59" E	74.99	LINE					
S 63°23'19" W	242.87	LINE					
S 26°36'41" E	5.00	LINE					
S 63°23'19" W	891.95	LINE					
S 53°35'25" W	280.80	CURVE L	825.00	282.17	19°35'48"	142.48	
							Rad-In: S 26°36'41" E Rad-Out: S 46°12'29" E
S 43°47'31" W	246.66	LINE					
S 36°42'08" W	260.43	CURVE L	1053.96	261.09	14°11'37"	131.22	
							Rad-In: S 46°12'03" E Rad-Out: S 60°23'40" E
S 29°36'40" W	25.98	LINE					
N 85°00'04" W	214.70	LINE					
N 04°59'57" E	38.00	LINE					
N 85°00'04" W	167.67	LINE					
N 04°59'56" E	10.00	LINE					
N 85°00'04" W	209.42	LINE					
S 49°59'56" W	52.04	LINE					
N 63°24'51" W	26.11	LINE					
S 49°59'56" W	10.89	LINE					
N 47°13'01" W	379.58	CURVE R	742.47	383.84	29°37'13"	196.31	
							Rad-In: N 27°58'23" E Rad-Out: N 57°35'36" E
S 50°24'42" W	639.89	LINE					
N 22°29'46" W	26.12	LINE					

Ending Coordinates: Northing 10225047.09, Easting 3116349.02

Area: 156563.46 S.F., 3.5942 Acres

Total Perimeter Distance> 7521.11

Closure Error Distance> 0.0150 Error Bearing> N 01°46'38" E

Closure Precision> 1 in 500618.9

Deed Report

Wed Apr 06 10:54:49 2022

Deed Name: PARCEL 2-USA-DESC

Starting Coordinates: Northing 10220085.45, Easting 3121666.20

Bearing	Distance	Type	Radius	Arc Len	Delta	Tangent	Description
N 50°24'42" E	657.96	LINE					
S 39°14'20" E	25.00	LINE					
S 46°10'31" E	348.38	CURVE L	642.26	352.80	31°28'23"	180.97	Rad-In: N 59°33'41" E Rad-Out: N 28°05'18" E
N 49°59'56" E	66.19	LINE					
S 85°00'04" E	619.81	LINE					
N 46°03'03" E	39.88	LINE					
N 39°10'45" E	175.32	CURVE R	1090.00	175.51	9°13'32"	87.94	Rad-In: S 55°26'01" E Rad-Out: S 46°12'29" E
N 43°47'31" E	246.66	LINE					
N 53°35'25" E	292.71	CURVE R	860.00	294.14	19°35'48"	148.52	Rad-In: S 46°12'29" E Rad-Out: S 26°36'41" E
N 63°23'19" E	828.65	LINE					
N 26°36'05" W	44.62	LINE					
N 51°59'35" E	300.36	LINE					
S 37°51'41" E	60.14	LINE					
S 26°35'59" E	74.99	LINE					
S 63°23'19" W	242.87	LINE					
S 26°36'41" E	5.00	LINE					
S 63°23'19" W	891.95	LINE					
S 53°35'25" W	280.80	CURVE L	825.00	282.17	19°35'48"	142.48	Rad-In: S 26°36'41" E Rad-Out: S 46°12'29" E
S 43°47'31" W	246.66	LINE					
S 36°42'08" W	260.43	CURVE L	1053.96	261.09	14°11'37"	131.22	Rad-In: S 46°12'04" E Rad-Out: S 60°23'41" E
S 29°36'40" W	25.98	LINE					
N 85°00'04" W	214.70	LINE					
N 04°59'57" E	38.00	LINE					
N 85°00'04" W	167.67	LINE					
N 04°59'56" E	10.00	LINE					
N 85°00'04" W	209.42	LINE					
S 49°59'56" W	52.04	LINE					
N 63°24'51" W	26.11	LINE					
S 49°59'56" W	10.89	LINE					
N 47°13'01" W	379.58	CURVE R	742.47	383.84	29°37'13"	196.31	Rad-In: N 27°58'22" E Rad-Out: N 57°35'35" E
S 50°24'42" W	639.89	LINE					
N 22°29'46" W	26.12	LINE					

Ending Coordinates: Northing 10220085.44, Easting 3121666.20

Area: 156563.45 S.F., 3.5942 Acres

Total Perimeter Distance> 7521.11

Closure Error Distance> 0.0150 Error Bearing> N 01°46'22" E

Closure Precision> 1 in 500674.1



CITY OF GEORGETOWN, TEXAS

PACKAGE 1: SOUTH LAKE WATER TREATMENT PLANT

PROJECT No PRJ000101

BID NO. 202203 CONTRACT ID NO. 22-0018-CIP

OCTOBER 2021

CITY COUNCIL

MAYOR

JOSH SCHROEDER

CITY COUNCIL MEMBERS

- AMANDA PARR DISTRICT 1
- SHAWN HOOD DISTRICT 2
- MIKE TRIGGS DISTRICT 3
- STEVE FOUGHT DISTRICT 4
- KEVIN PITTS MAYOR PRO TEM / DISTRICT 5
- VACANT DISTRICT 6
- TOMMY GONZALEZ DISTRICT 7

CITY MANAGER

DAVID MORGAN

ASSISTANT CITY MANAGERS

LAURIE BREWER
WAYNE NERO

WATER SERVICES UTILITY DIRECTOR

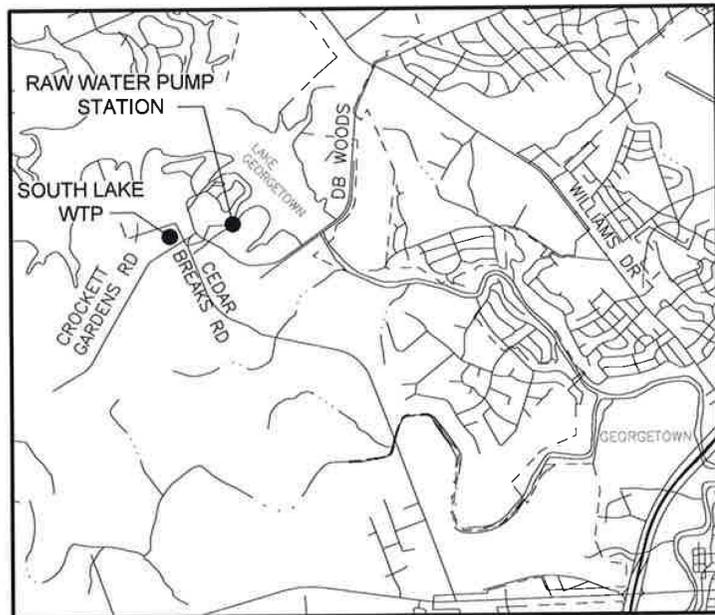
CHELSEA SOLOMON, P.E.

SYSTEMS ENGINEERING DIRECTOR

WESLEY WRIGHT, P.E.

UTILITY ENGINEER

DAVID MUNK, P.E.



LOCATION PLAN

CONFORMED DRAWINGS

VOLUME I OF III

Chen Pan 10-26-21
 CITY OF GEORGETOWN, CIP MANAGER DATE

[Signature] 10/26/21
 CITY OF GEORGETOWN, SYSTEM ENGINEERING DIRECTOR DATE

PREPARED BY:
Sarah Albers Stewart 10-26-2021
 CDM Smith TEXAS REGISTRATION NUMBER F-3043 DATE



AUSTIN, TEXAS
Transportation

Water

Environment

Energy

Facilities

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	JBF	AKM	CONFORMED DRAWINGS

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CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

SHEET INDEX I

PROJECT NO. 2048-248929
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G-1



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CITY OF GEORGETOWN, TEXAS
**SOUTH LAKE
 WATER TREATMENT PLANT**

SHEET INDEX II

PROJECT NO.	2048-248929
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SHEET NO.	G-2



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EK-4.4	TIE CIRCUIT BREAKER 523-3 CONTRAL SCHEMATIC
EK-4.5	MAIN CIRCUIT BREAKER 52-M3 CONTRAL SCHEMATIC
EK-4.6	METAL-CLAD PARALLELING SWITCHGEAR MVSWGR-K3 DIFFERENTIAL CONTROL SCHEMATIC
EK-5	METAL-CLAD PARALLELING SWITCHGEAR MVSWGR-GEN ONE-LINE DIAGRAM
EK-5.1	METAL-CLAD PARALLELING SWITCHGEAR MVSWGR-GEN ANSI FUNCTION DIAGRAM
EK-5.2	GENERATOR CIRCUIT BREAKER 52-G1 CONTROL SCHEMATIC
EK-5.3	GENERATOR CIRCUIT BREAKER 52-G2 CONTROL SCHEMATIC
EK-5.4	GENERATOR CIRCUIT BREAKER 52-G3 CONTROL SCHEMATIC
EK-5.5	TIE CIRCUIT BREAKER 52-G4 CONTROL SCHEMATIC
EK-5.6	TIE CIRCUIT BREAKER 52-G5 CONTROL SCHEMATIC
EK-5.7	TIE CIRCUIT BREAKER 52-G6 CONTROL SCHEMATIC
EK-5.8	FEEDER CIRCUIT BREAKER 52-G7 CONTROL SCHEMATIC
EK-5.9	METAL-CLAD PARALLELING SWITCHGEAR MVSWGR-GEN DIFFERENTIAL CONTROL SCHEMATIC
EK-5.10	PARALLELING SWITCHGEAR MVSWGR-GEN CONTROL RISER DIAGRAM
EK-5.11	GENERATOR CONTROL PANEL MCP-1 DETAILS
EK-5.12	GENERATOR CONTROL CONDUIT SCHEDULE
EK-6	MV MOTOR CONTROL CENTER MVMCC-1 ONE-LINE DIAGRAM
EK-7	MV MOTOR CONTROL CENTER MVMCC-2 ONE-LINE DIAGRAM
EK-8	MV MOTOR CONTROL CENTER MVMCC-3 ONE-LINE DIAGRAM
EK-9	SWITCHGEAR SWGR-K1 ONE-LINE DIAGRAM
EK-10	MOTOR CONTROL CENTER MCC-K1 ONE-LINE DIAGRAM
EK-11	MOTOR CONTROL CENTER MCC-K2 ONE-LINE DIAGRAM
EK-12	MOTOR CONTROL CENTER MCC-K3 ONE-LINE DIAGRAM
EK-13	ELECTRICAL BUILDING POWER AND CONTROL PLAN
EK-14	ELECTRICAL BUILDING LIGHTING AND RECEPTACLE PLAN
EK-15	ELECTRICAL BUILDING TRANSFORMER BELOW GRADE CONDUIT AND GROUNDING PLAN
EK-16	ELECTRICAL BUILDING BELOW GRADE ROUTING PLAN
EK-17	ELECTRICAL BUILDING GROUNDING PLAN
EK-18	ELECTRICAL BUILDING GENERATOR BELOW GRADE CONDUIT PLAN
EK-19	ELECTRICAL BUILDING GENERATOR GROUNDING PLAN

EK-20	ELECTRICAL BUILDING PANELBOARD SCHEDULE I
EK-21	ELECTRICAL BUILDING PANELBOARD SCHEDULE II
EL-1	RAW WATER PUMP STATION POWER AND CONTROL PLAN
EL-2	RAW WATER PUMP STATION POWER AND CONTROL PLAN
EL-3	RAW WATER PUMP STATION CABLE TRAY SCHEDULE
EM-1	INTAKE ELECTRICAL BUILDING AND CHEMICAL FEED BUILDING SITE PLAN
EM-1.1	RAW WATER LINE
EM-1.2	RAW WATER LINE
EM-2	PAD-MOUNTED SWITCHGEAR SWGR-RW-1 ONE-LINE DIAGRAM
EM-3	METAL-CLAD PARALLELING SWITCHGEAR MVSWGR-RW-1 ONE-LINE DIAGRAM
EM-3.1	METAL-CLAD PARALLELING SWITCHGEAR MVSWGR-RW-1 ANSI FUNCTION DIAGRAM
EM-3.2	FEEDER CIRCUIT BREAKER 52-1 CONTROL SCHEMATIC
EM-3.3	FEEDER CIRCUIT BREAKER 52-2 CONTROL SCHEMATIC
EM-3.4	FEEDER CIRCUIT BREAKER 52-3 CONTROL SCHEMATIC
EM-3.5	GENERATOR G-1 BREAKER 52-4 CONTROL SCHEMATIC
EM-3.6	GENERATOR G-2 BREAKER 52-5 CONTROL SCHEMATIC
EM-3.7	FEEDER CIRCUIT BREAKER 52-6 CONTROL SCHEMATIC
EM-3.8	FEEDER CIRCUIT BREAKER 52-7 CONTROL SCHEMATIC
EM-3.9	FEEDER CIRCUIT BREAKER 52-8 CONTROL SCHEMATIC
EM-3.10	FEEDER CIRCUIT BREAKER 52-9 CONTROL SCHEMATIC
EM-3.11	MAIN CIRCUIT BREAKER 52-M1 CONTROL SCHEMATIC
EM-3.12	MAIN CIRCUIT BREAKER 52-M2 CONTROL SCHEMATIC
EM-3.13	TIE CIRCUIT BREAKER 52-T1 CONTROL SCHEMATIC
EM-3.14	TIE CIRCUIT BREAKER 52-T2 CONTROL SCHEMATIC
EM-3.15	SWITCHGEAR MVSWGR-RW-1 BUS-A AND BUS-B DIFFERENTIAL CONTROL SCHEMATIC
EM-3.16	SWITCHGEAR MVSWGR-RW-1 BUS-C DIFFERENTIAL CONTROL SCHEMATIC
EM-3.17	PARALLELING SWITCHGEAR MVSWGR-RW-1 CONTROL RISER DIAGRAM
EM-3.18	GENERATOR CONTROL PANEL MCP-2 DETAILS
EM-3.19	GENERATOR CONTROL CONDUIT SCHEDULE
EM-4	RAW WATER BUILDING VARIABLE FREQUENCY DRIVES ONE-LINE DIAGRAM
EM-5	MOTOR CONTROL CENTER MCC-RW-1 ONE-LINE DIAGRAM
EM-6	RAW WATER ELECTRICAL BUILDING POWER PLAN
EM-7	RAW WATER ELECTRICAL BUILDING LIGHTING AND RECEPTACLE PLAN
EM-8	RAW WATER ELECTRICAL BUILDING UNDERGROUND AND GROUNDING PLAN
EM-9	RAW WATER ELECTRICAL BUILDING BELOW GRADE LARGE CONDUIT ROUTING PLAN
EM-10	RAW WATER ELECTRICAL BUILDING GROUNDING PLAN
EM-11	RAW WATER ELECTRICAL BUILDING GENERATORS BELOW GRADE CONDUIT ROUTING AND GROUNDING PLAN
EM-12	RAW WATER ELECTRICAL BUILDING PANELBOARD SCHEDULE I
EM-13	RAW WATER ELECTRICAL BUILDING PANELBOARD SCHEDULE II
EM-14	GENERAL ELECTRICAL DUCTBANK SCHEDULE I
EM-15	GENERAL ELECTRICAL DUCTBANK SCHEDULE II
EM-16	GENERAL ELECTRICAL DUCTBANK SCHEDULE III
EM-17	GENERAL ELECTRICAL DUCTBANK SCHEDULE IV
EN-1	RAW WATER CHEMICAL BUILDING POWER AND CONTROL PLAN
EN-2	RAW WATER CHEMICAL BUILDING LIGHTING AND RECEPTACLES PLAN
EX-1	FLOCCULATOR CONTROL SCHEMATICS I
EX-2	FLOCCULATOR CONTROL SCHEMATICS II
EX-3	FLOCCULATOR CONTROL SCHEMATICS III
EX-4	FLOCCULATOR CONTROL SCHEMATICS IV
EX-5	FLOCCULATOR CONTROL SCHEMATICS V
EX-6	FLOCCULATOR CONTROL SCHEMATICS VI
EX-7	SLUDGE COLLECTION DRIVE CONTROL SCHEMATICS I
EX-8	SLUDGE COLLECTION DRIVE CONTROL SCHEMATICS II
EX-9	SLUDGE COLLECTION DRIVE CONTROL SCHEMATICS III
EX-10	SLUDGE COLLECTION DRIVE CONTROL SCHEMATICS IV
EX-11	SLUDGE COLLECTION DRIVE CONTROL SCHEMATICS V
EX-12	SLUDGE COLLECTION DRIVE CONTROL SCHEMATICS VI
EX-13	BACKWASH AIR BLOWER CONTROL SCHEMATICS I
EX-14	BACKWASH AIR BLOWER CONTROL SCHEMATICS II
EX-15	THICKENED SLUDGE PUMP CONTROL SCHEMATICS I
EX-16	THICKENED SLUDGE PUMP CONTROL SCHEMATICS II
EX-17	WASHWATER RECYCLE PUMP CONTROL SCHEMATICS I
EX-18	WASHWATER RECYCLE PUMP CONTROL SCHEMATICS II
EX-19	WASHWATER RECYCLE PUMP CONTROL SCHEMATICS III
EX-20	WASHWATER RECYCLE PUMP CONTROL SCHEMATICS IV
EX-21	GRAVITY THICKENER CONTROL SCHEMATICS
EX-22	FILTRATE PUMP CONTROL SCHEMATICS
EX-23	SLUDGE PUMP CONTROL SCHEMATICS
EX-24	WASHWATER SETTLING BASIN DRIVE CONTROL SCHEMATICS
EX-25	TRANSFER PUMP CONTROL SCHEMATICS I
EX-26	TRANSFER PUMP CONTROL SCHEMATICS II
EX-27	TRANSFER PUMP CONTROL SCHEMATICS III
EX-28	TRANSFER PUMP CONTROL SCHEMATICS IV
EX-29	BACKWASH PUMP CONTROL SCHEMATICS I
EX-30	BACKWASH PUMP CONTROL SCHEMATICS II
EX-31	SITE LIGHTING CONTRACTOR CONTROL SCHEMATICS
EX-32	EXHAUST FAN CONTROL SCHEMATICS I
EX-33	EXHAUST FAN CONTROL SCHEMATICS II
EX-34	EXHAUST FAN CONTROL SCHEMATICS III
EY-1	RECYCLE WATER AND RAW WATER FLOW METER VAULT LIGHTING, RECEPTACLE, POWER AND CONTROL ELECTRICAL PLANS
EY-2	FINISHED WATER FLOW METER VAULT LIGHTING, RECEPTACLE, POWER AND CONTROL ELECTRICAL PLAN
EY-3	POTABLE WATER FLOW METER AND PRESSURE REDUCING VALVES ELECTRICAL PLAN
EZ-1	ELECTRICAL STANDARD DETAILS I

EZ-2	ELECTRICAL STANDARD DETAILS II
EZ-3	ELECTRICAL STANDARD DETAILS III
EZ-4	ELECTRICAL STANDARD DETAILS IV
EZ-5	ELECTRICAL STANDARD DETAILS V
EZ-6	ELECTRICAL STANDARD DETAILS VI
EZ-7	ELECTRICAL STANDARD DETAILS VII
EZ-8	ELECTRICAL STANDARD DETAILS VIII
INSTRUMENTATION	
I-1	INSTRUMENTATION LEGEND I
I-2	INSTRUMENTATION LEGEND II
I-3	SYSTEM ARCHITECTURE OVERVIEW
I-4	ADMINISTRATION BUILDING ELECTRICAL ROOM AND CHEMICAL FACILITY NETWORK ARCHITECTURE
I-5	ELECTRICAL BUILDING NETWORK ARCHITECTURE
I-6	TREATMENT STRUCTURE NETWORK ARCHITECTURE
I-7	DEWATERING BUILDING NETWORK ARCHITECTURE
I-8	STORAGE BUILDING NETWORK ARCHITECTURE
I-9	RAW WATER ELECTRICAL BUILDING AND PUMP STATION NETWORK ARCHITECTURE
I-10	SECURITY SYSTEM SITE PLAN
I-11	RAW WATER BUILDING SECURITY SYSTEM SITE PLAN
I-12	RAW WATER PUMP STATION SECURITY SYSTEM SITE PLAN
IA-1	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM RAPID MIXING AND FLOCCULATION BASINS 1 & 2
IA-2	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM RAPID MIXING AND FLOCCULATION BASINS 3 & 4
IA-3	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM SEDIMENTATION BASINS 1 & 2 AND SLUDGE VAULT
IA-4	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM SEDIMENTATION BASINS 3 & 4 AND SLUDGE VAULT
IA-5	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM FILTERS 1 THROUGH 3
IA-6	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM FILTERS 4 AND 5
IA-7	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM FILTERS 6 AND 7
IA-8	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM FILTERS 8 AND 9
IA-9	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM FILTERS 10 AND 11
IA-10	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM FILTERS 12 AND 13
IA-11	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM BACKWASH AIR BLOWERS
IB-1	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM DISINFECTION BASIN 1
IB-2	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM DISINFECTION BASIN 2
IB-3	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM TRANSFER PUMP STATION NO. 1
IB-4	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM TRANSFER PUMP STATION NO. 2
IC-1	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM CLEARWELLS
ID-1	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM BACKWASH PUMP STATION
ID-2	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM HIGH SERVICE PUMP STATION PUMPS 1 THROUGH 5
ID-3	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM HIGH SERVICE PUMP STATION PUMPS 6 THROUGH 9
ID-4	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM HIGH SERVICE PUMP STATION METER VAULT
IE-1	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM FILTRATE LIFT STATION
IF-1	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM SODIUM HYPOCHLORITE FEED SYSTEM 1
IF-2	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM SODIUM HYPOCHLORITE FEED SYSTEM 2
IF-3	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM LAS FEED SYSTEM
IF-4	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM ALUM FEED SYSTEM 1
IF-5	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM ALUM FEED SYSTEM 2
IF-6	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM POLYMER FEED SYSTEM 1
IF-7	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM POLYMER FEED SYSTEM 2
IG-1	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM SLUDGE PUMP STATION
IG-2	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM GRAVITY THICKENER
IG-3	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM WASHWATER RECOVERY BASIN
IG-4	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM WASHWATER RECYCLE PUMP STATION
IH-1	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM BELT FILTER PRESS FEED PUMPS
IH-2	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM SLUDGE THICKENING POLYMER SYSTEM
IH-3	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM BELT FILTER PRESS
IL-1	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM RAW WATER PUMP STATION
IL-2	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM RAW WATER CHEMICAL INJECTION
IN-1	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM COPPER ION GENERATION SYSTEM
IN-2	PROCESS MECHANICAL AND INSTRUMENTATION DIAGRAM SODIUM PERMANGANATE FEED SYSTEM
IZ-1	INSTALLATION DETAIL 1
IZ-2	INSTALLATION DETAIL 2
IZ-3	INSTALLATION DETAIL 3
IZ-4	INSTALLATION DETAIL 4
IZ-5	INSTALLATION DETAIL 5
IZ-6	INSTALLATION DETAIL 6
IZ-7	INSTALLATION DETAIL 7
IZ-8	INSTALLATION DETAIL 8
IZ-9	INSTALLATION DETAIL 9
IZ-10	INSTALLATION DETAIL 10
IZ-11	INSTALLATION DETAIL 11
IZ-12	INSTALLATION DETAIL 12
IZ-13	INSTALLATION DETAIL 13
IZ-14	INSTALLATION DETAIL 14
IZ-15	INSTALLATION DETAIL 15
IZ-16	INSTALLATION DETAIL 16
IZ-17	INSTALLATION DETAIL 17
IZ-18	INSTALLATION DETAIL 18
IZ-19	INSTALLATION DETAIL 19
IZ-20	INSTALLATION DETAIL 20

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	FBF	AKM	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER
 DRAWN BY: K. REESE
 SHEET CHK'D BY: S. STEWART
 CROSS CHK'D BY: A. KARAMALEGOS
 APPROVED BY: S. STEWART
 DATE: DECEMBER 2021



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CITY OF GEORGETOWN, TEXAS
**SOUTH LAKE
 WATER TREATMENT PLANT**

SHEET INDEX III

G-3

PROJECT NO.	2048-248929
FILE NAME:	GOO1NFIN.DWG
SHEET NO.	G-3



LANDSCAPE & DRAINAGE SYMBOLS

SYMBOL	FEATURE
	BUILDING OR STRUCTURE FOOTPRINT
	TREE, SIZE & TYPE
	TREE PROTECTION
	TREE TO BE REMOVED
	EDGE OF WOODS OR BRUSH
	DIRECTION OF FLOW FOR STORMWATER
	SILT FENCE
	ROCK BERM
	EROSION CONTROL BLANKET
	STABILIZED CONSTRUCTION ENTRANCE

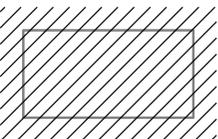
SURFACE ELEVATION SYMBOLS

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

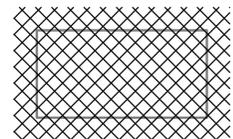
UNDERGROUND/OVERHEAD UTILITY SYMBOLS

SYMBOL	FEATURE
	WASTEWATER & MANHOLE
	STORM DRAIN & MANHOLE
	WATER LINE W/FIRE HYDRANT ASSEMBLY (INCLUDES VALVE)
	ELECTRICAL CABLE/DUCT
	OVERHEAD ELECTRIC
	TELEPHONE
	OVERHEAD TELEPHONE
	GAS LINE
	LIGHT POLE
	POWER POLE W/GUY WIRE

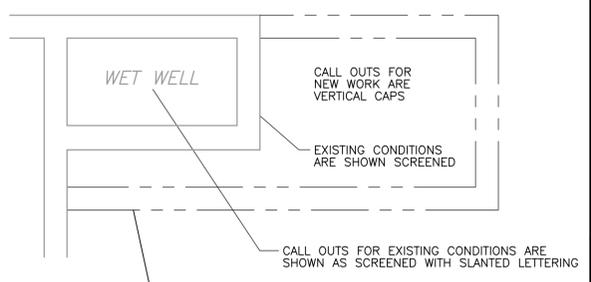
ITEMS TO BE REMOVED



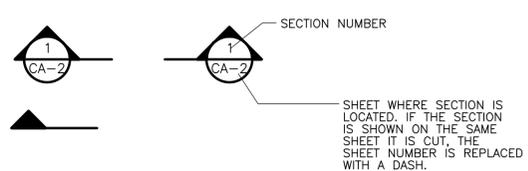
ITEMS TO BE DEMOLISHED



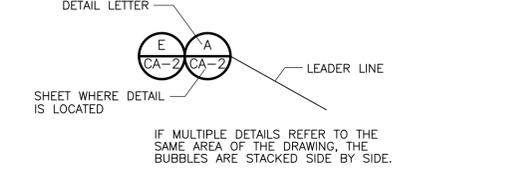
EXISTING OR FUTURE CONDITION DESIGNATION



SECTION CUT SYMBOLS



DETAIL CALL OUT SYMBOLS



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

3/4" = 1'-0"

DETAIL

3/4" = 1'-0"

* 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.

MB-2

DISCIPLINE	AREA CODE
G	GENERAL
C	CIVIL
A	ARCHITECTURAL
S	STRUCTURAL
M	PROCESS MECHANICAL
H	HVAC
PL	PLUMBING
PL	PLUMBING
F	FIRE PROTECTION
I	INSTRUMENTATION
A	TREATMENT STRUCTURE
B	DISINFECTION BASIN AND TRANSFER PUMP STATION
C	CLEARWELLS
D	HIGH SERVICE AND BACKWASH WATER PUMP STATIONS
E	FILTRATE LIFT STATION
F	CHEMICAL FACILITY
G	RESIDUALS
H	DEWATERING
I	ADMINISTRATION BUILDING
J	STORAGE BUILDING
K	ELECTRICAL BUILDING
L	RAW WATER PUMP STATION
M	RAW WATER ELECTRICAL BUILDING
N	RAW WATER CHEMICAL FEED
P	RAW WATER PIPELINE
R	GRADING
X	ELECTRICAL SCHEMATICS
Y	YARD PIPING
Z	STANDARD DETAILS

FIRE PROTECTION NOTES

- APPROVAL OF THIS SITE PLAN DOES NOT IMPLY APPROVAL TO INSTALL UNDERGROUND FIRE LINES. PRIOR TO INSTALLATION OF UNDERGROUND FIRE LINES, A SEPARATE PERMIT SHALL BE SUBMITTED, UNDER GROUND FIRE LINE SUPPLY.
- BACKFLOW PROTECTION WILL BE PROVIDED IN ACCORDANCE WITH THE CITY OF GEORGETOWN REQUIREMENTS WHEN REQUIRED. BACKFLOW PROTECTION WILL BE INSTALLED IN ACCORDANCE WITH THE DETAIL PROVIDED IN THE UTILITY DRAWINGS.
- ALL PRIVATE FIRE LINES AND WHAT THEY PROVIDE SERVICE TO WILL BE INSTALLED IN ACCORDANCE WITH NFPA 24 INSTALLATION OF PRIVATE SERVICE MAINS AND THEIR APPURTANCES.
- ALL TEES, PLUGS, CAPS, BENDS, REDUCERS, VALVES SHALL BE RESTRAINED AGAINST MOVEMENT. THRUST BLOCKING AND JOINT RESTRAINT WILL BE INSTALLED IN ACCORDANCE WITH NFPA 24.
- ALL UNDERGROUND SHALL REMAIN UNCOVERED UNTIL A VISUAL INSPECTION IS CONDUCTED BY THE CITY OF GEORGETOWN FIRE MARSHAL'S OFFICE (FMO). ALL JOINT RESTRAINTS AND THRUST BLOCKING SHALL BE UNCOVERED FOR VISUAL INSPECTION.
- ALL UNDERGROUND SHALL BE FLUSHED PER THE REQUIREMENTS OF NFPA STANDARD 24 AND WITNESSED BY GEORGETOWN FMO.
- ALL UNDERGROUND SHALL PASS A HYDROSTATIC TEST WITNESSED BY GEORGETOWN FMO. ALL JOINTS SHALL BE UNCOVERED FOR HYDROSTATIC TESTING. ALL PIPING AND ATTACHMENTS SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE TESTED AT 200 PSI, OR 50 PSI MORE THAN THE SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THE PRESSURE + OR - FOR 2 HOURS.
- FENCES, LANDSCAPING AND OTHER ITEMS WILL NOT BE INSTALLED WITHIN 3- FEET, AND WHERE THEY OBSTRUCT VISIBILITY OR ACCESS TO HYDRANTS, OR REMOVE FDOS.
- LICENSE REQUIREMENTS OF EITHER RME-U OR G. WHEN CONNECTING BY UNDERGROUND TO THE WATER PURVEYOR'S MAIN FROM THE POINT OF CONNECTION OR VALVE WHERE THE PRIMARY PURPOSE OF WATER IS FOR FIRE PROTECTION SPRINKLER SYSTEM.
- LA-507.5.7 CITY OF GEORGETOWN FIRE HYDRANT COLOR CODE SYSTEM. PRIVATE FIRE HYDRANT MAINTENANCE SHALL BE IN ACCORDANCE WITH NFPA 291.
 - ALL PRIVATE HYDRANT BARRELS WILL BE PAINTED RED WITH THE BONNET PAINTED USING THE HYDRANT FLOW STANDARD IN PARAGRAPH C OF THIS SECTION TO INDICATE FLOW. IT WILL BE THE CUSTOMER'S RESPONSIBILITY TO TEST AND MAINTAIN THEIR PRIVATE HYDRANTS(S).
 - ALL PRIVATE FIRE HYDRANTS SHOULD BE INSPECTED, MAINTAINED, AND FLOW TESTED ANNUALLY, AND COLOR CODED TO INDICATE EXPECTED FLOW FROM THE HYDRANT DURING NORMAL OPERATION. SUCH COLOR APPLIED TO THE FIRE HYDRANT BY PAINTING THE BONNET THE APPROPRIATE COLOR FOR THE EXPECTED FLOW CONDITION.
 - HYDRANT FLOW CODING STANDARDS. PUBLIC HYDRANT BARRELS WILL BE PAINTED SILVER, THE HYDRANTS WILL BE FLOW TESTED, AND THE BONNET PAINTED USING THE HYDRANT FLOW STANDARD IN AS FOLLOWS AT 20 PSI RESIDUAL FLOW COLOR:

GREATER THAN 1500 GPM	BLUE
1000 - 1500 GPM	GREEN
500 - 999 GPM	RED
LESS THAN 500 GPM	ORANGE
NOT WORKING	BLACK OR BAGGED
 - AT THE CONCLUSION OF CONSTRUCTION, FIRE HYDRANTS SHALL BE FLOW TESTED AND COLOR CODED IN ACCORDANCE WITH THE CITY'S STANDARDS, AND RESULTS SHALL BE EMAILED TO THE FIRE DEPARTMENT. IFC-LA-507.5.7 FIRE HYDRANT SYSTEMS.

GENERAL NOTES

- 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.
- 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.
- 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
FRONTIER	512-869-2231
PEDERNALES ELECTRIC CO-OP	877-372-0391
CITY OF GEORGETOWN ELECTRIC ENGINEERING	512-930-3651
TEXAS ONE CALL	811 OR 800-344-8377
- 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.
- 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.
- 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.
- CONTRACTOR SHALL PARTICIPATE IN A PRE-CONSTRUCTION MEETING WITH THE OWNER, ENGINEER, AND OTHER AFFECTED PARTIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
- 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.
- NO BLASTING WILL BE ALLOWED.
- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF EACH SEDIMENTATION/EROSION CONTROL MEASURE ON THIS PROJECT.
- 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.
- THE CONTRACTOR SHALL GIVE THE OWNER A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. THE PHASES OF CONSTRUCTION ARE AS FOLLOWS:
 - INSTALL EROSION AND SEDIMENTATION CONTROL.
 - INSTALL TREE PROTECTION.
 - SITE VISIT BY OWNER'S INSPECTOR.
 - AFTER INSPECTOR APPROVAL, BEGIN CONSTRUCTION.
 - UPON CONSTRUCTION COMPLETION, RESTORE ALL DISTURBED AREAS.
 - ARRANGE FOR FINAL INSPECTION.
 - REMOVE TEMPORARY EROSION CONTROL MEASURES.
- ALL EXISTING UTILITIES, STRUCTURES, AND PIPES SHALL BE PROTECTED BY CONTRACTOR.
- CARE SHALL BE TAKEN TO PROTECT EXISTING FACILITIES.
- FINISHED GRADES SHALL SLOPE UNIFORMLY.
- TRACK EQUIPMENT WILL NOT BE ALLOWED ON PAVED ROADWAYS WITHOUT APPROPRIATE PROTECTION FOR THE PAVEMENT AS APPROVED BY THE ENGINEER.
- NOT USED.
- 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.
- ALL POTABLE WATER PIPING SHALL BE RESTRAINED PER AWWA GUIDELINES WITH A MINIMUM FACTOR OF SAFETY OF TWO. PROCESS PIPING RESTRAINED JOINTS SHALL BE PROVIDED AT ALL FITTINGS, AS DESCRIBED BELOW, UP TO THE FIRST JOINT OF PIPE WITHOUT A FITTING, AND SHALL BE DESIGNED PER AWWA GUIDELINES WITH A MINIMUM FACTOR OF SAFETY OF TWO. FITTINGS INCLUDE ALL VERTICAL AND HORIZONTAL CHANGES IN PIPE DIAMETER (REDUCERS), OR DIRECTION (E.G. TEES, BENDS, ELBOWS, AND CROSSES), PLUGS, VALVES, OTHER LOCATIONS SHOWN ON THE DRAWINGS, AND ON ALL BURIED PIPING HAVING FLEXIBLE JOINTS. JOINTS SHOULD BE DESIGNED TO PREVENT THE PIPE FROM MOVING WHEN SUBJECTED TO OPERATING AND TEST PRESSURES. RESTRAINED JOINTS SHALL HAVE CADMIUM PLATED OR OTHER APPROVED CORROSION RESISTANT BOLTS, NUTS, ETC. RESTRAINED JOINTS SHALL BE "FLEX-RING" OR "LOK-RING" BY AMERICAN CAST IRON PIPE COMPANY, TR FLEX BY U.S. PIPE COMPANY, OR AN APPROVED EQUAL.
- ALL CONSTRUCTION MATERIAL/DEBRIS SHALL BE PLACED IN AN ON-SITE CONTAINER AND DISPOSED OF PROPERLY AT AN AUTHORIZED LANDFILL.
- 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 O1710.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING FACILITIES (SIGNS, UTILITIES, POLES, STRUCTURES, ETC). NOT ALL FACILITIES, ETC. ARE SHOWN.
- ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ANY EXISTING FENCES, WALLS, AND FACILITIES DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ALL DISTURBED AREAS SHALL BE GRADED, HYDROMULCHED OR SODDED, AS INDICATED ON THE DRAWINGS AND RESTORED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL FOLLOW SEQUENCE OF CONSTRUCTION SPECIFIED IN SECTION CIP3 AND SHALL NOT DEVIATE WITHOUT WRITTEN AUTHORIZATION FROM ENGINEER.
- UNLESS OTHERWISE NOTED, ALL FLEXIBLE COUPLINGS, FLANGE COUPLING ADAPTERS, ETC, SHALL BE RESTRAINED PER SPECIFICATIONS & DETAILS.
- 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.
- WHEN CONNECTING TO EXISTING MANHOLES, FIELD VERIFY EXISTING INVERT ELEVATIONS AND MODIFY PROPOSED INVERT ELEVATIONS TO ACHIEVE CONTINUOUS DOWNWARD SLOPE.
- 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.
- ALL CAPS/PLUGS 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.
- PIPE ALIGNMENT BENDS OF LESS THAN MANUFACTURER'S PUBLISHED ACCEPTABLE DEFLECTION MAY BE MADE BY DEFLECTING THE JOINTS PER ENGINEER'S APPROVAL. BENDS OF MORE THAN MANUFACTURER'S PUBLISHED ACCEPTABLE DEFLECTION SHALL BE MADE WITH MANUFACTURER'S STANDARD FITTINGS PER ENGINEER'S APPROVAL.
- PIPE SUPPORTS ARE SHOWN FOR VISUALIZATION PURPOSES. FINAL TYPES, COUNTS, SIZING, ETC. ARE A DELEGATED DESIGN DELIVERABLE. SEE SPECIFICATION SECTION 400507, HANGERS AND SUPPORTS FOR PROCESS PIPING.
- ALL PIPING UNDER STRUCTURES SHALL BE CONCRETE ENCASED, UNLESS SPECIFICALLY NOTED OTHERWISE.
- CLEARING IS NOT ALLOWED BETWEEN MARCH 1ST AND SEPTEMBER 1ST.



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	JBF	AKM	CONFORMED DRAWINGS
2	11/16/21	JBF	AKM	REVISED PER ADDENDUM NO. 2
5	12/17/21	JBF	AKM	REVISED PER ADDENDUM NO. 5
7	1/14/22	JBF	AMK	REVISED FOR ADDENDUM NO. 7

DESIGNED BY:	A. BROWER
DRAWN BY:	S. RAJI
SHEET CHK'D BY:	S. STEWART
CROSS CHK'D BY:	A. KARAMALEGOS
APPROVED BY:	S. STEWART
DATE:	DECEMBER 2021

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 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS
SOUTH LAKE
WATER TREATMENT PLANT

PROJECT NO.	2048-248929
FILE NAME:	G006NFGN.DWG
SHEET NO.	G-6

ABBREVIATIONS

#	NUMBER	CGFB	CEMENTITIOUS GLASS FIBER BOARD	E	EMERGENCY WATER	GP	GLASS PIPE	MAS	MASONRY	PL	PROPERTY LINE	SCB	SCREENING CONVEYOR BELT	U	HEAT TRANSFER COEFFICIENT
&	AND	CGV	CHLORINE GAS (VACUUM)	EAT	ENTERING AIR TEMPERATURE	GPD	GALLONS PER DAY	MATL	MATERIAL	PLC	PROGRAMMABLE LOGIC CONTROLLER	SCJ	SLAB CONTROL JOINT	UC	UNDERCUT
<	ANGLE	CH	CONCRETE HARDENER	EB	EXPANSION BOLT	GPM	GALLONS PER MINUTE	MAU	MAKE UP AIR UNIT	PLK	PLANK	SCL	SCRUBBING LIQUID	UD	UNDERDRAIN
Ø	AT	CHAM	CHAMFER	EC	EMPTY CONDUIT	GR	GRADE	MAX	MAXIMUM	PLP	POLYPHOSPHATE	SCR	SCREENING DEVICE	UGND	UNDERGROUND
2S1W	TWO SPEED, ONE WINDING	CHAN	CHANNEL	ECC	ELECTRIC CONDUIT	GRAV	GRAVITY	MB	MACHINE BOLTS	PLS	PLASTIC LINED STEEL	SGRN	SCRUBBING LIQUID	UGND	UNDERGROUND TELEPHONE CABLE
2S2W	TWO SPEED, TWO WINDING	CHKD	CHECKED	ED-F	EQUIPMENT DRAIN (FLUSH TYPE)	GRCP	GRIT REMOVAL CHAMBER	MBS	THOUSAND BTU PER HOUR	PLT	PLANT	SCV	SILENT CHECK VALVE	UH	UNIT HEATER
2S2W	TWO SPEED, TWO WINDING	CHL	CHLORINATOR	ED-O	EQUIPMENT DRAIN (EXTENDED TYPE-OPEEN)	GRS	GRIT REMOVAL PUMPS	MBH	MANUAL BAR SCREEN	PLW	PLANT WATER	SD	STORM DRAIN	UL	UNDERWRITERS LABORATORY
A	AMP (COMPRESSED)	CHR	CHLOROPRENE RUBBER (NEOPRENE)	ED-S	EQUIPMENT DRAIN (EXTENDED TYPE-SEALED)	GRS	GALVANIZED RIGID STEEL	MC	STEEL MISCELLANEOUS CHANNEL	PLYWD	PLYWOOD	SD	SUPPLY DIFFUSER	UN	UNION
A, AMP	AMPERE	CI	CAST IRON	EDH	ELECTRIC DUCT HEATER	GRTG	GRATING	MCC	MOTOR CONTROL CENTER	PM	PRESSED METAL	SE	SECONDARY	UNO	UNLESS NOTED OTHERWISE
A/C	AIR CONDITIONING	CIGL	CAST IRON PIPE GLASS LINED	EF	EACH FACE	GRS	GRIT SCREEN	MCJ	MASONRY CONTROL JOINT	PNL	PANEL	SEC	SECONDARY	UP/C	UNPLASTICISED POLYVINYL CHLORIDE
AA	AERATION AIR	CIP	CAST IN PLACE	EFF	EFFLUENT	OSK	GASKET	ME	METHANOL	POJ	PUSH ON JOINT	SEC-1	PER SECOND	UR	URNAL
AB	ANCHOR BOLT	CIR	CIRCLE	EFM	EFFLUENT FLOW METER	GV	GATE VALVE	MEAS	MEASURE	POLY	POLYETHYLENE	SEC-2	SECTION		
ABA	AEROBIC BASIN AERATOR	CIRC	CIRCUMFERENTIAL	EG	EMERGENCY GENERATION SYSTEM	GYP	GYPSPUM	MECH	MECHANICAL	POLY	POLYPROPYLENE	SEC-3	SECTION		
ABC	ASBESTOS CEMENT	CIS	CAST IRON SOIL PIPE	EG	EXHAUST GRILLE	HAS	HEADED ANCHOR STUD	MEMB	MEMBRANE	POM	POLYOXYMETHYLENE	SEF	SECONDARY EFFLUENT		
ABDN	ABANDON	CLC	CELLULOSIC MASONRY UNIT	EG	EQUIPMENT GROUNDING CONDUCTOR	HG	HEATING COIL	MEMB	MEMBRANE	POT	POINT OF TANGENCY	SEJ	SLAB EXPANSION JOINT		
ABS	ACRYLONITILE-BUTADIENE-STYRENE	CJ	CONSTRUCTION JOINT	EGC	ELEVATED GEAR OPERATOR	HG	HEATING COIL	MFD	MANUFACTURED	POH	POTASSIUM HYDROXIDE	SF	SEAMLESS FLOORING		
ABV	ABOVE	CKT	CIRCUIT	EGO	ELEVATED GEAR OPERATOR	HM	HEAVY DUTY	MFG	MANUFACTURING	POH	POTASSIUM HYDROXIDE	SF	SUPPLY FAN	V	VOLTS
ACCU	AIR CONDITIONING CONDENSING UNIT	CL	CENTERLINE	EL	ELEVATION	HD	HIGH DENSITY POLYETHYLENE	MFG	MANUFACTURING	PP	POWER POLE	SF	SILT FENCE	VA-H	VENT AIR
ACCV	AIR CUSHION CHECK VALVE	CL2	CHLORINE SYSTEM	ELEC	ELECTRIC (AL)	HDR	HEADER	MFR	MANUFACTURER	PPB	PARTS PER BILLION	SFR	SYNTHETIC FIBER REINFORCED	VA-M	MOTOR VALVE OPERATOR
ACMU	ACOUSTICAL MASONRY UNIT	CLC	CELLULOSIC MASONRY UNIT	ELEV	ELEVATOR	HDR	HEADER	MGD	MILLIGRAMS PER LITER	PFM	PARTS PER MILLION	SG	SUPPLY GRILLE	VA-P	PNEUMATIC VALVE OPERATOR
ACP	ASBESTOS CEMENT UNIT	CL2S	CHLORINE (LIQUID)	EMERG	EMERGENCY	HCL	HYDROCHLORIC ACID	MH	MANHOLE	PR	PAIR	SG-C	SLUICE GATE - MANUAL CRANK OPERATOR	VA-S	SOLENOID VALVE OPERATOR
ACT	ACOUSTICAL TILE	CL2S	CHLORINE SOLUTION	ENGR	ENGINEER	HD	HEAVY DUTY	MHS	METAL HOSE	PR	PRETREATED WATER SYSTEM, PAIR	SG-C	SLUICE GATE - MANUAL CRANK OPERATOR	VAC	VACUUM
ACU	AIR CONDITIONING UNIT	CL2V	CHLORINE VENT	ENT	ENTERING, ENTRANCE	HDPE	HIGH DENSITY POLYETHYLENE	MIN	MINIMUM	PRC	POINT OF REVERSE CURVE	SG-HW	SLUICE GATE - HAND WHEEL OPERATOR	VAR	VARIOUS/VARIABLE
AD	ACCESS DOOR	CLF	CURRENT LIMITING FUSE	EOP	EDGE OF PAVEMENT	HDR	HEADER	MIS	MISCELLANEOUS	PRC	PRECAST	SG-M	SLUICE GATE - MOTOR OPERATOR	VAV	VARIABLE AIR VOLUME
ADJL	ADJUNCTION	CLH	CELLULOSE	EP	ELECTROPNEUMATIC	HDRW	HARDWARE	MISC	MISCELLANEOUS	PRF	PRE-FABRICATED	SGT	STRUCTURE GLAZED FACING TILE	VBF	VOLUME BOX
ADH	ADHESIVE	CLJ	CONTROL JOINT	EP	ELECTROPNEUMATIC	HDRW	HARDWARE	MISC	MISCELLANEOUS	PRF	PRE-FABRICATED	SGR	SLUDGE GRINDER	VB	VAPOR BARRIER
ADJ	ADJUSTABLE, ADJUST	CLKG	CAULKING	EPDM	ETHYLENE PROPYLENE RUBBER	HEX	HEXAGON	MJ	MIXED LIQUOR	PREST	PRESSURE TREATED	SH	SHIELDED	VBR	VACUUM BREAKER
ADPT	ADAPTER	CLR	CLEAR	EQ	EQUAL (LY)	HFAC	HARNESSED FLANGED ADAPTOR COUPLING	MM	MILLIMETER	PRIM	PRIMARY	SHC	SODIUM HYDROXIDE (CONCENTRATED)	VC	VICTUALIC COUPLING (SHOULDERED ENDS)
AFD	ADJUSTABLE FREQUENCY DRIVE	CLW	CLARIFIED WATER (CLARIFIER EFFLUENT)	EQPT	EQUIPMENT	HGR	HANGER	MO	MASONRY OPENING	PRMLD	PREMOLDED	SHD	SODIUM HYDROXIDE (DILUTED)	VC	VITRIFIED CLAY
AFF	ABOVE FINISHED FLOOR	CM	CORRUGATED METAL	EQV	EQUIVALENT	MOB	MOTOR OPERATED DAMPER	MOD	MOTOR OPERATED DAMPER	PRV	PRESSURE RELIEF VALVE	SHR	SHEET	VCP	VOLUME COMPOSITION TILER
AFG	ABOVE FINISHED GRADE	CMON	CONCRETE MONUMENT	ES	ESHAULT REGISTER	HGT	HIGHT	MON	MONUMENT	PRW	PRESSURE WASTE	SHT	SHEET	VCT	VOLUME DAMPER
AGG	AGGREGATE	CMP	CORRUGATED METAL PIPE	ES	EACH SIDE	HM	HOLLOW METAL	MOT	MOTOR	PS	PUMP STATION	SHR	SHEET	VCT	VOLUME DAMPER
AHP	AIR HORSEPOWER	CMU	CONCRETE MASONRY UNITS	ESMT	EASEMENT	HOA	HAND-OFF-AUTO	MPH	MILES PER HOUR	PS	PUMP STATION	SIM	SIMILAR	VE	VACUUM EXHAUST
AHU	AIR HANDLING UNIT	CND	CONDUIT	ESMT	EASEMENT	HOR	HORIZONTAL	MSC	MISCELLANEOUS	PS	PUMP STATION	SIM	SIMILAR	VE	VACUUM EXHAUST
AI	AIR INPUT, AIR INSTRUMENT	CNS	CONDENSATE RETURN	ESP	ESTIMATE SAMPLE PUMPS	HP	HIGH POINT	MRPP	METAL REINFORCED PLASTIC PIPE	PS	PUMP STATION	SIM	SIMILAR	VE	VACUUM EXHAUST
AL	ALUMINUM	CNS	CONDENSATE SUPPLY	ETC	ETCETERA (D)	HP	HIGH POINT	MSG	MOTORIZED SLUICE GATES	PSF	POUNDS PER SQUARE FOOT	SL	SLUDGE	VFD	VARIABLE FREQUENCY DRIVE
AL VT	ALUM VENT	CO	CLEAN OUT	ETC	ETCETERA	HPA	HIGH PRESSURE AIR	MTD	MOUNTING	PSI	POUNDS PER SQUARE INCH ABSOLUTE	SLG	SLIDE GATE	VIB	VIBRATION
ALS	ALUM SOLUTION	COL	COLUMN	EUH	ELECTRIC UNIT HEATER	HR	HANDRAIL	MTG	MOUNTING	PSIA	POUNDS PER SQUARE INCH ABSOLUTE	SLG-C	SLIDE GATE - MANUAL CRANK OPERATOR	VIPA	VIRGIN ISOPROPYL ALCOHOL
ALSS	ALUM SYSTEM	COMB	COMBINATION	EV	EVAPORATOR VENT	HS	HIGH SERVICE	MTL	METAL	PSIG	POUNDS PER SQUARE INCH GAGE	SLG-HW	SLIDE GATE - HAND WHEEL OPERATOR	VNBA	VIRGIN N. BUTYL ACETATE
ALT	ALTERNATE (ING)	COMP	COMPRESSION	EVA	ELECTRICAL GEAR ACTUATOR	HS	HIGH SERVICE	PT	POTENTIAL TRANSFORMER	PSIG	POUNDS PER SQUARE INCH GAGE	SLG-M	SLIDE GATE - MOTOR	VOL	VOLUME
ALT	ALTERNATE (ING)	COMP	COMPRESSION	EW	ELECTRIC WATER COOLER	HTW	HIGH TEMPERATURE HOT WATER	PT	POTENTIAL TRANSFORMER	PSI	POUNDS PER SQUARE INCH	SLV	SLEEVE	VSD	VARIABLE SPEED DRIVE
ALU	ALUMINUM SULFATE	CONC	CONCRETE	EW	ELECTRIC WATER COOLER	HVA	HYDRAULIC VALVE ACTUATOR	PTD	PAINTED	PS	PUMP STATION	SLV	SLEEVE	VT	VENT
ALUM	ALUM (CHEMICAL)	COND	CONDUCTIVITY	EXA	EXHAUST AIR	HVAC	HEATING, VENTILATING & AIR CONDITIONING	PTD	PAINTED	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
AMG	AMMONIA GAS	CONN	CONNECTION	EXA	EXHAUST AIR	HVAC	HEATING, VENTILATING & AIR CONDITIONING	PTD	PAINTED	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
AMU	AMMONIA LIQUID	CONST	CONSTRUCTION	EXH	EXHAUST	HW	POTABLE HOT WATER	PTD	PROTECTED WATER	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
AND	ANDZIDE	CONT	CONTINUOUS	EXP	EXPANDED	HWA	HIGH WATER ALARM	PUD	PERFORATED UNDERDRAIN	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
AO	ANALOG OUTPUT	COR	CORNER(S)	EXP	EXPANSION JOINT	HWA	HIGH WATER ALARM	PUE	PUBLIC UTILITY EASEMENT	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
AP	ACCESS PANEL	CORR	CORRUGATED	EXP JT	EXPANSION JOINT EXISTING	HWR	HOT WATER RETURN	PV	PLUG VALVE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
APPROX	APPROXIMATE (LY)	CORR	CORRUGATED	EXP JT	EXPANSION JOINT EXISTING	HWS	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
AR	ARCHITECT (URAL) (URE)	CPLG	CONCRETE PRESSURE PIPE	EXP JT	EXPANSION JOINT EXISTING	HW	HIGH PRESSURE WASHWATER	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ARCH	ARCHITECT (URAL) (URE)	CPT	CONTROL POWER TRANSFORMER	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ARND	AROUND	CPVC	CHLORINATED POLYVINYLCHLORIDE PIPE	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ARV	AIR RELEASE VALVE	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
AS	ACTIVATED SLUDGE, AIR SUPPLY	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
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ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
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ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP	SUMP PUMPS	VTR	VENT THRU ROOF
ASPH	ASPHALT	CR	CONCRETE RESIDUAL	EXP JT	EXPANSION JOINT EXISTING	HWT	HOT WATER SUPPLY	PVC	POLYVINYL CHLORIDE	PS	PUMP STATION	SMP</			

PIPE SCHEDULE

SERVICE ABBREVIATION	DESCRIPTION	PIPE MATERIAL	SPEC REFERENCE	ALTERNATE ALLOWED PIPE MATERIAL	ALTERNATE MATERIAL SPEC REFERENCE	OPERATING PRESSURE (PSIG)	TEST PRESSURE (PSIG)	MIN/MAX TEMPERATURE (F)	NOTES
BURIED (DIVISION 33, C- AND M-SHEETS)									
RW	TRANSMISSION AND VAULTS	DUCTILE IRON	W1	NONE	N/A	75	112.5	50/77	
FLW	BENEATH FILTER GALLERY	DUCTILE IRON	W1	CARBON STEEL	330524.23	10	15	50/77	
FLW	TO DISINFECTION BASIN AND VAULTS	DUCTILE IRON	W1	NONE		10	15	50/77	
FINW	TRANSMISSION	DUCTILE IRON	W1	NONE		210	315	50/77	
FINW	HSPS PUMP STATION HEADER AND VAULTS	DUCTILE IRON	W1	NONE		210	315	50/77	
FINW	TPS DISCHARGE TO CLEARWELL	DUCTILE IRON	W1	NONE		20	30	50/77	
FINW	CLEARWELL TO HSPS	DUCTILE IRON	W1	NONE		20	30	50/77	
BWW	PUMP STATION TO FILTER GALLERY	DUCTILE IRON	W1	NONE		20	30	50/77	
BWW	PUMP STATION HEADER	DUCTILE IRON	W1	NONE		20	30	50/77	
WBW	FROM BACKWASH GULLET TO WASHWATER COLLECTION BOX	DUCTILE IRON	W1	NONE		10	15	50/77	
RCW	FROM WASHWATER COLLECTION BOX	DUCTILE IRON	W1	NONE		20	30	50/77	
RCW	PUMPED FROM RECYCLE PS	DUCTILE IRON	W1	PVC AWWA C900	W2	30	45	50/77	
DR	BENEATH STRUCTURES	DUCTILE IRON	W1	NONE		10	15	50/77	
DR	PROCESS, >14"	DUCTILE IRON	W1	PVC AWWA C900	W2	10	15	50/77	
DR	PROCESS, 4-12"	DUCTILE IRON	W1	PVC AWWA C900	W2	10	15	50/77	
DR	<4"	PVC SCH 80	400531	NONE		10	15	50/77	
DR	FOUNDATION DRAINS	PVC AWWA C900	W2	NONE		10	15	50/77	
SL	FROM SED BASINS TO SLUDGE BOXES	DUCTILE IRON	W1	NONE		20	30	50/77	
SL	12" FROM SLUDGE BOXES TO SLUDGE PS	DUCTILE IRON	W1	PVC AWWA C900	W2	20	30	50/77	
SL	PUMPED FROM SLUDGE PS TO GT	DUCTILE IRON	W1	NONE		20	30	50/77	
TSL		DUCTILE IRON	W1	NONE		40	60	50/77	
SUPN		DUCTILE IRON	W1	NONE		10	15	50/77	
PPW	4-12"	DUCTILE IRON	W1	PVC AWWA C900	W2	70	105	50/77	
PPW	<4"	HDPE	330533.23	NONE		70	105	50/77	
PW	4-12"	DUCTILE IRON	W1	PVC AWWA C900	W2	70	105	50/77	
PW	<4"	HDPE	330533.23	NONE		70	105	50/77	
SHC		DUAL CONTAINED	400531	NONE		30	45	50/77	SEE NOTE 4
LAS		DUAL CONTAINED	400531	NONE		30	45	50/77	SEE NOTE 4
ALC		DUAL CONTAINED	400531	NONE		60	90	50/77	SEE NOTE 4
POLD		DUAL CONTAINED	400531	NONE		60	90	50/77	SEE NOTE 4
SPC		DUAL CONTAINED	400531	NONE		110	165	50/77	SEE NOTE 4
CION		DOUBLE CONTAINED	400531	NONE		70	105	50/77	SEE NOTE 4
SAN		PVC AWWA C900	W2	PVC ASTM D3034 SDR 26	WW2	10	15	50/77	
FLT	PUMPED FROM FILTRATE LS TO SANITARY	DUCTILE IRON	W1	PVC AWWA C900	W2	20	30	50/77	
SPL		PVC SCH 80	400531	NONE		*	*	50/77	SEE NOTE 8
ABOVE - GRADE (DIVISION 40, C- AND M-SHEETS)									
RW	PUMP HEADER IN VAULT	DUCTILE IRON	400519	NONE		75	112.5	50/77	
RW	UPSTREAM OF INFLUENT BOX	DUCTILE IRON	400519	NONE		100	150	50/77	
FLW	FILTER GALLERY	DUCTILE IRON	400519	CARBON STEEL	400524	10	15	50/77	
FINW	HSPS PUMP STATION HEADER	DUCTILE IRON	400519	NONE		210	315	50/77	
FINW	TPS PUMP STATION HEADER	DUCTILE IRON	400519	NONE		20	30	50/77	
BWW	PUMP STATION HEADER	DUCTILE IRON	400519	NONE		20	30	50/77	
BWW	FILTER GALLERY	DUCTILE IRON	400519	CARBON STEEL	400524	20	30	50/77	
WBW	FILTER GALLERY	DUCTILE IRON	400519	CARBON STEEL	400524	10	15	50/77	
RCW	PUMP STATION HEADER	DUCTILE IRON	400519	NONE		30	45	50/77	
DR	PROCESS, 4-12"	DUCTILE IRON	400519	NONE		10	15	50/77	
DR	<4"	GALVANIZED STEEL	400524	PVC SCH 80	400531	10	15	50/77	SEE NOTE 2
SL		DUCTILE IRON	400519	NONE		20	30	50/77	
SUPN		DUCTILE IRON	400519	NONE		10	15	50/77	
PPW	4-12"	DUCTILE IRON	400519	NONE		70	105	50/77	
PPW	<4"	GALVANIZED STEEL	400524	PVC SCH 80	400531	70	105	50/77	SEE NOTE 2
PW	4-12"	DUCTILE IRON	400519	NONE		70	105	50/77	
PW	<4"	GALVANIZED STEEL	400524	PVC SCH 80	400531	70	105	50/77	SEE NOTE 2
SHC		PVC SCH 80	400531	DUAL CONTAINED	400531	30	45	50/77	SEE NOTES 4 AND 5
LAS		PVC SCH 80	400531	DUAL CONTAINED	400531	30	45	50/77	SEE NOTES 4 AND 5
ALC		PVC SCH 80	400531	DUAL CONTAINED	400531	60	90	50/77	SEE NOTES 4 AND 5
POLD		PVC SCH 80	400531	DUAL CONTAINED	400531	60	90	50/77	SEE NOTES 4 AND 5
POLC		PVC SCH 80	400531	DUAL CONTAINED	400531	60	90	50/77	SEE NOTES 4 AND 5
SPC		PVC SCH 80	400531	DUAL CONTAINED	400531	110	165	50/77	SEE NOTES 4 AND 5
CION		PVC SCH 80	400531	NONE		70	105	50/77	SEE NOTES 4 AND 5
LPA		SST	400523	NONE		10	15	50/250	SEE NOTE 12
FLT	PUMP STATION HEADER	DUCTILE IRON	400519	NONE		20	30	50/77	
SPL		GALVANIZED STEEL	400524	PVC SCH 80, SEE NOTE 2	400531	*	*	50/77	SEE NOTES 2 AND 8

- NOTES:**
- SEE DIVISION 09 FOR PIPE PAINTING AND COATING REQUIREMENTS.
 - SEE CITY OF GEORGETOWN STANDARD SPECIFICATION CIP 12 FOR PIPE TESTING REQUIREMENTS.
 - PROVIDE AN INSULATED FLANGE DIELECTRIC ISOLATION KIT AND TRANSITION COUPLING AT EVERY LOCATION WHERE THERE ARE DISSIMILAR METALS DUE TO CONSTRUCTION MATERIAL CHANGE.
 - DUAL CONTAINED PVC REFERS TO SCHEDULE 80 PVC CONTAINMENT PIPE WITH PVC TUBING CARRIER. CHEMICAL PIPING SHALL BE DUAL CONTAINED WHERE INSTALLED IN ANY OF THE FOLLOWING LOCATIONS:
 - BURIED.
 - ABOVE GRADE OUTSIDE OF CONTAINMENT AREA.
 - ABOVE 7-FT FROM FINISHED FLOOR IN CONTAINMENT AREA (EXCEPT FOR CHEMICAL FILL PIPE).
 - CHEMICAL PIPING DOES NOT REQUIRE DUAL CONTAINMENT IF INSTALLED IN CONTAINMENT AREA BELOW 7-FT FROM FINISHED FLOOR, AND ON CHEMICAL FILL LINES.
 - REFER TO PLUMBING DRAWINGS AND SPECIFICATIONS FOR PLUMBING PIPING REQUIREMENTS.
 - SEE SECTION 400507 REGARDING PIPE STRESS ANALYSIS AND DELEGATED DESIGN OF PIPE SUPPORT SYSTEMS.
 - WHERE A SAMPLE LINE IS CONNECTED TO ANOTHER PROCESS LINE, OPERATING AND TEST PRESSURE TO MATCH THE CONNECTED PROCESS LINE FROM WHICH THE SAMPLE IS TAKEN.
 - SEE PIPE SPECIFICATIONS FOR LINING REQUIREMENTS.
 - INSULATION AND HEAT TRACE REQUIREMENTS PER DRAWINGS AND SPECIFICATIONS.
 - MAXIMUM FLOW VELOCITY IN LPA PIPING IS 4000 FEET PER MINUTE.
 - PROVIDE JOINT TYPES AND FITTING TYPES AS INDICATED BELOW UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR SPECIFICATIONS. PROVIDE FLANGED CONNECTIONS WHERE CONNECTING TO FLANGED VALVES OR EQUIPMENT.
 - BELOW GRADE PIPING: AS INDICATED ON DRAWINGS AND SPECIFICATIONS.
 - ABOVE GROUND DUCTILE IRON PIPE: PROVIDE FLANGED FITTINGS AND JOINTS.
 - ABOVE GROUND STAINLESS STEEL PIPE: SEE SECTION 400523.00.
 - ABOVE GROUND CARBON STEEL PIPE 2-INCHES OR LESS: THREADED JOINTS AND FITTINGS.
 - ABOVE GROUND CARBON STEEL PIPE GREATER THAN 2-INCHES PROVIDE: FLANGED FITTINGS. WELDED MAINFOLD PIPING IS ACCEPTABLE.
 - ABOVE GROUND GALVANIZED STEEL PIPE: THREADED FITTINGS AND JOINTS.
 - ABOVE GROUND PVC PIPE: BELL END PIPE, SOLVENT WELDED.
 - DOUBLE CONTAINMENT PIPING REFERS TO PREMANUFACTURED DOUBLE WALLED PIPING. CONTAINED PIPING SHALL BE INSTALLED WHERE THE CION PIPING IS
 - BURIED
 - ABOVE GRADE OUTSIDE OF CONTAINMENT AREA
 - IN VAULTS DESIGNED TO DRAIN RAINWATER

14. PIPE SHALL BE PAINTED IN ACCORDANCE WITH TCEQ 290.42".

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REV. NO.	DATE	DRWN	CHKD	REMARKS
B	NTP	JBF	AMK	FIELD ORDER NO. 1
A	1/19/22	JBF	AMK	CONFORMED DRAWINGS
2	11/16/21	JBF	AKM	REVISED PER ADDENDUM NO. 2
5	12/17/21	JBF	AKM	REVISED PER ADDENDUM NO. 5
6	1/06/22	JBF	AKM	REVISED PER ADDENDUM NO. 6

DESIGNED BY: A. BROWER
 DRAWN BY: S. RAJI
 SHEET CHK'D BY: A. KUMARI
 CROSS CHK'D BY: S. STEWART
 APPROVED BY: A. BROWER
 DATE: DECEMBER 2021

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 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS

**SOUTH LAKE
 WATER TREATMENT PLANT**

PIPE SCHEDULE

PROJECT NO. 2048-248929
 FILE NAME: G017NFPS.DWG
 SHEET NO.
G-17



GENERAL NOTES FOR YARD PIPING:

- FIELD VERIFY LOCATION, DEPTH, JOINT LOCATIONS AND TYPE, PIPE MATERIAL AND SIZE OF ALL KNOWN PIPES TO BE CONNECTED TO, CROSSED, ETC., PRIOR TO ORDERING MATERIAL OR DOING ANY NEW PIPE WORK.
- PIPELINE MATERIAL SHALL BE IN ACCORDANCE WITH PIPE SCHEDULE ON SHEET G-17.
- ALL YARD PIPING SYSTEMS (EXCEPT GRAVITY DRAINS) SHALL BE RESTRAINED UNLESS OTHERWISE NOTED.
- PIPING THRUST RESTRAINT SHALL BE ACCOMPLISHED USING RESTRAINED JOINTS, RESTRAINED FITTINGS AND VALVES. RESTRAINED DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS OF SPECIFICATION W1, PARAGRAPH W1.05.E, UNLESS NOTED OTHERWISE. MEGA-LUG SERIES 1100 RESTRAINED JOINTS, OR ENGINEER APPROVED EQUAL, MAY BE USED AT ALL FITTINGS, VALVES, HYDRANTS, AND OTHER APPURTENANCES.
- CONCRETE THRUST BLOCKS MAY BE USED FOR SPECIAL CONDITIONS WHEN APPROVED OR DIRECTED BY THE ENGINEER. REFER TO DETAILS AND NOTES SHOWN ON SHEET C2-11.
- CONTRACTOR SHALL DESIGN, FURNISH, INSTALL, AND MAINTAIN EXCAVATION SAFETY SYSTEMS AS SPECIFIED IN SECTION CIP11.
- ALL BURIED FITTINGS (VALVES, BENDS, TEES, HYDRANTS, ETC.) SHALL HAVE FACTORY RESTRAINTS, MECHANICAL JOINT OR RESTRAINED PUSH-ON CONNECTIONS.
- ALL PIPELINE STATIONING IS FOR THE PIPELINE ITSELF.
- MINIMUM DISTANCE FROM CENTERLINE OF TAP TO NEAREST JOINT SHALL BE PER PIPE MANUFACTURER'S RECOMMENDATIONS. ADJUST TAP LOCATION AS NECESSARY TO COMPLY. PROVIDE ALL FITTINGS, ETC., TO ADJUST NEW PIPE ALIGNMENT.
- CONTRACTOR SHALL REFER TO E/I DRAWINGS TO COORDINATE ELECTRICAL/INSTRUMENTATION CONDUITS AND DUCTS WITH YARD PIPING. CONTRACTOR SHALL ALSO COORDINATE CHEMICAL PIPING BANKS WITH E/I DUCT BANKS AND YARD PIPING.
- SOIL BORING LOCATIONS ARE SHOWN ON SHEET C-7. THE BORING LOGS ARE INCLUDED IN SPECIFICATION SECTION CIP4 FOR THE CONTRACTOR'S USE. GEOTECHNICAL REPORTS ARE AVAILABLE UPON REQUEST FROM THE OWNER AND THE ENGINEER FOR THE CONTRACTOR'S USE.
- UTILITIES AND PIPES TO BE DISTURBED BY NEW WORK SHALL BE PROTECTED.
- CONTRACTOR SHALL REPAIR ALL PAVEMENT DAMAGED DURING CONSTRUCTION. DAMAGED PAVEMENT SHALL BE SAW CUT AND PATCHED IN A RECTANGULAR SHAPE PERPENDICULAR TO CURBS AND STRUCTURES TO MATCH EXISTING CONDITIONS WHICH EXISTED PRIOR TO CONSTRUCTION. SEE DETAILS ON C2 SHEETS. CURBS AND GUTTERS, ETC., THAT ARE DAMAGED OR NEED TO BE REMOVED AS PART OF TRENCH EXCAVATION SHALL BE SAW CUT AND REPLACED PER CIVIL DETAILS. IF SAW CUT LINE FALLS WITHIN 2 FEET OF CURB OR STRUCTURE, REMOVE AND REPLACE PAVEMENT TO CURB OR STRUCTURE.
- CONTRACTOR SHALL REPAIR FENCING DAMAGED DURING CONSTRUCTION. DAMAGED FENCING SHALL RE PAIRED TO MATCH EXISTING CONDITIONS PRIOR TO CONSTRUCTION. ANY REMOVED FENCING SHALL BE DISPOSED OF AS WASTE.
- FINISHED GRADES SHALL SLOPE UNIFORMLY, LEAVING NO LOW AREAS TO POND WATER.
- THE REQUIREMENT OF THE OWNER/ENGINEER IS TO HAVE PIPELINES INSTALLED TO THE DEPTHS SHOWN ON THE DRAWINGS. THE FLOWLINE ELEVATIONS AND THE PIPELINE PROFILES SHOWN ON THE DRAWINGS ARE SHOWN TO EMPHASIZE THAT NO DIPS, SACS, HUMPS, OR OTHER IRREGULARITIES IN VERTICAL ALIGNMENT ARE ACCEPTABLE. THE PROFILES SHOWN ARE THE INTENDED PROFILES CONSIDERING TOPOGRAPHY, EXISTING KNOWN UTILITIES, AND OTHER KNOWN CONDITIONS. VARIANCES FROM PROFILES MAY BE NECESSARY IF OTHER UTILITIES OR OBSTRUCTIONS ARE ENCOUNTERED DURING WORK. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL KNOWN EXISTING UTILITIES PRIOR TO ORDERING MATERIALS AND INSTALLING THE PIPELINE SO THAT CONFLICTS CAN BE AVOIDED AND ACCEPTABLE PROFILES CAN BE ESTABLISHED PRIOR TO INSTALLATION OF THE PIPELINE. IF, FOR ANY REASON, THE PROFILE ELEVATIONS SHOWN OR THE NATURAL GROUND ELEVATIONS AT THE PIPE CENTERLINE WOULD RESULT IN LESS COVER THAN IS SHOWN, THE OWNER/ENGINEER RESERVES THE RIGHT TO MAKE REASONABLE ADJUSTMENTS IN THE PIPE PROFILES TO PROVIDE AN ACCEPTABLE COVER. NO PRICE ADJUSTMENTS WILL BE MADE FOR THESE SITUATIONS.
- UNLESS OTHERWISE NOTED, ALL FLEXIBLE COUPLINGS, FLANGE COUPLING ADAPTERS, ETC., SHALL HAVE HARNESS PER DETAILS ON MZ-7 AND AWWA M11.
- IN SITUATIONS WHERE THE PLANS INDICATE POSSIBLE SPACE CONFLICTS BETWEEN NEW BURIED PIPING AND EXISTING UTILITY PIPING, ELECTRICAL CONDUITS, ETC., INCLUDING LOCATIONS WHERE THE EXISTING PIPING WILL BE WITHIN THE LIMITS OF TRENCHING FOR THE NEW PIPE, THE CONTRACTOR SHALL DO THE FOLLOWING:
 - FIELD LOCATE EXISTING PIPING AND DETERMINE THE ACTUAL EXTENT AND NATURE OF CONFLICT, IF ANY
 - IF CONTRACTOR CAN "WORK AROUND" THE EXISTING PIPING, IN THE ENGINEER'S OPINION, THE EXISTING PIPING SHALL BE SUPPORTED AND PROTECTED AND KEPT IN SERVICE AS SPECIFIED ELSEWHERE
 - IF THERE IS AN UNWORKABLE CONFLICT, IN THE ENGINEER'S OPINION, THE CONTRACTOR SHALL PROPOSE A SOLUTION ACCEPTABLE TO THE ENGINEER AND ADJUST OR REROUTE THE NEW OR EXISTING PIPE AS NECESSARY TO ELIMINATE THE CONFLICT
 - THIS WORK WILL BE CONSIDERED TO BE PART OF THE BASIC CONTRACT WORK AND NO ADDITIONAL PAYMENT WILL BE MADE FOR ADJUSTMENTS/REROUTES FOR EXISTING PIPING SHOWN ON THE PLANS.
 - IN SITUATIONS SIMILAR TO THE ABOVE, BUT WHERE THE DRAWINGS DO NOT INDICATE A CONFLICT, SUCH AS IN THE CASE OF AN EXISTING LINE NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL FOLLOW THE SAME PROCEDURE AS ABOVE. UNDER THIS SITUATION, PAYMENT WILL BE MADE TO THE CONTRACTOR IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL PROPOSED AND EXISTING PIPING CROSSINGS MAY NOT BE SHOWN ON PROFILE SHEETS. REFER TO PLAN SHEETS FOR LOCATIONS OF ALL PIPING CROSSINGS.
- REFER TO VALVE SCHEDULE IN SECTION 400551 FOR VALVE OPERATOR REQUIREMENTS (MANUAL VERSUS MOTORIZED, ETC)
- AT LOCATIONS WHERE A BUTTERFLY VALVE IS SHOWN TO BE INSTALLED NEXT TO A TEE, CROSS, ETC., THE BVF SHALL BE INSTALLED FAR ENOUGH AWAY FROM THE FITTING OR PLUG THAT THE BVF DISC DOES NOT EXTEND TO WITHIN 12 INCHES OF THE FITTING'S MAIN FLOWSTREAM OR WITHIN 12 INCHES OF THE PLUG WHEN THE BVF IS IN THE FULL-OPEN POSITION. CONTRACTOR SHALL FURNISH AND INSTALL SPOOL PIECES AS NECESSARY TO PROPERLY LOCATE THE BVF AWAY FROM THE FITTING OR PLUG AS SPECIFIED HEREIN.
- YARD PIPING PROFILES ARE SET BY FLOWLINE (INVERT) ELEVATIONS. PROCESS MECHANICAL PIPING PROFILES/ELEVATIONS ARE GENERALLY SET BY PIPE CENTERLINE ELEVATIONS. WHERE YARD PIPING AND PROCESS MECHANICAL PIPING CONNECT, THE CONTRACTOR SHALL COORDINATE THE INTERFACE CONNECTION PROCESS SO THAT THERE WILL BE NO MISCONNECTS REQUIRING ADDITIONAL FITTINGS, ETC.
- ALL YARD PIPELINES WITH LESS THAN 3 FEET OF COVER AND ALL CHEMICAL LINES IN THE YARD SHALL BE CONCRETE ENCASED BELOW THE ROAD PAVEMENT IN ACCORDANCE WITH DETAILS B AND C ON SHEET C2-2 AND SIMILAR TO DETAIL A ON SHEET EZ-1, AS APPLICABLE.
- CONTRACTOR SHALL INSTALL TRACER WIRE AND ASSOCIATED TEST STATIONS FOR ALL YARD PIPELINES, INCLUDING THE RAW WATER LINE FROM THE LAKE TO THE WATER TREATMENT PLANT, IN ACCORDANCE WITH THE CITY STANDARD DESIGN DETAILS.
- PERFORM GEOPHYSICAL INVESTIGATION ACCORDING TO SECTION 31 20 00 - EARTHWORK PRIOR TO BACKFILLING ANY FOUNDATION EXCAVATION.
- FOR RAW WATER, ALL COMBINATION AIR VALVES SHALL BE SLOW-CLOSING, NON-SLAM TYPE (CAV2).

**Construction General Permit
TPDES General Permit TXR150000**

The SWP3 must include, at a minimum, the information described in this section.
 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;
 (d) the total number of acres of the entire property and the total number of acres where construction activities will occur, including off-site material storage areas, overburden and stockpiles of dirt, and borrow areas that are authorized under the permittee's NOI;
 (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) drainage patterns and approximate slopes anticipated after major grading activities;
 (ii) areas where soil disturbance will occur;
 (iii) locations of all major structural controls either planned or in place;
 (iv) locations where temporary or permanent stabilization practices are expected to be used;
 (v) locations of construction support activities, including off-site activities, that are authorized under the permittee's NOI, including material, waste, borrow, fill, or equipment storage areas;
 (vi) surface waters (including wetlands) either at, adjacent, or in close proximity to the site;
 (vii) locations where storm water discharges from the site directly to a surface water body or a municipal separate storm sewer system; and
 (viii) vehicle wash areas.
 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 permit 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, and
 (k) the notice of intent (NOI) and acknowledgement certificate for primary operators of large construction sites, and the site notice for small construction sites and for secondary operators of large construction sites.

2. A description of the best management practices (BMPs) that will be used to minimize pollution in runoff.
 The description must identify the general timing or sequence for 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 the manufacturer's or designer's specifications.
 (iii) Controls must be developed to minimize the offsite transport of litter, construction debris, and construction materials.
 (b) Erosion Control and Stabilization Practices
 The SWP3 must include a description of temporary and permanent erosion control and stabilization practices for the site, including a schedule of when the practices will be implemented. Site plans should ensure that existing vegetation 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 as soon as practicable in portions of the site where construction activities have temporarily ceased. Stabilization measures that provide a protective cover must be initiated as soon as practicable in portions of the site where construction activities have permanently ceased. Except as provided in (A) through (D) below, these measures must be initiated no more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

**Texas Commission on Environmental Quality
Water Pollution Abatement Plan
General Construction Notes**

- 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.
- All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.
- If any sensitive feature is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. The regulated activities near the sensitive feature may not proceed until the TCEQ has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality.
- No temporary aboveground hydrocarbon and hazardous substance storage tank system is installed within 150 feet of a domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- Prior to commencement of construction, all temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. Controls specified in the temporary storm water section of the approved Edwards Aquifer Protection Plan are required during construction. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. The controls must remain in place until disturbed areas are revegetated and the areas have become permanently stabilized.
- 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).
- 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.
- 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).
- All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.
- 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 be initiated as soon as practicable.
- The following records shall be maintained and made available to the TCEQ upon request: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; and the dates when stabilization measures are initiated.
- The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
 - A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
 - B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
 - C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office
 12100 Park 35 Circle
 Austin, Texas 78753
 Phone (512) 239-6731
 Fax (512) 239-4390

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

THRUST RESTRAINT NOTES:

- THE DISTANCES SHOWN ABOVE INDICATE THE MINIMUM REQUIRED RESTRAINED LENGTHS FOR THE FINISHED INSTALLATION. ADDITIONAL RESTRAINTS ARE REQUIRED IF TEMPORARY PLUGS OR OTHER FITTINGS ARE USED FOR PIPELINE TESTING. NO SEPARATE PAY.
- SEGMENTS OF PIPE IN VAULTS OR IN CASING PIPE DO NOT COUNT TOWARD THE REQUIRED RESTRAINED LENGTH.
- ALL FITTINGS, VALVES, HYDRANTS, AND OTHER APPURTENANCES SHALL BE RESTRAINED.
- THE END OF THE LINE SHALL BE RESTRAINED A MINIMUM DISTANCE EQUAL TO A DEAD END.
- VALVE LOCATIONS SHALL BE RESTRAINED IN BOTH DIRECTIONS A MINIMUM DISTANCE EQUAL TO A DEAD END.
- THE PRIMARY LENGTHS SHOWN ABOVE ARE BASED ON POLYETHYLENE ENCASED DUCTILE IRON PIPE WITH FOUR FEET OF COVER AND A FACTOR OF SAFETY OF 2.0 AT A PRESSURE OF 150 PSI.
- FOR ANY GIVEN PIPE MATERIAL, THE CONTRACTOR MAY PROPOSE ALTERNATE RESTRAINED LENGTHS FOR THE ENGINEER'S CONSIDERATION BY FILING A WRITTEN REQUEST PREPARED BY THE PIPE MANUFACTURER AND SUPPORTED BY DETAILED CALCULATIONS PREPARED AND SEALED BY A LICENSED ENGINEER. ALL SUCH CALCULATIONS SHALL BE BASED ON THE APPLICABLE TEST PRESSURE AND A FACTOR OF SAFETY OF 2.0.



RESTRAINED JOINT SCHEDULE	
BEND ANGLE OR FITTING DESCRIPTION	MINIMUM RESTRAINT LENGTH (FT) @ 4.0 FT BURIAL DEPTH FOR DI
	150 PSI TEST PRESSURE
11.25° - 42° HORIZONTAL BEND	10
22.50° - 42° HORIZONTAL BEND	21
45.00° - 42° HORIZONTAL BEND	42
90.00° - 42° HORIZONTAL BEND	102
	UPWARD DOWNWARD
11.25° - 42° VERTICAL BEND	10 45
22.50° - 42° VERTICAL BEND	21 91
42° TEE	20
DEAD END OR VALVE, 42°	456

RAW WATER RESTRAINED PIPE SECTIONS	
STARTING STATION	ENDING STATION
0+00.00	0+86.57
7+56.57	7+96.57
9+45.06	9+85.06
11+05.06	11+45.06
16+14.36	17+30.45
20+34.36	20+74.36
22+40.52	24+42.74
25+42.74	25+82.74
26+84.92	28+73.99
34+23.00	WTP

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	RSM	AMK	CONFORMED DRAWINGS
2	1/16/22	DWS	SAS	ADDENDUM No 2

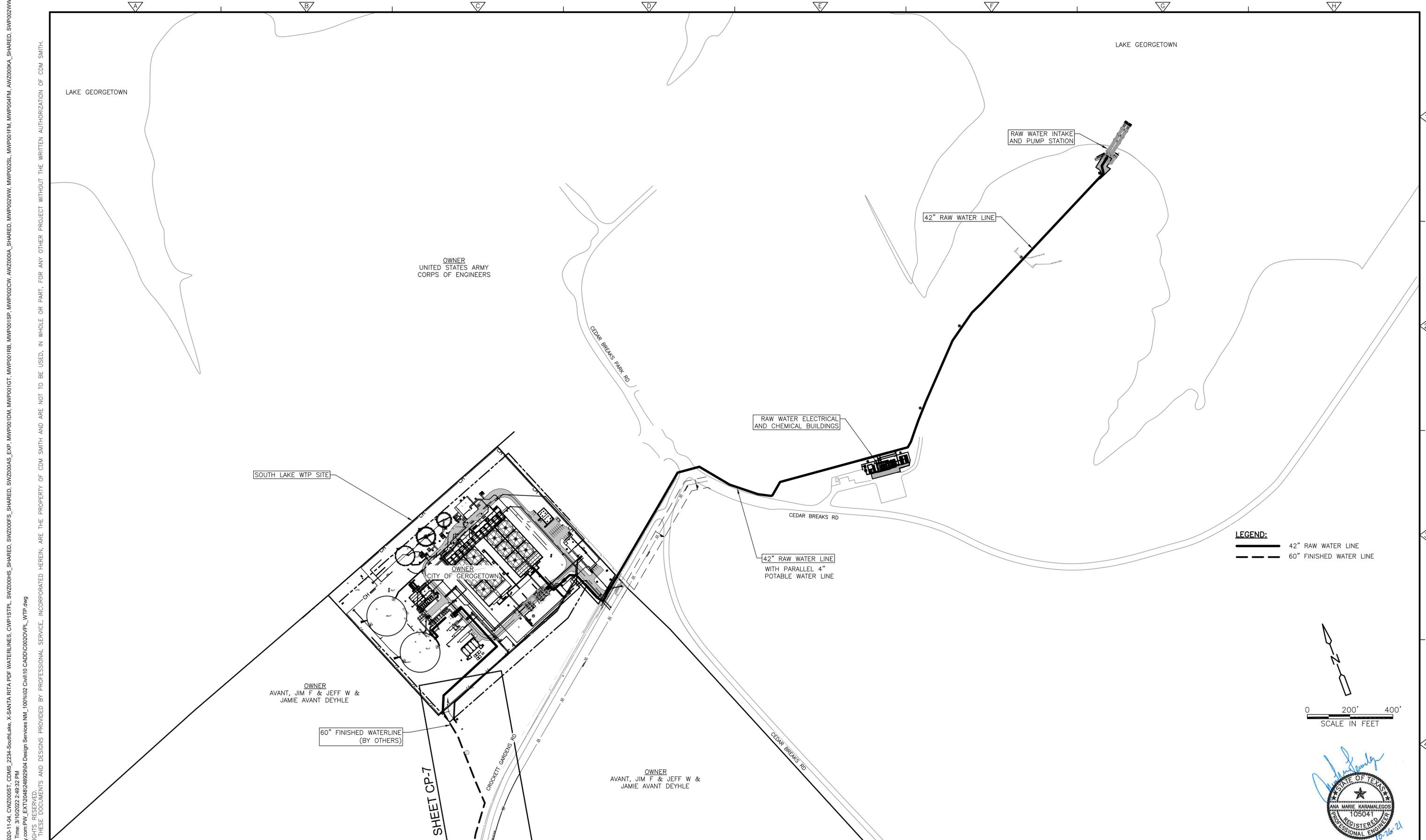
DESIGNED BY: A. KARAMALEGOS
 DRAWN BY: D. SANDEFUR
 SHEET CHK'D BY: A. BROWER
 CROSS CHK'D BY: A. RHAMES
 APPROVED BY: A. KARAMALEGOS
 DATE: DECEMBER 2021

CDM Smith
 9430 RESEARCH BLVD., SUITE 1-200
 Austin, TX 78759
 Tel: (512) 346-1100
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS
**SOUTH LAKE
 WATER TREATMENT PLANT**

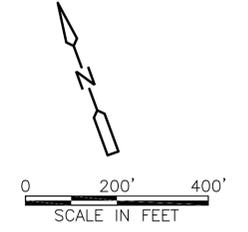
GENERAL CIVIL NOTES

PROJECT NO. 2048-248929
 FILE NAME: C001YPM1
 SHEET NO.
C-1



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LEGEND:
 ——— 42" RAW WATER LINE
 - - - 60" FINISHED WATER LINE



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	RSM	AMK	CONFORMED DRAWING

DESIGNED BY: A. KARAMEGOS
 DRAWN BY: D. SANDEFUR
 SHEET CHK'D BY: A. RHAMES
 CROSS CHK'D BY: A. BROWER
 APPROVED BY: A. KARAMEGOS
 DATE: DECEMBER 2021



CITY OF GEORGETOWN, TEXAS
**SOUTH LAKE
 WATER TREATMENT PLANT**

OVERALL PROJECT CIVIL PLAN

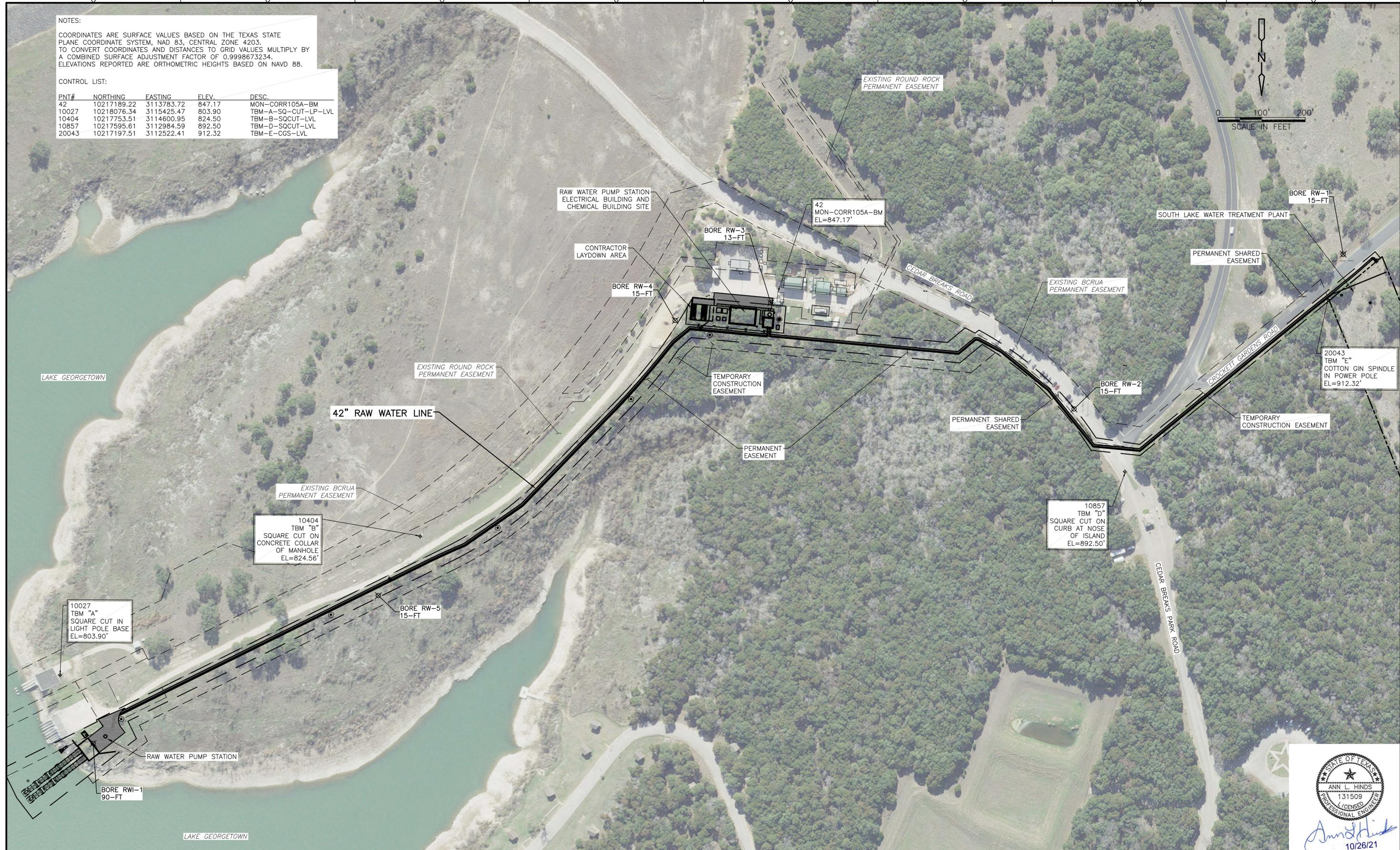
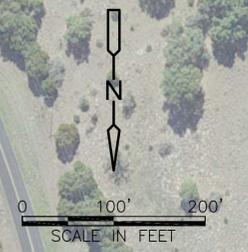
PROJECT NO. 2048-248929
 FILE NAME: C0020VPL_WTP
 SHEET NO.
C-2

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NOTES:
 COORDINATES ARE SURFACE VALUES BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, CENTRAL ZONE 4203. TO CONVERT COORDINATES AND DISTANCES TO GRID VALUES MULTIPLY BY A COMBINED SURFACE ADJUSTMENT FACTOR OF 0.9998673234. ELEVATIONS REPORTED ARE ORTHOMETRIC HEIGHTS BASED ON NAVD 88.

CONTROL LIST:

PNT#	NORTHING	EASTING	ELEV.	DESC.
42	10217189.22	3113783.72	847.17	MON-CORR105A-BM
10027	10218076.34	3115425.47	803.90	TBM-A-SQ-CUT-LP-LVL
10404	10217753.51	3114600.95	824.50	TBM-B-SQCUT-LVL
10857	10217595.61	3112984.59	892.50	TBM-D-SQCUT-LVL
20043	10217197.51	3112522.41	912.32	TBM-E-CGS-LVL



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	RSM	AMK	CONFORMED DRAWING

DESIGNED BY: A. HINDS
 DRAWN BY: D. SANDEFUR
 SHEET CHK'D BY: A. KARAMALEGOS
 CROSS CHK'D BY: A. WOEKLE
 APPROVED BY: A. HINDS
 DATE: OCTOBER 2021



CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

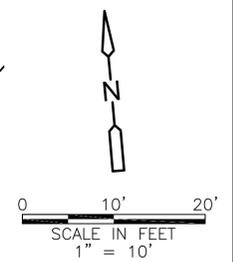
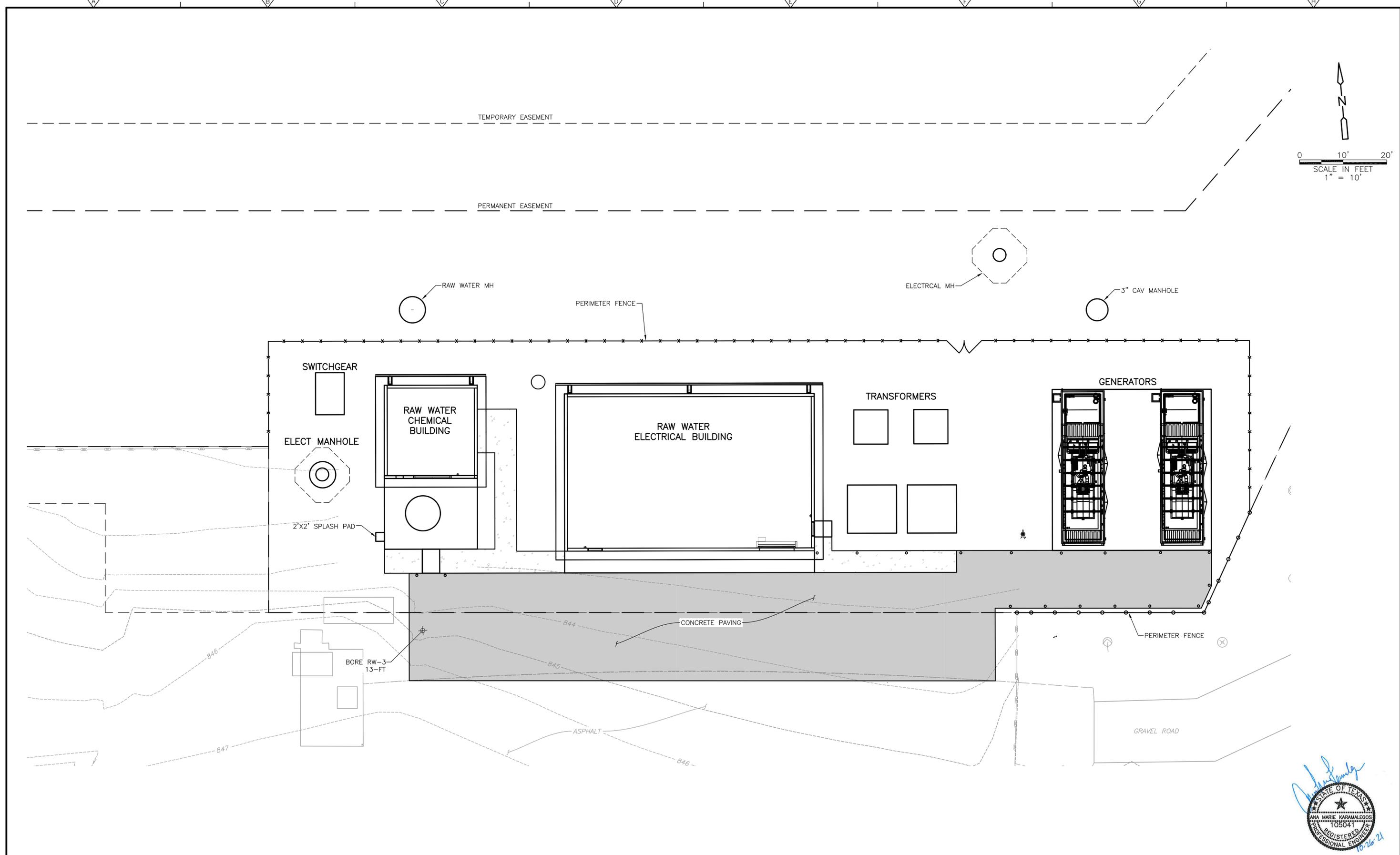
RAW WATER
 OVERALL SITE LAYOUT,
 CONTROL AND BORING PLAN

PROJECT NO. 2048-248929
 FILE NAME: CO08RWPL
 SHEET NO. C-8



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	RSM	AMK	CONFORMED DRAWING

DESIGNED BY: A. KARAMALEGOS
 DRAWN BY: D. SANDEFUR
 SHEET CHK'D BY: A. HINDS
 CROSS CHK'D BY: A. WOEKLE
 APPROVED BY: A. KARAMALEGOS
 DATE: OCTOBER 2021

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 9430 RESEARCH BLVD., SUITE 1-200
 AUSTIN, TX 78759
 TEL: (512) 346-1100
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

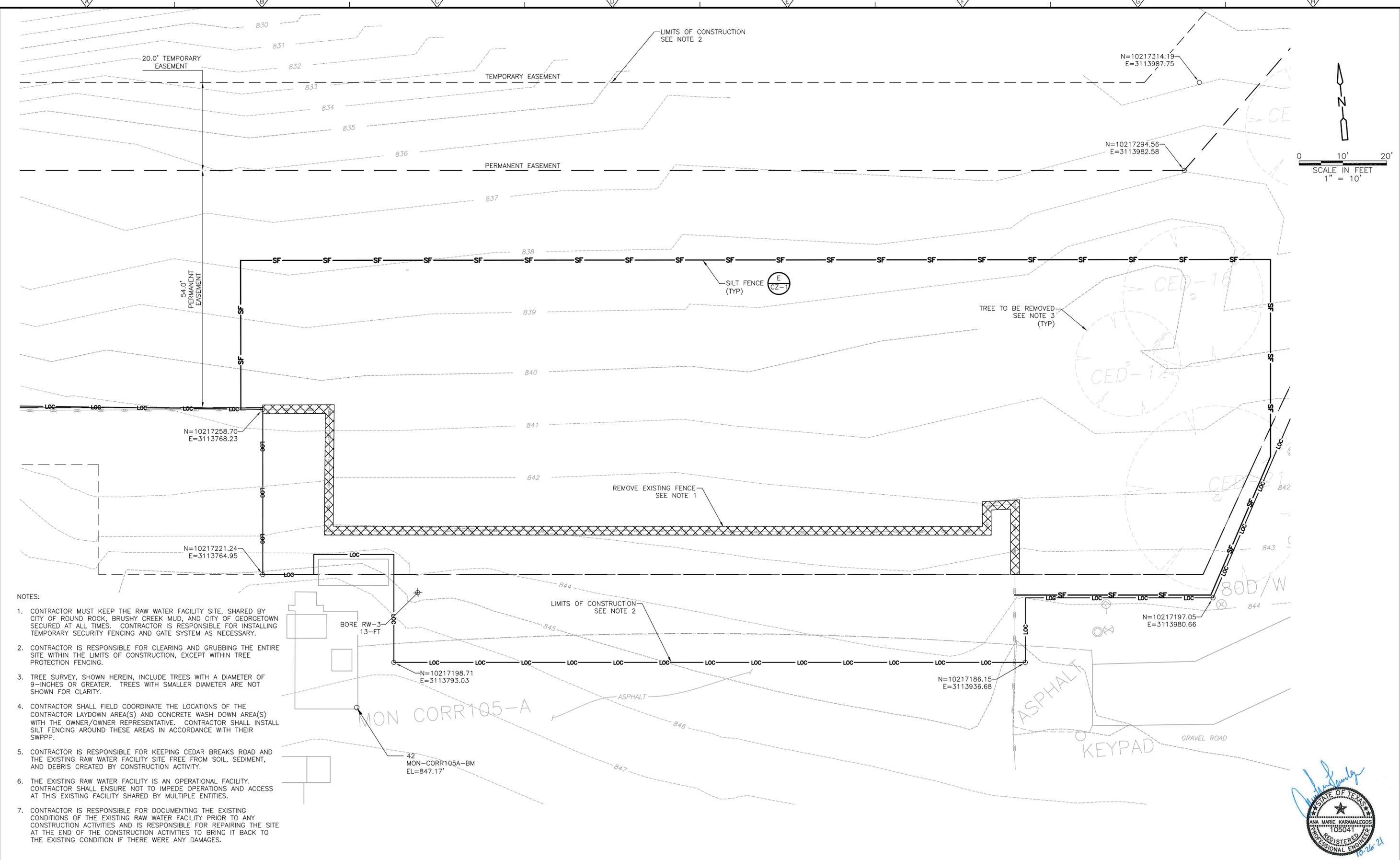
RAW WATER ELECTRICAL
 AND CHEMICAL BUILDINGS
 PROPOSED SITE PLAN

PROJECT NO. 2048-248929
 FILE NAME:
 SHEET NO.
 C-12



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- NOTES:
1. CONTRACTOR MUST KEEP THE RAW WATER FACILITY SITE, SHARED BY CITY OF ROUND ROCK, BRUSHY CREEK MUD, AND CITY OF GEORGETOWN SECURED AT ALL TIMES. CONTRACTOR IS RESPONSIBLE FOR INSTALLING TEMPORARY SECURITY FENCING AND GATE SYSTEM AS NECESSARY.
 2. CONTRACTOR IS RESPONSIBLE FOR CLEARING AND GRUBBING THE ENTIRE SITE WITHIN THE LIMITS OF CONSTRUCTION, EXCEPT WITHIN TREE PROTECTION FENCING.
 3. TREE SURVEY, SHOWN HEREIN, INCLUDE TREES WITH A DIAMETER OF 9-INCHES OR GREATER. TREES WITH SMALLER DIAMETER ARE NOT SHOWN FOR CLARITY.
 4. CONTRACTOR SHALL FIELD COORDINATE THE LOCATIONS OF THE CONTRACTOR LAYDOWN AREA(S) AND CONCRETE WASH DOWN AREA(S) WITH THE OWNER/OWNER REPRESENTATIVE. CONTRACTOR SHALL INSTALL SILT FENCING AROUND THESE AREAS IN ACCORDANCE WITH THEIR SWPPP.
 5. CONTRACTOR IS RESPONSIBLE FOR KEEPING CEDAR BREAKS ROAD AND THE EXISTING RAW WATER FACILITY SITE FREE FROM SOIL, SEDIMENT, AND DEBRIS CREATED BY CONSTRUCTION ACTIVITY.
 6. THE EXISTING RAW WATER FACILITY IS AN OPERATIONAL FACILITY. CONTRACTOR SHALL ENSURE NOT TO IMPEDE OPERATIONS AND ACCESS AT THIS EXISTING FACILITY SHARED BY MULTIPLE ENTITIES.
 7. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING THE EXISTING CONDITIONS OF THE EXISTING RAW WATER FACILITY PRIOR TO ANY CONSTRUCTION ACTIVITIES AND IS RESPONSIBLE FOR REPAIRING THE SITE AT THE END OF THE CONSTRUCTION ACTIVITIES TO BRING IT BACK TO THE EXISTING CONDITION IF THERE WERE ANY DAMAGES.

DESIGNED BY:	A. KARAMALEGOS
DRAWN BY:	D. SANDEFUR
SHEET CHK'D BY:	A. HINDS
CROSS CHK'D BY:	A. WOEKLE
APPROVED BY:	A. KARAMALEGOS
DATE:	OCTOBER 2021

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	RSM	AMK	CONFORMED DRAWING

CDM Smith

9430 RESEARCH BLVD., SUITE 1-200
 Austin, TX 78759
 Tel: (512) 346-1100
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

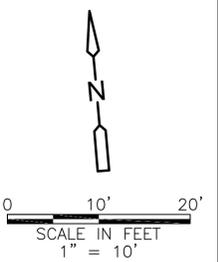
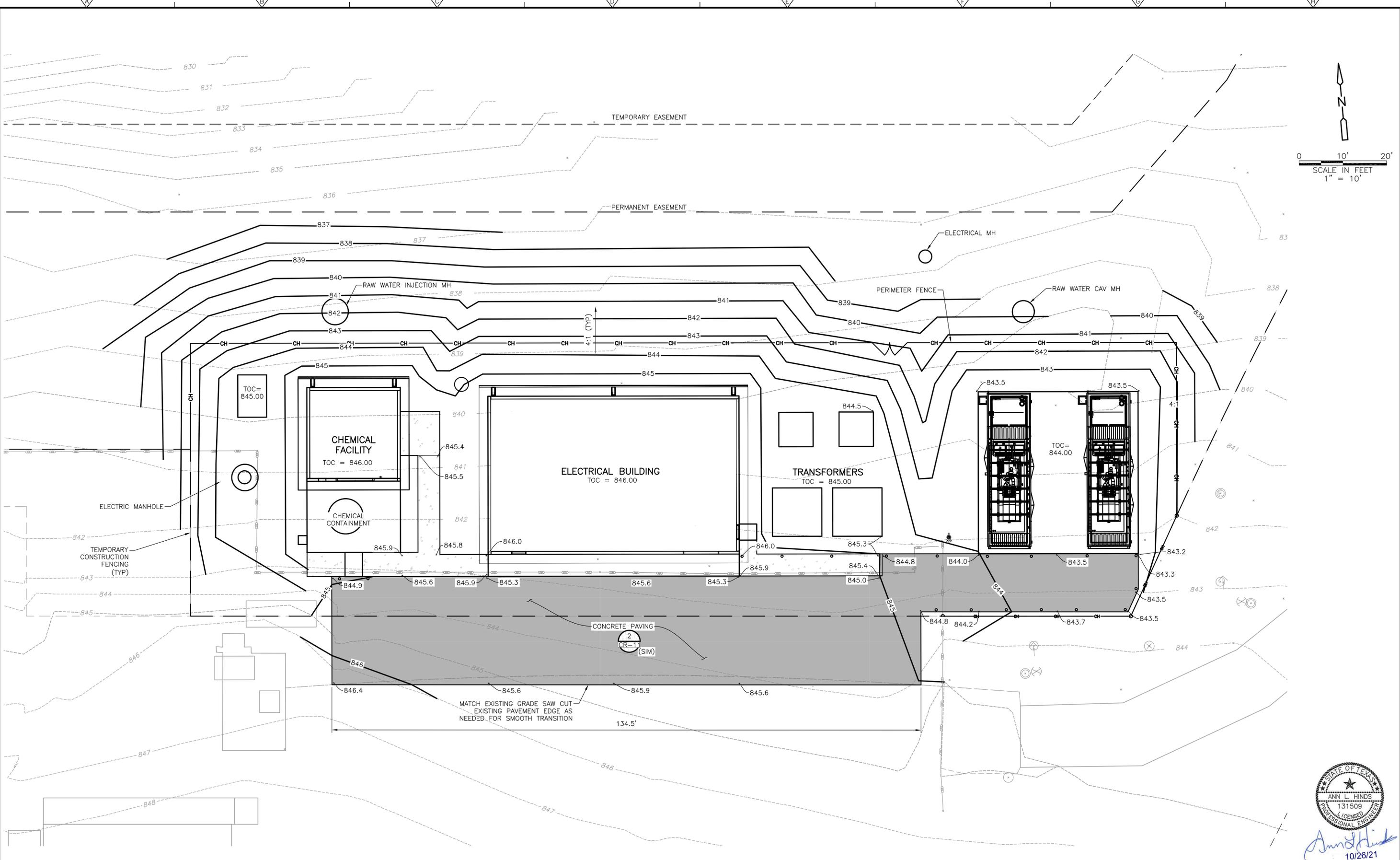
RAW WATER ELECTRICAL
 AND CHEMICAL BUILDINGS
 SITE CLEARING, DEMOLITION AND TEMPORARY
 EROSION AND SEDIMENTATION CONTROL PLAN

PROJECT NO.	2048-248929
FILE NAME:	
SHEET NO.	C-13



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	RSM	AMK	CONFORMED DRAWING

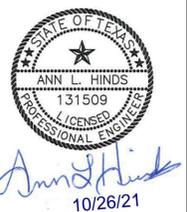
DESIGNED BY: A. HINDS
 DRAWN BY: D. SANDEFUR
 SHEET CHK'D BY: A. RHAMES
 CROSS CHK'D BY: A. WOEKLE
 APPROVED BY: S. HINDS
 DATE: OCTOBER 2021

CDM Smith
 9430 RESEARCH BLVD., SUITE 1-200
 AUSTIN, TX 78759
 TEL: (512) 346-1100
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

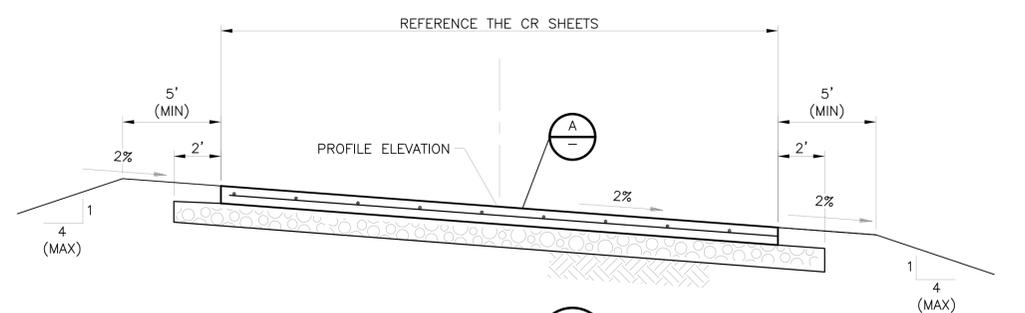
RAW WATER ELECTRICAL
 AND CHEMICAL BUILDINGS
 PAVING AND GRADING PLAN

PROJECT NO. 2048-248929
 FILE NAME:
 SHEET NO.
CR-10

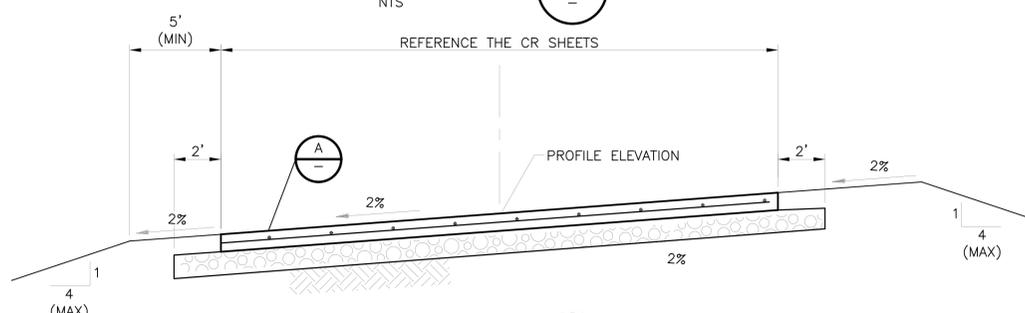


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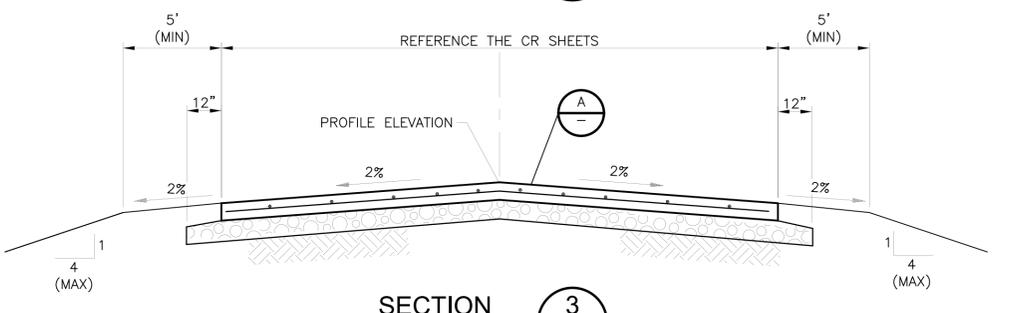
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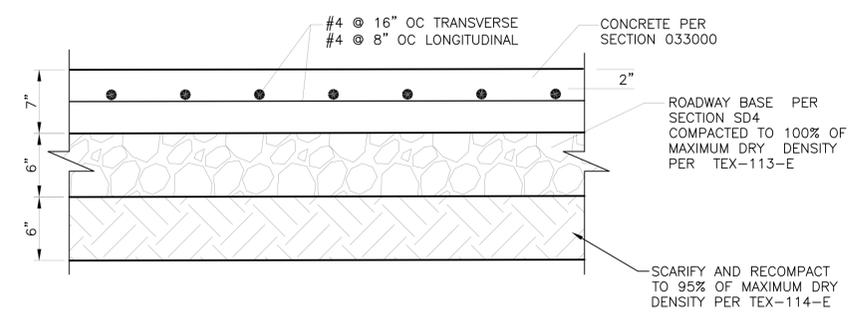
SECTION 1
NTS



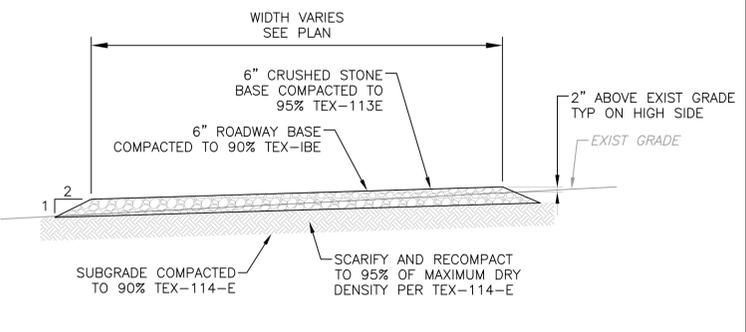
SECTION 2
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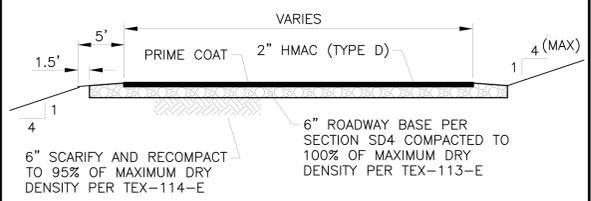
SECTION 3
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TYPICAL CONCRETE PAVING SECTION
DETAIL A
NTS

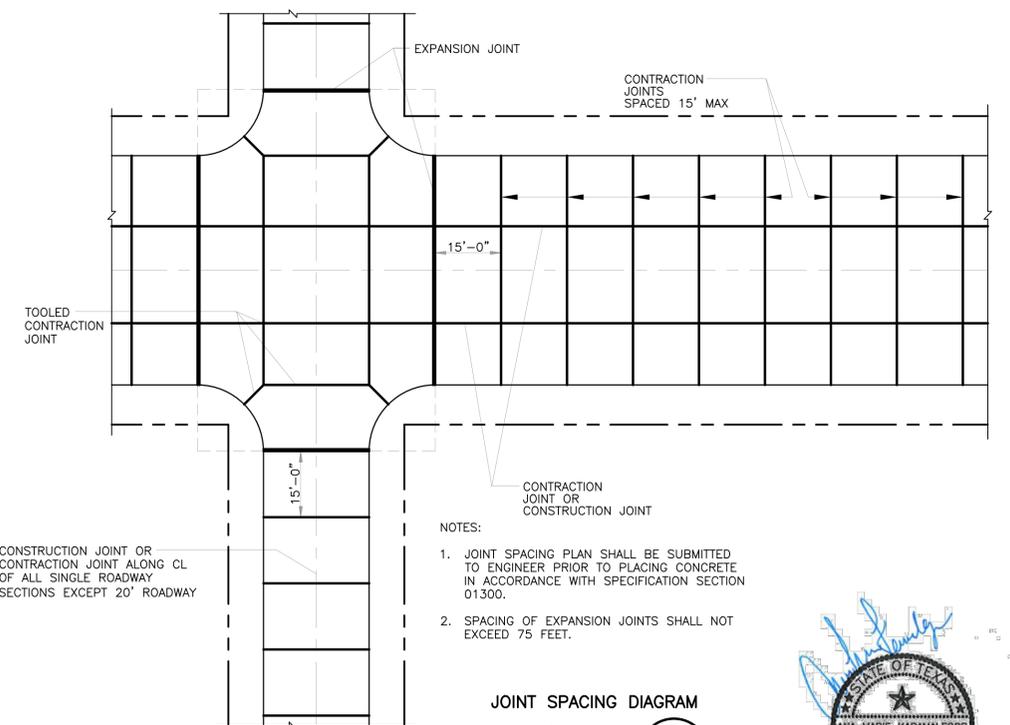


GRAVEL ACCESS ROAD
DETAIL B
NTS



ASPHALT ROAD
DETAIL E
NTS

- NOTE:
- ASPHALT ROAD SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTIONS SD1 HOT MIX ASPHALTIC CONCRETE PAVEMENT AND SD4 FLEXIBLE BASE.

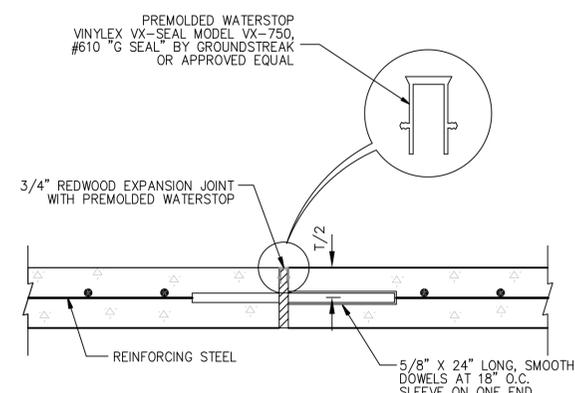


JOINT SPACING DIAGRAM
DETAIL G
NTS

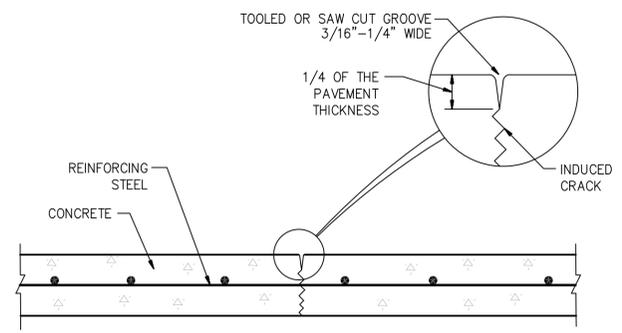
- NOTES:
- JOINT SPACING PLAN SHALL BE SUBMITTED TO ENGINEER PRIOR TO PLACING CONCRETE IN ACCORDANCE WITH SPECIFICATION SECTION 01300.
 - SPACING OF EXPANSION JOINTS SHALL NOT EXCEED 75 FEET.



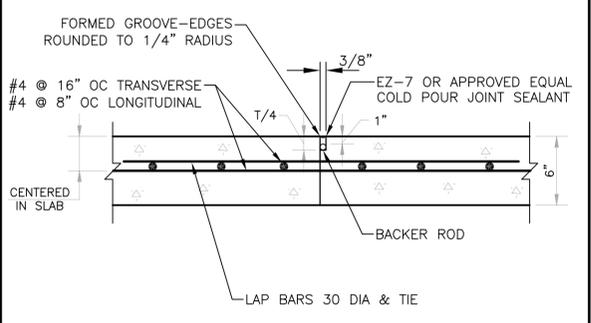
- NOTES:
- TOOLED OR SAW CUT CONTRACTION JOINTS SHALL BE AT REGULAR INTERVALS THROUGHOUT THE PAVEMENT AT EVEN INTERVALS BETWEEN EXPANSION JOINTS AS INDICATED ON THE PLAN. FOR SIDEWALKS LESS THAN 6 FEET WIDE, THE JOINT SPACING SHALL EQUAL THE SIDEWALK WIDTH.
 - JOINTS SHALL BE SPACED SO THAT THE RESULTING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



EXPANSION JOINT
DETAIL C
NTS



CONTRACTION JOINT
DETAIL D
NTS



CONSTRUCTION JOINT
DETAIL F
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	RSM	AMK	CONFORMED DRAWING

DESIGNED BY: A. KARAMELEGOS
 DRAWN BY: D. SANDEFUR
 SHEET CHK'D BY: A. RHAMES
 CROSS CHK'D BY: A. BROWER
 APPROVED BY: A. KARAMELEGOS
 DATE: OCTOBER 2021

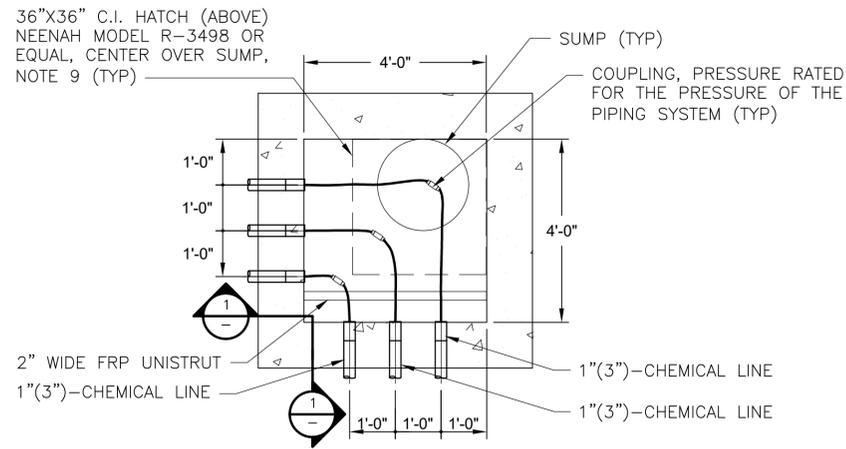


CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

TYPICAL ROAD SECTIONS AND PAVING DETAILS

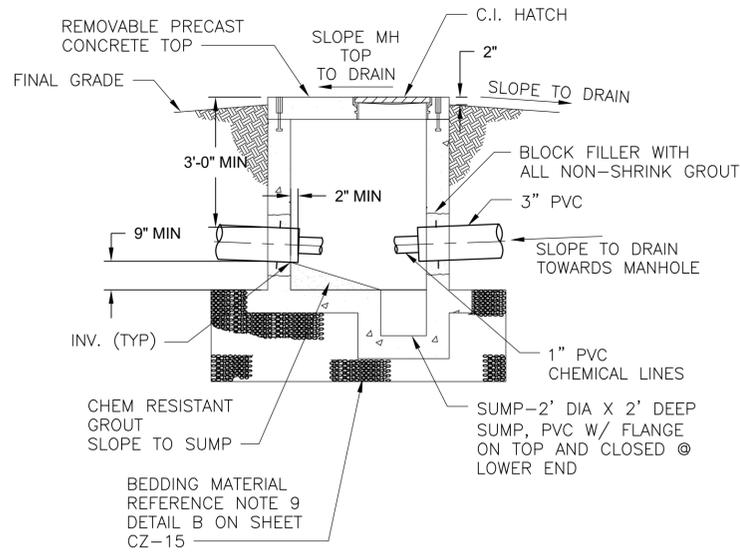
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 SHEET NO. **CR-11**

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CHEMICAL PIPE VAULT NO. 4
 (SIMILAR TO CHEMICAL PIPE VAULT NOS. 1 - 3)

DETAIL A
 1/2" = 1'-0"
 CY-3



SECTION 1
 NTS

CHEMICAL PIPE VAULTS (CH) GENERAL NOTES:

1. THE YARD PIPING CHEMICAL SYSTEMS DRAWINGS (SHEET CY-1 AND CY-3) SHOW THE LOCATION OF THE CH VAULTS AS WELL AS THE SIZE AND ROUTING OF THE CHEMICAL FEED LINES. REFER TO SHEET CY-3 AND TO THE CY PROFILE SHEETS FOR THE ELEVATION OF THE CHEMICAL LINES.
2. THE CHEMICAL CONTAINMENT LINES SHALL BE CONTINUOUS BETWEEN VAULTS AND STRUCTURES IN ACCORDANCE WITH THE ELEVATIONS SHOWN ON THE YARD PIPING DRAWINGS. WHERE LOCAL INTERFERENCES OCCUR, THE CHEM PIPES CAN BE ADJUSTED TO MISS THE INTERFERENCE PROVIDED THAT CHEM PIPES REMAIN SELF-DRAINING BETWEEN VAULTS AND STRUCTURES.
3. SHALL HAVE A SHUTOFF VALVE AT EACH LOCATION WHERE EACH CHEM PIPE ENTERS AND EXITS THE VAULTS. VALVES SHALL BE BALL VALVES. EXCEPT FOR VALVES ON THE SODIUM HYPOCHLORITE PIPES. THE SODIUM HYPOCHLORITE PIPES SHALL HAVE DIAPHRAGM VALVES.
4. PROVIDE CAST IRON, FLUSH, HEAVY DUTY, SPRING-ASSISTED-TO-HOLD-OPEN, H-29 RATED HATCHES, W/ GASKETS AND T-HANDLE OPENER. PROVIDE 2" CLOSE CELL FORM INSIDE MH COVER.
5. FOR PRECAST VAULTS:
 PROVIDE JOINTS AS NECESSARY FOR FABRICATION AND INSTALLATION. INSTALL NON-SHRINK GROUT OR RAM-NEK COMPOUND OR EQUAL TO MAKE ALL JOINTS WATER TIGHT.
 PROVIDE REMOVABLE H-20 RATED CONCRETE OVER. PROVIDE GALV STL LIFTING EYES AT CORNER BALANCE POINTS FOR SLAB REMOVAL.
 INSTALL CHEMICAL STORAGE COATING ON THE INTERIOR WALLS AND FLOOR IN ACCORDANCE WITH SPECIFICATION SECTION 099673.33. THE COATING PRODUCT SHALL BE BASED CHEMICAL ASSOCIATED WITH THE SPECIFIC MANHOLE.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	RSM	AMK	CONFORMED DRAWING

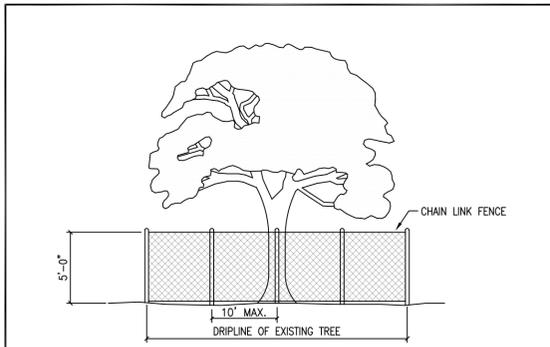
DESIGNED BY: A. KARAMELEGOS
 DRAWN BY: D. SANDEFUR
 SHEET CHK'D BY: A. RHAMES
 CROSS CHK'D BY: A. BROWER
 APPROVED BY: A. KARAMELEGOS
 DATE: DECEMBER 2021

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 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

CHEMICAL INJECTION VAULT
 DETAIL AND SECTION

PROJECT NO. 2048-248929
 FILE NAME: CY19YPT
 SHEET NO. CY-19



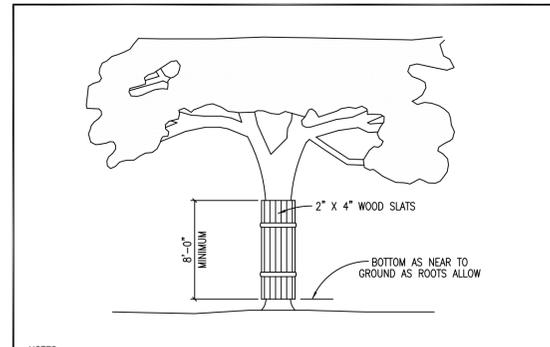
NOTES:

- TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
- 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:
 - SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
 - ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY.
 - WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
 - OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
- EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
 - WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
 - 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	ADOPTED 6/21/2006
		EC09
NTS	1/2003	TRB

DETAIL A
NTS



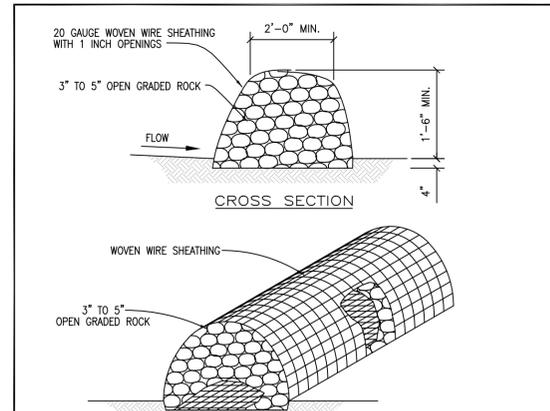
NOTES:

- 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.
- 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.
- 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.
- 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.
- ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
- NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR INCHES (4") SHALL BE PERMITTED WITHIN THE DRIPLINE OF A TREE. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
- 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	ADOPTED 6/21/2006
		EC10
NTS	1/2003	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 ENCLOSE 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 ITS SHAPE.
- SECURE WITH THE 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.

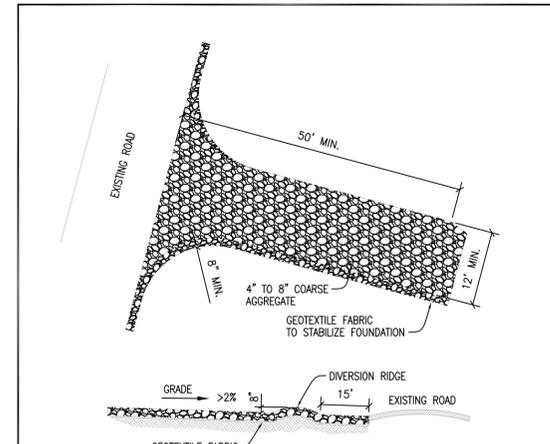
INSPECTION AND MAINTENANCE GUIDELINES:

- 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 REPAIRED 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	ADOPTED 6/21/2006
		EC03
NTS	1/2003	TRB

DETAIL C
NTS



INSTALLATION:

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

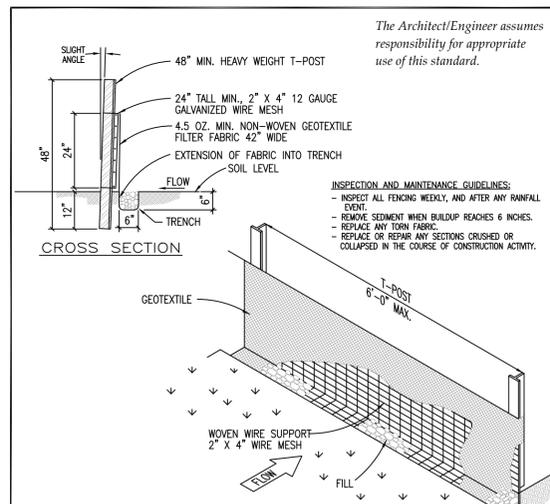
INSPECTIONS AND MAINTENANCE GUIDELINES:

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

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

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS STABILIZED CONSTRUCTION ENTRANCE	ADOPTED 6/21/2006
		EC06
NTS	1/2003	TRB

DETAIL D
NTS



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

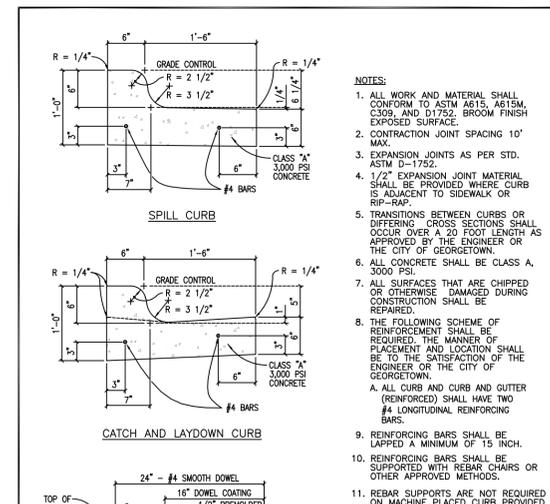
- INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
 - REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
 - REPLACE ANY TORN FABRIC.
 - REPAIR OR REPLACE ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY.

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 1 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 4" AND TIED AT LEAST 6 TIMES WITH HOG RINGS.
- THE SILT FENCE TO BE INSTALLED WITH A SHORT A MINIMUM OF 6" WIDE PLACED ON THE UPWIND SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1'.
- ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").
- GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
- SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS SILT FENCE DETAIL	ADOPTED 6/21/2006
		EC02
NTS	1/2003	TRB

DETAIL E
NTS



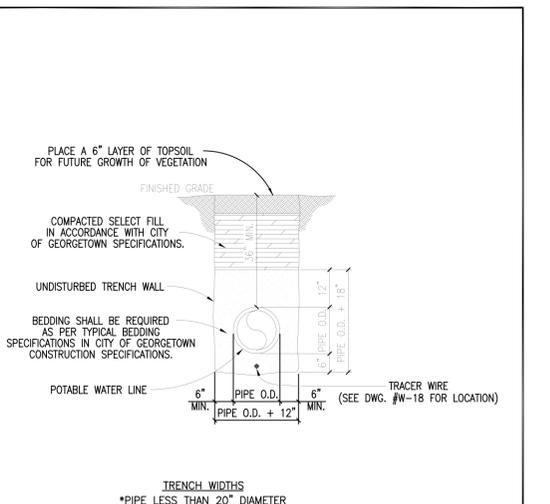
NOTES:

- ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, ASTM C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
- CONTRACTION JOINT SPACING 10' MAX.
- EXPANSION JOINTS AS PER STD. ASTM D-1752.
- 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP-RAP.
- TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL OCCUR OVER A 20 FOOT LENGTH AS APPROVED BY THE ENGINEER OR THE CITY OF GEORGETOWN.
- ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
- ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
- 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.
 - ALL CURB AND CURB AND GUTTER (REINFORCED) SHALL HAVE TWO #4 LONGITUDINAL REINFORCING BARS.
 - REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
 - REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED METHODS.
 - 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	ADOPTED 6/21/2006
		SD06
NTS	1/2003	TRB

DETAIL F
NTS

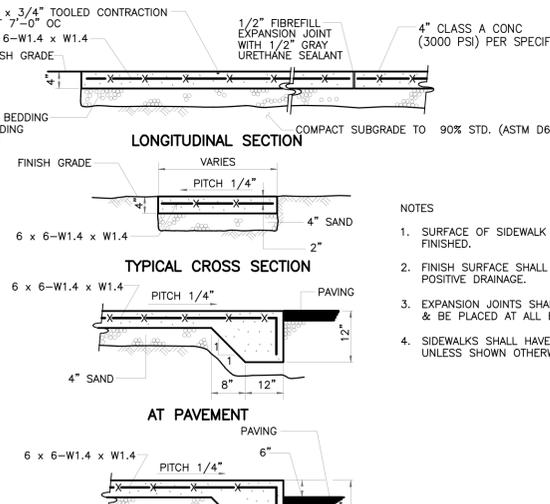


- TRENCH WIDTHS
- *PIPE LESS THAN 20" DIAMETER 1'-0" + PIPE O.D.
 - *20" DIAMETER PIPE AND LARGER 2'-0" + PIPE O.D.

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

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS	ADOPTED 6/21/2006
		WO2
NTS	1/2003	TRB

DETAIL G
NTS



- NOTES
- SURFACE OF SIDEWALK TO BE BROOM FINISHED.
 - FINISH SURFACE SHALL BE SLOPED FOR POSITIVE DRAINAGE.
 - EXPANSION JOINTS SHALL NOT EXCEED 30' OC & BE PLACED AT ALL BUILDING ABUTMENTS.
 - SIDEWALKS SHALL HAVE A WIDTH OF 4'-0" UNLESS SHOWN OTHERWISE.

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

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS SIDEWALK	ADOPTED 6/21/2006
		WO2
NTS	1/2003	TRB

DETAIL H
NTS



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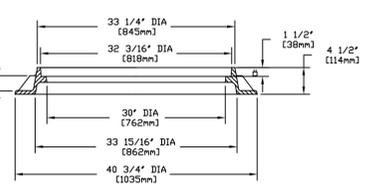
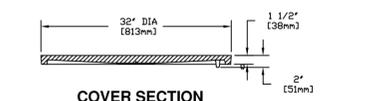
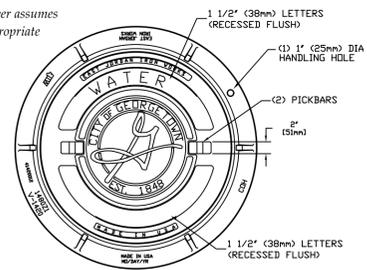
DESIGNED BY: A. KARAMELEGOS
 DRAWN BY: D. SANDEFUR
 SHEET CHK'D BY: A. RHAMES
 CROSS CHK'D BY: A. BROWER
 APPROVED BY: A. KARAMELEGOS
 DATE: DECEMBER 2021

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 Tel: (512) 346-1100
 TBP Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

STANDARD CIVIL DETAILS I
 PROJECT NO. 2048-248929
 FILE NAME: CZ-1
 SHEET NO. CZ-1

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

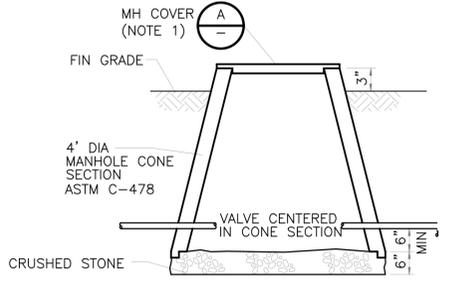


- NOTES:
- STANDARD WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V-1420/1480Z1. COVER TO BE STAMPED WITH "WATER".
 - STANDARD WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
 - FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148390.
 - FOR BOLTED WASTEWATER MANHOLE SET REFER TO DETAIL WW07A.

ADOPTED 6/21/2006	PROJECT NAME: WW07
DATE: 1/2003	DESIGNED BY: MRS
APPROVED BY: TRB	

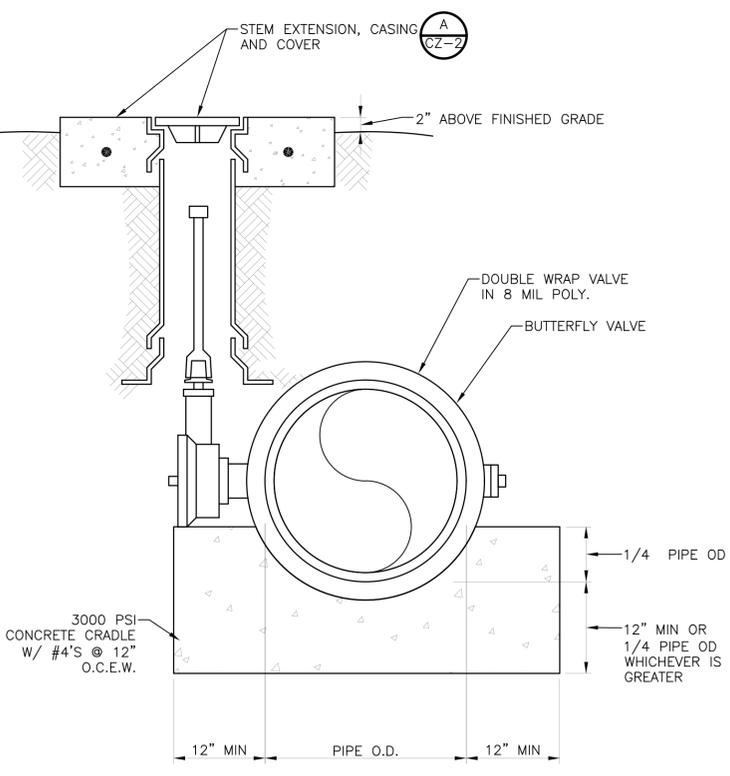
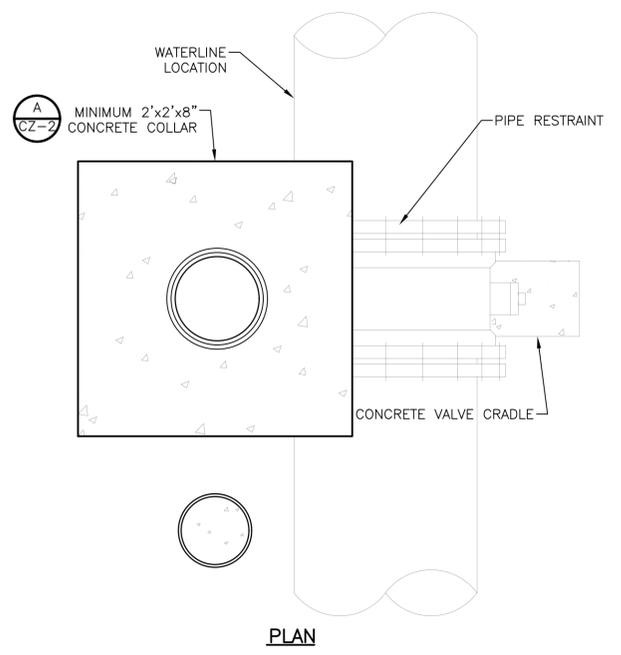
DETAIL A
NTS

- NOTES:
- PROVIDE 32" MANHOLE RING AND COVER PER COG STANDARDS.

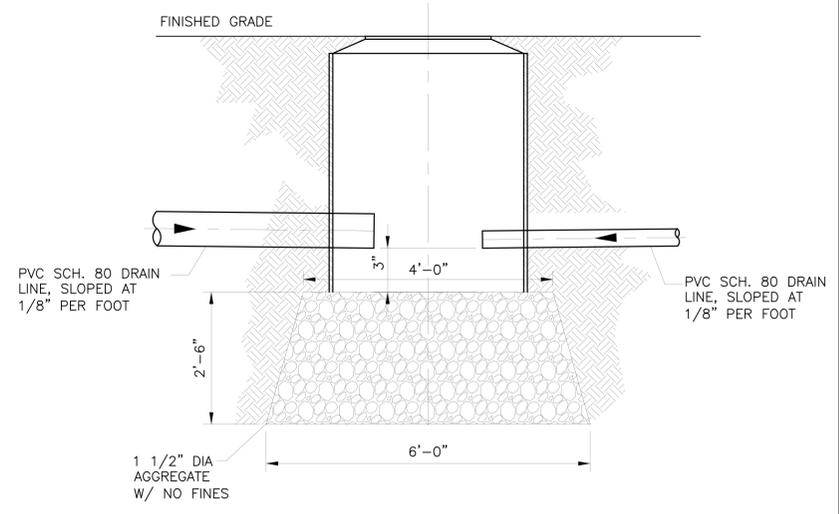


DETAIL B
NTS

- GENERAL NOTE
- DELETE "SANITARY SEWER" AND REPLACE WITH "WATER" ON THE MANHOLE COVER.

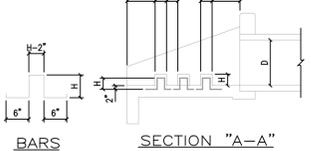
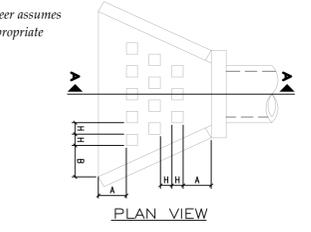


DETAIL E
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DETAIL F
NTS

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

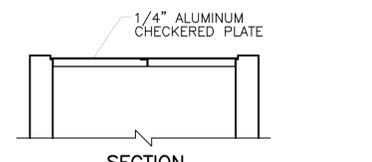
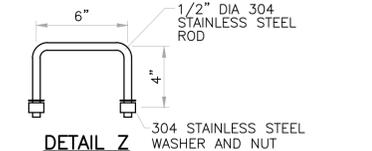
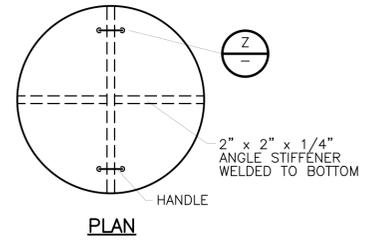


- NOTES:
- USE CLASS "A" CONCRETE, 3,000 PSI AT 28 DAYS, UNLESS NOTED.
 - REINFORCING STEEL - ASTM A615, GRADE 40, UNLESS NOTED.
 - LAP REINFORCING 30 BAR DIAMETERS MIN. AT SPLICES, UNLESS NOTED.
 - CHAMFER EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED.
 - PLACE REINFORCING WITH THE CENTER OF THE OUTSIDE BARS 2 INCHES FROM THE SURFACE OF THE CONCRETE.

D PIPE DIAMETER (INCHES)	NUMBER OF ROWS OF DISSIPATORS	NUMBER OF DISSIPATORS IN FRONT ROW	H (INCHES)	A (INCHES)	B (INCHES)
12	1	3	4	4	9.1875
18	2	4	4 1/2	4 1/2	15.5625
24	2	5	6	14 3/4	16 1/2
30	3	6	7 1/2	12 1/2	14 3/8
36	3	6	9	16 1/4	18 5/16
42	3	6	10 1/2	20	22 1/4
48	3	6	12	23 3/4	26 1/4
54	3	6	13 1/2	27 1/2	27 3/4
60	3	6	15	31 1/4	31 5/8

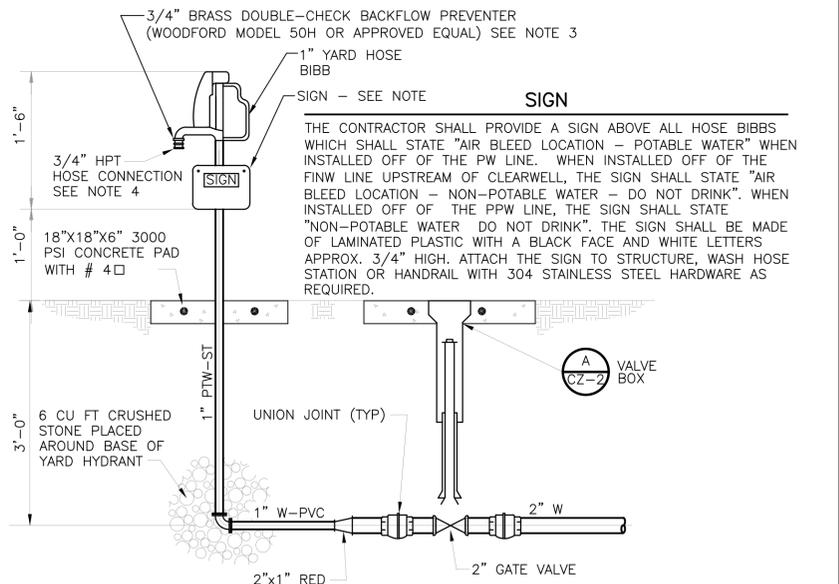
ADOPTED 6/21/2006	PROJECT NAME: SD20
DATE: 1/2003	DESIGNED BY: MRS
APPROVED BY: TRB	

DETAIL C
NTS



- NOTE:
- FOR MANHOLES IN ROADWAYS, RING & COVER SHALL BE HS-20 RATED FOR TRAFFIC LOADING.

DETAIL D
NTS



- NOTES:
- YARD HOSE BIBB TO BE WOODFORD IOWA HYDRANT, MODEL Y1, OR EQUAL.
 - ALL YARD HOSE BIBBS SHALL HAVE A VACUUM BREAKER INSTALLED ON THEM.
 - WHEN A 1" YARD HYDRANT IS CALLED OUT ON THE PLANS, SUCH AS AT THE DECANT BASIN (TYP OF 4) AND FILTRATE LIFT STATION, PROVIDE 1" BACKFLOW PREVENTER AND 1" HPT HOSE CONNECTION. HOSE CONNECTION SHALL BE COMPATIBLE WITH THE HOSE SUPPLIED FOR THE LOCATION.

DETAIL G
NTS



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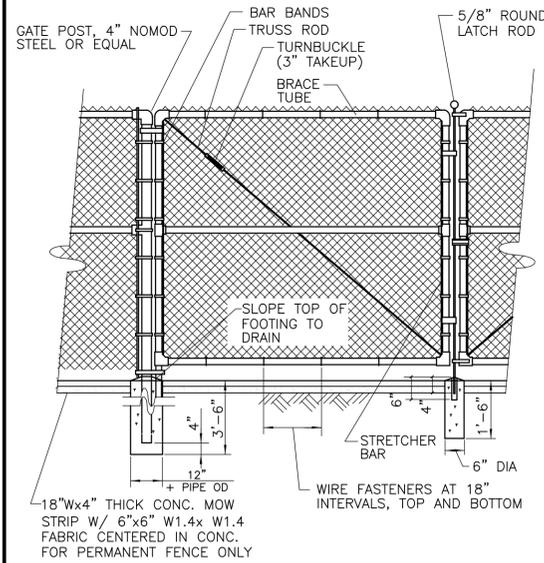
REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	RSM	AMK	CONFORMED DRAWING

DESIGNED BY: A. KARAMALEGOS
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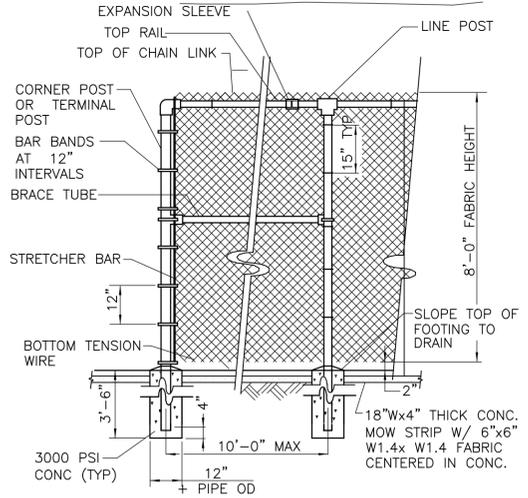
CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

PROJECT NO. 2048-248929
 FILE NAME: CZ-4
 SHEET NO. CZ-4



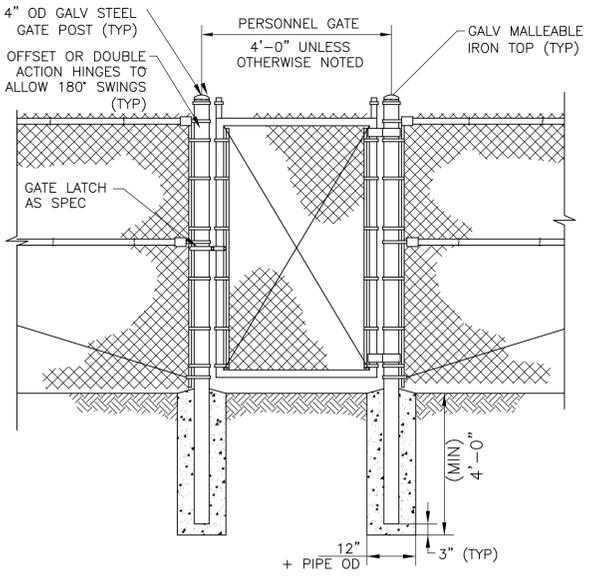
CHAIN LINK FENCE-DOUBLE GATE

DETAIL A
NTS



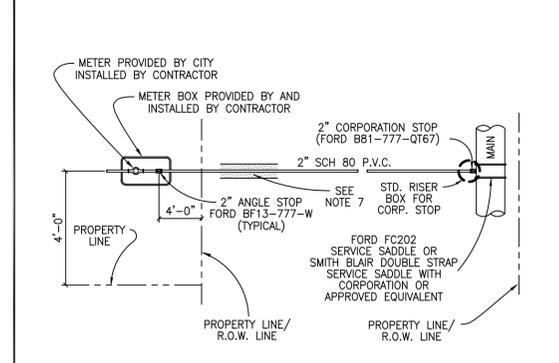
CHAIN LINK FENCE

DETAIL B
NTS



PERSONNEL GATE

DETAIL C
NTS

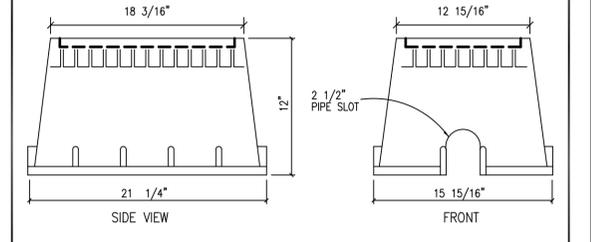
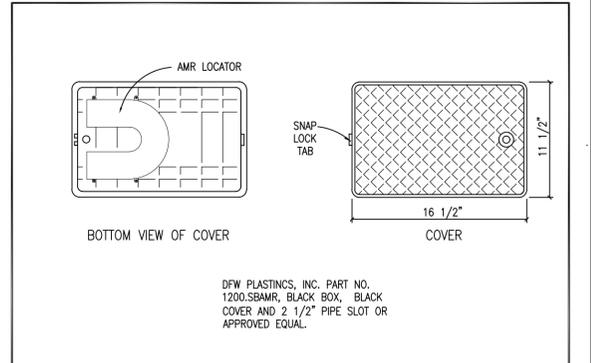


- NOTES:
- AUTHORIZED SERVICE LINE MATERIAL:
 - A. POLYETHYLENE TUBING SDR 9 (MAX. DIA. 1") CLASS 200
 - B. SCHEDULE 80, P.V.C. (DIA. LARGER THAN 1") CLASS 200
 - ANGLE STOP SHALL BE 1" MINIMUM.
 - 1" ANGLE STOPS WITH 3/4" VALVES SHALL NOT BE PERMITTED.
 - MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN 4 METERS PER SERVICE AND SERVICE LINES LARGER THAN 2" IN DIAMETER SHALL BE HANDLED ON AN INDIVIDUAL BASIS.
 - ANGLE STOPS 1 1/2" AND 2" IN SIZE SHALL BE PROVIDED WITH BOTH A LOCKING CAP AND METER FLANGE.
 - ANGLE STOPS SHALL BE INSTALLED 8" BELOW FINISHED GRADE AND MARKED WITH A 2" X 2" X 48" TREATED WOOD STAKE, PAINTED BLUE.
 - BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
 - CASING REQUIREMENTS FOR SERVICE LINES CROSSING ROADWAYS SEE DETAIL W-03 NOTE #7.
 - ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
 - ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY.

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

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS SINGLE WATER SERVICE PLAN	ADOPTED 6/21/2006 W04
		1/2003 TRB

DETAIL D
NTS

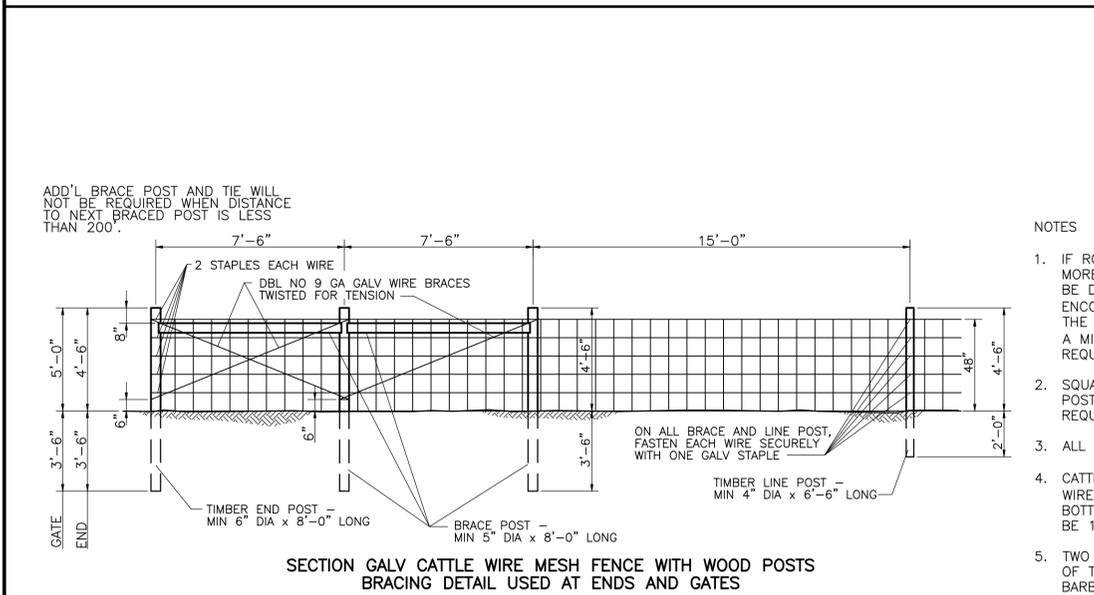


The Architect/Engineer assumes responsibility for appropriate use of this standard.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS METER BOX (NON-TRAFFIC AREAS)	ADOPTED 6/21/2006 W23
		1/2003 TRB

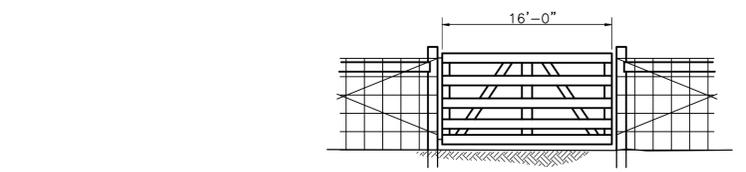
DETAIL E
NTS

- FENCE NOTES:
- THE COLUMN HEIGHT SHALL BE A MINIMUM OF 8'-0" TO A MAXIMUM OF 10'-0" - WITH 8'-0" ABOVE GRADE.
 - ALL CONCRETE SHALL BE 3000 PSI.
 - ALL REINFORCEMENT SHALL BE ASTM 615 GRADE 60. SPECIAL REINFORCEMENT IS AVAILABLE UPON SPECIAL ORDER.
 - FOOTING - 2 FEET DEEP FOOTING STANDARD PER COLUMN. DEPTH AND DIAMETER CAN VARY PER LOCAL SOIL CONDITIONS.
 - TEXTURE: ALL EXPOSED SIDES HAVE ROCK-LIKE TEXTURE.
 - GATES: SHALL HAVE ADDITIONAL STEEL SUPPORTS ADJACENT TO CONCRETE COLUMNS.
 - ALL STEEL REINFORCEMENT IS PREWELDED WITH STEEL SPACERS SO AS TO ALLOW FOR MAXIMUM CONCRETE COVERAGE.
 - A SPECIAL SILICONE SEALANT IS USED TO LOCK THE CAPRAIL AND POST CAPS IN PLACE. THIS SEALANT REQUIRES SPECIAL TOOLS FOR REMOVAL.
 - PROVIDE OPENINGS FOR DRAINAGE AS DIRECTED BY THE ENGINEER.
 - OWNER SHALL SELECT COLOR.
 - PROVIDE A SIGN ON THE FENCING ON EACH GATE STATING:
 - * OWNER
 - * LOCATION NAME
 - * EMERGENCY PHONE NUMBERS
 - * NO TRESPASSING INFORMATION
 - VERIFY FENCE COMPLIES WITH CITY STANDARDS AND PREFERENCES

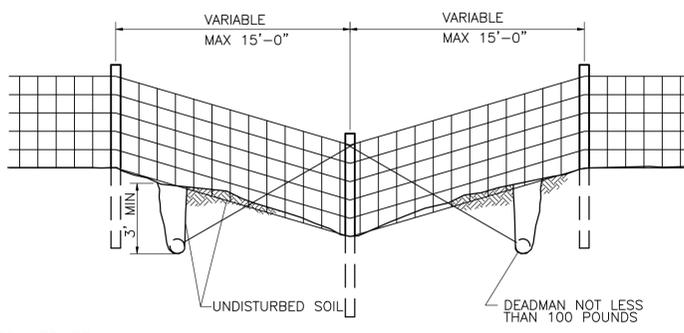


SECTION GALV CATTLE WIRE MESH FENCE WITH WOOD POSTS BRACING DETAIL USED AT ENDS AND GATES

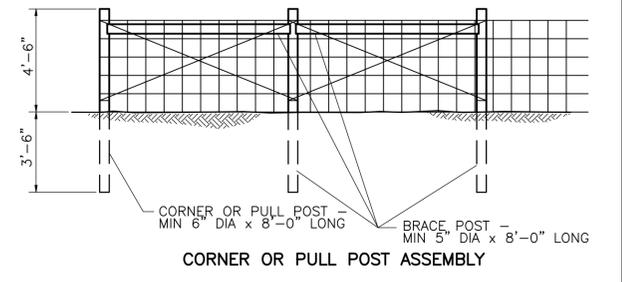
DETAIL F
NTS



TYPE 1 GATE



FENCE SAG



CORNER OR PULL POST ASSEMBLY

INSTALLATION OF HINGES OF TYPE 1 GATE

ADD'L BRACE POST AND TIE WILL NOT BE REQUIRED WHEN DISTANCE TO NEXT BRACED POST IS LESS THAN 200'.

- NOTES
- IF ROCK IS ENCOUNTERED AT A DEPTH OF 1'-6" OR MORE BELOW THE GROUND SURFACE, THE HOLE SHALL BE DRILLED THE REQUIRED DEPTH. IF ROCK IS ENCOUNTERED AT A DEPTH LESS THAN 1'-6" BELOW THE GROUND SURFACE, THE HOLES SHALL BE DRILLED A MINIMUM OF 2'-0" INTO THE ROCK OR THE REQUIRED DEPTH WHICHEVER IS THE LESSER DEPTH.
 - SQUARE POSTS MAY BE USED IN LIEU OF ROUND POSTS PROVIDED MINIMUM EQUIVALENT SIZE REQUIREMENTS AS TABULATED HEREON ARE MET.
 - ALL POSTS SHALL BE WOLMANIZED.
 - CATTLE WIRE MESH FENCE SHALL BE 48" GALVANIZED WIRE MESH WITH 9" VERTICAL MESH SPACING. TOP & BOTTOM WIRE SHALL BE 9 GAGE. FILLER WIRE SHALL BE 11 GAGE. VERTICAL STAYS SHALL BE 9 GAGE.
 - TWO STRANDS OF BARB WIRE TO BE ADDED ON TOP OF THE WIRE MESH FENCE, AND ONE STRAND OF BARB WIRE TO BE ADDED ON THE BOTTOM OF THE WIRE MESH FENCE.

TYPICAL CATTLE WIRE MESH FENCE

- NOTES
- METAL GATE SHALL CONSIST OF 5 PANELS NOT LESS THAN 4'-4" HIGH AND SHALL BE GALVANIZED METAL AND OF GOOD QUALITY. GATE AND HARDWARE SHALL MEET THE APPROVAL OF THE ENGINEER.
 - PULL POST ASSEMBLY SHALL BE INSTALLED ON BOTH SIDES OF GATE.



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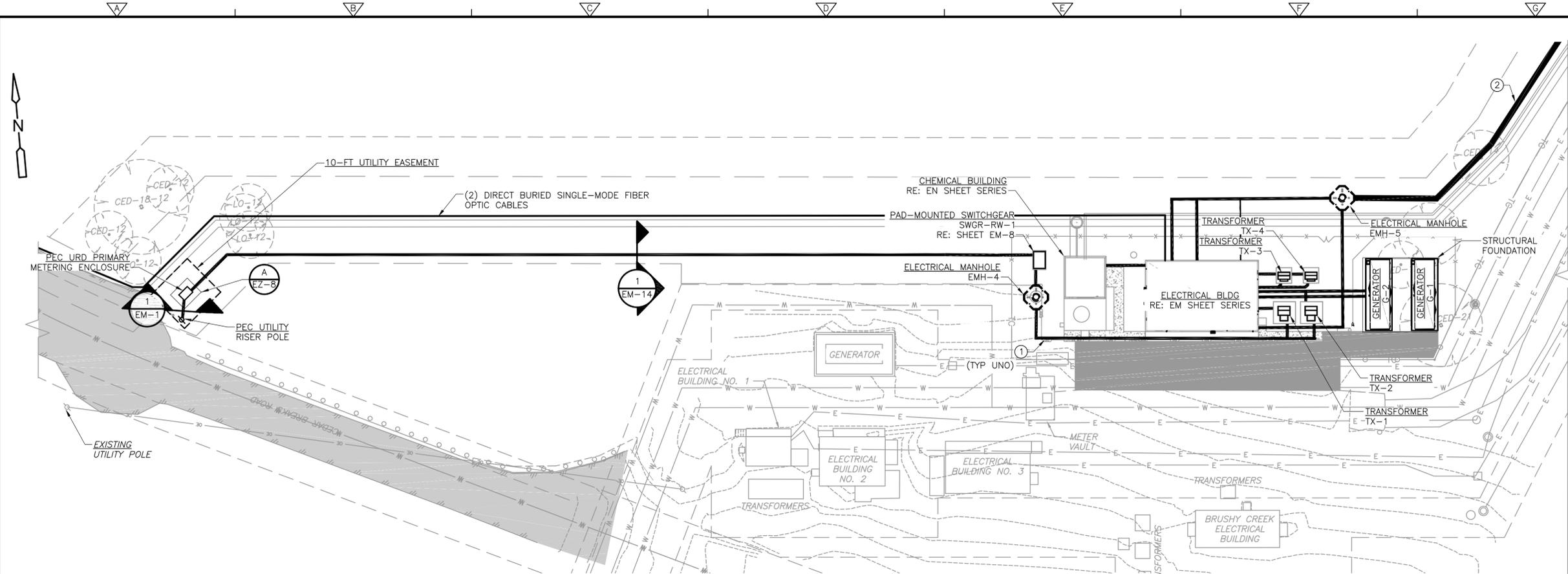
DESIGNED BY:	A. KARAMELEGOS
DRAWN BY:	D. SANDEFUR
SHEET CHK'D BY:	A. RHAMES
CROSS CHK'D BY:	A. BROWER
APPROVED BY:	A. KARAMELEGOS
DATE:	DECEMBER 2021

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 TBPE Firm Registration No. F-3043

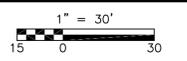
CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

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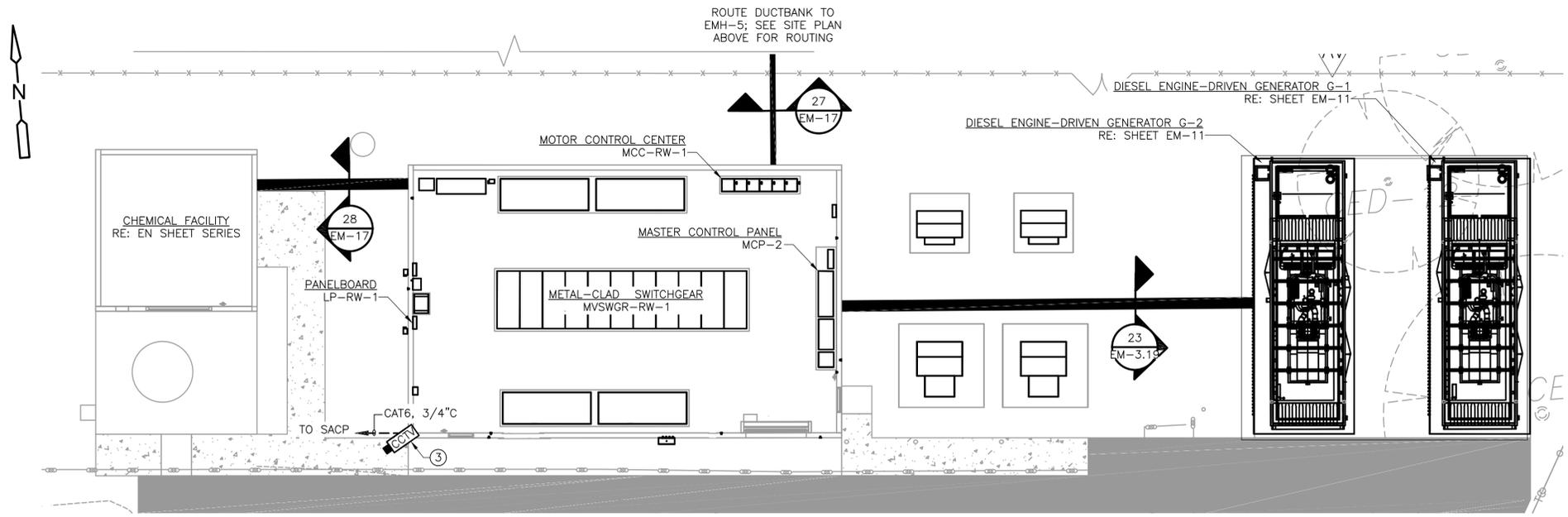
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INTAKE ELECTRICAL BUILDING AND CHEMICAL FEED BUILDING SITE PLAN



- GENERAL ELECTRICAL NOTES:**
- FIELD VERIFY LOCATIONS OF EXISTING UTILITIES. COORDINATE ROUTING OF PROPOSED DUCTBANKS WITH EXISTING DUCTBANKS, EXISTING PROCESS PIPING, AND NEW PROCESS PIPING. REFER TO CIVIL AND MECHANICAL SHEETS FOR PROCESS PIPING NEAR PROPOSED DUCTBANKS.
 - REFERENCE IZ SHEET SERIES FOR TYPICAL SECURITY INSTALLATION DETAILS.
 - INSTALL DUCTBANK IN REINFORCED CONCRETE WHERE LOCATED UNDERNEATH ROAD PER DETAIL A ON SHEET EZ-1 EXTEND REINFORCED ENCASEMENT 5-FT BEYOND ROAD.
- KEY NOTES:**
- REFERENCE SHEET EM-8, EM-9, AND EM-11 FOR ADDITIONAL INFORMATION ON THE DUCTBANK SHOWN.
 - REFERENCE SHEET EM-1.1 AND EM-1.2 FOR ADDITIONAL INFORMATION ON THE DUCTBANK SHOWN.
 - PROVIDE BY DIVISION 28. COORDINATE EXACT EQUIPMENT LOCATIONS.



INTAKE ELECTRICAL BUILDING AND CHEMICAL FEED BUILDING LOW VOLTAGE DUCTBANK ENLARGED SITE PLAN

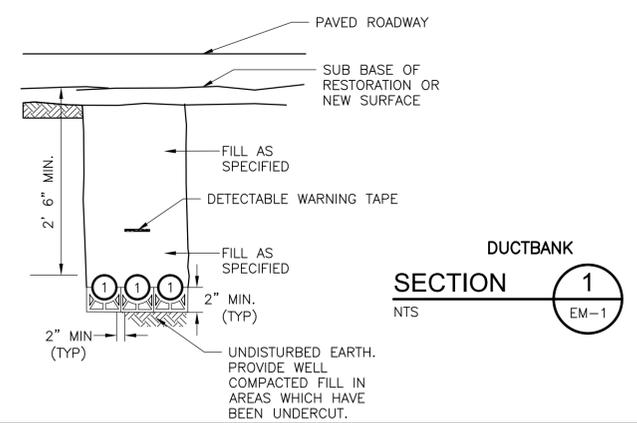
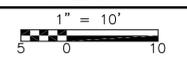


TABLE FOR SECTION 1

CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	PRIMARY 3" C W/PULLSTRING	FROM PEC RISER POLE TO PEC URD PRIMARY METERING CABINET

PEC UTILITY DUCTBANK SCHEDULE NTS



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/19/22	NRM	JCS	CONFORMED DRAWING
B	11/12/21	NRM	JCS	REVISED PER ADDENDUM NO. 2

DESIGNED BY: J. SAENZ
 DRAWN BY: N. MONTGOMERY
 SHEET CHK'D BY: M. HANDLEY
 CROSS CHK'D BY: I. PJETROVIC
 APPROVED BY: J. SAENZ
 DATE: DECEMBER 2021

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CITY OF GEORGETOWN, TEXAS
 SOUTH LAKE
 WATER TREATMENT PLANT

INTAKE ELECTRICAL BUILDING AND
 CHEMICAL FEED BUILDING
 SITE PLAN

PROJECT NO. 2048-248929
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