

# City of Georgetown, Texas



## San Gabriel Force Main Replacement



**Texas Commission on Environmental Quality  
Submittal for Edwards Aquifer Protection Plan**

**SCS Application**

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# Texas Commission on Environmental Quality

## Edwards Aquifer Application Cover Page

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### 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.

<b>1. Regulated Entity Name:</b> San Gabriel Force Main Replacement				<b>2. Regulated Entity No.:</b> N/A			
<b>3. Customer Name:</b> City of Georgetown				<b>4. Customer No.:</b>			
<b>5. Project Type:</b> (Please circle/check one)	<input checked="" type="radio"/> New	Modification		Extension	Exception		
<b>6. Plan Type:</b> (Please circle/check one)	WPAP	CZP	<input checked="" type="radio"/> SCS	UST	AST	EXP	EXT
						Technical Clarification	Optional Enhanced Measures
<b>7. Land Use:</b> (Please circle/check one)	Residential		<input checked="" type="radio"/> Non-residential		<b>8. Site (acres):</b>		0.28
<b>9. Application Fee:</b>	\$1,934.00		<b>10. Permanent BMP(s):</b>				
<b>11. SCS (Linear Ft.):</b>			<b>12. AST/UST (No. Tanks):</b>		N/A		
<b>13. County:</b>	Williamson		<b>14. Watershed:</b>		Smith Branch San Gabriel		



# 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](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.)	—	—	<u>1</u>
Region (1 req.)	—	—	<u>1</u>
County(ies)	—	—	<u>1</u>
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 checked="" type="checkbox"/> 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.

JAKE L BLAIR, P.E.

Print Name of Customer/Authorized Agent



6/20/24

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: Jake L Blair, P.E.

Date: 6-17-2024

Signature of Customer/Agent:



## Project Information

1. Regulated Entity Name: City of Georgetown
2. County: Williamson
3. Stream Basin: San Gabriel
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

- ☒ Recharge Zone  
☐ Transition Zone

6. Plan Type:

- ☐ WPAP  
☒ SCS  
☐ Modification

- ☐ AST  
☐ UST  
☐ Exception Request

Mailing Address: 300-1 Industrial Avenue

City, State: Georgetown, Texas

Telephone: 512-930-6513

Email Address: Daniel.Havins@georgetown.org

Zip: 78626-8445

FAX: \_\_\_\_\_

8. Agent/Representative (If any):

Contact Person: Jake L Blair, P.E.

Entity: Kasberg, Patrick & Associates, LP

Mailing Address: 19 N Main Street

City, State: Temple, Texas

Telephone: 254-773-3731

Email Address: jblair@kpaengineers.com

Zip: 76501

FAX: \_\_\_\_\_

9. Project Location:

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

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

The proposed San Gabriel Force Main site is generally located along North College Street and extending onto the City of Georgetown wastewater treatment plant property in Georgetown, Williamson County, Texas.

11. ☒ **Attachment A – Road Map.** A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.
12. ☒ **Attachment B - USGS / Edwards Recharge Zone Map.** A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

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

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

☐ Survey staking will be completed by this date: \_\_\_\_\_

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

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

15. Existing project site conditions are noted below:

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

### ***Prohibited Activities***

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

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

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

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

## ***Administrative Information***

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

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

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

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

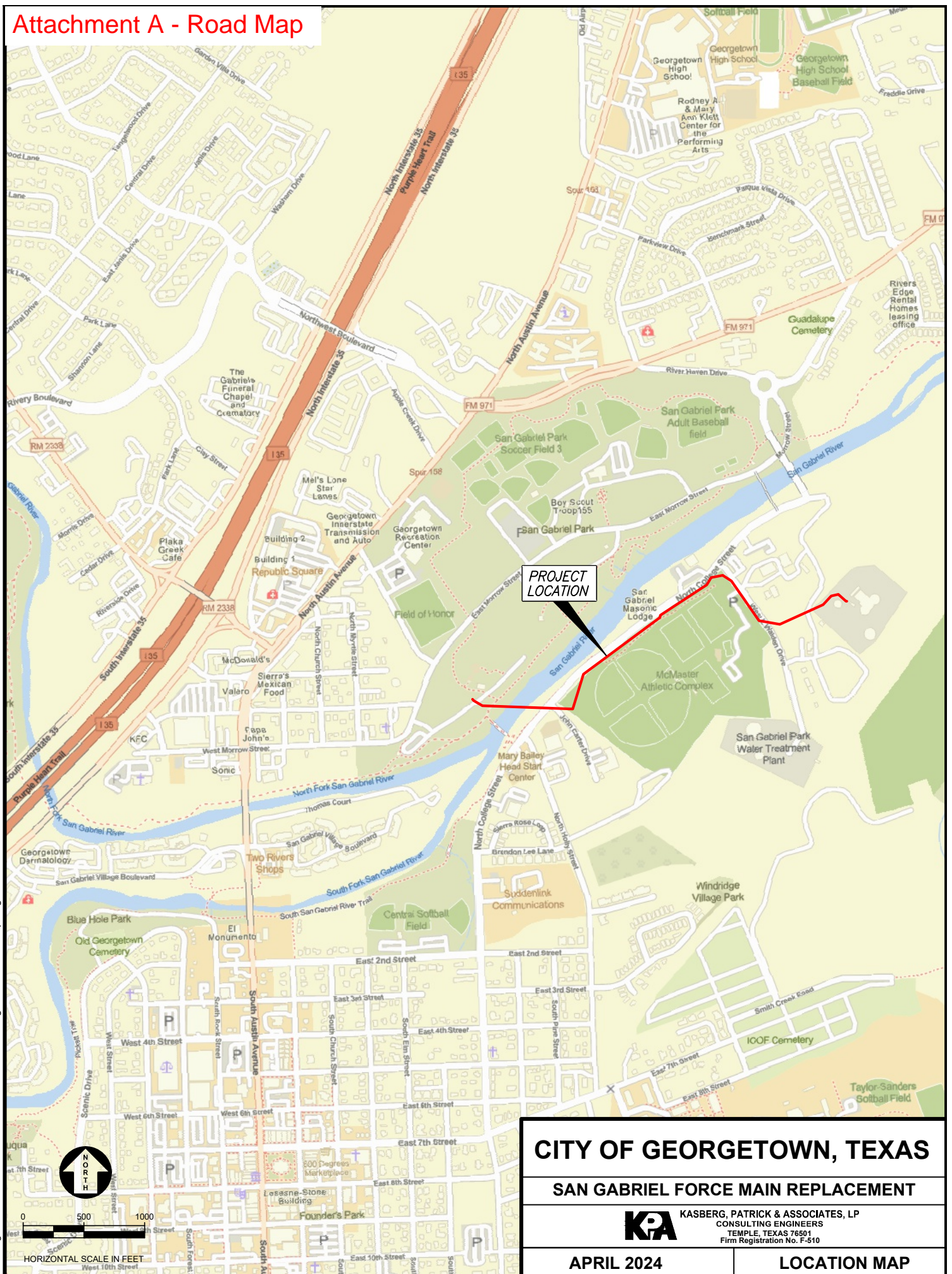
20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies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

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



# Attachment A - Road Map

P:\Georgetown\2023\23-130 San Gabriel FIMCAD\Working\Exhibits\Road Map.dwg - 8.5x11 Exh





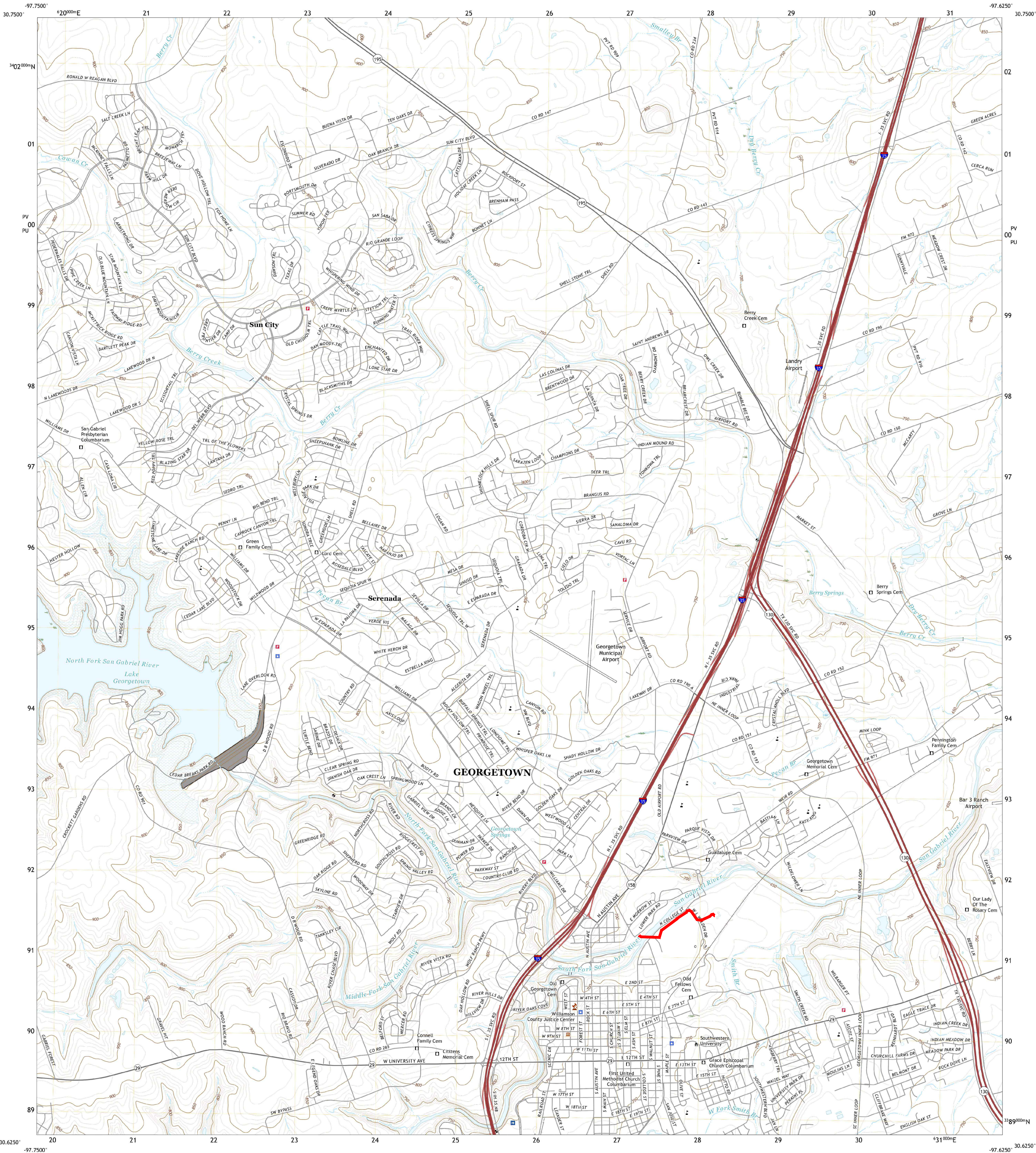
Attachment B - USGS Map



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

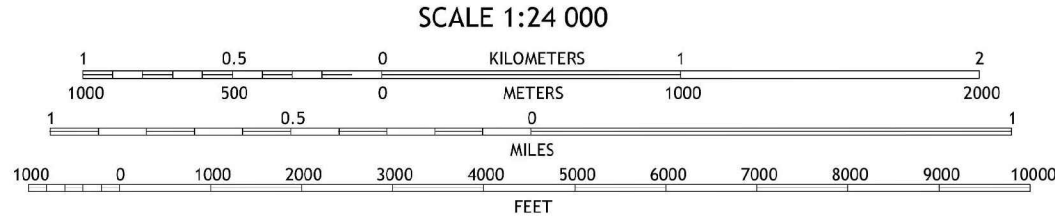
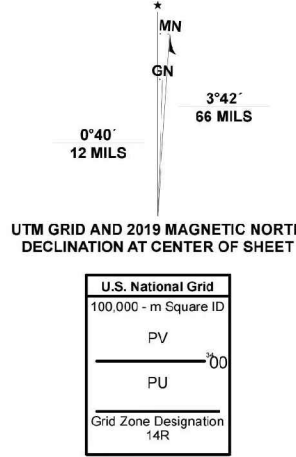


GEORGETOWN QUADRANGLE  
TEXAS - WILLAMSON COUNTY  
7.5-MINUTE SERIES

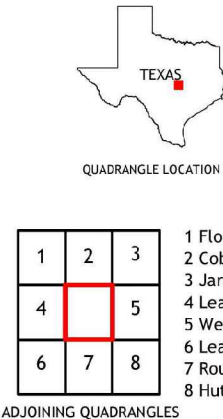


Produced by the United States Geological Survey  
North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84), Projection and  
1 000-meter grid-Universal Transverse Mercator, Zone 14R  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

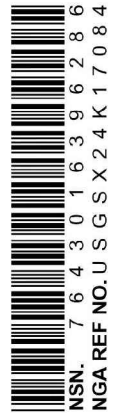
Imagery.....NAP, August 2016 - November 2016  
Roads.....U.S. Census Bureau, 2013 - 2019  
Names.....GNIS, 2003 - 2022  
Hydrography.....National Hydrography Dataset, 2002 - 2021  
Contours.....National Elevation Dataset, 2004  
Boundaries.....Multiple sources; see metadata file 2019 - 2021  
Wetlands.....FWS National Wetlands Inventory Not Available



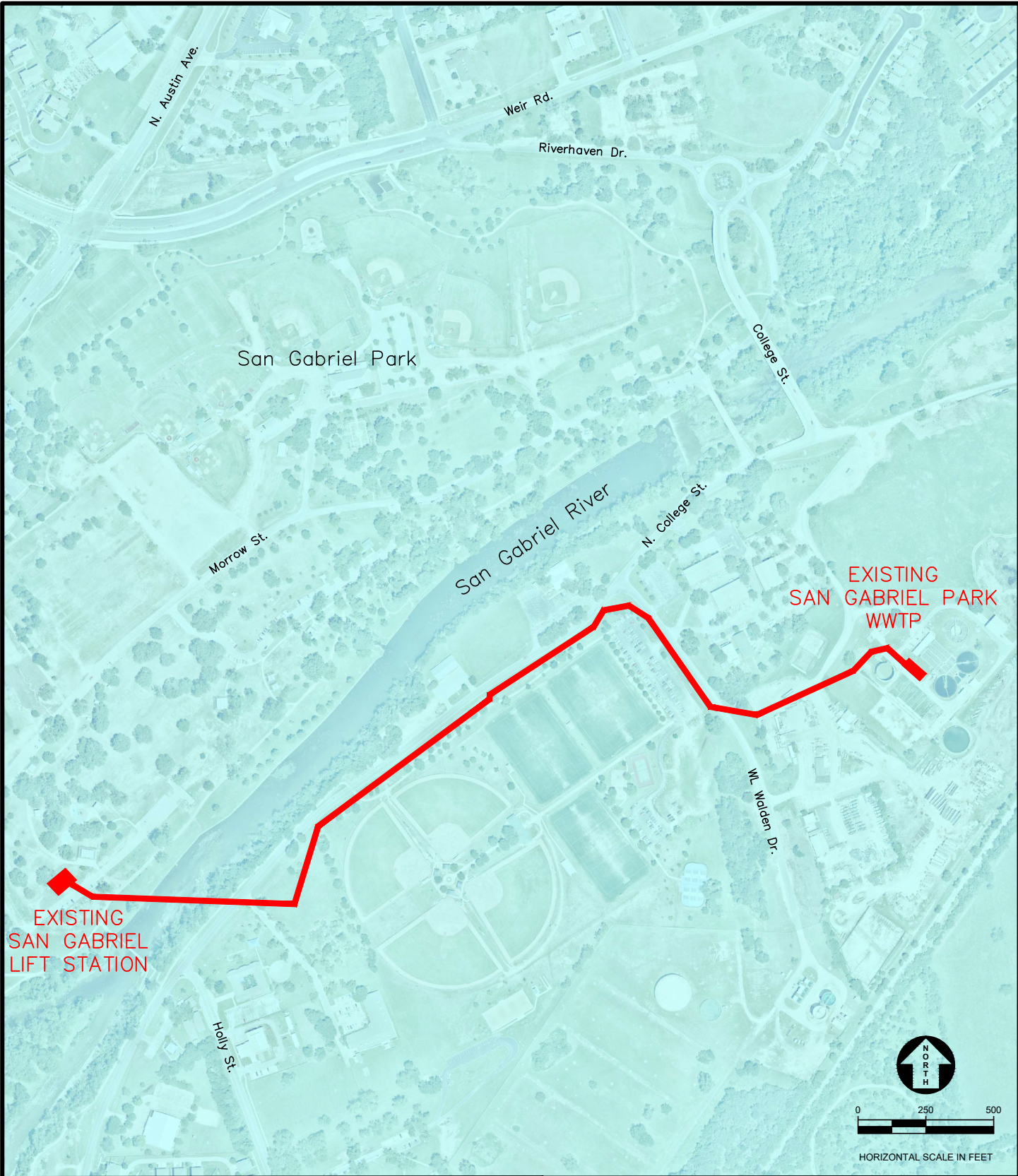
CONTOUR INTERVAL 10 FEET  
NORTH AMERICAN VERTICAL DATUM OF 1988  
This map was produced to conform with the  
National Geospatial Program US Topo Product Standard.



GEORGETOWN, TX  
2022







**LEGEND**



**EDWARDS AQUIFER RECHARGE ZONE**



**PROPOSED 20" FORCE MAIN**

**CITY OF GEORGETOWN, TEXAS**

**SAN GABRIEL FORCE MAIN REPLACEMENT  
EDWARDS AQUIFER ZONE**



**KASBERG, PATRICK & ASSOCIATES, LP**  
CONSULTING ENGINEERS  
TEMPLE, TEXAS 76501  
Firm Registration No. F-510

**JUNE 2024**

**EXHIBIT A**

**General Information Form  
TCEQ-0587**

**Attachment C**

**Project Description**

The project includes approximately 4,000 feet of 20-inch ductile iron force main from the existing San Gabriel Lift Station on Lower Park Road to the San Gabriel Park Wastewater Treatment plant east of West Walden Drive. Proposed improvements connect to existing infrastructure at both sites and are of same size with no increase in current capacity. Approximate quantities for infrastructure to be installed will be as follows:

- 745 feet of 20-in HDPE pipe by directional bore
- 322 feet of 20-in Ductile Iron pipe with 36-in steel encasement by open cut
- 3,123 feet of 20-in Ductile Iron by open cut

The proposed force main replacement meets the TCEQ minimum and maximum velocity requirements and provides air/vacuum release as detailed on the plans. Under this project, there will not be any significant lift station or WWTP improvements and the existing 20-in force main to be replaced will be abandoned in place.

# 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: M Kevin Denson

Telephone: 512 442-1122

Date: 1/19/2024

Fax: \_\_\_\_\_

Representing: Terracon Consultants, Inc. (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



**Regulated Entity Name:** San Gabriel Force Main, North College Street, Georgetown, Williamson County, Texas

## Project Information

1. Date(s) Geologic Assessment was performed: 1/4/2024

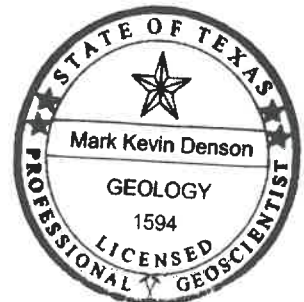
2. Type of Project:

- ☐ WPAP  
☒ SCS

- ☐ AST  
☐ UST

3. Location of Project:

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





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

**Table 1 - Soil Units, Infiltration Characteristics and Thickness**

Soil Name	Group*	Thickness(feet)
OaA	B	4-7
OIA	B	4-7
SvA	B	4-7
SvB	B	4-5
QuC	D	3-9

*\* 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" = \_\_\_\_\_'  
 Site Geologic Map Scale: 1" = 100'  
 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.

NONE IDENTIFIED

GEOLOGIC ASSESSMENT TABLE										PROJECT NAME: San Gabriel Force Main, North College Street, Georgetown, Texas									
LOCATION			FEATURE CHARACTERISTICS							EVALUATION						PHYSICAL SETTING			
1A	1B *	1C *	2A	2B	3	4	5	5A	6	7	8A	8B	9	10	11	12			
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)	TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY	CATCHMENT AREA (ACRES)	TOPOGRAPHY			
						X	Y	Z						<40	>1.6				

\* DATUM: NAD27

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING
N None, exposed bedrock
C Coarse - cobbles, breakdown, sand, gravel
O Loose or soft mud or soil, organics, leaves, sticks, dark colors
F Fines, compacted clay-rich sediment, soil profile, gray or red colors
V Vegetation. Give details in narrative description
FS Flowstone, cements, cave deposits
X Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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

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

Date 1/19/2024



**ATTACHMENT B**

Stratigraphic Column  
San Gabriel Force Main  
North College Street  
Georgetown, Williamson County, Texas

HYDROGEOLOGIC SUBDIVISION	FORMATION	THICKNESS (feet)	LITHOLOGY
Edwards Aquifer	Georgetown	65	Interbedded chalky limestone and marl

Source: Small, 1996



## **ATTACHMENT C SITE-SPECIFIC GEOLOGY**

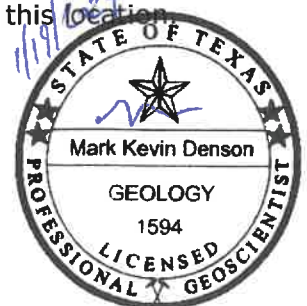
The Geologic Assessment (GA) of the San Gabriel Force Main site was conducted by Kevin Denson, P.G., of Terracon on January 4, 2024. The project site consists of an approximate 4,000-linear feet alignment located generally along North College Street and extending onto the City of Georgetown waste water treatment plant property in Georgetown, Williamson County, Texas.

Exhibit 1 (attached) is a site location map depicting the site in relation to the surrounding area. The areas immediately surrounding the site are a mix of parkland and other City properties. The site is characterized as gently sloping toward the San Gabriel River, which crosses the western portion of the site alignment. Site elevation ranges from about 685 feet above mean sea level (msl) at the eastern terminus to 673 feet at the western terminus. The topographic low point of the site alignment is within the riverbed of the San Gabriel River at approximately 665 feet msl.

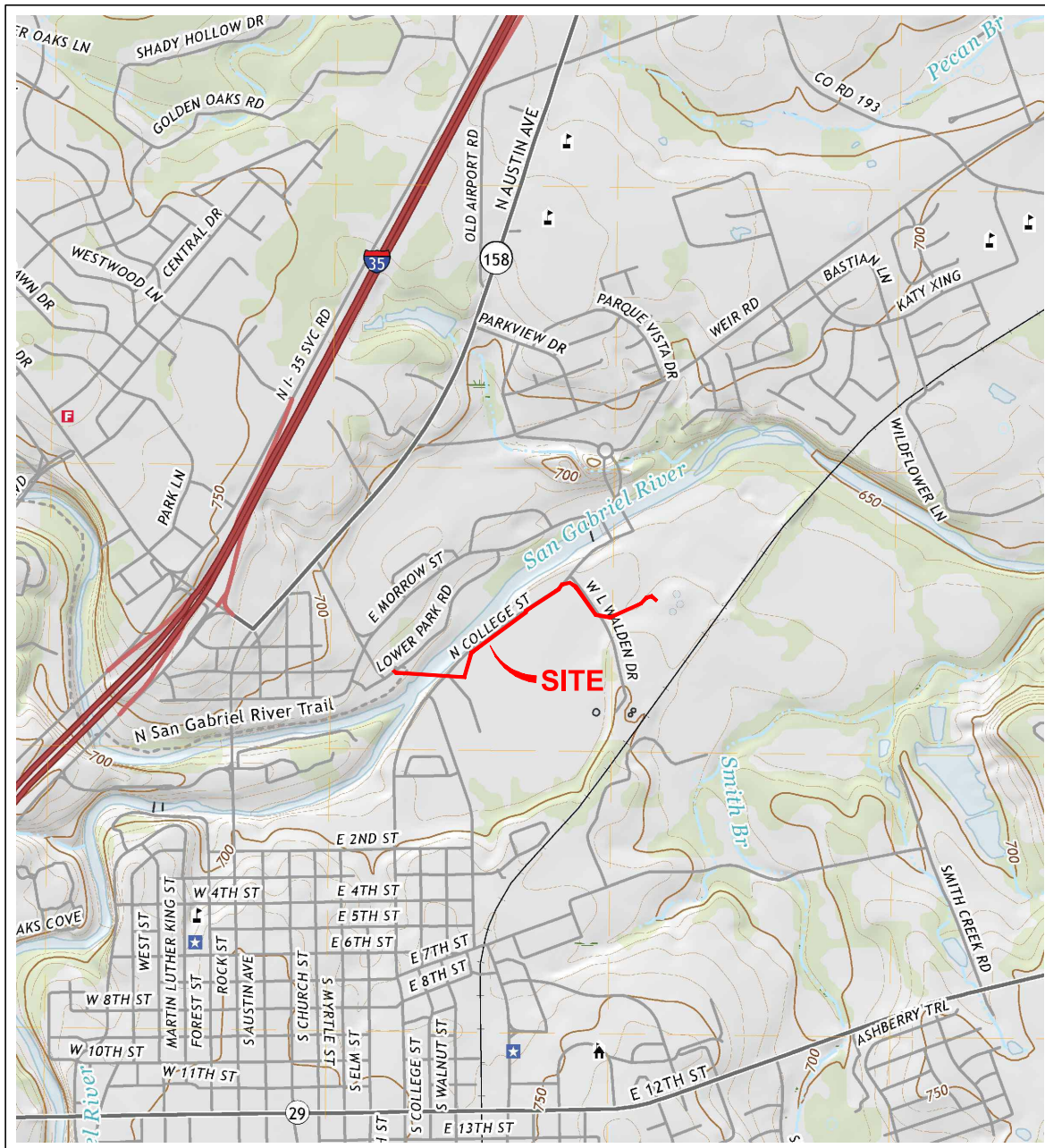
The surficial geologic unit present at the site has been identified as the Georgetown Formation. The Georgetown Formation overlies the Edwards and is the uppermost formation of the Edwards aquifer. The formation consists of nodular, fossiliferous limestone interbedded with marl and is about 65 feet thick in the area. Exposure of the unit onsite is obscured by the soil cover. The site is located entirely within the recharge zone of the Edwards aquifer. The Contributing Zone boundary is located about 2,200 feet southwest of the site, and the Transition Zone boundary is located about 4,900 feet southeast of the site. Attachment B (attached) is a stratigraphic column prepared for the site. Exhibit 2 (attached) is a geologic map of the site.

Based on a review of site topography, aerial photographs, and published geologic maps, there are no mapped faults located onsite and no field evidence of onsite faulting was observed. The nearest mapped fault is located approximately 2,100 feet southwest of the site. The fault is associated with the Balcones fault zone, which is comprised of en echelon, normal, high-angle faults that are representative of the dominant structural trend of the area. No sensitive geologic features (feature score above 40 points) were observed on the site. Due to the lack of sensitive recharge features observed on the site and the presence of a relatively impermeable soil cover present, the potential for fluid movement to the Edwards aquifer beneath the site is considered low.

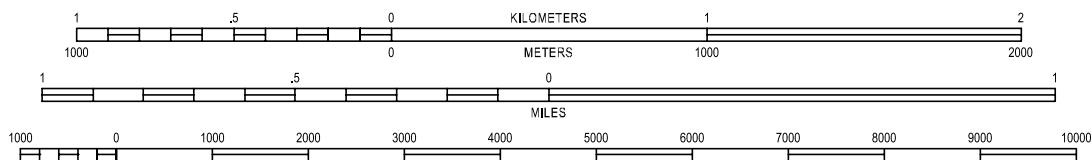
The proposed force main crosses beneath the San Gabriel River. A review of the site maps contained in the City of Georgetown Ordinance 2015-14 indicated there are no known springs occupied by the Georgetown Salamander on the site alignment, and the nearest known occupied site is San Gabriel Spring. This spring is located about 500 feet north of the proposed force main line. It is noted that the spring is located to the north of the San Gabriel River, and the force main is to the south of the river at this location.







SCALE 1:24,000



CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1988

**Georgetown, Texas**  
2019  
7.5 MINUTE SERIES (TOPOGRAPHIC)

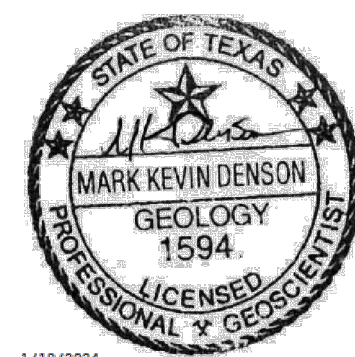
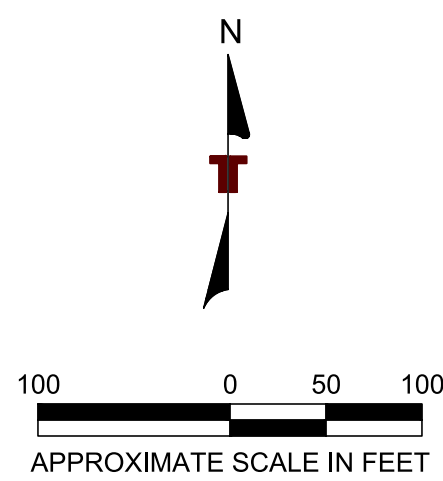
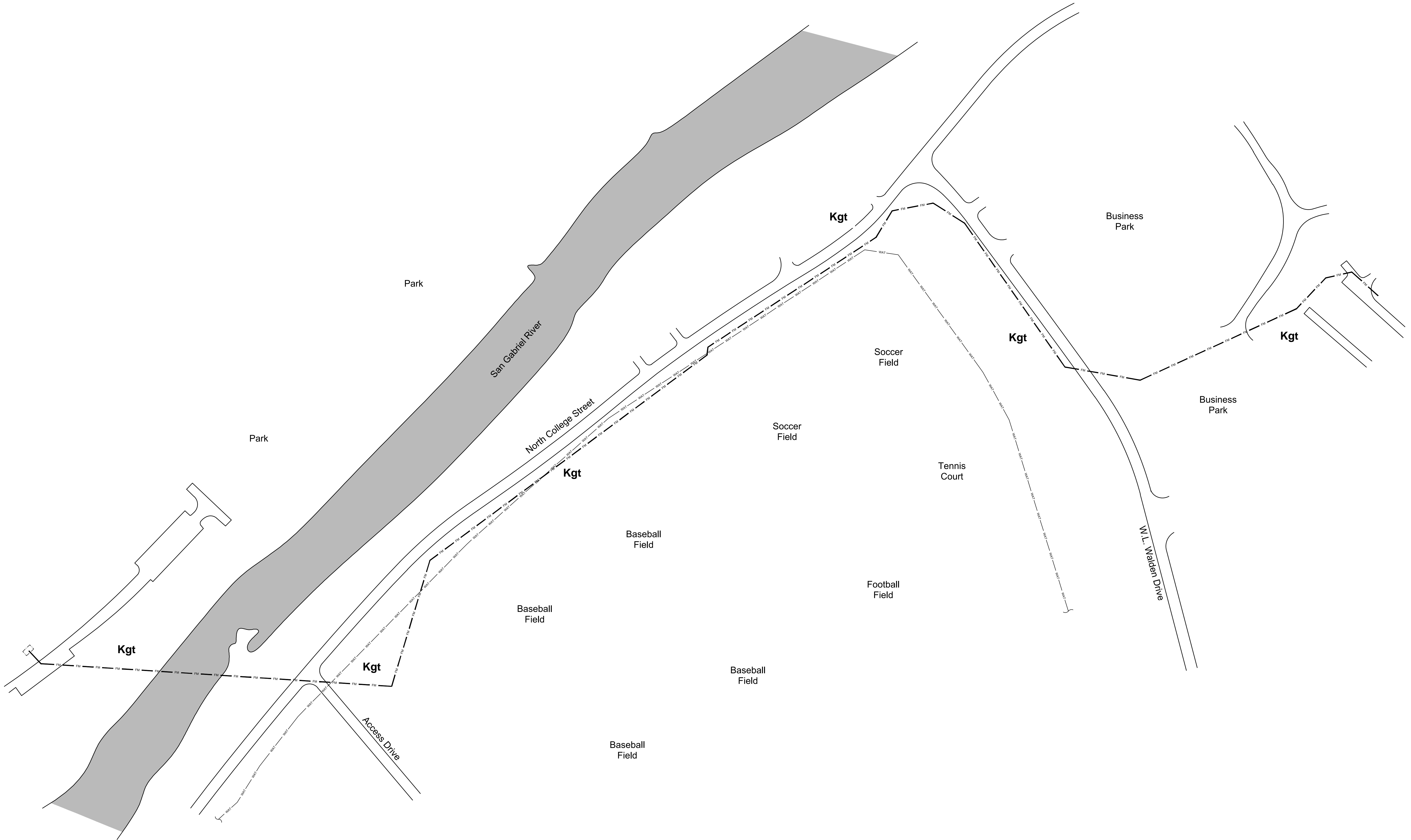
Project Mngr:	KD
Drawn By:	ATX Drafting
Checked By:	KD
Approved By:	KD
Project No.	96237780
Scale:	AS SHOWN
File No.	96237780
Date:	Dec 26, 2023




**Terracon**  
Consulting Engineers and Scientists  
5307 INDUSTRIAL OAKS BLVD., #160 AUSTIN, TX 78735  
PH. (512) 442-1122 FAX (512) 442-1181

**TOPOGRAPHIC MAP**  
**San Gabriel Force Main**  
North College Street  
Georgetown, Williamson County, Texas

EXHIBIT

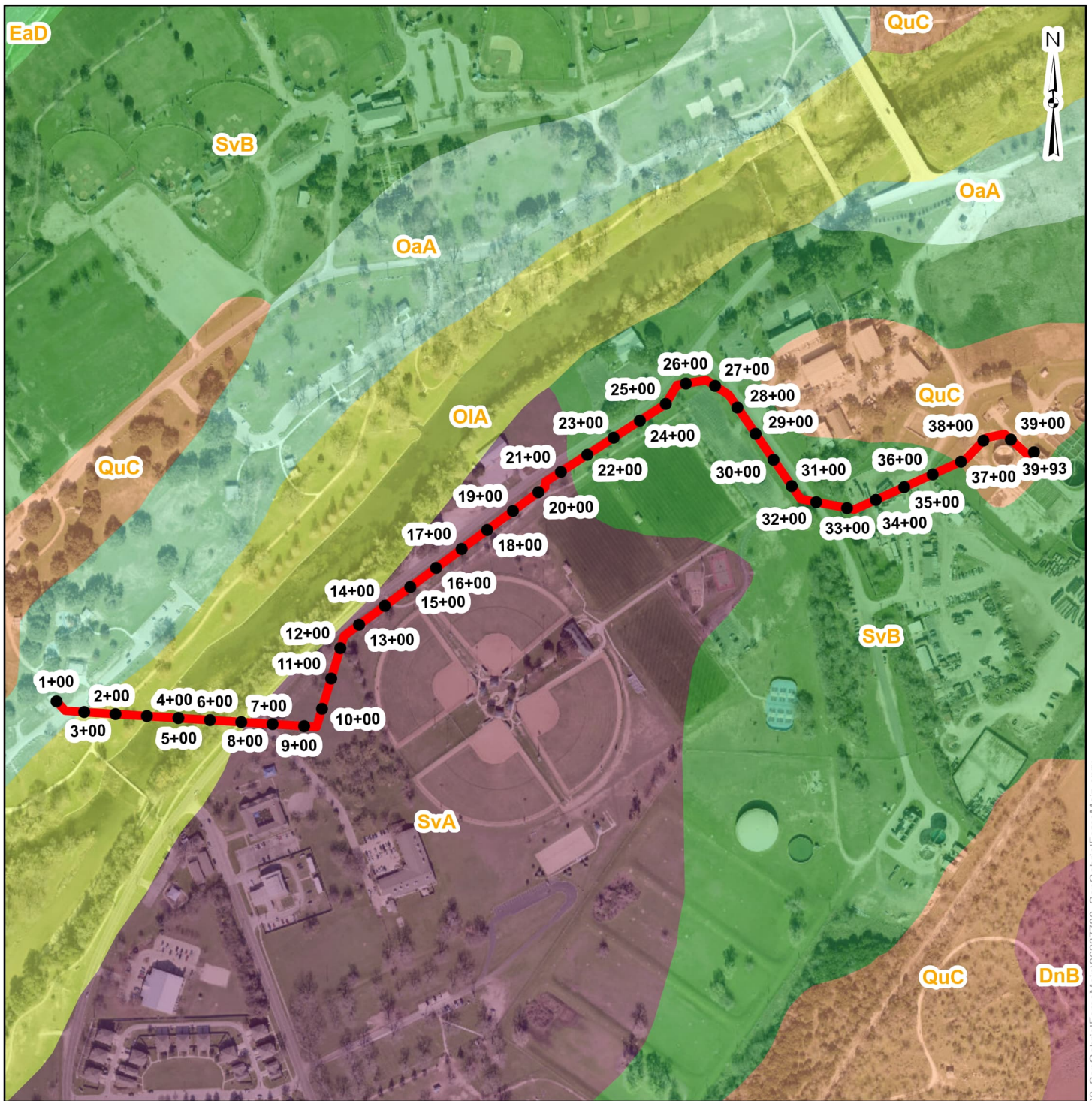
1



LEGEND	
	Proposed Force Main
	Existing 12" RW Line
	Georgetown Formation

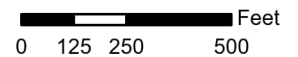
Project Mgr: KD		Project No: 96237780	 Consulting Engineers and Scientists 5307 INDUSTRIAL OAKS BLVD. - #160 AUSTIN, TX 78735 PH: (512) 442-1122 FAX: (512) 442-1181	SITE GEOLOGIC MAP San Gabriel Force Main North College Street Georgetown, Williamson County, Texas	EXHIBIT 2
Drawn By: ATX Drafting		Scale: AS SHOWN			
Checked By: KD		File No: 96237780			
Approved By: KD		Date: Dec 26, 2023			





- Approximate Project Alignment
- Denton Silty Clay (DnB)
- Eckrant cobbly clay (EaD)
- Oakalla silty clay loam (OaA)

- Oakalla soils (OIA)
- Queeney clay loam (QuC)
- Sunev silty clay loam (SvA)
- Sunev silty clay loam (SvB)



DATA SOURCES:  
Williamson County TX, Maxar, TNRIS, USDA NRCS Web  
Soil Survey

Project No.:	96237780
Date:	Jan 2024
Drawn By:	RC
Reviewed By:	KD

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PH. (512) 442-1122 [terracon.com](http://terracon.com)

Site Specific Soils
<p><b>San Gabriel Force Main</b></p> <p>North College Street Georgetown, Williamson County, Texas</p>

Exhibit
<b>3.0</b>

N:\GIS\Projects\2023\96237780 - San Gabriel Force Main\96237780 - San Gabriel Force Main.aprx





— Approximate Project Alignment

TCEQ Edwards Aquifer Zone Data

— Edwards Aquifer Contributing Zone

— Edwards Aquifer Recharge Zone

— Edwards Aquifer Transition Zone

0 0.13 0.25 0.5 Miles

DATA SOURCES:  
Williamson County TX, Maxar, TNRS, TCEQ, Bureau of  
Economic Geology

Project No.:	96237780
Date:	Jan 2024
Drawn By:	RC
Reviewed By:	KD



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**Edwards Aquifer Zones**

**San Gabriel Force Main**

North College Street  
Georgetown, Williamson County, Texas

**Exhibit**

**4.0**

# Organized Sewage Collection System Application

## Texas Commission on Environmental Quality

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

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

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

**Regulated Entity Name:** San Gabriel Force Main Replacement

1. ☒ **Attachment A – SCS Engineering Design Report.** This Engineering Design Report is provided to fulfill the requirements of 30 TAC Chapter 217, including 217.10 of Subchapter A, §§217.51 – 217.70 of Subchapter C, and Subchapter D as applicable, and is required to be submitted with this SCS Application Form. **See TCEQ 0624 Design Report**

## Customer Information

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

Contact Person: Daniel Havins

Entity: City of Georgetown

Mailing Address: 300-1 Industrial Avenue

City, State: Georgetown, TX

Zip: 78626

Telephone: 512-930-6513

Fax: \_\_\_\_\_

Email Address: Daniel.Havins@georgetown.org

***The appropriate regional office must be informed of any changes in this information within 30 days of the change.***

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

Contact Person: Jake L Blair, P.E.

Texas Licensed Professional Engineer's Number: 136581

Entity: Kasberg, Patrick & Associates, LP

Mailing Address: 19 N Main Street

City, State: Temple, Texas

Zip: 76501

Telephone: (254) 773-3731

Fax: \_\_\_\_\_

Email Address: jblair@kpaengineers.com

## Project Information

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

- ☐ Residential: Number of single-family lots: \_\_\_\_\_  
☐ Multi-family: Number of residential units: \_\_\_\_\_  
☐ Commercial  
☐ Industrial  
☐ Off-site system (not associated with any development)  
☒ Other: Replaces Existing Facilities

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

\_\_\_\_\_ % Domestic \_\_\_\_\_ gallons/day  
\_\_\_\_\_ % Industrial \_\_\_\_\_ gallons/day  
\_\_\_\_\_ % Commingled \_\_\_\_\_ gallons/day  
Total gallons/day: \_\_\_\_\_

6. Existing and anticipated infiltration/inflow is \_\_\_\_\_ gallons/day. This will be addressed by: \_\_\_\_\_.

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

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

8. Pipe description:

**Table 1 - Pipe Description**

<b>Pipe Diameter(Inches)</b>	<b>Linear Feet (1)</b>	<b>Pipe Material (2)</b>	<b>Specifications (3)</b>
20"	3,124	Ductile Iron	ASTM A746
20"	745	HDPE	DR11
36"	322	Steel Encasement	

**Total Linear Feet: 3,869**

(1) Linear feet - Include stub-outs and double service connections. Do not include private service laterals.

(2) Pipe Material - If PVC, state SDR value.

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



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

☒ Existing  
☐ Proposed

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

☒ The City of \_\_\_\_\_ standard specifications. City of Georgetown  
☐ Other. Specifications are attached.

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

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

### Alignment

N/A, No Gravity Improvements this project

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

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

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

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

### Manholes and Cleanouts

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

No Manholes exist in this project

Table 2 - Manholes and Cleanouts

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

<i>Line</i>	<i>Shown on Sheet</i>	<i>Station</i>	<i>Manhole or Clean-out?</i>
	Of		
	Of		
	Of		

15. ☐ Manholes are installed at all Points of Curvature and Points of Termination of a sewer line.
16. ☐ The maximum spacing between manholes on this project for each pipe diameter is no greater than:

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

- ☐ **Attachment C – Justification for Variance from Maximum Manhole Spacing.** The maximum spacing between manholes on this project (for each pipe diameter used) is greater than listed in the table above. A justification for any variance from the maximum spacing is attached, and must include a letter from the entity which will operate and maintain the system stating that it has the capability to maintain lines with manhole spacing greater than the allowed spacing.
17. ☐ All manholes will be monolithic, cast-in-place concrete.
- ☐ The use of pre-cast manholes is requested for this project. The manufacturer's specifications and construction drawings, showing the method of sealing the joints, are attached.

## ***Site Plan Requirements***

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

18. ☒ The Site Plan must have a minimum scale of 1" = 400'.  
Site Plan Scale: 1" = 400 '.
19. ☐ The Site Plan must include the sewage collection system general layout, including manholes with station numbers, and sewer pipe stub outs (if any). Site plan must be overlain by topographic contour lines, using a contour interval of not greater than ten feet and showing the area within both the five-year floodplain and the 100-year floodplain of any drainage way.
20. Lateral stub-outs:
- ☐ The location of all lateral stub-outs are shown and labeled.
- ☒ No lateral stub-outs will be installed during the construction of this sewer collection system.



21. Location of existing and proposed water lines:

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

22. 100-year floodplain:

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

**Table 3 - 100-Year Floodplain**

<i>Line</i>	<i>Sheet</i>	<i>Station</i>
	of	to
	of	to
	of	to
	of	to

23. 5-year floodplain:

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

**Table 4 - 5-Year Floodplain**

<i>Line</i>	<i>Sheet</i>	<i>Station</i>
	of	to
	of	to
	of	to
	of	to

24. ☒ Legal boundaries of the site are shown.

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

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

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

☐ There will be no water line crossings.

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

**Table 5 - Water Line Crossings**

<i>Line</i>	<i>Station or Closest Point</i>	<i>Crossing or Parallel</i>	<i>Horizontal Separation Distance</i>	<i>Vertical Separation Distance</i>
18"	2+51	Crossing		8' 6"
18"	11+53	Crossing		2' 10"
12"	11+66	Crossing		3' 3"
12"	15+55	Crossing		1' 10 3/4"
12"	20+29	Crossing		2' 1/2"
6"	27+13	Crossing		0.9"
2"	35+83	Crossing		1' 5 1/2"

27. Vented Manholes: **No Manholes Installed in the Project**

☐ **No part** of this sewer line is within the 100-year floodplain and vented manholes are not required by 30 TAC Chapter 217.

☐ **A portion** of this sewer line is within the 100-year floodplain and vented manholes will be provided at less than 1500 foot intervals. These water-tight manholes are listed in the table below and labeled on the appropriate profile sheets.

☐ **A portion** of this sewer line is within the 100-year floodplain and an alternative means of venting shall be provided at less than 1500 feet intervals. A description of the alternative means is described on the following page.

☐ **A portion** of this sewer line is within the 100-year floodplain; however, there is no interval longer than 1500 feet located within. No vented manholes will be used.

**Table 6 - Vented Manholes**

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

28. Drop manholes:

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

**Table 7 - Drop Manholes**

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

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

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

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

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

31. Minimum flow velocity (From Appendix A)

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

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

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

**Table 8 - Flows Greater Than 10 Feet per Second**

<i>Line</i>	<i>Profile Sheet</i>	<i>Station to Station</i>	<i>FPS</i>	<i>% Slope</i>	<i>Erosion/Shock Protection</i>

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

☐ Concrete encasement shown on appropriate Plan and Profile sheets for the locations listed in the table above.

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

☒ N/A

### ***Administrative Information***

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

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

**Table 9 - Standard Details**

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

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

36. ☒ All organized sewage collection system general construction notes (TCEQ-0596) are included on the construction plans for this sewage collection system.
37. ☒ All proposed sewer lines will be sufficiently surveyed/staked to allow an assessment prior to TCEQ executive director approval. If the alignments of the proposed sewer lines are not walkable on that date, the application will be deemed incomplete and returned.
- ☐ Survey staking was completed on this date: \_\_\_\_\_
38. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
39. ☒ Any modification of this SCS application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

## Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Organized Sewage Collection System Application** is hereby submitted for TCEQ review and executive director approval. The system was designed in accordance with the requirements of 30 TAC §213.5(c) and 30 TAC §217 and prepared by:

Print Name of Licensed Professional Engineer: Jake Blair, P.E.

Date: 6/20/2024

Place engineer's seal here:



Signature of Licensed Professional Engineer:

  
\_\_\_\_\_

## Appendix A-Flow Velocity Table

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

**Table 10 - Slope Velocity**

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

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

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

**Figure 1 - Manning's Formula**

Where:

$v$  = velocity (ft/sec)

$n$  = Manning's roughness coefficient (0.013)

$R_h$  = hydraulic radius (ft)

$S$  = slope (ft/ft)

# Lift Station/Force Main System Application

## Texas Commission on Environmental Quality

for Regulated Activities On the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(c)(3)(B) and (c), Effective June 1, 1999

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

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

**Regulated Entity Name:** San Gabriel Force Main Replacement

## Customer Information

*(If different than customer information provided on core data form)*

1. The person(s) responsible for providing the engineering certification to the TCEQ pursuant to 30 TAC §213.5(f)(2)(C) during construction and 30 TAC §213.5 (c)(3)(D) upon completion of construction is:

Contact Person: Daniel Havins

Entity: City of Georgetown

Mailing Address: 300-1 Industrial Avenue

City, State: Georgetown, TX

Zip: 78626

Telephone: 512-930-6513

Fax: \_\_\_\_\_

Email Address: Daniel.Havins@georgetown.org

2. The engineer responsible for the design of this lift station and force main:

Contact Person: Jake L Blair, P.E.

Entity: Kasberg, Patrick & Associates, LP

Mailing Address: 19 N Main Street

City, State: Temple, Texas

Zip: 76501

Telephone: (254) 773-3731

Fax: \_\_\_\_\_

Email Address: jblair@kpaengineers.com

Texas Licensed Professional Engineer's Serial Number: 136581

## Project Information

3. This project is for the construction or replacement of:

☐ Lift Station only.

- ☒ ~~Lift Station~~ **Force Main Improvements Only**  
☐ Lift Station and Force Main system.  
☐ Lift Station, Force Main, and Gravity system.

San Gabriel Park

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

- ☒ Existing  
☐ Proposed

5. All components of this lift station/force main system will comply with:

- ☒ The City of \_\_\_\_\_ standard specifications. City of Georgetown  
☐ Other. Specifications are attached.

## Site Plan Requirements

*Items 6-14 must be included on the Site Plan.*

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

Site Plan Scale: 1" = \_\_\_\_\_'.

7. ☒ Lift station/force main system layout meets all requirements of 30 TAC Chapter 217.

8. Geologic or Manmade Features:

- ☒ No geologic or manmade features were identified in the Geologic Assessment.  
☐ All geologic or manmade features identified in the Geologic Assessment (caves, solution openings, sinkholes, fractures, joints, porous zones, etc.) which exist at the site of the proposed lift station and along the path(s) or within **50 feet of each side** of a proposed force main line are shown on the Site Plan and are listed in the table below. Designs used to protect the integrity of the sewer line crossing each feature are described and labeled on the attached page. A detailed design drawing for each feature is shown on Plan Sheet \_\_\_\_\_ of \_\_\_\_\_.  
☐ No Geologic Assessment is required for this project.

**Table 1 - Geologic or Manmade Features**

<i>Line</i>	<i>Station to Station</i>	<i>Type of Feature</i>
	to	
	to	
	to	
	to	
	to	
	to	
	to	
	to	



9. ☐ Existing topographic contours are shown and labeled. The contour interval is \_\_\_\_\_ feet. (Contour interval must not be greater than 5 feet).
10. ☐ Finished topographic contours are shown and labeled. The contour interval is \_\_\_\_\_ feet. (Contour interval must not be greater than 5 feet).
- ☒ Finished topographic contours will not differ from the existing topographic configuration and are not shown.

11. 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): \_\_\_\_\_

12. 5-year floodplain:

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

**Table 2 - 5-Year Floodplain**

Proposed Force Main will cross Existing 5-year floodplain by DR11 HDPE directional bore.

<i>Line</i>	<i>Sheet</i>	<i>Station to Station</i>
20" HDPE Forcemain	FM-01 of 08	1+95 to 7+00
20" HDPE Forcemain	FM-02 of 08	7+00 to 9+40
20" HDPE Forcemain	FM-03 of 08	7+00 to 9+40
	of	to

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

**If applicable, this must agree with Item No. 15 on the Geologic Assessment Form.**

- ☐ 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 plugged.
- ☐ The wells are not in use and will be properly plugged.
- ☐ 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.

14. ☐ Legal boundaries of the site are shown.

## Plan and Profile Sheets

The construction drawings and technical specifications will not be considered for review unless they are the **final plans and technical specifications** which will be used by the contractor for bidding and construction.

**Items 15 – 18 must be included on the Plan and Profile sheets.**

15. ☒ The equipment installation construction plans must have a minimum scale of 1" = 10'.  
Plan sheet scale: 1" = 10 '.
16. ☒ Locations, descriptions and elevations of all required equipment and piping for the lift station and force main are shown and labeled.
17. ☒ Air Release/Vacuum Valves will be provided at all peaks in elevation of the proposed force main. These locations are listed in the table below and labeled on the appropriate plan and profile sheets.

**Table 3 - Air Release/Vacuum Valves**

<i>Line</i>	<i>Station</i>	<i>Sheet</i>
20" DIP Forcemain	20+43	FM-05 of 08
		of
		of
		of
		of
		of

18. ☒ The **final plans and technical specifications** are submitted for the TCEQ's review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.
19. ☒ **Attachment A - Engineering Design Report.** An engineering design report with the following required items is attached:
- ☒ The report is dated, signed, and sealed by a Texas Licensed Professional Engineer.
  - ☒ Calculations for sizing system.
  - ☒ Pump head calculations, including, but not limited to, system head and pump capacity curves, head loss calculations, and minimum and maximum static head C values for normal and peak operational conditions.
  - ☒ 100-year and 25-year flood considerations.
  - ☒ Total lift station pumping capacity with the largest pump out of service.
  - ☒ Type of pumps, including standby units.
  - ☒ Type of pump controllers, including standby air supply for bubbler controllers, as applicable.

- ☒ Pump cycle time.
- ☒ Type of wet well ventilation; include number of air changes for mechanical ventilation.
- ☒ Minimum and maximum flow velocities for the force main.
- ☒ Lift station security.
- ☒ Lift station emergency provisions and reliability.

### **Administrative Information**

- 20. ☒ Upon completion of the wet well excavation, a geologist must certify that the excavation was inspected for the presence of sensitive features and submit the signed, sealed, and dated certification to the appropriate regional office.
- 21. ☒ The TCEQ Lift Stations and Force Mains General Construction Notes (TCEQ-0591) are included on the General Notes Sheet of the Final Construction Plans for this lift station and/or force main system.
- 22. ☒ 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.
- 23. ☒ Any modification of this lift station/force main system application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

### **Signature**

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Lift Station/Force Main System Application** is hereby submitted for TCEQ review and executive director approval. The system was designed in accordance with the requirements of 30 TAC §213.5(c)(3)(C) and 30 TAC Chapter 217, and prepared by:

Print Name of Licensed Professional Engineer: JAKE L. BLAIR, PE

Place engineer's seal here:

Date: 6/20/24

Signature of Licensed Professional Engineer:





San Gabriel Force Main Replacement

City of Georgetown

Texas Commission on Environmental Quality

Submittal for

Edwards Aquifer Protection Sewage Collection System Plan

TCEQ 0624 Attachment A

Engineering Design Report



June 2024

CN: 600412043 Zip: 78626-8445



## **Final Design Engineering Report**

### **San Gabriel Force Main Replacement, Georgetown, Texas**

The engineering firm Kasberg, Patrick & Associates, LP on behalf of the City of Georgetown, Texas is submitting this engineering report for the force main replacement. This report is provided to fulfill the requirements of 30 TAC Chapter 217, specifically as required by 217.10 Final Engineering Design Report. This document references previous San Gabriel Lift Station Improvements approved August 24, 2018

#### **(1) Calculations for Sizing System**

- a. The proposed improvements replace the existing 20" Force Main with a same diameter pipe and does not increase capacity outside of an adjusted roughness coefficient for new pipe. See Page 2, Section 2.1 of the previously approved design report attached as Exhibit C to this document.

#### **(2) Pump head calculations, including, but not limited to, system head and pump capacity curves, head loss calculations, and minimum and maximum static head C values for normal and peak operational conditions.**

- a. See Page 2 and 3, Section 2.1 thru 3.3 of the previously approved design report detailing the system head curve, head loss calculations and pump operational conditions for the new 20" force main. Proposed curves are utilizing a revised roughness coefficient of 140 in lieu of existing conditions at 110.

#### **(3) 100-year and 25-year flood considerations.**

- a. See Page 5, Section 3.2 of the previously approved design report detailing the floodplain provisions for the lift station site. Alignment crossing the flood plain is shown on attached Exhibit B. Proposed improvements will exit the existing San Gabriel Lift Station and cross the 100 year and 25 year flood plain by directional bore with HDPE DR 11 pipe as shown on Sheets FM-01 thru FM-03.

(4) Type of pumps, including standby units.

- a. See Page 3, Section 2.3 of the previously approved design report detailing the type of existing pumps in the San Gabriel Lift Station.

(5) Type of pump controllers, including standby air supply for bubbler controllers, as applicable.

- a. Pumps will be controlled with a primary ultrasonic transmitter and a backup float system as shown on Exhibit C, Page 4 - Figure 5 of the design report.

(6) Pump Cycle Times.

- a. See attached Exhibit D for the pump cycle times for the existing lift station.

(7) Type of wet well ventilation; include number of air changes for mechanical ventilation.

- a. See Page 5, Section 2.5 for passive ventilation on the existing lift station.

(8) Minimum and maximum flow velocities for the force main.

- a. See Page 3, Section 2.2, Figure 2 for operating conditions of the existing lift station and proposed force main.

(9) Lift station security.

- a. See Page 5, Section 3.3 for security provisions on the existing lift station and proposed force main.

(10) Lift station emergency provisions and reliability.

- a. See Page 5, Section 3.1 for emergency provisions on the existing lift station and proposed force main.

Prepared by:



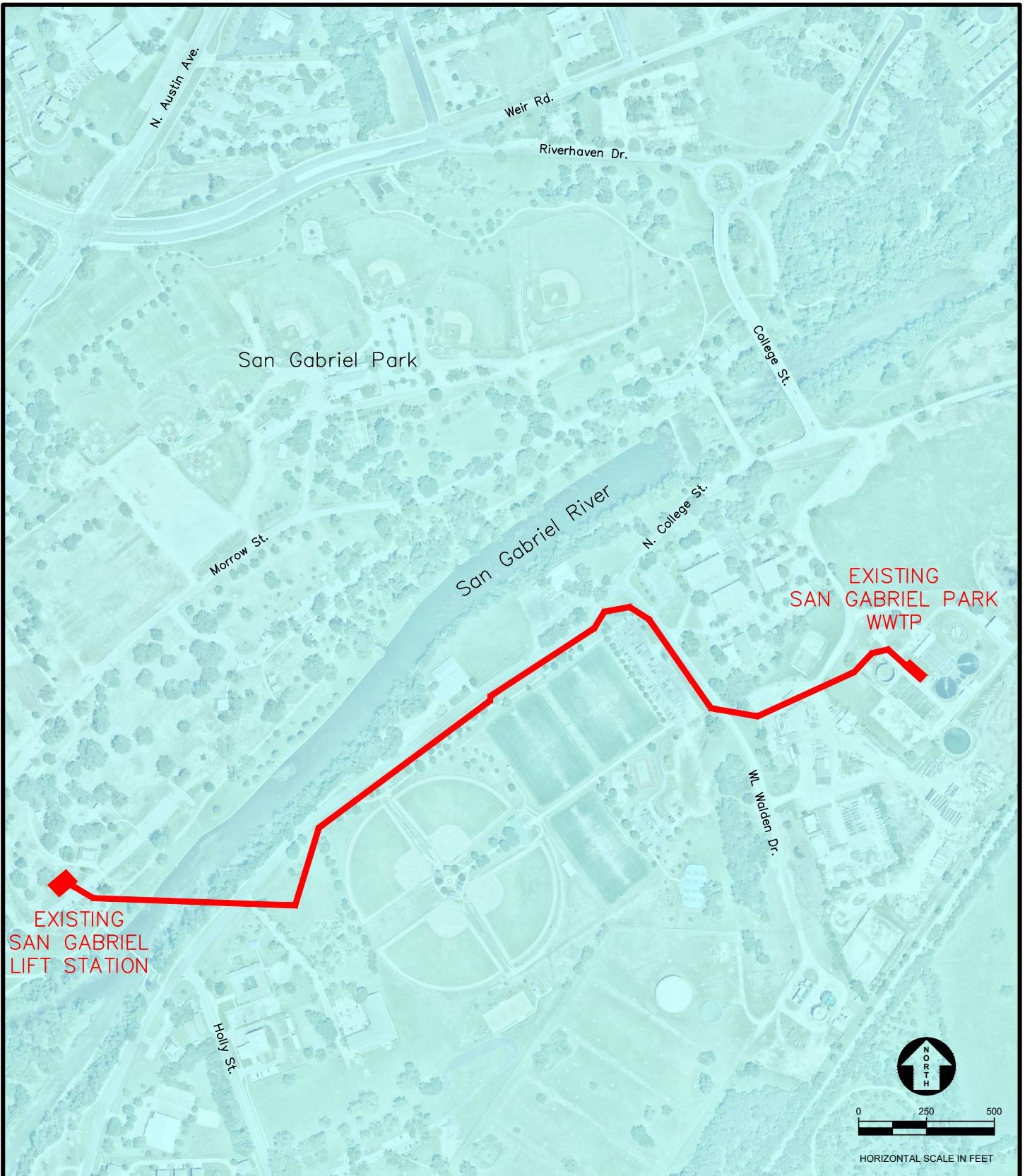
Jake L. Blair, P.E.

Kasberg, Patrick & Associates, LP

## APPENDIX

- **Exhibit A** – San Gabriel Force Main Replacement Edwards Aquifer Recharge Zone
- **Exhibit B** – San Gabriel Force Main Replacement FEMA Flood Plain
- **Exhibit C** – Existing San Gabriel Lift Station Engineering Design Report – 9-12-2018
- **Exhibit D** – San Gabriel Lift Station Engineering Design Report Pump Cycle Times
- **Exhibit E** – San Gabriel Lift Station SCS TCEQ Approval





### LEGEND



EDWARDS AQUIFER RECHARGE ZONE



PROPOSED 20" FORCE MAIN

## CITY OF GEORGETOWN, TEXAS

### SAN GABRIEL FORCE MAIN REPLACEMENT EDWARDS AQUIFER ZONE

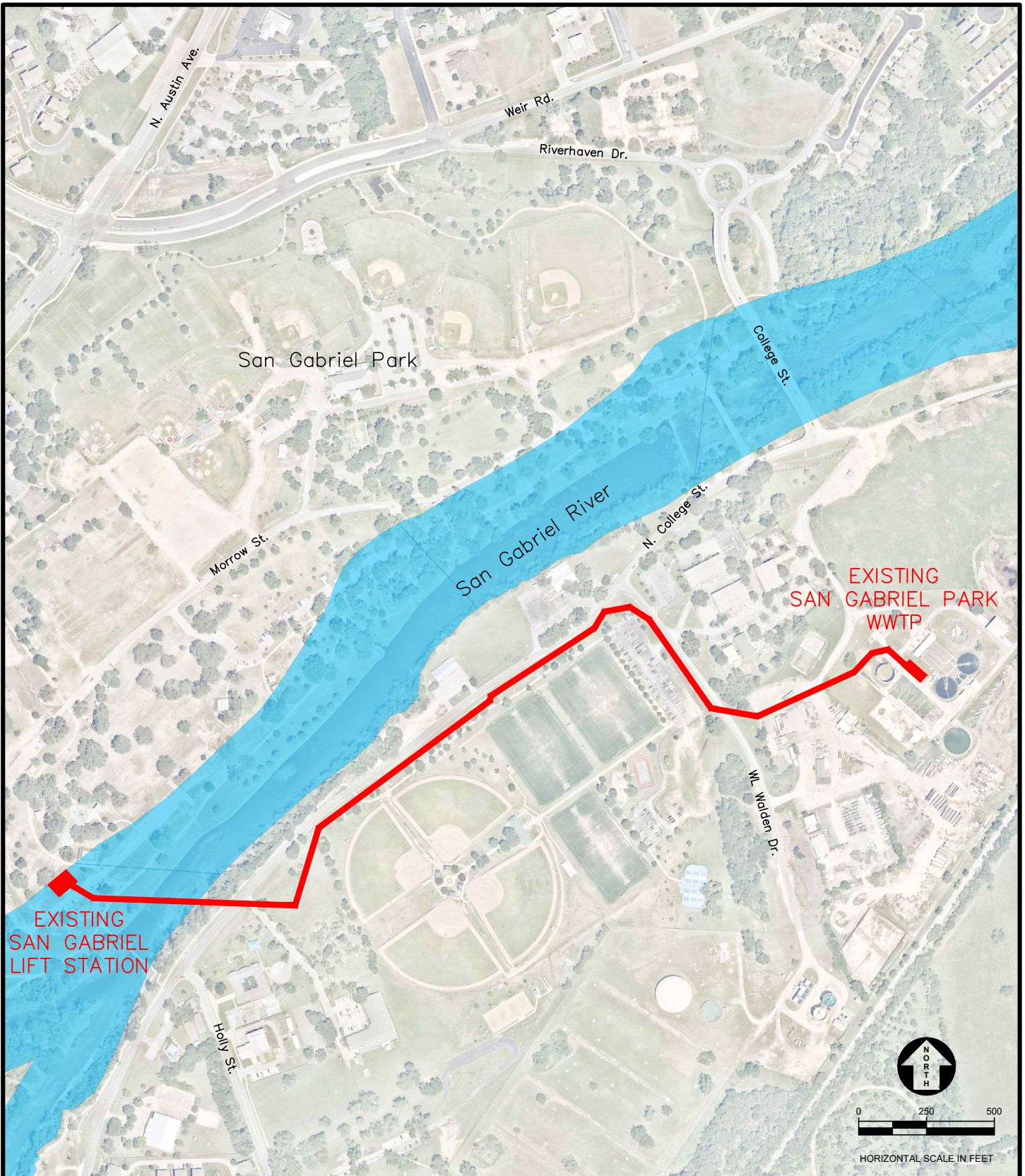


KASBERG, PATRICK & ASSOCIATES, LP  
CONSULTING ENGINEERS  
TEMPLE, TEXAS 76501  
Firm Registration No. F-510

JUNE 2024

EXHIBIT A





### LEGEND



FEMA FLOOD PLAIN



PROPOSED 20" FORCE MAIN

## CITY OF GEORGETOWN, TEXAS

### SAN GABRIEL FORCE MAIN REPLACEMENT FEMA FLOOD PLAIN



KASBERG, PATRICK & ASSOCIATES, LP  
CONSULTING ENGINEERS  
TEMPLE, TEXAS 76501  
Firm Registration No. F-510

JUNE 2024

EXHIBIT B



**REVISED**  
**ORGANIZED SEWAGE COLLECTION SYSTEM PLAN**  
**TCEQ-0582**

**Attachment A**

**Engineering Design Report**

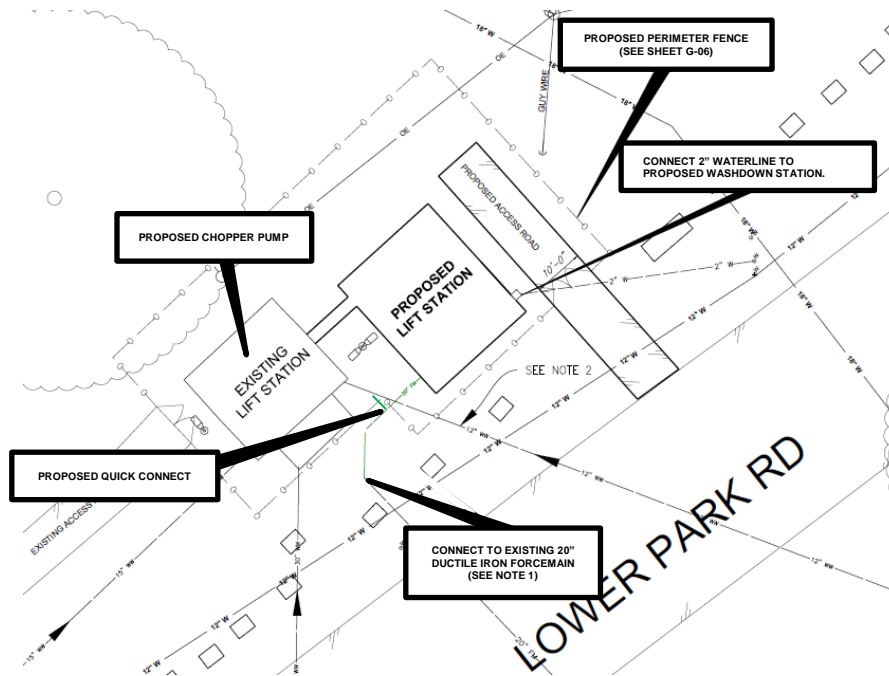


**1.1 Background**

The San Gabriel Park Lift Station replacement project is located in the western half of the San Gabriel Park just north of downtown Georgetown, Texas. The project proposes the construction of a replacement lift station adjacent to the existing San Gabriel Park lift station.

The site is currently used for the operation of the existing lift station and will be used at project completion for the replacement lift station. The existing lift station was originally constructed in 1986. Over the past several years operations and maintenance staff have observed severe corrosion of the existing pump guide rails and supports which has required temporary repairs and improvements. The pumps also experience frequent clogging issues which requires maintenance for cleaning and unclogging. The combination of the deteriorated guide rails and the need to hoist pumps out of the wet well for unclogging has created the need to fully replace the pumps, guide rails and rail supports within the existing wet well. Due to the volume of wastewater flow received at the existing wet well, there is not a feasible method of bypassing and/or temporarily dewatering the existing wet well to replace the deteriorated guide rail and supports. A more feasible plan would be to build a new wet well and valve vault (lift station) adjacent to the existing wet well and transfer flow from the existing wet well to the new lift station once completed. Once these components are completed, the combination of the existing wet well and newly constructed lift station would provide a mechanism to store and/or bypass flow to perform future maintenance work on the newly constructed lift station.

A mixing-chopper pump is also proposed to mitigate pump clogging issues historically experienced at this lift station. The proposed chopper pump will be installed in the existing wet well upstream of the proposed replacement lift station. The replacement lift station is proposed to have a footprint of 24' X 30'. A reconnection of the existing force main to the replacement valve vault will be required, however no gravity wastewater lines will be adjusted as the existing wet well will remain to serve as a collector and junction box for the proposed replacement wet well. The existing and proposed wet wells will be interconnected with a proposed 24" pipe with a sluice gate which will allow for temporary dewatering of the replacement wet well for maintenance.



*Figure 1 – Lift Station Improvements Layout*

## 2.1 Pump, Force Main & Wet Well Sizing

The replacement lift station will be a triplex lift station, with two equally sized pumps and one pump of a smaller size. The existing 20" force main will be used for the replacement lift station and will comply with the TCEQ requirement for a lift station with three or more pumps. The velocity within the existing forcemain will remain between 2.0 and 6.0 feet per second at the flow ranges proposed for the replacement lift station. At these velocities, a 20" Force Main can accommodate a flow range of 1960 to 5875 gallons per minute (2.82 to 8.46 MGD). This lift station is projected to have 3500 gallons per minute (5.0 MGD) under current conditions. Future ultimate flow projections are expected to be approximately 8.8 MGD which will require a new 24" forcemain and upgrading of the WWTP. The following sections will further detail specific components of the lift station.

## 2.2 System Head Curves

The system head curve for the existing 20" DIP force main was calculated using a "C" factor of 120 to represent older pipe. Based on the system head curves and the desired firm pump capacity of 3500gpm (5.0 MGD), the pumps will operate at a total dynamic head between 66' at 1960gpm and 76' at 3500gpm. The pumps will meet the minimum velocity requirements of 2.0 fps in the existing 20" force main as shown below.

Flow		Pipe Size	Pipe Area	Velocity
1960 gpm	4.37 cfs	20 in	2.18 sqft	2.0 fps
2200 gpm	4.90 cfs	20 in	2.18 sqft	2.2 fps
3500 gpm	7.80 cfs	20 in	2.18 sqft	3.6 fps
5875 gpm	13.09 cfs	20 in	2.18 sqft	6.0 fps

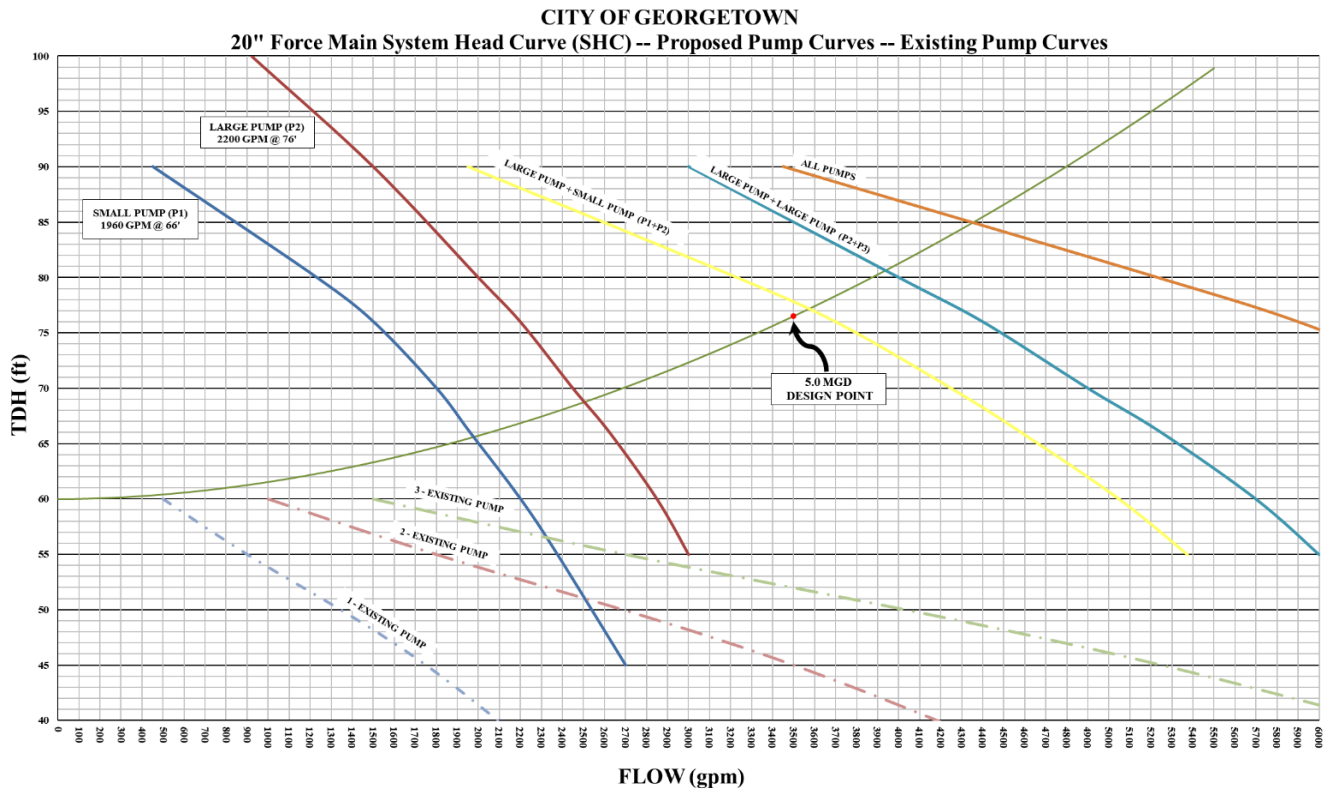
*Figure 2 – Velocity Calculation Table*

## 2.3 Pump Selections

The selected pump characteristics are as follows:

- Number of Pumps @ Startup = 3
- Two Pumps Sized for 2200gpm @ 76' TDH
- One Pump Sized for 1960gpm @ 66' TDH
- Actual Firm Capacity of Lift Station = 5.1 MGD

In addition, a proposed mixing-chopper pump will reduce the risk of septic conditions during low flow. Shown in figure 3 is a graphical summarization of the Existing Pumps, Proposed Pumps and System Curve.



**Figure 3 – System Head Curve**

## 2.4 Wet Well Diameter -- 217.60(b)(7) & (8)

(7) A pump must run continuously during the pump cycle time, which begins when the pump is activated by the pump controls. Pump cycle time, based on peak flow, must equal or exceed 6 minutes for pumps with a horsepower less than 50. Pump Cycle time must equal or exceed 10 minutes for pumps with a horsepower between 50 and 100.

(8) An evaluation of minimum wet well volume requires the following formula:

$$V = \frac{T * Q}{4 * 7.48}$$

Where:

$V$  = active volume (cubic feet)

$Q$  = pump capacity (gallons per minute)

$T$  = cycle time (minutes)

The wet well floats will be adjusted to have an active volume of 1390 cubic feet which corresponds to a pump cycle time greater than 10 minutes. The cycle time requirement is met with the volume in the proposed wet well in addition to the volume of the existing lift station wet well. Detailed below in Figure 2 are the wet well float elevations and general layout. See Pump Cycle Calculation spreadsheet below.

Active Pump(s)	Cycle Time (min)	Pump Capacity (gpm)	Active Volume (ft <sup>3</sup> )	Depth (ft)
P1 = 50 HP	10	1960	655	<b>0.97</b>
P1 = 50 HP	11	1960	721	<b>1.06</b>
P1 = 50 HP	12	1960	786	<b>1.16</b>

Active Pump(s)	Cycle Time (min)	Pump Capacity (gpm)	Active Volume (ft <sup>3</sup> )	Depth (ft)
P2 = 60 HP	10	2200	735	<b>1.08</b>
P2 = 60 HP	11	2200	809	<b>1.19</b>
P2 = 60 HP	13.5	2200	993	<b>1.46</b>

Figure 4 – Pump Cycle Calculation

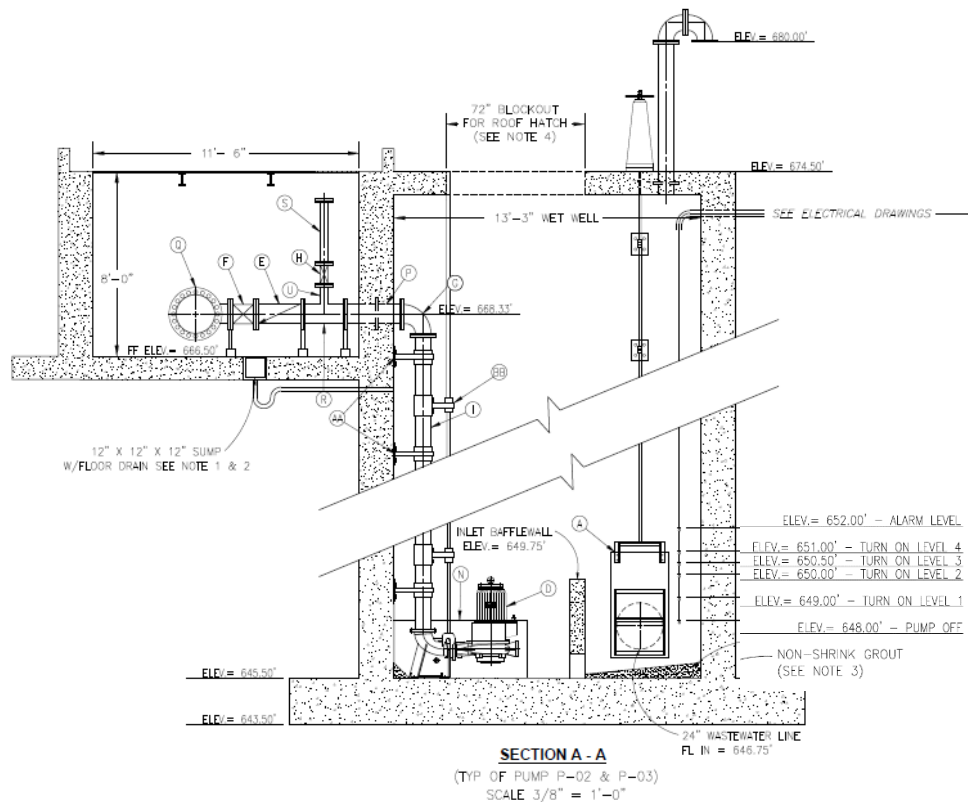


Figure 5 –Proposed Lift Station Wet Well Pump On/Off Elevations

## **2.5 Passive Ventilation – 217.60(d)(1)(c)**

*(c) A passive ventilation system must be sized to vent at a rate equal to the maximum pumping rate of a lift station, but not to exceed 600 feet per minute.*

The ultimate capacity of the lift station will be 6111gpm (8.8 MGD). In order to not exceed 600 feet per minute, the vent will require a cross sectional area equal to or larger than:

$$A = \frac{Q}{7.4805 \frac{\text{gal}}{\text{cf}} * \frac{600\text{ft}}{\text{min}}}$$

When the equation is solved for the ultimate capacity of the lift station (Q = 6111 gpm), the result dictates that a required area of 1.36 ft<sup>2</sup>. A 10” goose neck vent has a clear opening equal to 0.55 ft<sup>2</sup> and therefore three (3) will be installed to meet the passive ventilation requirements laid out in TCEQ 217.60. The gooseneck will be positioned so that the outlet will be above the 100-year floodplain elevation to prevent inflow during flood conditions.

## **2.7 Combination Air Release Valves**

The 20” force main header piping includes Vent-O-Mat RGX anti-shock, anti-surge air release vacuum break valves. The RGX utilizes both a large orifice for discharging air/breaking a vacuum and an automatic “anti-surge” orifice device that serves to slow sewage approaching at excessive speed, thereby limiting pressure rise in the pipeline.

## **3.1 Emergency Provisions**

The Lift Station will have a dual source of three phase electrical power with automatic switch over capability during a power failure.

In addition to emergency power, the owner will also have the ability to temporarily bypass the proposed lift station for maintenance purposes. A proposed forcemain quick connect and a sluice gate installed at the new wet well inlet pipe which will allow for temporary bypass operation. The owner will have the ability to isolate the existing and proposed lift stations from one another through the use of the proposed sluice gate and then once isolated, use a portable pump which can be connected to the forcemain by means of the quick connect.

## **3.2 Floodplain Provisions**

The existing and proposed lift stations are within the **theoretical** 25-year floodplain elevation. However, the existing site has in fact been fully accessible throughout numerous actual historical 25-year flood events and beyond since it was originally constructed in 1986. As an added pre-caution, the project design includes relocation of all electrical panels and equipment 600 feet from the site to a location which is above the 100-year floodplain. The dual electrical services and automatic switchover equipment are to be located at this higher elevation as well.

## **3.3 Lift Station Security**

As per TCEQ §217.59, the lift station is proposed to restrict access by an unauthorized person through the installation of a 6.0 feet tall chain-link fence topped with barb wire surrounding the entire lift station site including two locking gates installed low enough to the surface grade to prevent human access.

**CITY OF GEORGETOWN**  
**SAN GABRIEL PARK LIFT STATION**  
PUMP CYCLE

Existing Wetwell (sqft)	Length (ft)	Width (ft)	Proposed Wetwell (sqft)	Combined Area (sqft)
400	21	13.250	278.25	<b>678.25</b>

Active Pump(s)	Cycle Time (min)	Pump Capacity (gpm)	Active Volume (ft <sup>3</sup> )	Depth (ft)
P1 = 50 HP	10	1960	655	<b>0.97</b>
P1 = 50 HP	11	1960	721	<b>1.06</b>
P1 = 50 HP	12	1960	786	<b>1.16</b>

Active Pump(s)	Cycle Time (min)	Pump Capacity (gpm)	Active Volume (ft <sup>3</sup> )	Depth (ft)
P2 = 60 HP	10	2200	735	<b>1.08</b>
P2 = 60 HP	11	2200	809	<b>1.19</b>
P2 = 60 HP	13.5	2200	993	<b>1.46</b>

Figure: 30 TAC §217.60(b)(8)

**Equation C.4.**

$$V = \frac{T \times Q}{4 \times 7.48}$$

Where:

V = Active volume (cubic feet)

Q = Pump capacity (gallons per minute)

T = Cycle time (minutes)

7.48 = Conversion factor (gallons/cubic foot)



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



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

September 18, 2018

Mr. Michael Hallmark  
City of Georgetown  
300-1 Industrial Avenue  
Georgetown, TX 78626

Re: Edwards Aquifer, Williamson County  
NAME OF PROJECT: San Gabriel Park Lift Station Improvements; 445 East Morrow Street; Georgetown, Texas  
TYPE OF PLAN: Request for Approval of an Organized Sewage Collection System (SCS); 30 Texas Administrative Code (TAC) Chapter 217  
Edwards Aquifer Protection Program ID No. 11001189; RN102727799

Dear Mr. Hallmark:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the SCS plans and specifications for the referenced project submitted to the Austin Regional Office by Kasberg Patrick & Associates, LP. on behalf of City of Georgetown on July 9, 2018. Final review of the application was completed after additional material was received on September 6, 7, and 17, 2018. As presented to the TCEQ, the construction documents were selected and were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213 and Chapter 217. Therefore, based on the Texas Licensed Professional Engineer's concurrence of compliance, the planning materials for construction of the proposed sewage collection system and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires (2) two years from the date of this letter unless, prior to the expiration date, more than 10 percent of construction has commenced, or an extension of time has been requested.*

### PROJECT DESCRIPTION

This proposed SCS is a lift station replacement project that replaces the lift station that was constructed in 1986. The site is currently used for the operation of the existing lift station and will be used for the proposed lift station that will have a footprint of 24' X 30'. In addition to the described activities, temporary erosion and sedimentation controls will be installed prior to commencing site disturbance and maintained during construction.

### SEWAGE COLLECTION SYSTEM

The proposed lift station consists of 21' 0" X 13' 3" wet well with an approximate depth of 29 feet, two submersible KSB 65 HP closed multi-channel impeller pumps, one submersible KSB 50 HP closed multi-channel impeller pump and a quick connect to the force main. Two pumps sized for 2,200 gpm at 76' TDH and one pump sized for 1,960 gpm at 66' TDH. Additional equipment will include an electronic control panel, an audio-visual alarm, gas-isolated junction, cellular auto-dialer, stainless steel guide rails for leveling and support, discharge piping and valves located in a valve vault, and a security fence with gate access.

Project wastewater will be disposed of by conveyance to the existing San Gabriel Wastewater Treatment Plant. The project is located within the City of Georgetown and will conform to all specifications, applicable codes, ordinances, and requirements of the City of Georgetown.

### GEOLOGY

The Geologic Assessment (GA) for this site was performed on April 4, 2017 by Mr. Russell C. Ford, P.G., of Terracon. According to the GA, the geologic formation within the site is Quaternary alluvium deposits underlain by Georgetown Formation deposits. There were no naturally occurring or manmade sensitive features found within the site. No site assessment was conducted.


### SPECIAL CONDITIONS

- I. It is emphasized that where wastewater lines must bridge faults, caverns, sinkholes, or solution features the lines shall be constructed in a manner that will maintain the structural integrity of the pipe. When such sensitive features are encountered, 30 TAC §213.5(f) (2) requires that all regulated activities near the feature must be immediately suspended and the owner/developer shall immediately notify the Austin Regional Office. Additionally, when such geologic features are encountered which are bridged by construction, the location and extend of those features must be assessed by a geologist and must be reported to the Austin Regional Office in writing within two working days of discovery as required by 30 TAC §213.5(c)(3)(K). Construction may not resume in the area of the feature until the executive director has reviewed and approved the methods proposed to protect the aquifer from any potential adverse impacts.



### STANDARD CONDITIONS

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

#### Prior to Commencement of Construction:

- 
4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the

county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

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

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213 and Chapter 217, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of



the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

13. No water well is located on this site. All water well including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered or treated through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
18. No part of the system shall be used as a holding tank for a pump-and-haul operation.

After Completion of Construction:

19. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
20. Certification by a Texas Licensed Professional Engineer of the testing of sewage collection systems required by 30 TAC Chapter 213 and Chapter 217 shall be submitted to the Austin Regional Office within 30 days of test completion and prior to the new sewage collection system being put into service. The certification should include the project name as it appeared on the approved application, the program ID number, and two copies of a site plan sheet(s) indicating the wastewater lines that were tested and are being certified as complying with the appropriate regulations.

Every five years after the initial certification, the sewage collection system shall be retested. Any lines that fail the test must be repaired and retested. Certification that the system continues to meet the requirements of 30 TAC Chapter 213 and Chapter 217 shall be submitted to the Austin Regional Office. The certification should include the project name

Mr. Michael Hallmark

Page 5

September 18, 2018

as it appeared on the approved application, the program ID number and two copies of a site plan sheet(s) indicating the wastewater lines that were tested and are being certified as complying with the appropriate regulations.

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

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

Sincerely,



Robert Sadlier, Water Section Team Leader  
Austin Region Office  
Texas Commission on Environmental Quality  
RCS/aki

cc: Mr. Terron Evertson, P.E., Williamson County Engineer  
Ms. Barbara Zwernemann, City Secretary, City of Liberty Hill  
Mr. Alvin R. "Trae" Sutton, III, P.E., Kasberg, Patrik & Associates, LP  
1008 South Main Street, Georgetown, Texas 78626

# City of Georgetown, Texas

# SAN GABRIEL

# FORCE MAIN REPLACEMENT

# BID SET



**City Council**

Mayor

**Josh Schroeder**

**Mayor Pro-Tem**

**Kevin Pitts**

## City Council Members

**Amanda Parr . . . . . District 1**

**Shawn Hood . . . . . District 2**

**Mike Triggs . . . . . District 3**

**Ron Garland . . . . . District 4**

**Kevin Pitts . . . . . District 5**

**Jake French. . . . . District 6**

**Ben Stewart. . . . . District 7**

**City Manager**

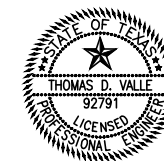
David Morgan

Approved by the City of Georgetown, Texas  
this \_\_\_\_\_ day of \_\_\_\_\_, 2024.

Director, Systems Engineering Date

---

**Manager,  
Systems Engineering**
**Date**



**KASBERG, PATRICK & ASSOCIATES, LP**  
**CONSULTING ENGINEERS**  
 GEORGETOWN, TEXAS 78626  
 FIRM REGISTRATION NO. F-510

  
Thomas D. Valle, P.E. 92791

06-17-2024

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DATE

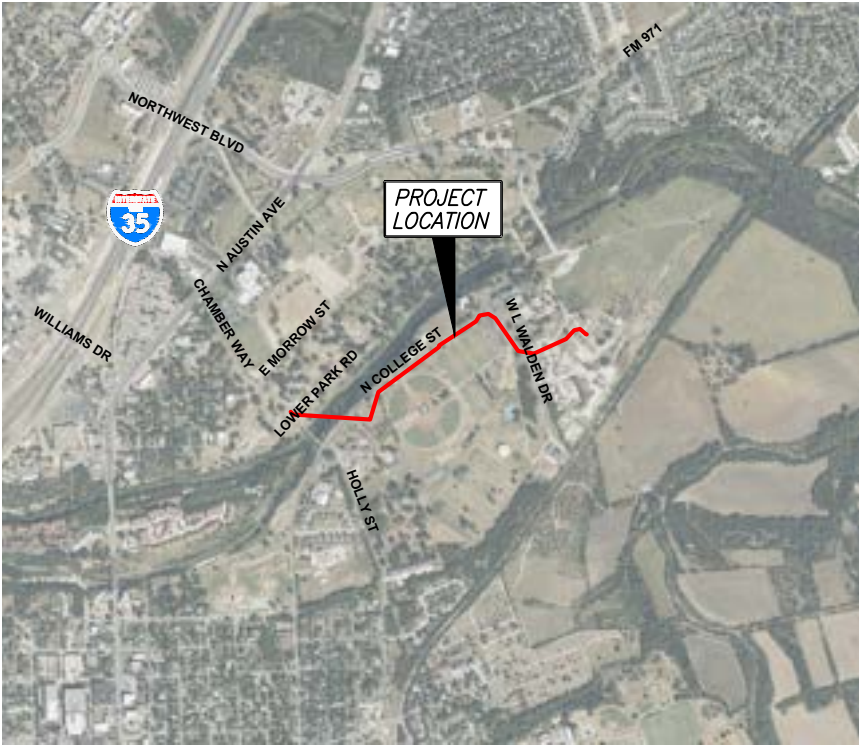


# City of Georgetown, Texas

## SAN GABRIEL

### FORCE MAIN REPLACEMENT

# BID SET



**City Council**

**Mayor**

Josh Schroeder

**Mayor Pro-Tem**

Kevin Pitts

**City Council Members**

- Amanda Parr . . . . . District 1
- Shawn Hood . . . . . District 2
- Mike Triggs . . . . . District 3
- Ron Garland . . . . . District 4
- Kevin Pitts . . . . . District 5
- Jake French. . . . . District 6
- Ben Stewart. . . . . District 7

**City Manager**

David Morgan

Approved by the City of Georgetown, Texas  
this \_\_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Director,  
Systems Engineering  
Date

\_\_\_\_\_  
Manager,  
Systems Engineering  
Date



**KASBERG, PATRICK & ASSOCIATES, LP**  
CONSULTING ENGINEERS  
GEORGETOWN, TEXAS 78626  
FIRM REGISTRATION NO. F-510

\_\_\_\_\_  
Thomas D. Valle, P.E. 92791

06-17-2024  
\_\_\_\_\_  
DATE



GENERAL

- G-00. COVER
- G-01. INDEX & LOCATION MAP
- G-02. GENERAL NOTES
- G-03. GENERAL NOTES
- G-04. GENERAL NOTES
- G-05. GENERAL - OVERALL MAP
- G-06. EROSION CONTROL - OVERALL MAP
- G-07. EROSION CONTROL - DETAILS

FORCE MAIN PLANS

- FM-01. PLAN & PROFILE - BEGINNING TO STATION 7+00
- FM-02. PLAN - STATION 7+00 TO STATION 13+00
- FM-03. PROFILE - STATION 7+00 TO STATION 13+00
- FM-04. PLAN & PROFILE - STATION 13+00 TO STATION 19+00
- FM-05. PLAN & PROFILE - STATION 19+00 TO STATION 25+00
- FM-06. PLAN & PROFILE - STATION 25+00 TO STATION 31+00
- FM-07. PLAN & PROFILE - STATION 31+00 TO STATION 37+00
- FM-08. PLAN & PROFILE - STATION 37+00 TO END

STANDARD DETAIL SHEETS

- D-01. DETAIL - UTILITY ASSIGNMENT
- D-02. DETAIL - AIR RELEASE VALVE
- D-03. DETAIL - TRENCH AND EMBEDMENT
- D-04. DETAIL - TRENCH AND EMBEDMENT
- D-05. DETAIL - VALVE AND THRUST BLOCK
- D-06. DETAIL - ENCASEMENT AND VALVE
- D-07. AS-BUILT - SAN GABRIEL PARK LS
- D-08. AS-BUILT - SAN GABRIEL PARK LS
- D-09. AS-BUILT - SAN GABRIEL WWTP - HEADWORKS
- D-10. AS-BUILT - SAN GABRIEL WWTP - HEADWORKS
- D-11. AS-BUILT - SAN GABRIEL WWTP - FM YARD PIPING
- D-12. AS-BUILT - SAN GABRIEL WWTP - YARD PIPING

LEGEND

	12" W	PROPOSED WATERLINE		TEMPORARY BENCH MARK
	8" WW	PROPOSED WASTEWATER LINE		FIRE HYDRANT
	12" W	EXISTING WATER LINE (TO REMAIN)		GUY WIRE
	12" W	EXISTING WATER LINE (TO BE ABANDONED)		IRON PIN FOUND
	10" WW	EXISTING WASTEWATER LINE (TO REMAIN)		EXISTING MANHOLE
	12" WW	EXISTING WASTEWATER LINE (TO BE ABANDONED)		POWER POLE
	G	EXISTING GAS LINE		STREET SIGN
		PROPOSED RIGHT-OF-WAY / PROPERTY LINE		WATER VALVE
	X	BARBED WIRE FENCE		PROPOSED WATER VALVE
	O	CHAIN LINK FENCE		PROPOSED FIRE HYDRANT
		WOODEN PRIVACY FENCE		PROPOSED MANHOLE
	OHE	OVERHEAD ELECTRIC LINE		FLOW LINE ELEVATION
	T	UNDERGROUND TELEPHONE CABLE		TOP OF CURB ELEVATION
	▽	TOP OF SLOPE		TOP OF ASPHALT ELEVATION
	---	TOE OF SLOPE / FLOWLINE		LINEAR FEET
	///	EXISTING EDGE OF ASPHALT		STATION
	---	PERMANENT UTILITY EASEMENT (P.U.E.)		POINT OF INTERSECTION
	---	TEMPORARY CONSTRUCTION EASEMENT (T.C.E.)		HORIZONTAL POINT OF INTERSECTION
	---	EXISTING PROPERTY LINE		VERTICAL POINT OF INTERSECTION
				TOP OF CURB
				EDGE OF CONCRETE
				EDGE OF PAVEMENT



				PROJECT NO. 2023-130				KASBERG, PATRICK & ASSOCIATES, LP CONSULTING ENGINEERS TEMPLE, TEXAS 76501	CITY OF GEORGETOWN, TEXAS SAN GABRIEL FORCE MAIN REPLACEMENT	SHEET NO. <b>G-01</b>  OF <b>07</b>	
				DRAWN BY Jared A. Chandler							
				DESIGNED BY Thomas D. Valle, P.E.							
				APPROVED BY							
NO. DATE REVISION BY				DATE 06-17-2024				GENERAL INDEX & LOCATION MAP			
©2024 Kasberg, Patrick & Associates, LP KPA Firm Registration Number F-510						Plot Date: Jun 17, 2024 - 9:47am Plotted By: JCHANDLER					

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Texas Commission on Environmental Quality  
Lift Station and Force Main  
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following/listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director (ED), nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code (TAC), Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following/listed "construction notes" restricts the powers of the ED, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, TAC, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the ED's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, TAC § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following/listed "construction notes" in no way represent an approved exception by the ED to any part of Title 30 TAC, Chapters 213 and 217, or any other TCEQ applicable regulation

- This lift station and/or force main must be constructed in accordance with 30 Texas Administrative Code (TAC) §213.5(c), the Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Rules, and any local government standard specifications.
- Any modification to the activities described in the referenced Lift Station/Force Main (LSFM) System application following the date of approval may require the submittal of a LSFM System application to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval.
- A written notice of construction must be submitted to the presiding TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
  - the name of the approved project;
  - the activity start date; and
  - the contact information of the prime contractor.
- Upon completion of any lift station excavation, a geologist must certify that the excavation has been inspected for the presence of sensitive features. The certification must be signed, sealed, and dated by the geologist preparing the certification. Certification that the excavation has been inspected must be submitted to the appropriate regional office.
  - If sensitive feature(s) are identified, all regulated activities near the sensitive feature must be suspended immediately and may not proceed until the executive director has reviewed and approved the methods proposed to protect any sensitive feature and the Edwards Aquifer from potentially adverse impacts to water quality from the lift station.
  - Construction may continue if the geologist certifies that no sensitive feature or features were present.
- If any sensitive features are discovered during the wastewater line trenching activities, all regulated activities near the sensitive feature must be suspended immediately. The applicant must immediately notify the appropriate regional office of the TCEQ of the feature discovery. A geologist's assessment of the location and extent of the feature discovered must be reported to that regional office in writing within two working days. The applicant must submit a plan for ensuring the structural integrity of the sewer line or for modifying the proposed collection system alignment around the feature. The regulated activities near the sensitive feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially

adverse impacts to water quality while maintaining the structural integrity of the line.

- All force main lines must be tested in accordance with 30 TAC §217.68. Testing method will be:
  - A pressure test must use 50 pounds per square inch above the normal operating pressure of a force main
  - A temporary valve for pressure testing may be installed near the discharge point of a force main and removed after a test is successfully completed
  - A pump isolation valve may be used as an opposite termination point.
  - A test must involve filling a force main with water.
  - A pipe must hold the designated test pressure for a minimum of 4.0 hours.
  - The leakage rate must not exceed 10.0 gallons per inch diameter per mile of pipe per day.

Austin Regional Office  
12100 Park 35 Circle, Building A  
Austin, Texas 78753-1808  
Phone (512) 339-2929  
Fax (512) 339-3795

San Antonio Regional Office  
14250 Judson Road  
San Antonio, Texas 78233-4480  
Phone (210) 490-3096  
Fax (210) 545-4329

THESE LIFT STATION AND FORCE MAINS CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

Texas Commission on Environmental Quality  
Organized Sewage Collection System  
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following/listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director, nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code, Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following/listed "construction notes" restricts the powers of the Executive Director, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any

with Title 30, Texas Administrative Code, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the Executive Director's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, Texas Administrative Code § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following/listed "construction notes" in no way represent an approved exception by the Executive Director to any part of Title 30 Texas Administrative Code, Chapters 213 and 217, or any other TCEQ applicable regulation.

- This Organized Sewage Collection System (SCS) must be constructed in accordance with 30 Texas Administrative Code (TAC) §213.5(c), the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules and any local government standard specifications.
- All contractors conducting regulated activities associated with this proposed regulated project must be provided with copies of the SCS plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors must be required to keep on-site copies of the plan and the approval letter.
- A written notice of construction must be submitted to the presiding TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
  - the name of the approved project;
  - the activity start date; and
  - the contact information of the prime contractor.
- Any modification to the activities described in the referenced SCS application following the date of approval may require the submittal of an SCS application to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval.
- Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. These controls must remain in place until the disturbed areas have been permanently stabilized.
- If any sensitive features are discovered during the wastewater line trenching activities, all regulated activities near the sensitive feature must be suspended immediately. The applicant must immediately notify the appropriate regional office of the TCEQ of the feature discovered. A geologist's assessment of the location and extent of the feature discovered must be reported to that regional office in writing and the applicant must submit a plan for ensuring the structural integrity of the sewer line or for modifying the proposed collection system alignment around the feature. The regulated activities near the sensitive feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality while maintaining the structural integrity of the line.
- Sewer lines located within or crossing the 5-year floodplain of a drainage way will be protected from inundation and stream velocities which could cause erosion and scouring of backfill. The trench must be capped with concrete to prevent scouring of backfill, or the sewer lines must be encased in concrete. All concrete shall have a minimum thickness of 6 inches.
- Blasting procedures for protection of existing sewer lines and other utilities will be in accordance with the National Fire Protection Association criteria. Sand is not allowed as bedding or backfill in trenches that have been blasted. If any existing sewer lines are damaged, the lines must be repaired and retested.
- All manholes constructed or rehabilitated on this project must have watertight size on size resilient connectors allowing for differential settlement. If manholes are constructed within the 100-year floodplain, the cover must have a gasket and be bolted to the ring. Where gasketed manhole covers are required for more than three manholes in sequence or for more than 1500 feet, alternate means of venting will be provided. Bricks are not an acceptable construction material for any portion of the manhole.

Sewer lines located within or crossing the 5-year floodplain of a drainage way will be protected from inundation and stream velocities which could cause erosion and scouring of backfill. The trench must be capped with concrete to prevent scouring of backfill, or the sewer lines must be encased in concrete. All concrete shall have a minimum thickness of 6 inches.

Blasting procedures for protection of existing sewer lines and other utilities will be in accordance with the National Fire Protection Association criteria. Sand is not allowed as bedding or backfill in trenches that have been blasted. If any existing sewer lines are damaged, the lines must be repaired and retested.

All manholes constructed or rehabilitated on this project must have watertight size on size resilient connectors allowing for differential settlement. If manholes are constructed within the 100-year floodplain, the cover must have a gasket and be bolted to the ring. Where gasketed manhole covers are required for more than three manholes in sequence or for more than 1500 feet, alternate means of venting will be provided. Bricks are not an acceptable construction material for any portion of the manhole.

The diameter of the manholes must be a minimum of four feet and the manhole for entry must have a minimum clear opening diameter of 30 inches. These dimensions and other details showing compliance with the commission's rules concerning manholes and sewer line/manhole inverts described in 30 TAC §217.55 are included on Plan Sheet \_\_ of \_\_.

It is suggested that entrance into manholes in excess of four feet deep be accomplished by means of a portable ladder. The inclusion of steps in a manhole is prohibited.

Where water lines and new sewer line are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC §217.53(d) (Pipe Design) and 30 TAC §290.44(e) (Water Distribution).

Where sewers lines deviate from straight alignment and uniform grade all curvature of sewer pipe must be achieved by the following procedure which is recommended by the pipe manufacturer:

If pipe flexure is proposed, the following method of preventing deflection of the joint must be used:

Specific care must be taken to ensure that the joint is placed in the center of the trench and properly bedded in accordance with 30 TAC §217.54.

New sewage collection system lines must be constructed with stub outs for the connection of anticipated extensions. The location of such stub outs must be marked on the ground such that their location can be easily determined at the time of connection of the extensions. Such stub outs must be manufactured wyes or tees that are compatible in size and material with both the sewer line and the extension. At the time of original construction, new stub-outs must be constructed sufficiently to extend beyond the end of the street pavement. All stub-outs must be sealed with a manufactured cap to prevent leakage. Extensions that were not anticipated at the time of original construction or that are to be connected to an existing sewer line not furnished with stub outs must be connected using a manufactured saddle and in accordance with accepted plumbing techniques.

If no stub-out is present an alternate method of joining laterals is shown in the detail on Plan Sheet \_\_ of \_\_. (For potential future laterals).

The private service lateral stub-outs must be installed as shown on the plan and profile sheets on Plan Sheet \_\_ of \_\_ and marked after backfilling as shown in the detail on Plan Sheet \_\_ of \_\_.

Trenching, bedding and backfill must conform with 30 TAC §217.54. The bedding and backfill for flexible pipe must comply with the standards of ASTM D-2321, Classes IA, IB, II or III. Rigid pipe bedding must comply with the requirements of ASTM C 12 (ANSI A 106.2) classes A, B or C.

Sewer lines must be tested from manhole to manhole. When a new sewer line is connected to an existing stub or clean-out, it must be tested from existing manhole to new manhole. If a stub or clean-out is used at the end of the proposed sewer line, no private service attachments may be connected between the last manhole and the cleanout unless it can be certified as conforming with the provisions of 30 TAC §213.5(c)(3)(E).

All sewer lines must be tested in accordance with 30 TAC §217.57. The engineer must retain copies of all test results which must be made available to the executive director upon request. The engineer must certify in writing that all wastewater lines have passed all required testing to the appropriate regional office within 30 days of test completion and prior to use of the new collection system. Testing method will be:

- For a collection system pipe that will transport wastewater by gravity flow, the design must specify an infiltration and exfiltration test or a low-pressure air test. A test must conform to the following requirements:

- Low Pressure Air Test.
  - A low pressure air test must follow the procedures described in American Society For Testing And Materials (ASTM) C-828, ASTM C 924, or ASTM F-1417 or other procedure approved by the executive director, except as to testing times as required in Table C.3 in subparagraph (C) of this paragraph or Equation C.3 in subparagraph (B)(ii) of this paragraph.
  - For sections of collection system pipe less than 36 inch average inside diameter, the following procedure must apply, unless a pipe is to be tested as required by paragraph (2) of this subsection.
    - A pipe must be pressurized to 3.5 pounds per square inch (psi) greater than the pressure exerted by groundwater above the pipe.

- Once the pressure is stabilized, the minimum time allowable for the pressure to drop from 3.5 psi gauge to 2.5 psi gauge is computed from the following equation:

$$\text{Equation C.3} \quad 0.085 \square D \square K$$

T □

Q

Where:

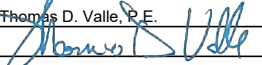
T = time for pressure to drop 1.0 pound per square inch gauge in seconds  
K = 0.000419 X D X L, but not less than 1.0  
D = average inside pipe diameter in inches  
L = length of line of same size being tested, in feet  
Q = rate of loss, 0.0015 cubic feet per minute per square foot internal surface

- Since a K value of less than 1.0 may not be used, the minimum testing time for each pipe diameter is shown in the following Table C.3:

Pipe Diameter (inches)	Minimum Time (seconds)	Maximum Length for Minimum Time (feet)
Time for Longer Length (seconds/foot)		
6	340	398
8	454	298
10	567	239
12	680	199
15	850	159
18	1020	133
21	1190	114
24	1360	100
27	1530	88
30	1700	80
33	1870	72

- An owner may stop a test if no pressure loss has occurred during the first 25% of the calculated testing time.
- If any pressure loss or leakage has occurred during the first 25% of a testing period, then the test must continue for the entire test duration as outlined above or until failure.
- Wastewater collection system pipes with a 27 inch or larger average inside diameter may be air tested at each joint instead of following the procedure outlined in this section.
- A testing procedure for pipe with an inside diameter greater than 33 inches must be approved by the executive director.

NO.	DATE	REVISION	BY
©2024 Kasberg, Patrick & Associates, LP		Plot Date: Jun 17, 2024 - 9:47am	
KPA Firm Registration Number F-510		Plotted By: JCHANDLER	

PROJECT NO.	2023-130
DRAWN BY	Jared A. Chandler
DESIGNED BY	Thomas D. Valle, P.E.
APPROVED BY	
DATE	06-17-2024



KASBERG, PATRICK & ASSOCIATES, LP  
CONSULTING ENGINEERS  
TEMPLE, TEXAS 76501

CITY OF GEORGETOWN, TEXAS  
SAN GABRIEL  
FORCE MAIN REPLACEMENT

GENERAL  
GENERAL NOTES

SHEET NO. **G-03**

OF **07**

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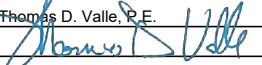
- H. Infiltration/Exfiltration Test.
- i. The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of pipe per 24 hours at a minimum test head of 2.0 feet above the crown of a pipe at an upstream manhole.
  - ii. An owner shall use an infiltration test in lieu of an exfiltration test when pipes are installed below the groundwater level.
  - iii. The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two feet above the crown of a pipe at an upstream manhole, or at least two feet above existing groundwater level, whichever is greater.
  - iv. For construction within a 25-year flood plain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of pipe per 24 hours at the same minimum test head as in subparagraph (C) of this paragraph.
  - v. If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, an owner shall undertake remedial action in order to reduce the infiltration or exfiltration to an amount within the limits specified. An owner shall retest a pipe following a remediation action.
    - 1. If a gravity collection pipe is composed of flexible pipe, deflection testing is also required. The following procedures must be followed:
- I. For a collection pipe with inside diameter less than 27 inches, deflection measurement requires a rigid mandrel.
- i. Mandrel Sizing.
    - 1. A rigid mandrel must have an outside diameter (OD) not less than 95% of the base inside diameter (ID) or average ID of a pipe, as specified in the appropriate standard by the ASTMs, American Water Works Association, UNI-BELL, or American National Standards Institute, or any related appendix.
    - 2. If a mandrel sizing diameter is not specified in the appropriate standard, the mandrel must have an OD equal to 95% of the ID of a pipe. In this case, the ID of the pipe, for the purpose of determining the OD of the mandrel, must equal be the average outside diameter minus two minimum wall thicknesses for OD Controlled pipe and the average inside diameter for ID controlled pipe.
    - 3. All dimensions must meet the appropriate standard.
  - ii. Mandrel Design.
    - 1. A rigid mandrel must be constructed of a metal or a rigid plastic material that can withstand 200 psi without being deformed.
    - 2. A mandrel must have nine or more odd number of runners or legs.
    - 3. A barrel section length must equal at least 75% of the inside diameter of a pipe.
    - 4. Each size mandrel must use a separate proving ring.
  - iii. Method Options.
    - 1. An adjustable or flexible mandrel is prohibited.
    - 2. A test may not use television inspection as a substitute for a deflection test.
    - 3. If requested, the executive director may approve the use of a deflectometer or a mandrel with removable legs or runners on a case-by-case basis.
  - iv. For a gravity collection system pipe with an inside diameter 27 inches and greater, other test methods may be used to determine vertical deflection.
  - v. A deflection test method must be accurate to within plus or minus 0.2% deflection.
  - vi. An owner shall not conduct a deflection test until at least 30 days after the final backfill.
  - vii. Gravity collection system pipe deflection must not exceed five percent (5%).
  - viii. If a pipe section fails a deflection test, an owner shall correct the problem and conduct a second test after the final backfill has been in place at least 30 days.
16. All manholes must be tested to meet or exceed the requirements of 30 TAC §217.58.
- i. All manholes must pass a leakage test.
  - ii. An owner shall test each manhole (after assembly and backfilling) for leakage, separate and independent of the collection system pipes, by hydrostatic exfiltration testing, vacuum testing, or other method approved by the executive director.
- A. Hydrostatic Testing.
- i. The maximum leakage for hydrostatic testing or any alternative test methods is 0.025 gallons per foot diameter per foot of manhole depth per hour.
  - ii. To perform a hydrostatic exfiltration test, an owner shall seal all wastewater pipes coming into a manhole with an internal pipe plug, fill the manhole with water, and maintain the test for at least one hour.
  - iii. A test for concrete manholes may use a 24-hour wetting period before testing to allow saturation of the concrete.
- B. Vacuum Testing.
- iii. To perform a vacuum test, an owner shall plug all lift holes and exterior joints with a non-shrink grout and plug all pipes entering a manhole.
  - iv. No grout must be placed in horizontal joints before testing.
  - v. Stub-outs, manhole boots, and pipe plugs must be secured to prevent movement while a vacuum is drawn.
  - vi. An owner shall use a minimum 60 inch/lb torque wrench to tighten the external clamps that secure a test cover to the top of a manhole.
  - vii. A test head must be placed at the inside of the top of a cone section, and the seal inflated in accordance with the manufacturer's recommendations.
  - viii. There must be a vacuum of 10 inches of mercury inside a manhole to perform a valid test.
  - ix. A test does not begin until after the vacuum pump is off.
  - x. A manhole passes the test if after 2.0 minutes and with all valves closed, the vacuum is at least 9.0 inches of mercury.
17. All private service laterals must be inspected and certified in accordance with 30 TAC §213.5(c)(3)(I). After installation of and, prior to covering and connecting a private service lateral to an existing organized sewage collection system, a Texas Licensed Professional Engineer, Texas Registered Sanitarian, or appropriate city inspector must visually inspect the private service lateral and the connection to the sewage collection system and certify that it is constructed in conformity with the applicable provisions of this section. The owner of the collection system must maintain such certifications for five years and forward copies to the appropriate regional office upon request. Connections may only be made to an approved sewage collection system.

Austin Regional Office  
12100 Park 35 Circle, Building A  
Austin, Texas 78753-1808  
Phone (512) 339-2929 Fax (512) 339-3795


San Antonio Regional Office  
14250 Judson Road  
San Antonio, Texas 78233-4480  
Phone (210) 490-3096 Fax (210) 545-4329

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

NO.	DATE	REVISION	BY
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KPA Firm Registration Number F-510		Plotted By: JCHANDLER	

PROJECT NO.	2023-130
DRAWN BY	Jared A. Chandler
DESIGNED BY	Thomas D. Valle, P.E.
APPROVED BY	
DATE	06-17-2024

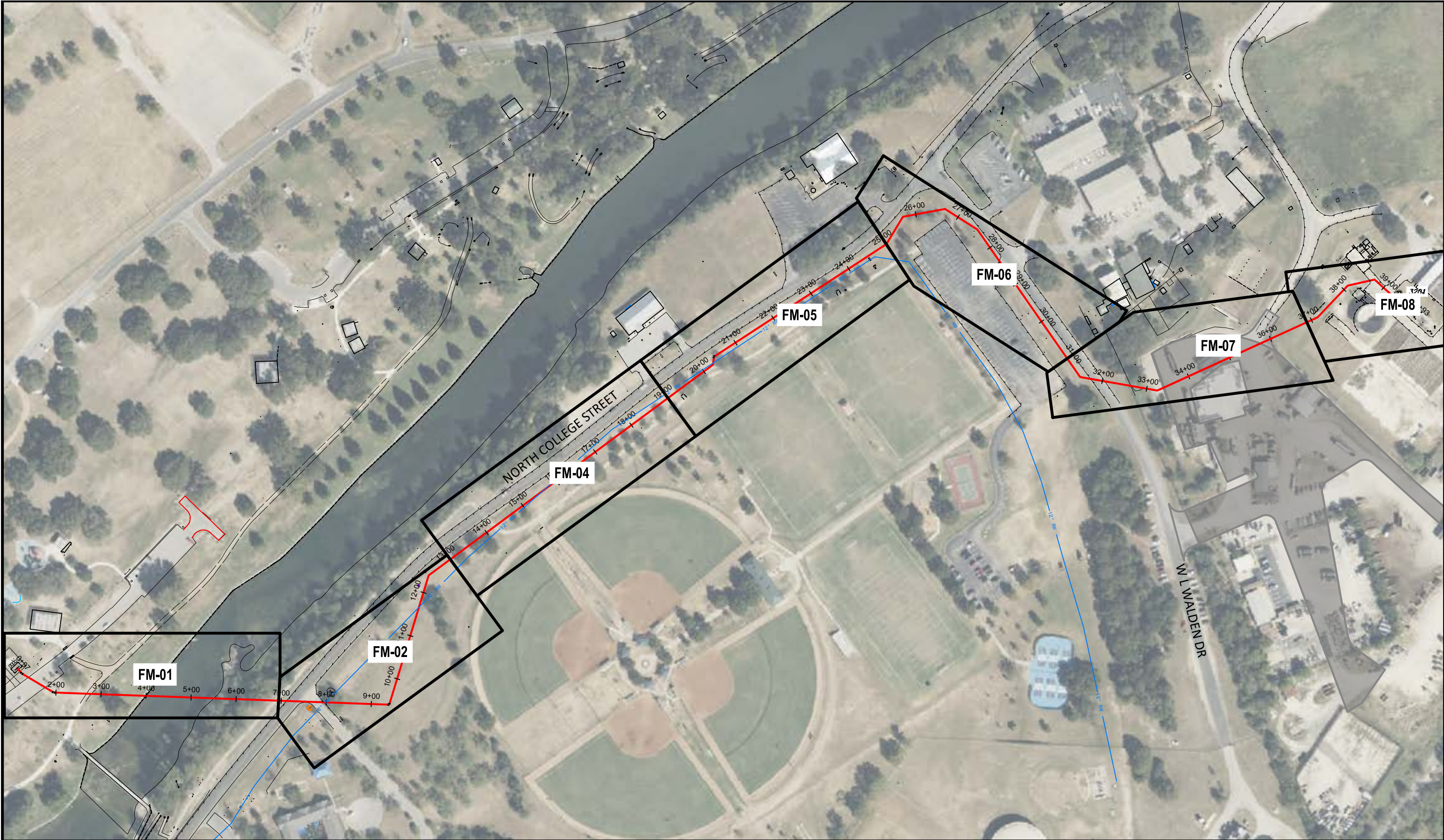




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**TEMPLE, TEXAS 76501**

<b>CITY OF GEORGETOWN, TEXAS</b> SAN GABRIEL FORCE MAIN REPLACEMENT	SHEET NO. <b>G-04</b>  OF <b>07</b>
GENERAL GENERAL NOTES	



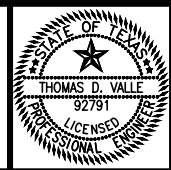


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APPROVED BY	<i>Thomas D. Valle</i>
DATE	06-17-2024



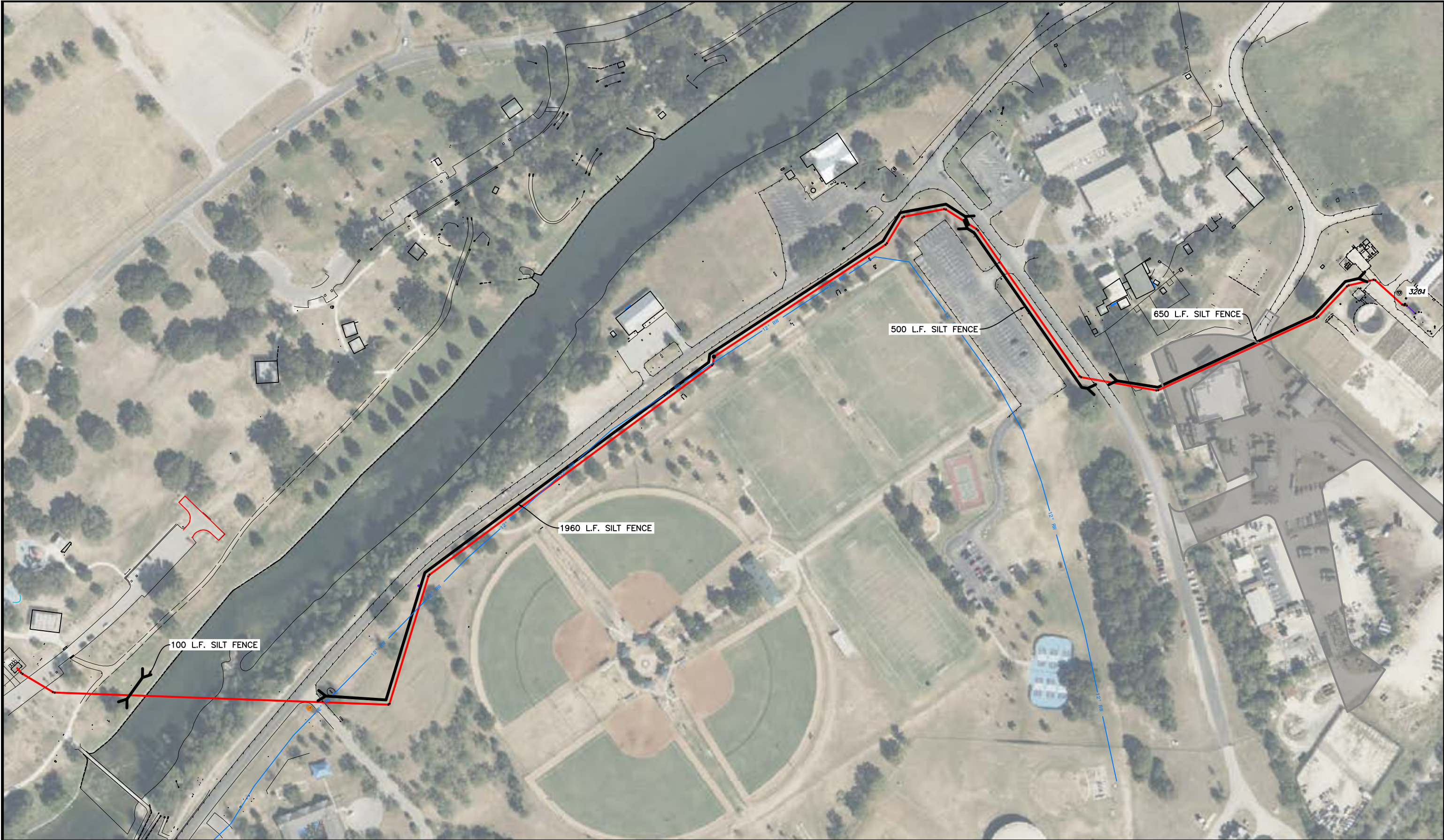
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CONSULTING ENGINEERS  
TEMPLE, TEXAS 76501

**CITY OF GEORGETOWN, TEXAS**  
SAN GABRIEL  
FORCE MAIN REPLACEMENT  
  
GENERAL  
OVERALL MAP

SHEET NO. **G-05**  
  
OF **07**

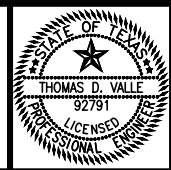
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KPA Firm Registration Number F-510		Plotted By: JCHANDLER		

PROJECT NO.	2023-130
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DESIGNED BY	Thomas D. Valle, P.E.
APPROVED BY	<i>Thomas D. Valle</i>
DATE	06-17-2024



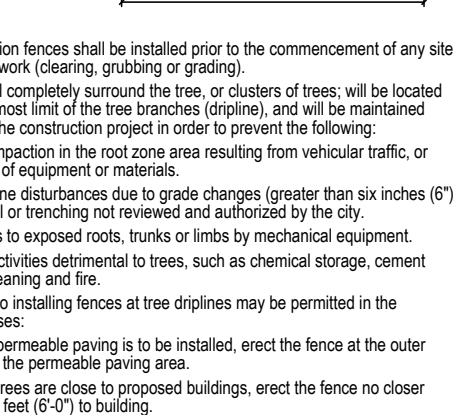
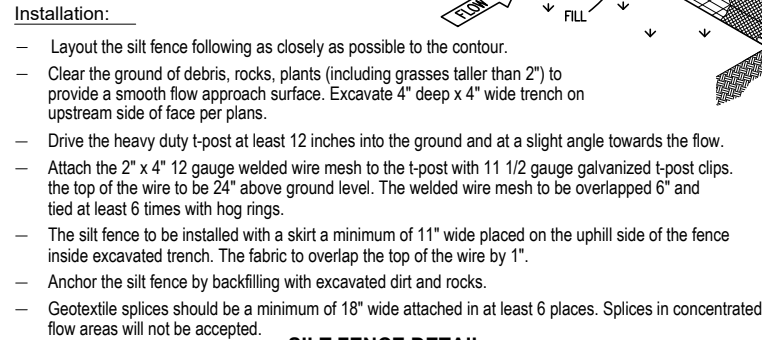
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**CONSULTING ENGINEERS**  
**TEMPLE, TEXAS 76501**

**CITY OF GEORGETOWN, TEXAS**  
**SAN GABRIEL**  
**FORCE MAIN REPLACEMENT**  
**EROSION CONTROL**  
**OVERALL MAP**

SHEET NO. **G-06**  
OF **07**

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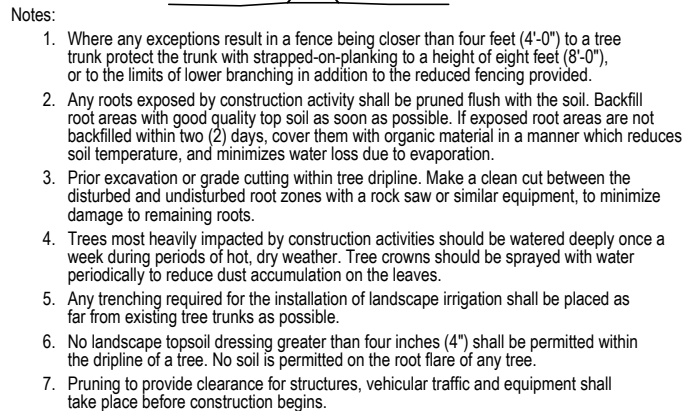




- Installation:
  - Layout the rock berm following as closely as possible to the contour.
  - Clear the ground of debris, rocks or plants that will interfere with installation.
  - Place woven wire fabric on the ground along the proposed installation with enough overlap to completely encircle the finished size of the berm.
  - Place the rock along the center of the wire to the designated height.
  - Wrap the structure with the previously placed wire mesh secure enough so that when walked across the structure retains its shape.
  - Secure with tie wire.
  - The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approx. 4 inches deep to prevent failure of the control.
  - The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

Inspection and Maintenance Guidelines:

- Inspection should be made weekly and after each rainfall event by the responsible party. For installations in streambeds, additional daily inspections should be made.
- Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner.
- Repair any loose wire sheathing.
- The berm should be reshaped as needed during inspection.
- The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.



**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
- Entrance onto a public street will not be accepted.
- Place geotextile fabric if required.
- Place rock as required.

**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.

**Installation:**

- Layout the filter dike following as closely as possible to the contour.
- Clear the ground of debris, rocks or plants that will interfere with installation.
- Place the filter dike sections one at a time, with the skirt on the uphill side towards the direction of flow anchoring each section to the ground before the next section is placed.
- Anchors should be placed on 2'-0" centers alternating from front to back so that there is actually only 1'-0" in between anchors.
- Securely fasten the skirt from one section of filter dike to the next.
- Filter dikes shall maintain continuous contact with the ground.
- After the site is completely stabilized, the dikes and any remaining silt should be removed.
- Silt should be disposed of in a manner that will not contribute to additional siltation.

Inspection and Maintenance Guidelines:

- Inspection should be made weekly or after each rainfall event and repair or replacement should be made promptly as needed by the contractor.
- Inspect and realign berms as needed to prevent gaps between the sections.
- Accumulated silt should be removed after each rainfall event, and disposed of in a manner which shall not cause additional siltation.

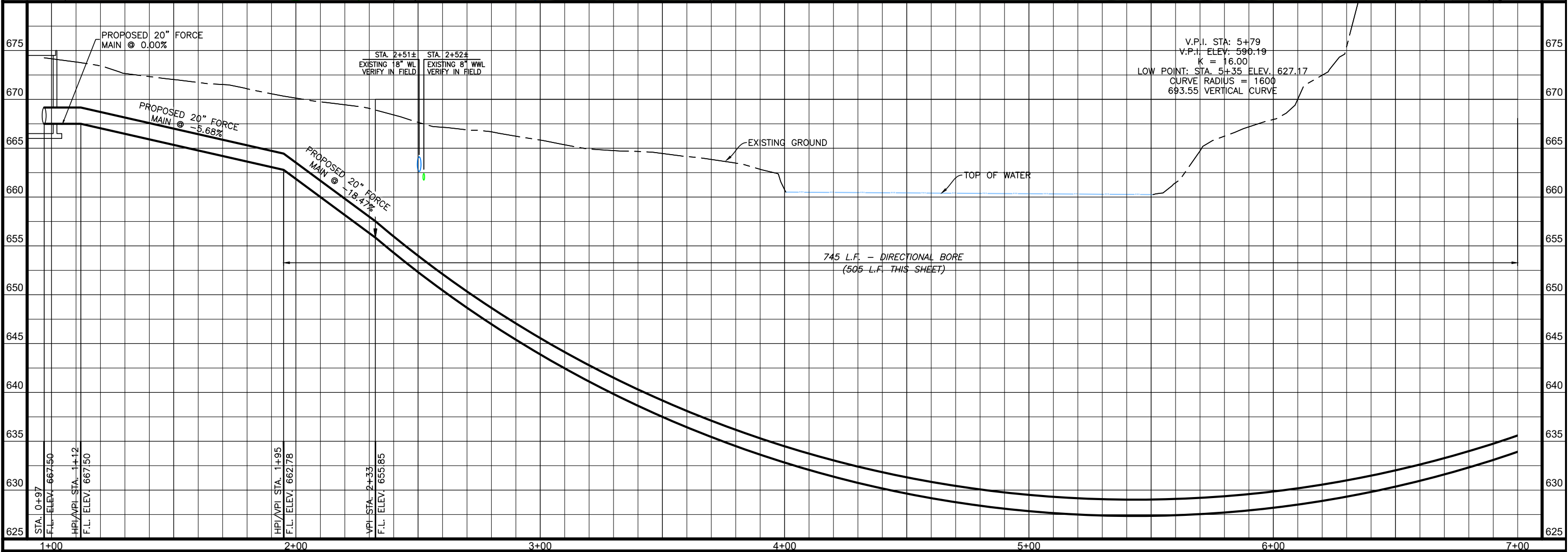
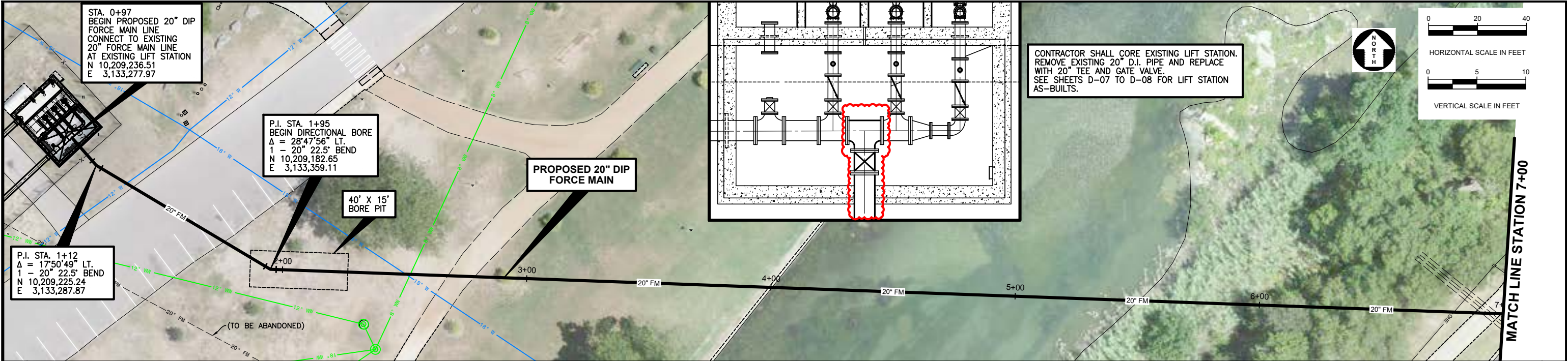
Note: PLAN  
Filter fabric to extend 5'-0" beyond inlet opening, upstream of inlet.  
Terminate fabric in street gutter with sand bags placed in gutter flowline.

## EROSION/SEDIMENTATION AND TREE PROTECTION NOTES

1. The contractor to install and maintain erosion/sedimentation controls and tree/natural area protective fencing prior to any site preparation work (clearing, grubbing, grading, or excavation). Contractor to remove erosion/sedimentation controls at the completion of project and grass restoration.
2. The placement of erosion/sedimentation controls to be in accordance with the approved erosion and sedimentation control plan and water pollution abatement plan. Deviations from the approved plan shall be submitted to and approved by the owner's representative.
3. All disturbed areas to be restored as noted in the water pollution abatement plan.
4. The seeding for erosion control to be applied over areas disturbed by construction as follows:  
     From September 15 to March 1, seeding to be with a combination of 2 pounds per 1,000 square feet of unhulled bermuda and 2 pounds per 1,000 square feet of winter rye with a purity of 95% with 90% germination.  
     From March 2, to September 14, seeding to be with hulled bermuda grass (cynodon dactylon) at a rate of 2 pounds per 1,000 square feet with a purity of 95% with 85% germination.
5. The planted area to be irrigated or sprinkled in a manner that will not erode the topsoil, but will sufficiently soak the soil to a depth of four (4) inches. The irrigation to occur at 10-day intervals during the first two months. Rainfall occurrences of 1/2 inch or greater to postpone the watering schedule one week.
6. Restoration to be acceptable when the grass has grown at least 1-1/2 inches high with 95% coverage, provided no bare spots larger than 25 square feet exist.
7. A minimum of four (4) inches of topsoil to be placed in all areas disturbed by construction.
8. The contractor to hydromulch or sod (as shown on plans) all exposed cuts and fills upon completion of construction, except where cuts are made in solid rock.
9. Erosion and sedimentation controls to be installed or maintained in a manner which does not result in soil buildup within tree dripline.
10. To avoid soil compaction, contractor shall not allow vehicular traffic, parking, or storage of equipment or materials in the tree dripline areas.
11. Where a fence is closer than four (4) feet to a tree trunk, protect the trunk with strapped-on planking to a height of eight (8) feet (or to the limits of lower branching) in addition to the fencing.
12. Trees to be removed in a manner which does not impact trees to be preserved.
13. Any root exposed by construction activity to be pruned flush with the soil. Backfill root areas with good quality topsoil as soon as possible. If exposed root areas are not backfilled within two days, cover them with organic material in a manner which reduces soil temperature and minimizes water loss due to evaporation.
14. Contractor to prune vegetation to provide clearance for structures, vehicular traffic, and equipment before damage occurs (ripping of branches, etc.). All finished pruning to be done according to recognized, approved standards of the industry (reference the "National Arborist Association pruning standards for shade trees").
15. The contractor is to inspect the controls at weekly intervals and after every rainfall exceeding 1/4 inch to verify that they have not been significantly disturbed. Any accumulated sediment after a significant rainfall to be removed and placed in the owner designated spoil disposal site. The contractor to conduct periodic inspections of all erosion/sedimentation controls and to make any repairs or modifications necessary to assure continued effective operation of each device.
16. Where there is to be an approved grade change, impermeable paving surface, tree well, or other such site development immediately adjacent to a protected tree, erect the fence approximately two to four feet (2'-4') behind the area in question.
17. No above and/or below ground temporary fuel storage facilities to be stored on the project site.
18. If erosion and sedimentation control systems are existing from prior contracts, owner's representative and the contractor to examine the existing erosion and sedimentation control systems for damage prior to construction. Any damage to preexisting erosion and sedimentation controls noted to be repaired at owners expense.
19. Intentional release of vehicle or equipment fluids onto the ground is not allowed. contaminated soil resulting from accidental spill to be removed and disposed of properly.

SHEET NO. **G-07**  
OF **07**



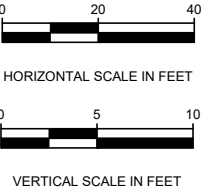
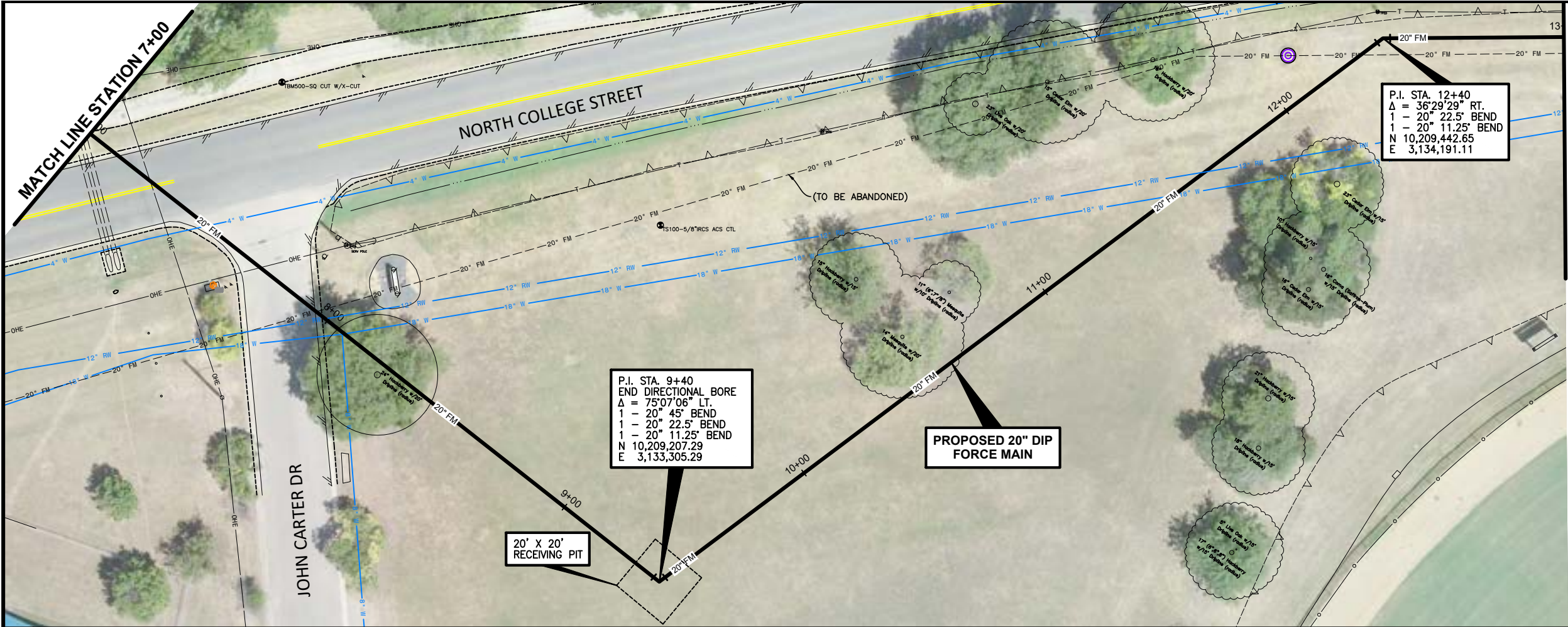


PROJECT NO. 2023-130						KASBERG, PATRICK & ASSOCIATES, LP CONSULTING ENGINEERS TEMPLE, TEXAS 76501	CITY OF GEORGETOWN, TEXAS SAN GABRIEL FORCE MAIN REPLACEMENT PLAN & PROFILE BEGINNING TO STATION 7+00	SHEET NO. FM-01 OF 08
DRAWN BY Jared A. Chandler								
DESIGNED BY Thomas D. Valle, P.E.								
APPROVED BY								
DATE 06-17-2024								

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Plot Date: Jun 17, 2024 - 9:48am  
Plotted By: JCHANDLER





P.I. STA. 12+40  
Δ = 36°29'29" RT.  
1 - 20" 22.5" BEND  
1 - 20" 11.25" BEND  
N 10,209,442.65  
E 3,134,191.11

P.I. STA. 9+40  
END DIRECTIONAL BORE  
Δ = 75°07'06" LT.  
1 - 20" 45" BEND  
1 - 20" 22.5" BEND  
1 - 20" 11.25" BEND  
N 10,209,207.29  
E 3,133,305.29

PROPOSED 20" DIP  
FORCE MAIN

SEE SHEET FM-03 FOR PROFILE

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KPA Firm Registration Number F-510		Plotted By: JCHANDLER	

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DRAWN BY	Jared A. Chandler
DESIGNED BY	Thomas D. Valle, P.E.
APPROVED BY	<i>Thomas D. Valle</i>
DATE	06-17-2024



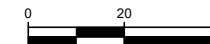


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TEMPLE, TEXAS 76501

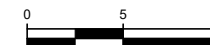
<b>CITY OF GEORGETOWN, TEXAS</b> SAN GABRIEL FORCE MAIN REPLACEMENT
PLAN STATION 7+00 TO STATION 13+00

SHEET NO. <b>FM-02</b>
OF <b>08</b>

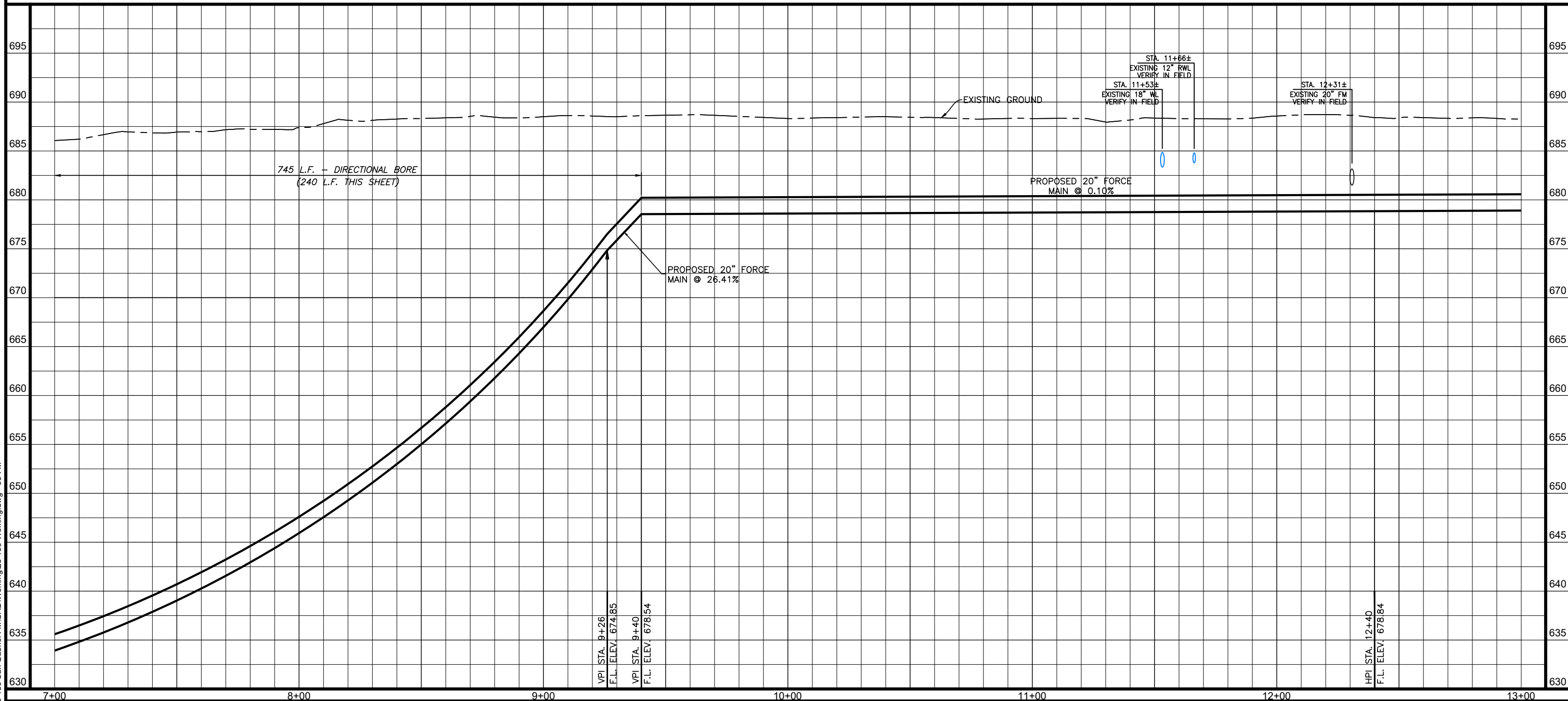
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HORIZONTAL SCALE IN FEET

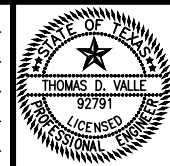


VERTICAL SCALE IN FEET



NO.	DATE	REVISION	BY
1	06-17-2024	Initial Design	JCHANDLER
2	06-17-2024	Revised Design	JCHANDLER

PROJECT NO.	2023-130
DRAWN BY	Jared A. Chandler
DESIGNED BY	Thomas D. Valle, P.E.
APPROVED BY	[Signature]
DATE	06-17-2024



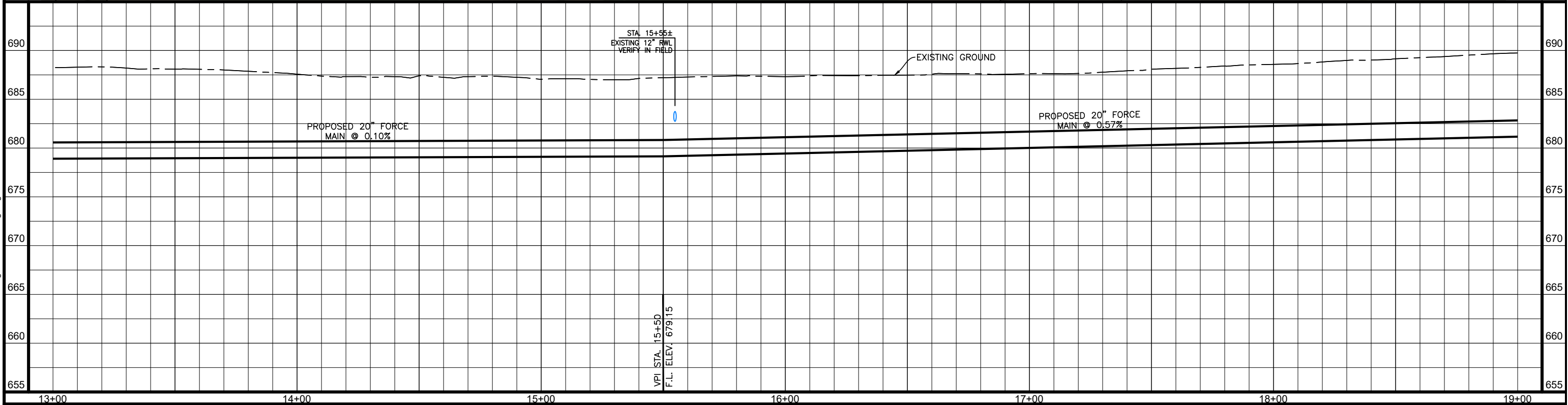
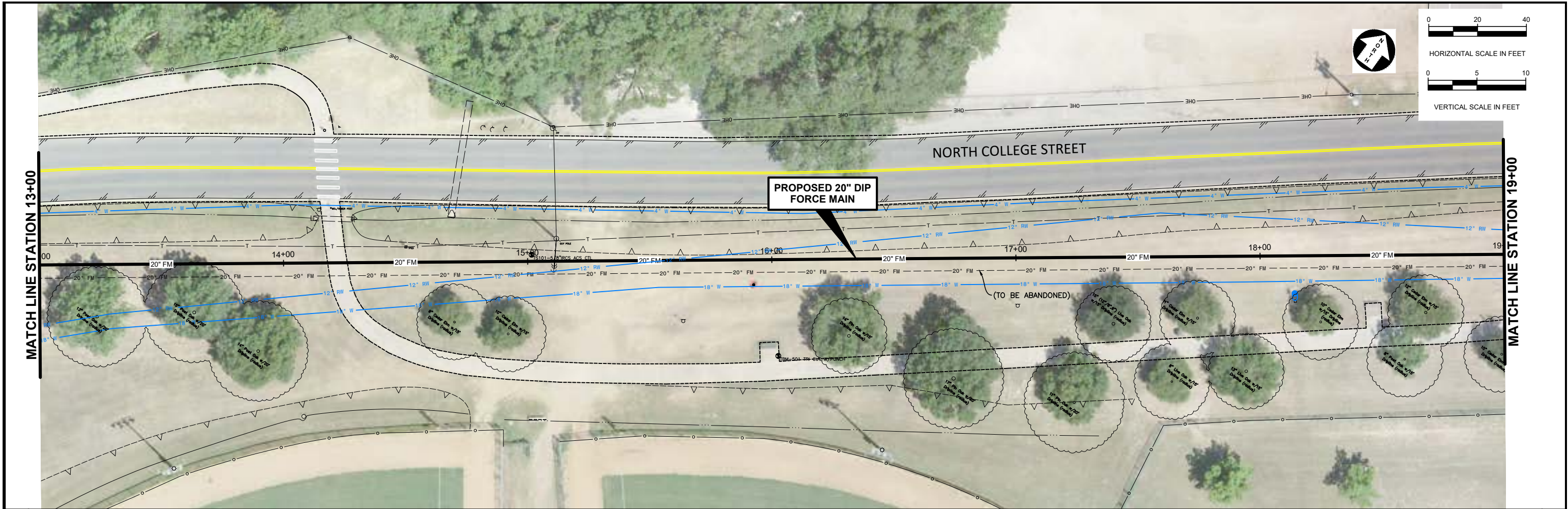
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**CITY OF GEORGETOWN, TEXAS**  
SAN GABRIEL  
FORCE MAIN REPLACEMENT  
PROFILE  
STATION 7+00 TO STATION 13+00

SHEET NO. **FM-03**  
OF **08**



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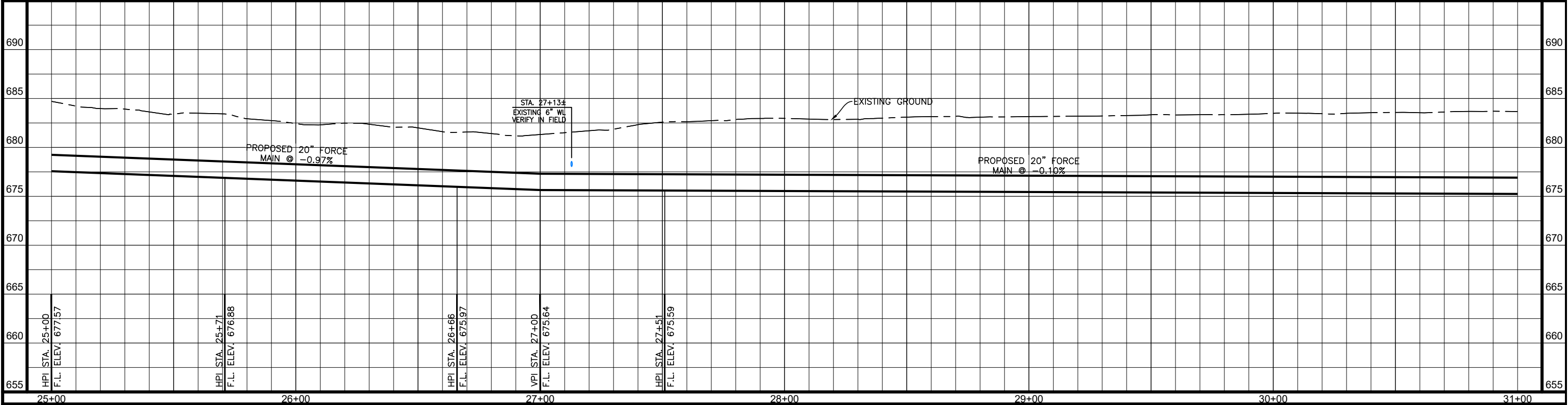


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PROJECT NO. 2023-130						KASBERG, PATRICK & ASSOCIATES, LP CONSULTING ENGINEERS TEMPLE, TEXAS 76501	CITY OF GEORGETOWN, TEXAS SAN GABRIEL FORCE MAIN REPLACEMENT PLAN & PROFILE STATION 25+00 TO STATION 31+00	SHEET NO. FM-06 OF 08
DRAWN BY Jared A. Chandler								
DESIGNED BY Thomas D. Valle, P.E.								
APPROVED BY [Signature]								
DATE 06-17-2024								

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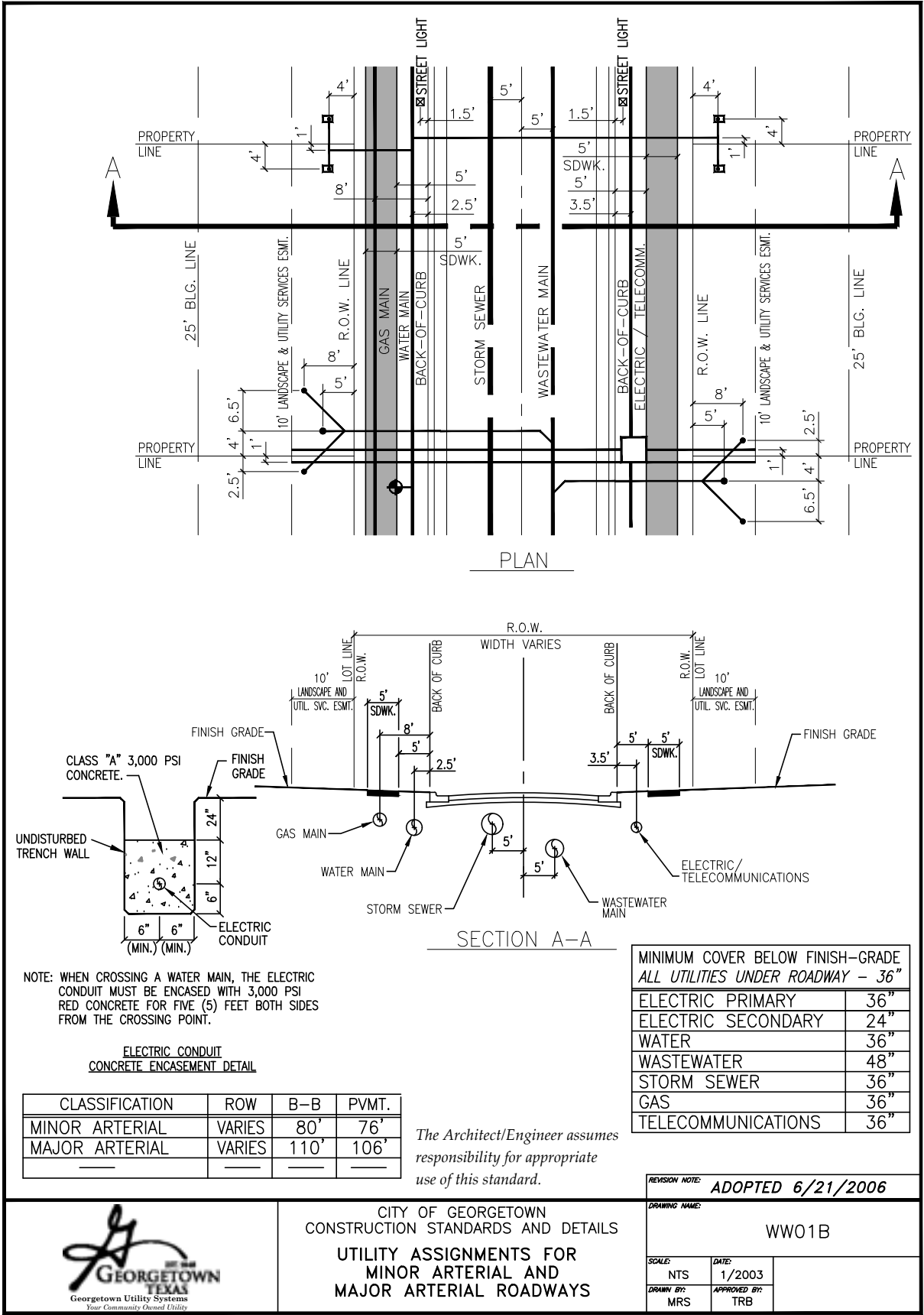
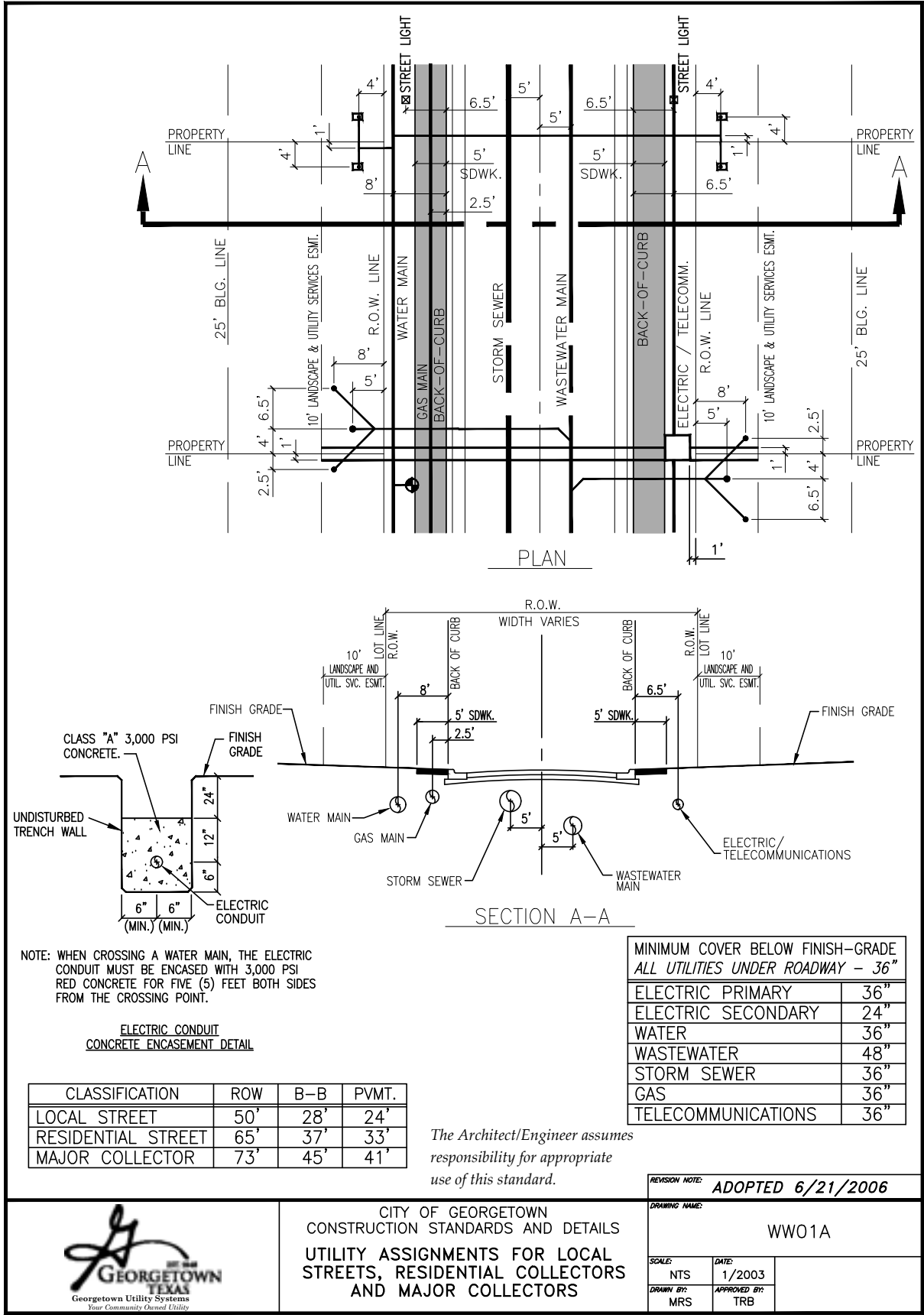






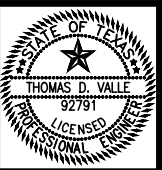



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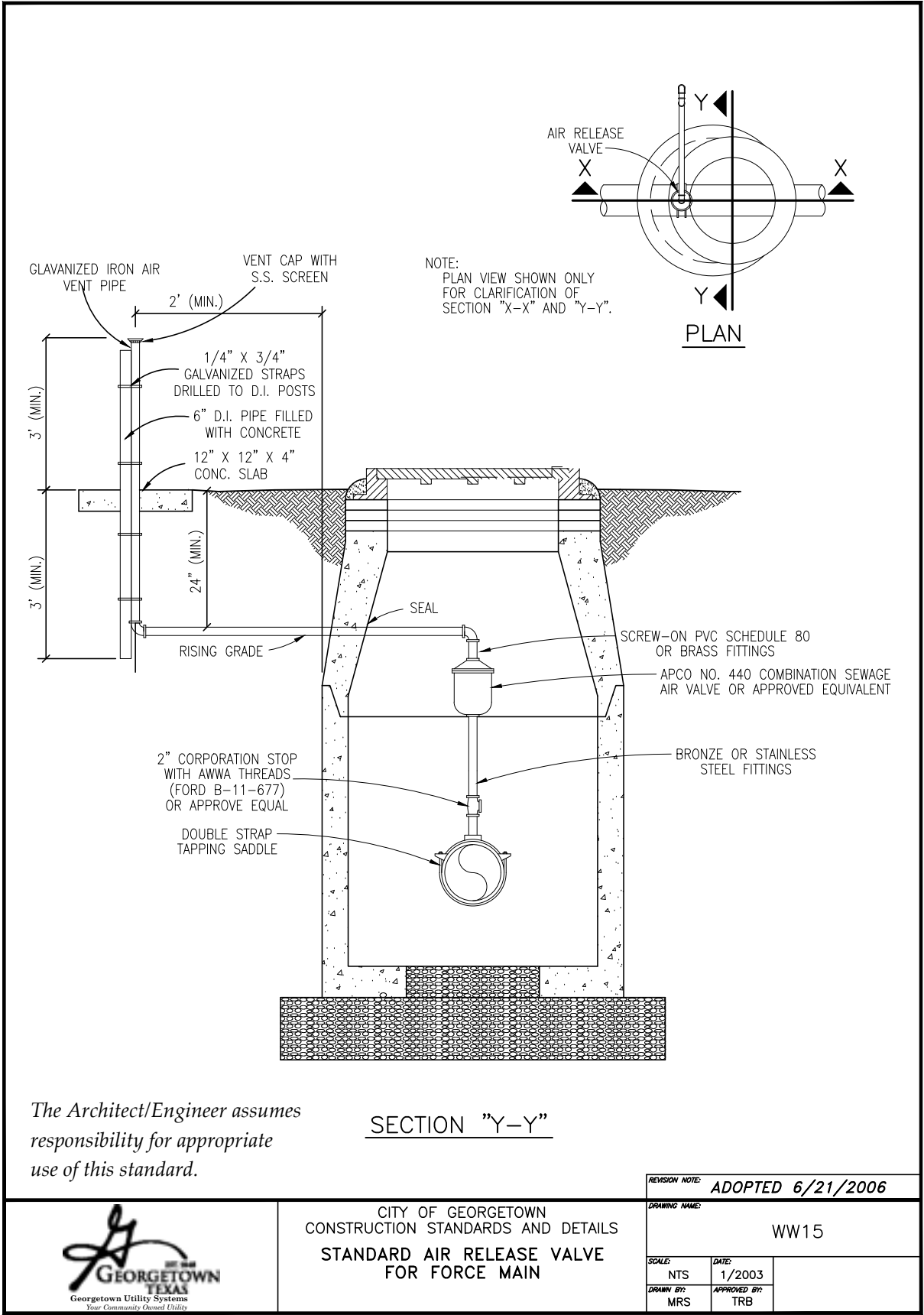
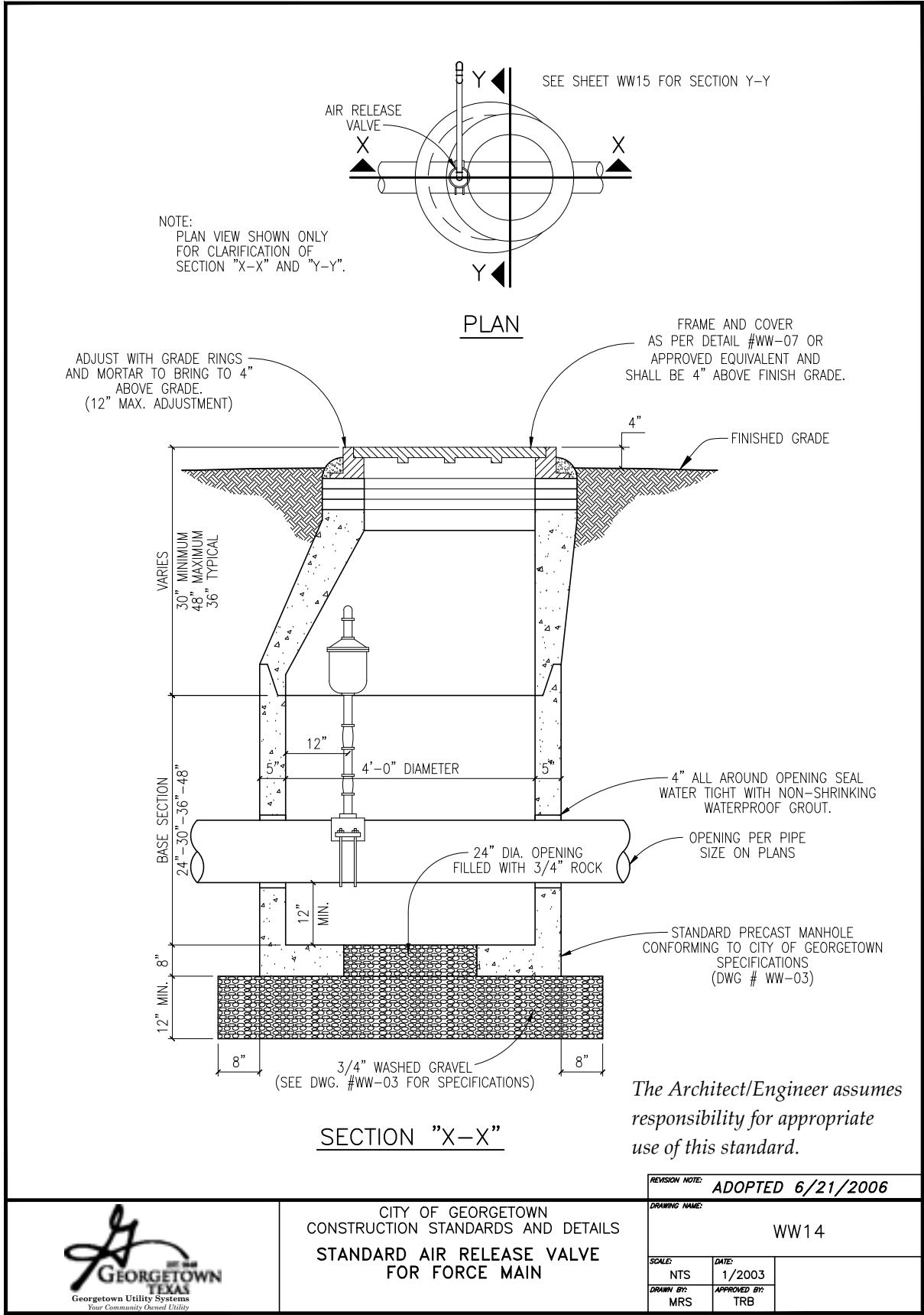


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TEMPLE, TEXAS 76601

**CITY OF GEORGETOWN, TEXAS**  
SAN GABRIEL  
FORCE MAIN REPLACEMENT  
  
DETAIL  
UTILITY ASSIGNMENT

SHEET NO. **D-01**  
  
OF **12**


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NO.	DATE	REVISION	BY
© 2024 Kasberg, Patrick & Associates, LP		Plot Date: Jun 17, 2024 - 9:49am	
KPA Firm Registration Number F-510		Plotted By: JCHANDLER	

PROJECT NO.	2023-130
DRAWN BY	Jared A. Chandler
DESIGNED BY	Thomas D. Valle, P.E.
APPROVED BY	Thomas D. Valle
DATE	06-17-2024





**KASBERG, PATRICK & ASSOCIATES, LP**  
CONSULTING ENGINEERS  
TEMPLE, TEXAS 76601

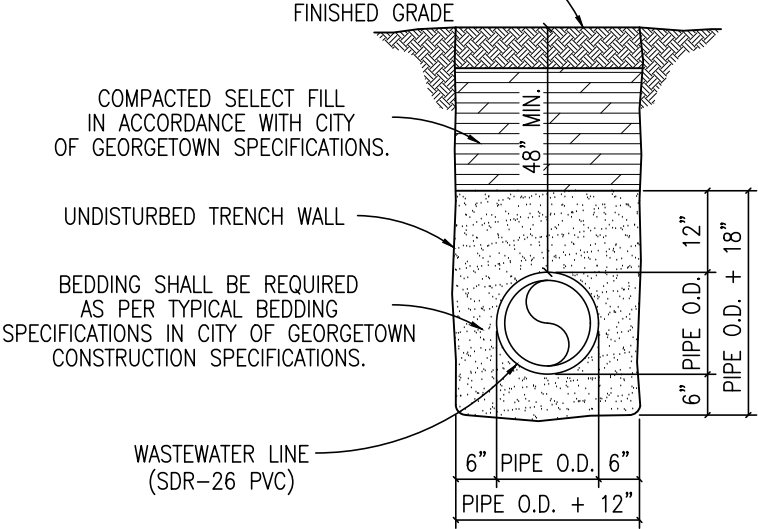
**CITY OF GEORGETOWN, TEXAS**  
SAN GABRIEL  
FORCE MAIN REPLACEMENT  
  
DETAIL  
AIR RELEASE VALVE

SHEET NO. **D-02**  
  
OF **12**



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PLACE A 6" LAYER OF EXISTING TOPSOIL  
FOR FUTURE GROWTH OF VEGETATION



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

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

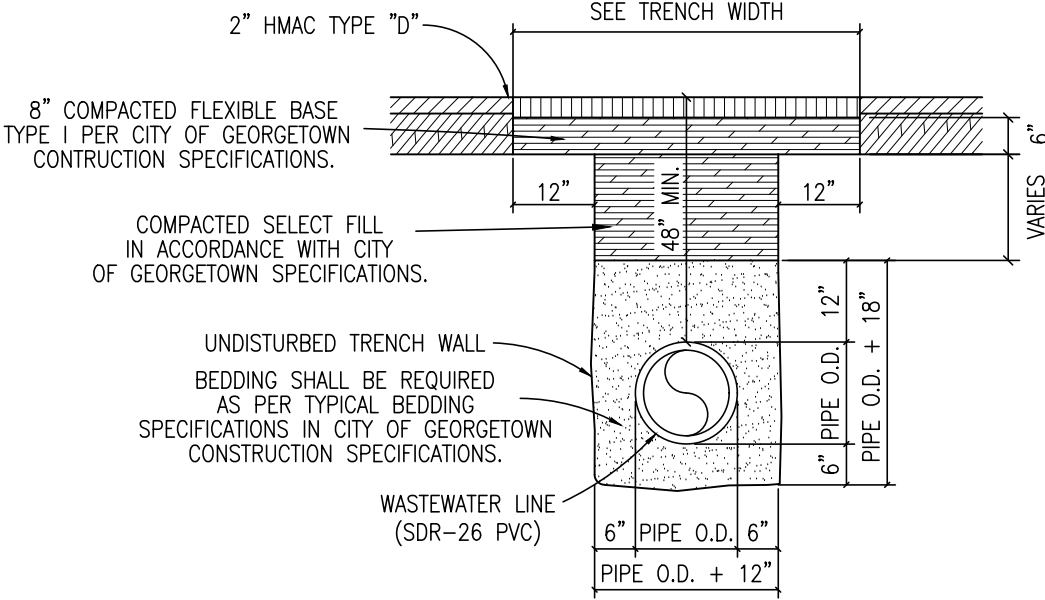
REVISION NOTE: ADOPTED 6/21/2006

DRAWING NAME: WW16

SCALE: NTS  
DATE: 1/2003  
DRAWN BY: MRS  
APPROVED BY: TRB



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



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

- NOTES:
1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE.
  2. BASE MATERIAL SHALL BE PLACED IN MULTIPLE LIFTS NOT TO EXCEED 6". EACH LAYER SHALL BE THOROUGHLY ROLLED OR TAMPED TO SPECIFIED MAXIMUM DENSITY.
  3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
  4. SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE.
  5. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
  6. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

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

REVISION NOTE: ADOPTED 6/21/2006

DRAWING NAME: WW17

SCALE: NTS  
DATE: 1/2003  
DRAWN BY: MRS  
APPROVED BY: TRB



CITY OF GEORGETOWN  
CONSTRUCTION STANDARDS AND DETAILS  
TRENCH AND EMBEDMENT  
AND PAVEMENT REPLACEMENT DETAIL  
UNDER EXISTING ROADWAY

NO.	DATE	REVISION	BY
1	1/2003	ADOPTED	TRB

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KPA Firm Registration Number F-510

Plot Date: Jun 17, 2024 - 9:49am  
Plotted By: JCHANDLER

PROJECT NO.	2023-130
DRAWN BY	Jared A. Chandler
DESIGNED BY	Thomas D. Valle, P.E.
APPROVED BY	Thomas D. Valle
DATE	06-17-2024

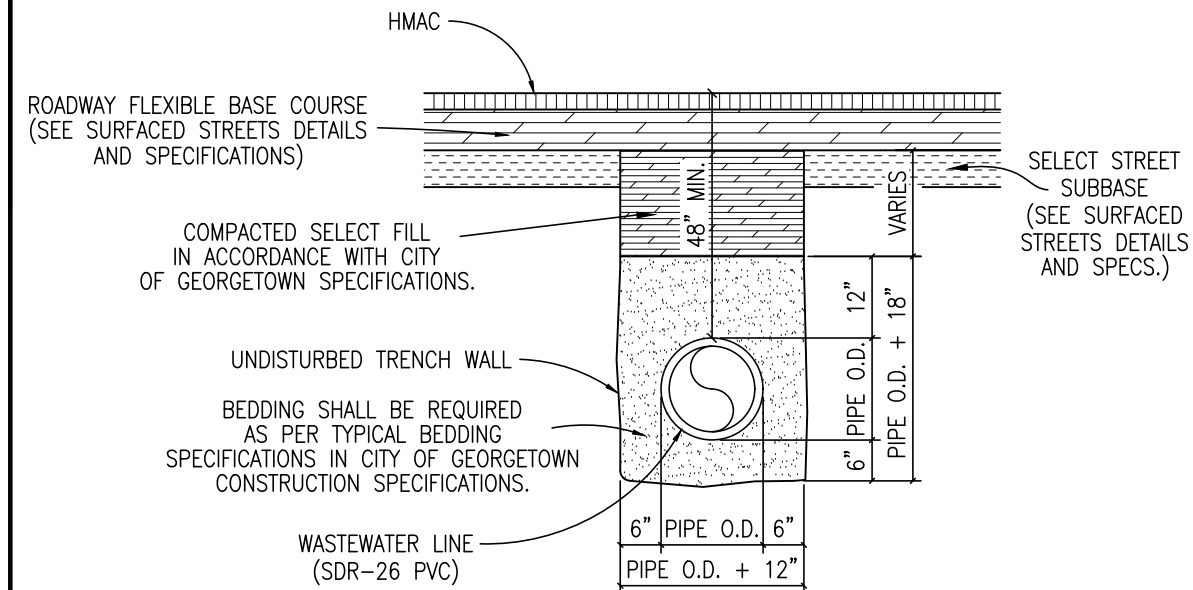


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CONSULTING ENGINEERS  
TEMPLE, TEXAS 76501

CITY OF GEORGETOWN, TEXAS  
SAN GABRIEL  
FORCE MAIN REPLACEMENT  
DETAIL  
TRENCH AND EMBEDMENT

SHEET NO. **D-03**  
OF **12**

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

NOTES:

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

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

REVISION NOTE: ADOPTED 6/21/2006



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

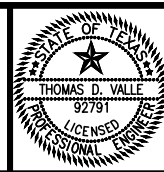
DRAWING NAME:  
WW18

SCALE: NTS  
DRAWN BY: MRS

DATE: 1/2003  
APPROVED BY: TRB

NO.	DATE	REVISION	BY
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KPA Firm Registration Number F-510		Plotted By: JCHANDLER	

PROJECT NO.	2023-130
DRAWN BY	Jared A. Chandler
DESIGNED BY	Thomas D. Valle, P.E.
APPROVED BY	<i>Thomas D. Valle</i>
DATE	06-17-2024



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CONSULTING ENGINEERS  
TEMPLE, TEXAS 76501

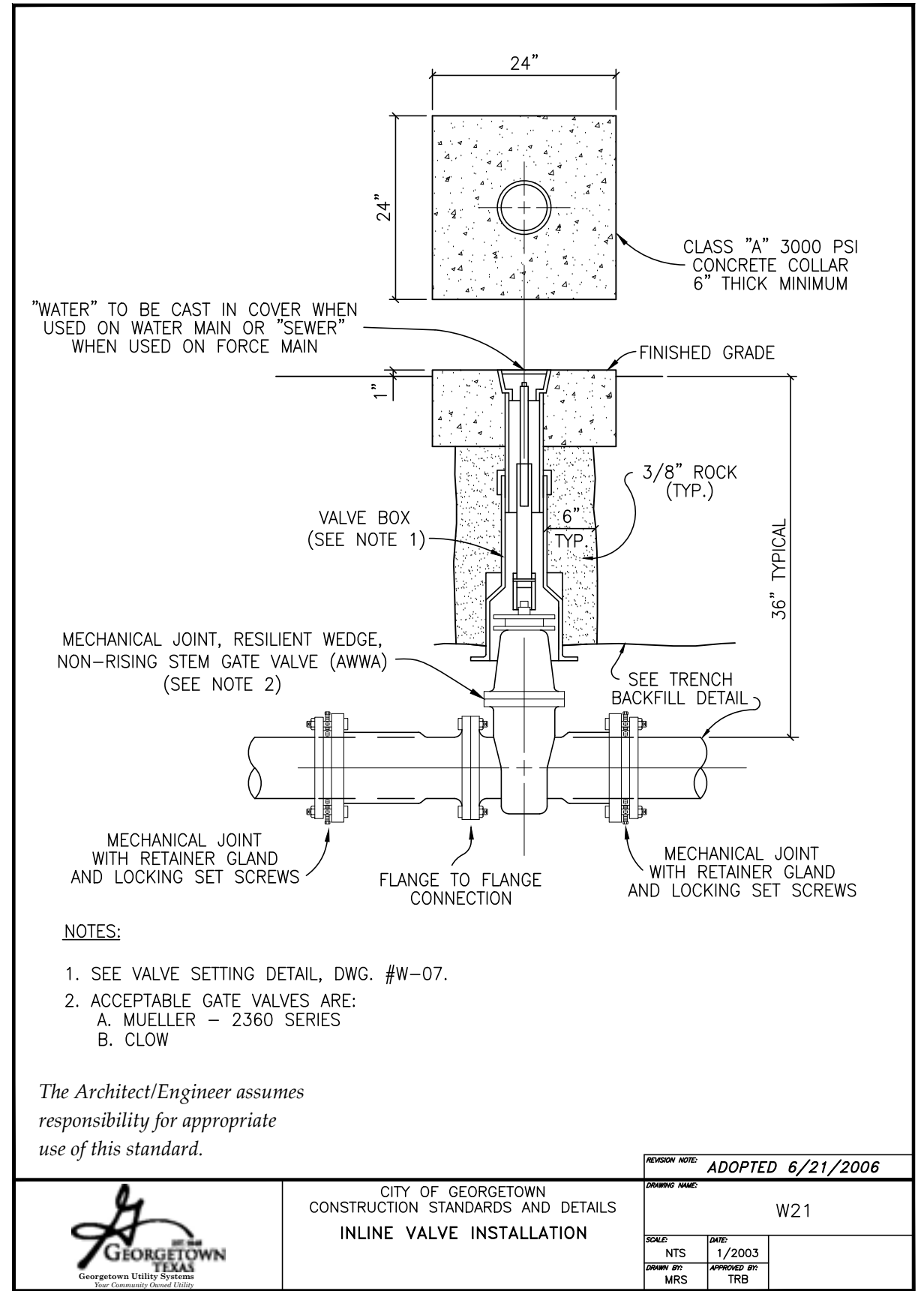
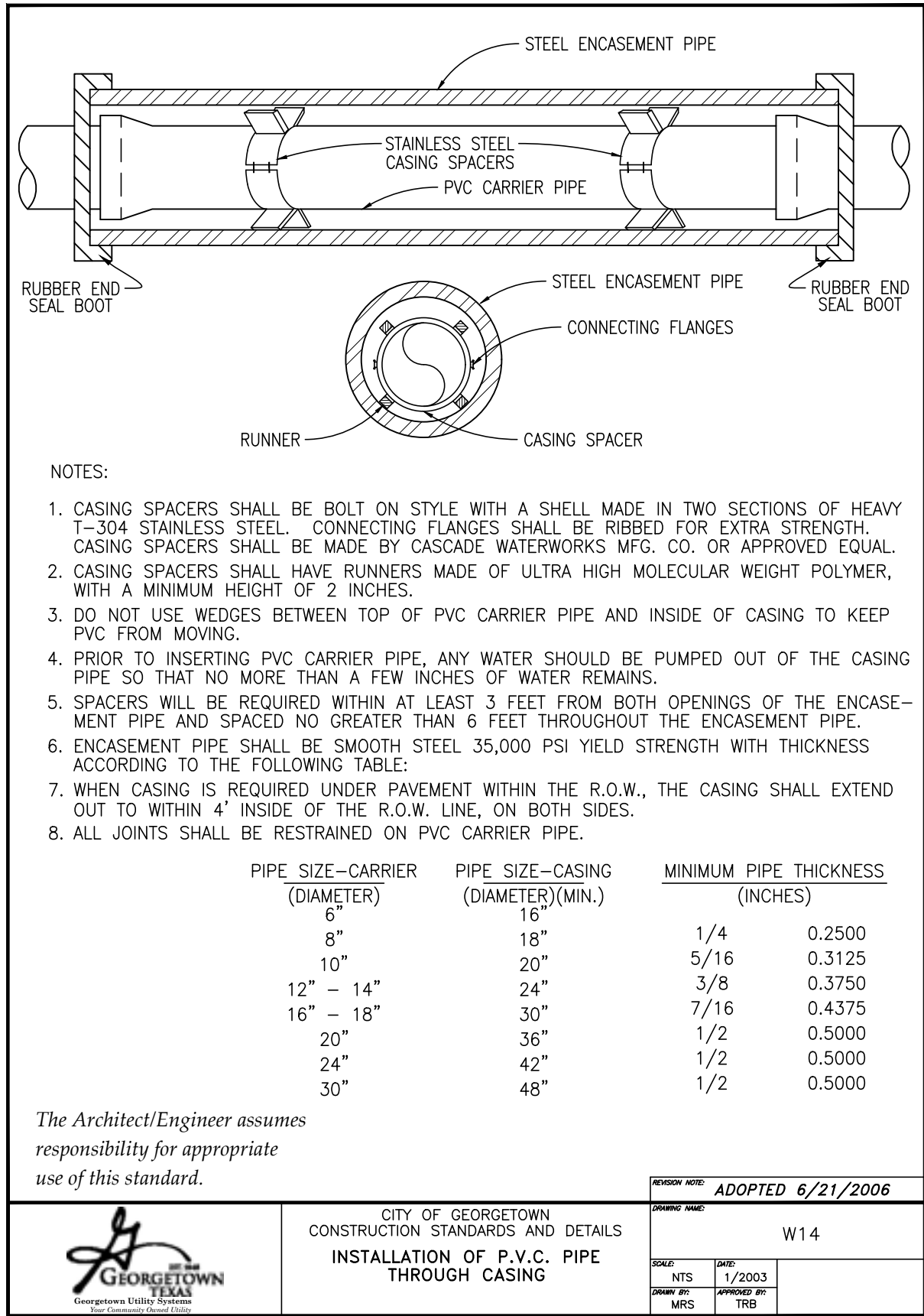
CITY OF GEORGETOWN, TEXAS  
SAN GABRIEL  
FORCE MAIN REPLACEMENT  
DETAIL  
TRENCH AND EMBEDMENT

SHEET NO. **D-04**  
OF **12**





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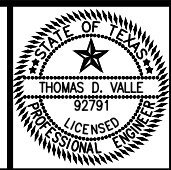


NO.	DATE	REVISION	BY
1	1/2003	1	MRS
2	1/2003	2	TRB

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KPA Firm Registration Number F-510

Plot Date: Jun 17, 2024 - 9:49am  
Plotted By: JCHANDLER

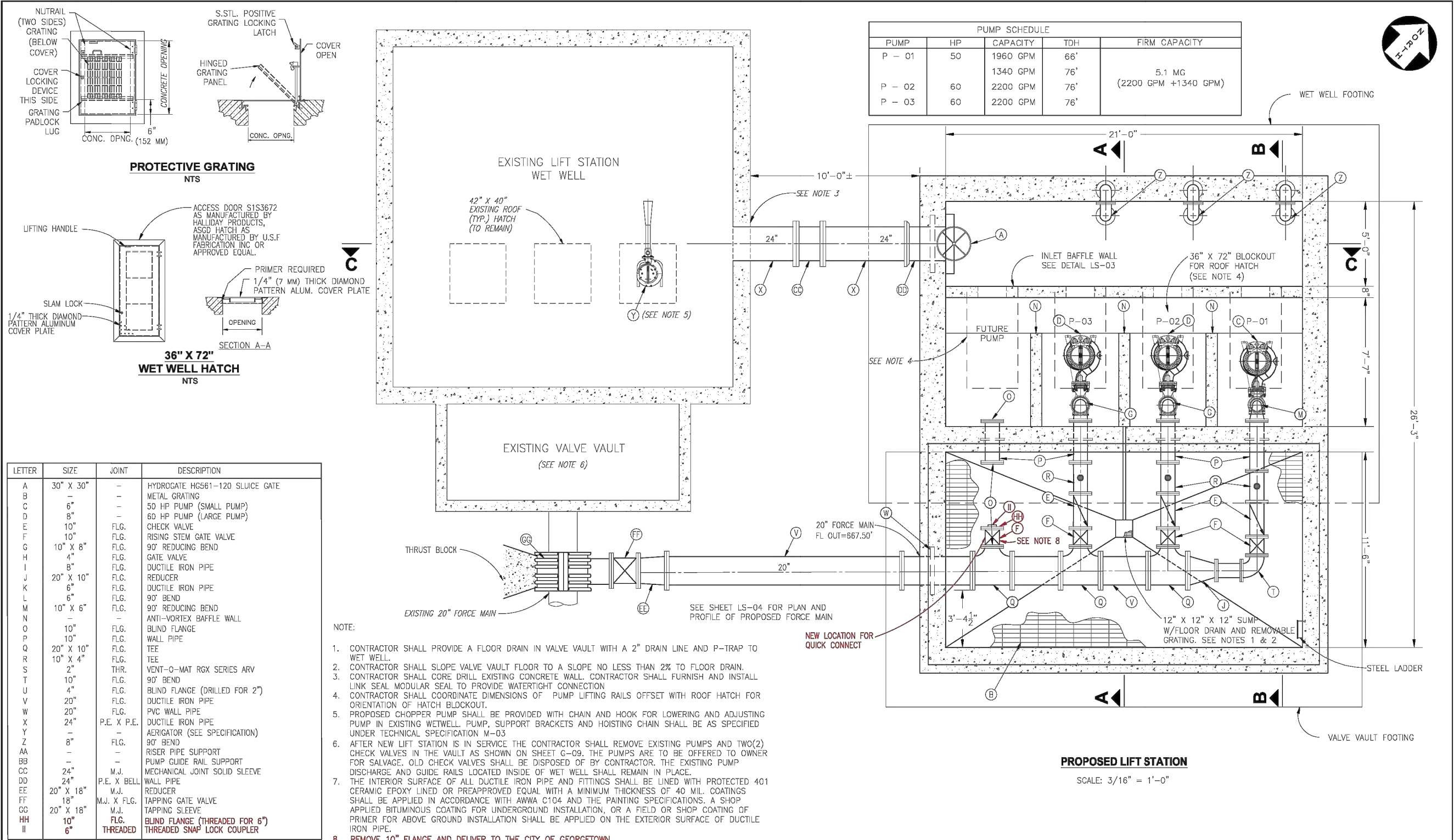
PROJECT NO.	2023-130
DRAWN BY	Jared A. Chandler
DESIGNED BY	Thomas D. Valle, P.E.
APPROVED BY	Thomas D. Valle
DATE	06-17-2024



KASBERG, PATRICK & ASSOCIATES, LP  
CONSULTING ENGINEERS  
TEMPLE, TEXAS 76501

CITY OF GEORGETOWN, TEXAS  
SAN GABRIEL  
FORCE MAIN REPLACEMENT  
DETAIL  
ENCASEMENT AND VALVE

SHEET NO. D-06  
OF 12



**RECORD DRAWING**

These record documents are signed and dated on the cover sheet are provided based on information furnished by the contractor upon which Kasberg, Patrick & Associates, LP has the right to rely and without any warranty as to their fitness for any purpose. The owner agrees that any use of these documents is at its sole risk and further, to the fullest extent permitted by law, releases Kasberg, Patrick & Associates, LP from any liability arising out of any use or modification of the documents.

NO.	DATE	REVISION	BY
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Plot Date: 5/4/2022 2:05:34 PM Plotted By: ZCOOPER			

**PROJECT NO.** 2017-115  
**DRAWN BY** Zane G. Cooper  
**DESIGNED BY** Rick N. Kasberg, P.E.  
**APPROVED BY** [Signature]  
**DATE** 05-04-2022



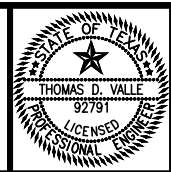
**KASBERG, PATRICK & ASSOCIATES, LP**  
**CONSULTING ENGINEERS**  
TEMPLE, TEXAS 76501

**City of Georgetown, Texas**  
**SAN GABRIEL PARK LIFT STATION IMPROVEMENTS**  
LIFT STATION PLAN VIEW

**SHEET NO.**  
**LS-01** OF  
**04** SHEETS

NO.	DATE	REVISION	BY
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Plot Date: Jun 17, 2024 - 9:49am Plotted By: JCHANDLER			

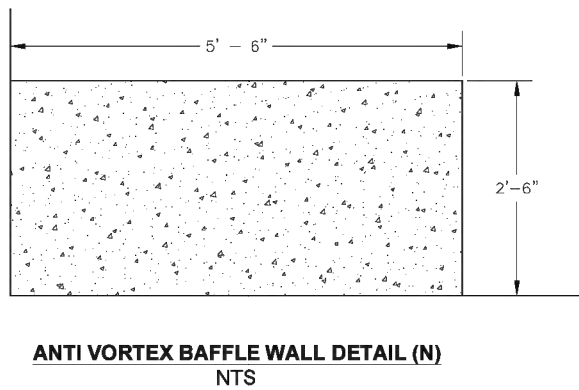
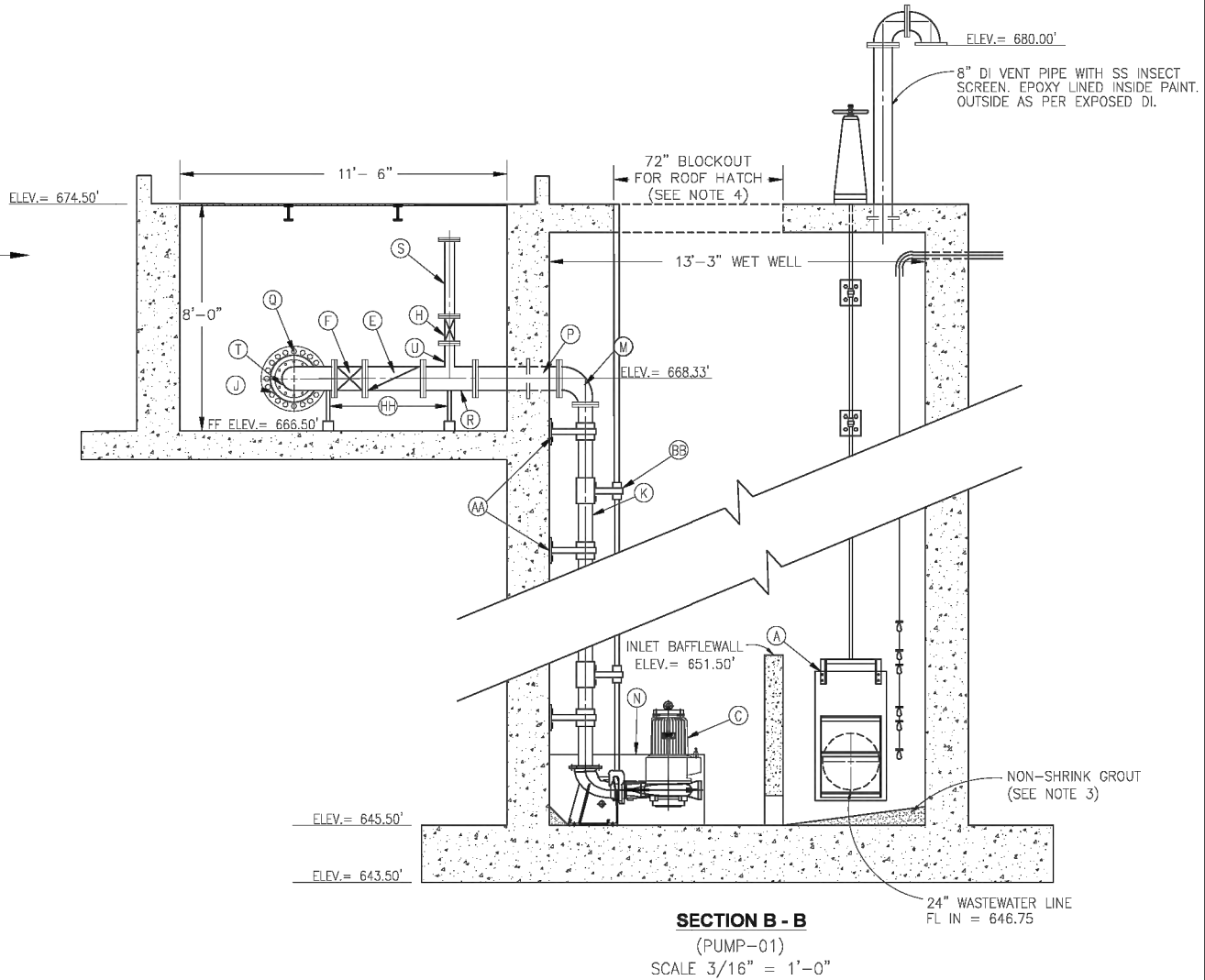
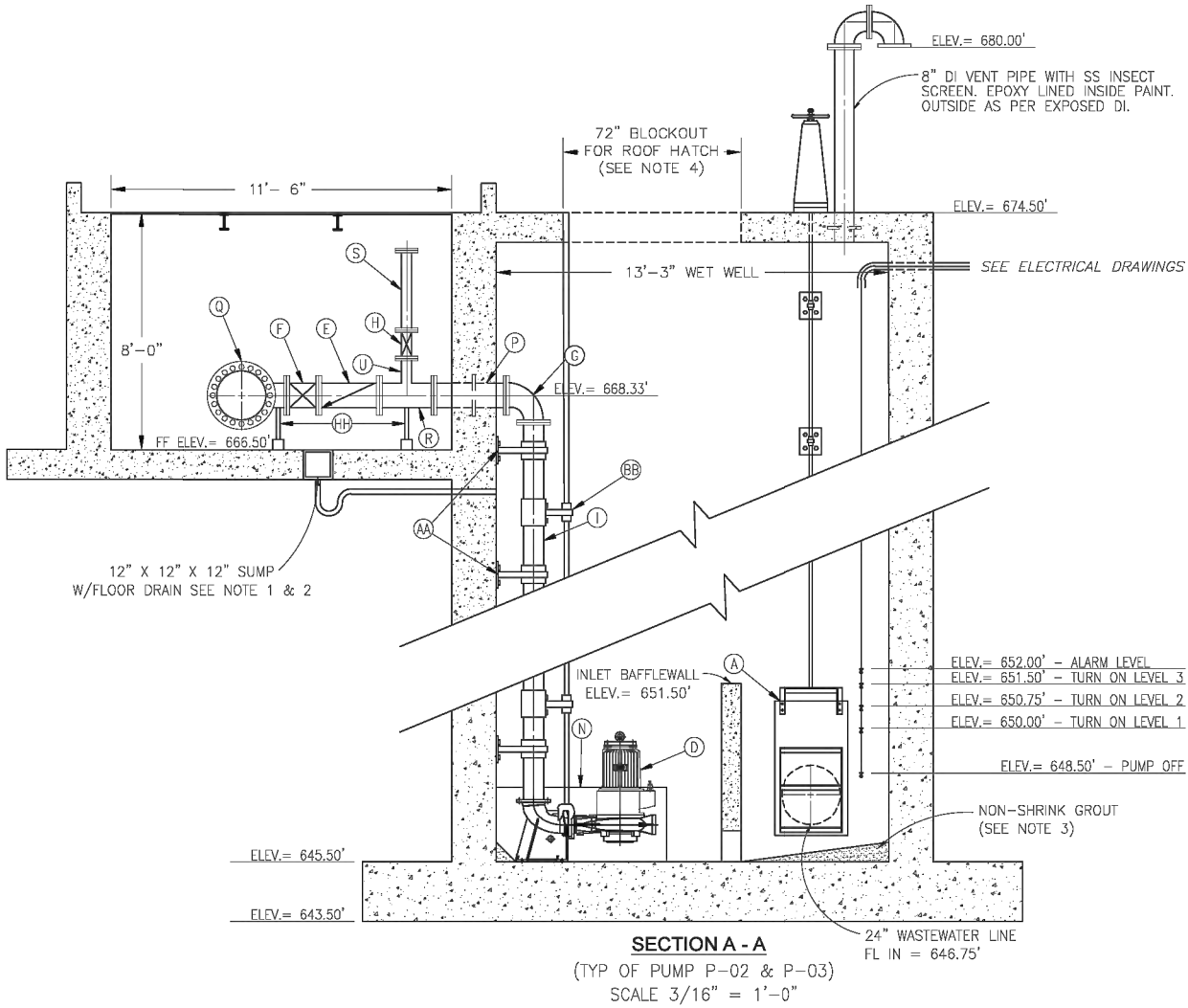
**PROJECT NO.** 2023-130  
**DRAWN BY** Jared A. Chandler  
**DESIGNED BY** Thomas D. Valle, P.E.  
**APPROVED BY** [Signature]  
**DATE** 06-17-2024



**KASBERG, PATRICK & ASSOCIATES, LP**  
**CONSULTING ENGINEERS**  
TEMPLE, TEXAS 76501

**CITY OF GEORGETOWN, TEXAS**  
**SAN GABRIEL FORCE MAIN REPLACEMENT**  
AS-BUILT  
SAN GABRIEL PARK LS

**SHEET NO.** D-07  
**OF** 12



LETTER	SIZE	JOINT	DESCRIPTION	LETTER	SIZE	JOINT	DESCRIPTION
A	30" X 30"	-	HYDROGATE HG561-120 SLUICE GATE	T	10"	FLG.	90° BEND
B	-	-	METAL GRATING	U	4"	FLG.	BLIND FLANGE (DRILLED FOR 2")
C	6"	-	50 HP PUMP (SMALL PUMP)	V	20"	FLG.	DUCTILE IRON PIPE
D	8"	-	60 HP PUMP (LARGE PUMP)	W	20"	FLG.	PVC WALL PIPE
E	10"	FLG.	CHECK VALVE	X	24"	M.J.	DUCTILE IRON PIPE
F	10"	FLG.	RISING STEM GATE VALVE	Y	-	-	AERIGATOR (SEE SPECIFICATION)
G	10" X 8"	FLG.	90° REDUCING BEND	Z	8"	FLG.	90° BEND
H	4"	FLG.	GATE VALVE	AA	-	-	RISER PIPE SUPPORT
I	8"	FLG.	DUCTILE IRON PIPE	BB	-	-	PUMP GUIDE RAIL SUPPORT
J	20" X 10"	FLG.	REDUCER	CC	24"	M.J.	MECHANICAL JOINT SOLID SLEEVE
K	6"	FLG.	DUCTILE IRON PIPE	DD	24"	M.J.	WALL PIPE
L	6"	FLG.	90° BEND	EE	20" X 18"	M.J.	REDUCER
M	10" X 6"	FLG.	90° REDUCING BEND	FF	18"	M.J. X FLG.	TAPPING GATE VALVE
N	-	-	ANTI-VORTEX BAFFLE WALL	GG	20" X 18"	M.J.	TAPPING SLEEVE
O	10"	FLG.	BLIND FLANGE	HH	-	H.D.G.S.	ADJUSTABLE SADDLE TYPE PIPE SUPPORT
P	10"	FLG.	WALL PIPE				
Q	20" X 10"	FLG.	TEE				
R	10" X 4"	FLG.	TEE				
S	2"	THR.	VENT-O-MAT RGX SERIES ARV				

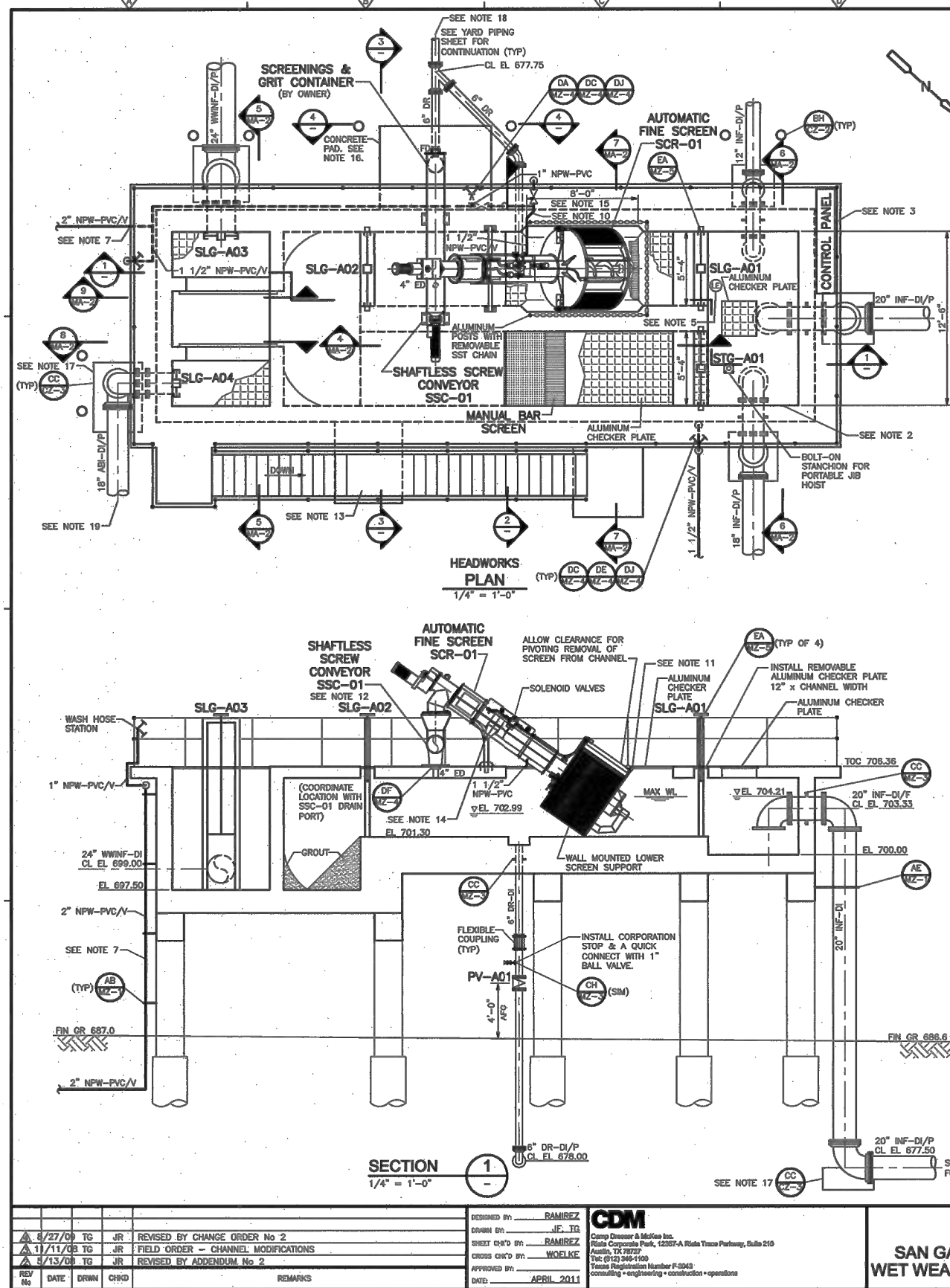
- NOTES:
- CONTRACTOR SHALL PROVIDE A FLOOR DRAIN IN VALVE VAULT WITH A 2" DRAIN LINE AND P-TRAP TO WET WELL.
  - CONTRACTOR SHALL SLOPE VALVE VAULT FLOOR TO A SLOPE NO LESS THAN 2% TO FLOOR DRAIN.
  - WET WELL FLOOR SHALL HAVE MINIMUM SLOPE OF 10% TO PUMP PER TCEQ CHAPTER 217.
  - CONTRACTOR SHALL COORDINATE DIMENSIONS OF PUMP LIFTING RAILS OFFSET WITH ROOF HATCH FOR ORIENTATION OF HATCH BLOCKOUT.
  - CONTRACTOR SHALL FURNISH AND INSTALL A MINIMUM OF 3 RISERS AND 3 GUIDE RAIL SUPPORTS PER PUMP EQUALLY SPACED ALONG LENGTH OF RISER PIPE.
  - THE INTERIOR SURFACE OF ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE LINED WITH PROTECTO 401 CERAMIC EPOXY LINED OR PREAPPROVED EQUAL WITH A MINIMUM THICKNESS OF 40 MIL. COATINGS SHALL BE APPLIED IN ACCORDANCE WITH AWWA C104 AND THE PAINTING SPECIFICATIONS. A SHOP APPLIED BITUMINOUS COATING FOR UNDERGROUND INSTALLATION, OR A FIELD OR SHOP COATING OF PRIMER FOR ABOVE GROUND INSTALLATION SHALL BE APPLIED ON THE EXTERIOR SURFACE OF DUCTILE IRON PIPE.

<b>RECORD DRAWING</b> These record documents are signed and dated on the cover sheet are provided based on information furnished by the contractor upon which Kasberg, Patrick & Associates, LP has the right to rely and without any warranty as to their fitness for any purpose. The owner agrees that any use of these documents is at its sole risk and further, to the fullest extent permitted by law, releases Kasberg, Patrick & Associates, LP from any liabilities arising out of any use or modification of the documents.				<b>PROJECT NO.</b> 2017-115 <b>DRAWN BY</b> Zane G. Cooper <b>DESIGNED BY</b> Rick N. Kasberg, P.E. <b>APPROVED BY</b> [Signature] <b>DATE</b> 05-04-2022				<b>KASBERG, PATRICK &amp; ASSOCIATES, LP</b> <b>CONSULTING ENGINEERS</b> <b>TEMPLE, TEXAS 76501</b>	<b>City of Georgetown, Texas</b> <b>SAN GABRIEL PARK LIFT STATION IMPROVEMENTS</b> <b>LIFT STATION SECTION VIEW (A-A &amp; B-B)</b>	<b>SHEET NO.</b> <b>LS-02</b> OF <b>04</b> SHEETS
<b>NO.</b> <b>DATE</b> <b>REVISION</b> <b>BY</b>		<b>© 2022 Kasberg, Patrick &amp; Associates, LP</b> <b>KPA Firm Registration Number F-510</b> <b>Plot Date:</b> 5/4/2022 2:05:36 PM <b>Plotted By:</b> ZCOOPER								

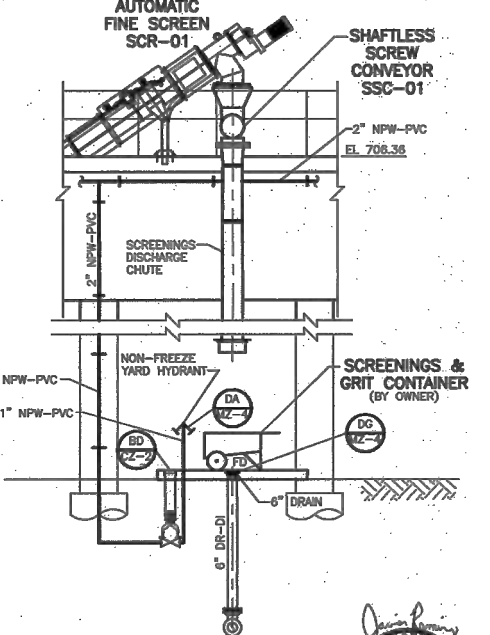
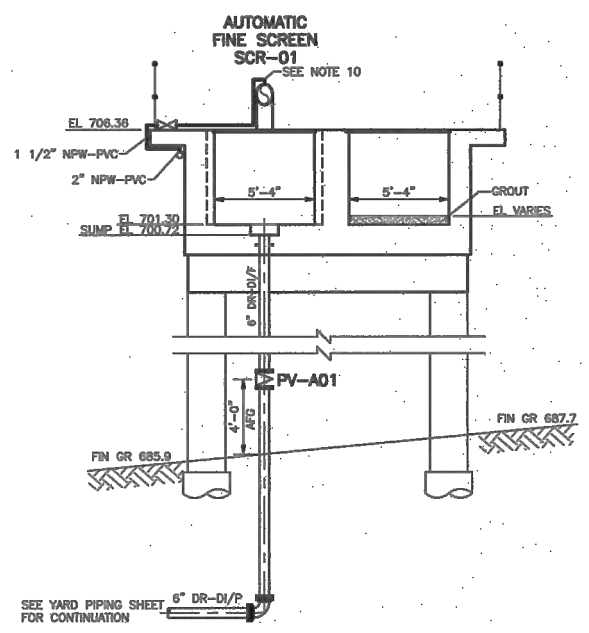
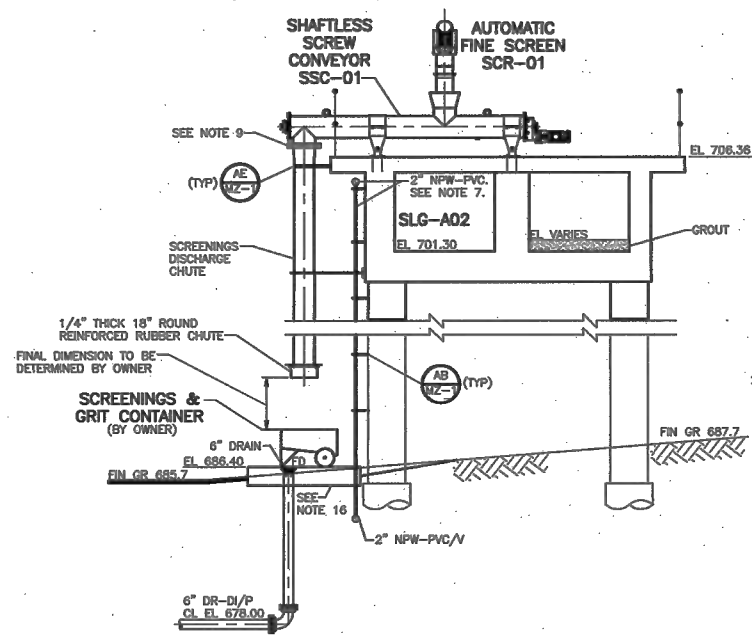
<b>NO.</b> <b>DATE</b> <b>REVISION</b> <b>BY</b>				<b>PROJECT NO.</b> 2023-130 <b>DRAWN BY</b> Jared A. Chandler <b>DESIGNED BY</b> Thomas D. Valle, P.E. <b>APPROVED BY</b> [Signature] <b>DATE</b> 06-17-2024				<b>KASBERG, PATRICK &amp; ASSOCIATES, LP</b> <b>CONSULTING ENGINEERS</b> <b>TEMPLE, TEXAS 76501</b>	<b>CITY OF GEORGETOWN, TEXAS</b> <b>SAN GABRIEL</b> <b>FORCE MAIN REPLACEMENT</b> <b>AS-BUILT</b> <b>SAN GABRIEL PARK LS</b>	<b>SHEET NO.</b> <b>D-08</b> <b>OF</b> <b>12</b>
<b>© 2024 Kasberg, Patrick &amp; Associates, LP</b> <b>KPA Firm Registration Number F-510</b>		<b>Plot Date:</b> Jun 17, 2024 - 9:49am <b>Plotted By:</b> JCHANDLER								



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- NOTES
1. CONCRETE ENCASUREMENT REQUIRED BELOW HEADWORKS STRUCTURE & CONCRETE SLAB BENEATH DISCHARGE CHUTE. SEE STRUCTURAL SHEETS.
  2. CORROSION RESISTANT COATING PER SECTION 09020 SHALL BE APPLIED TO INTERIOR OF ALL CONCRETE HEADWORKS STRUCTURES (WALLS AND CEILING ONLY). COATING NOT REQUIRED FOR CHANNEL FLOOR.
  3. SEE ELECTRICAL DRAWINGS FOR CONTROL PANEL DETAILS.
  4. MINIMUM 3'-6" COVER IS REQUIRED FOR YARD PIPING UNLESS NOTED OTHERWISE. CONTRACTOR MAY UTILIZE (MAXIMUM) 45 DEG BENDS TO ADJUST ELEVATION, AT THE CONTRACTOR'S OPTION. FURNISHING AND INSTALLATION OF FITTINGS NOT SHOWN IN DRAWINGS SHALL BE AT NO ADDED COST TO THE OWNER. RESTRAINED JOINTS REQUIRED FOR ALL PIPING EXCEPT DRAIN PIPING.
  5. PROVIDE OPENING THROUGH CONCRETE SLAB & PROTECTIVE SLEEVE THROUGH OPENING FOR ULTRASONIC LEVEL SENSOR.
  6. FURNISH ALUMINUM PLATE THAT CAN BE INSERTED INTO OPENING FOR STG-01 WHICH WILL SERVE AS AN OVERFLOW WEIR. ELEVATION OF OVERFLOW IS 704.40.
  7. INSULATE & JACKET ALL EXPOSED PIPE (3 INCHES OR SMALLER) IN ACCORDANCE WITH SECTION 15250.
  8. SIDEWALKS ARE NOT SHOWN FOR CLARITY. REFER TO PAVING & GRADING SHEET FOR SIDEWALK LOCATIONS.
  9. DISCHARGE CHUTE ASSEMBLY FROM SHAFTLESS SCREW CONVEYOR MAY VARY BY MANUFACTURER. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER & PROVIDE NECESSARY FITTINGS TO CONSTRUCT A DISCHARGE CHUTE THAT IS PERPENDICULAR TO CONCRETE SLAB.
  10. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT MANUFACTURERS TO DETERMINE THE NECESSARY NPW LINES & FITTINGS TO OPERATE FINE SCREEN & SCREW CONVEYOR.
  11. LIMITS OF ALUMINUM CHECKER PLATE AROUND FINE SCREEN MAY VARY BASED ON MANUFACTURER.
  12. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT MANUFACTURERS TO PROVIDE SUFFICIENT CLEARANCE BETWEEN SCREEN & CONCRETE PLATFORM FOR INSTALLATION & OPERATION OF THE SCREW CONVEYOR.
  13. STAIRWAY NOT SHOWN IN MECHANICAL SECTIONS FOR CLARITY.
  14. INSTALL SCREEN PIVOT MOUNTING ASSEMBLY. COORDINATE LOCATION WITH SCREEN MANUFACTURER.
  15. CONTRACTOR SHALL VERIFY LENGTH WITH FINE SCREEN MANUFACTURER TO ENSURE PIVOTING CAPABILITY.
  16. CENTER CONCRETE SLAB UNDERNEATH DISCHARGE CHUTE. CONCRETE SLAB SHALL BE MOVED TOWARDS HEADWORKS STRUCTURE IF SLAB ENCLOSES ASPHALT PAVEMENT.
  17. CONCRETE CRADLE SHALL BE 2500 PSI. CONCRETE CRADLE SHALL BE INSTALLED FOR ALL INFLUENT LINES, AERATION BASIN INFLUENT LINES, & WET WEATHER INFLUENT LINES. SEE SHEET MA-2 FOR PIPE CRADLE SCHEDULE. SEE STRUCTURAL SHEETS FOR EXCAVATION & BACKFILL REQUIREMENTS.
  18. CONNECT DRAIN LINE TO PROPOSED MANHOLE ON EXISTING 18" WASTEWATER LINE (SEE YARD PIPING SHEET). 6" DRAIN IE AT MANHOLE 677.0.
  19. CONTRACTOR SHALL FIELD VERIFY PROPOSED CENTERLINE ELEVATION OF 684.95 FOR 18" ABI LINE. PROPOSED 18" LINE SHALL SLOPE DOWNWARD FROM HEADWORKS TO EXISTING 18" ABI TIE-IN (SEE YARD PIPING SHEET).



**RECORD DRAWING**  
DATE: 4/20/11 BY: *Jared Chandler*  
CAMP DRESSER & MCKEE INC.



REV	DATE	DRWN	CHGD	REMARKS
1	8/27/09	TG	JR	REVISED BY CHANGE ORDER No 2
2	11/11/09	TG	JR	FIELD ORDER - CHANNEL MODIFICATIONS
3	8/13/09	TG	JR	REVISED BY ADDENDUM No 2

DESIGNED BY: RAMIREZ, J.F. TG  
DRAWN BY: RAMIREZ, J.F. TG  
CHECKED BY: WOELKE  
APPROVED BY: *Thomas D. Valle*  
DATE: APRIL 2011

**CDM**  
Camp Dresser & McKee Inc.  
Rita Corporate Park, 12327-A Rita Trace Parkway, Suite 210  
Austin, TX 78727  
Tel: (512) 340-1100  
Texas Registration Number F-5043  
consulting • engineering • construction • operations

CITY OF GEORGETOWN, TEXAS  
**SAN GABRIEL WASTEWATER TREATMENT PLANT  
WET WEATHER & IRRIGATION WATER IMPROVEMENTS**

**HEADWORKS  
PLAN & SECTIONS**

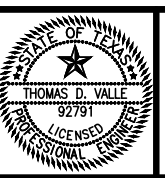
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FILE NAME: M-SGWTP  
SHEET No: **MA-1**

NO.	DATE	REVISION	BY

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KPA Firm Registration Number F-510

Plot Date: Jun 17, 2024 - 9:50am  
Plotted By: JCHANDLER

PROJECT NO. 2023-130  
DRAWN BY: Jared A. Chandler  
DESIGNED BY: Thomas D. Valle, P.E.  
APPROVED BY: *Thomas D. Valle*  
DATE: 06-17-2024



**KASBERG, PATRICK & ASSOCIATES, LP  
CONSULTING ENGINEERS  
TEMPLE, TEXAS 76501**

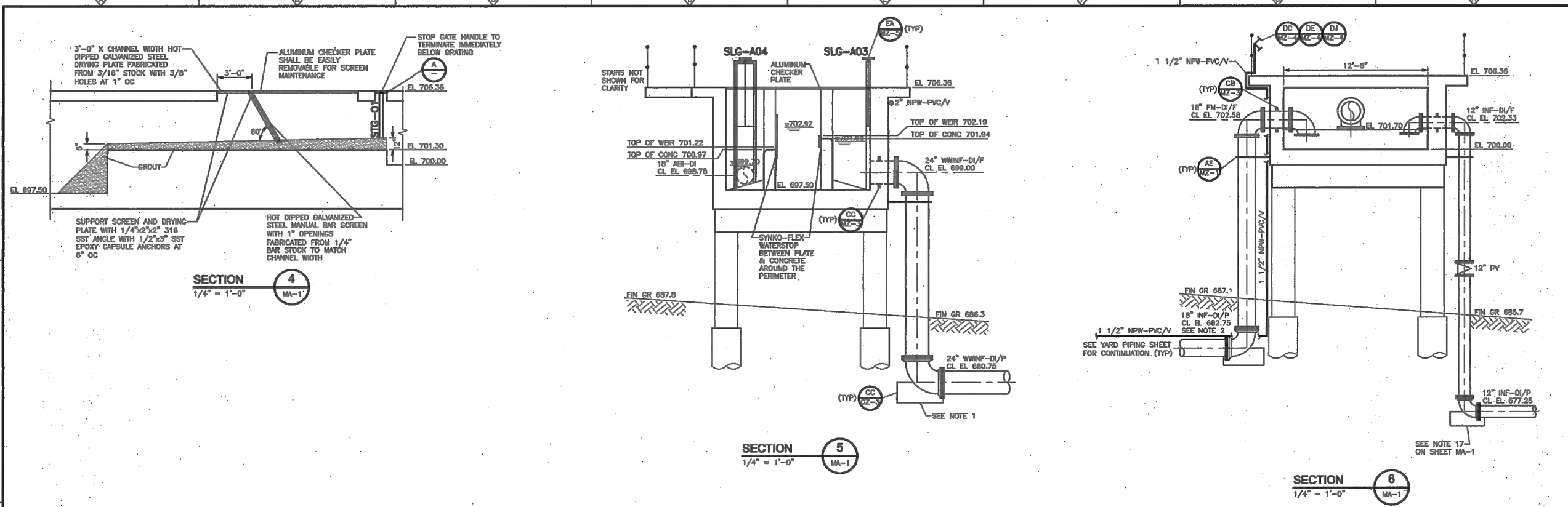
**CITY OF GEORGETOWN, TEXAS  
SAN GABRIEL  
FORCE MAIN REPLACEMENT**

**AS-BUILT  
SAN GABRIEL WWTP - HEADWORKS**

SHEET NO. **D-09**  
OF **12**

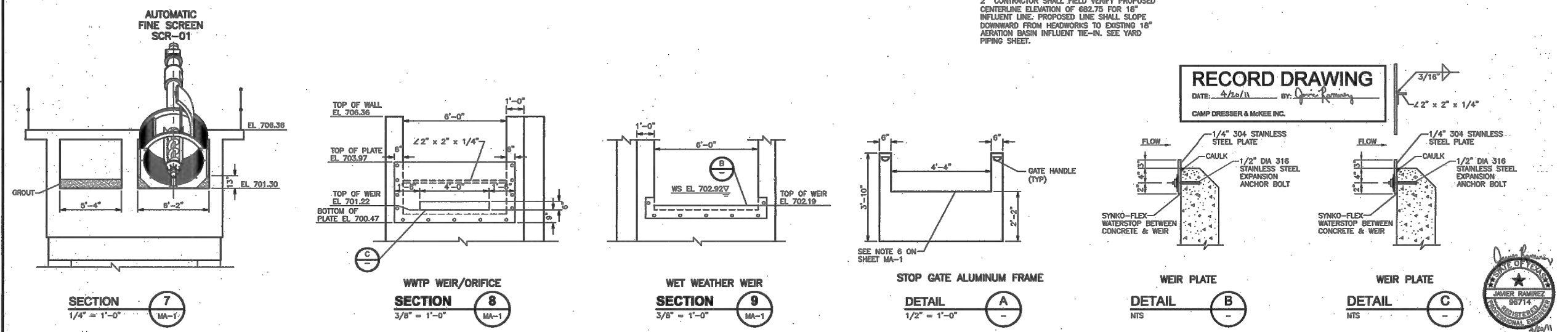
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PIPE CRADLE SCHEDULE			
PIPE	THICKNESS	WIDTH	LENGTH
12" INF	1'-3"	3'-0"	3'-0"
20" INF	1'-7"	3'-6"	3'-6"
18" INF	1'-6"	3'-6"	3'-6"
18" ABI	1'-6"	3'-6"	5'-0"
24" WWNF	1'-9"	4'-0"	4'-0"

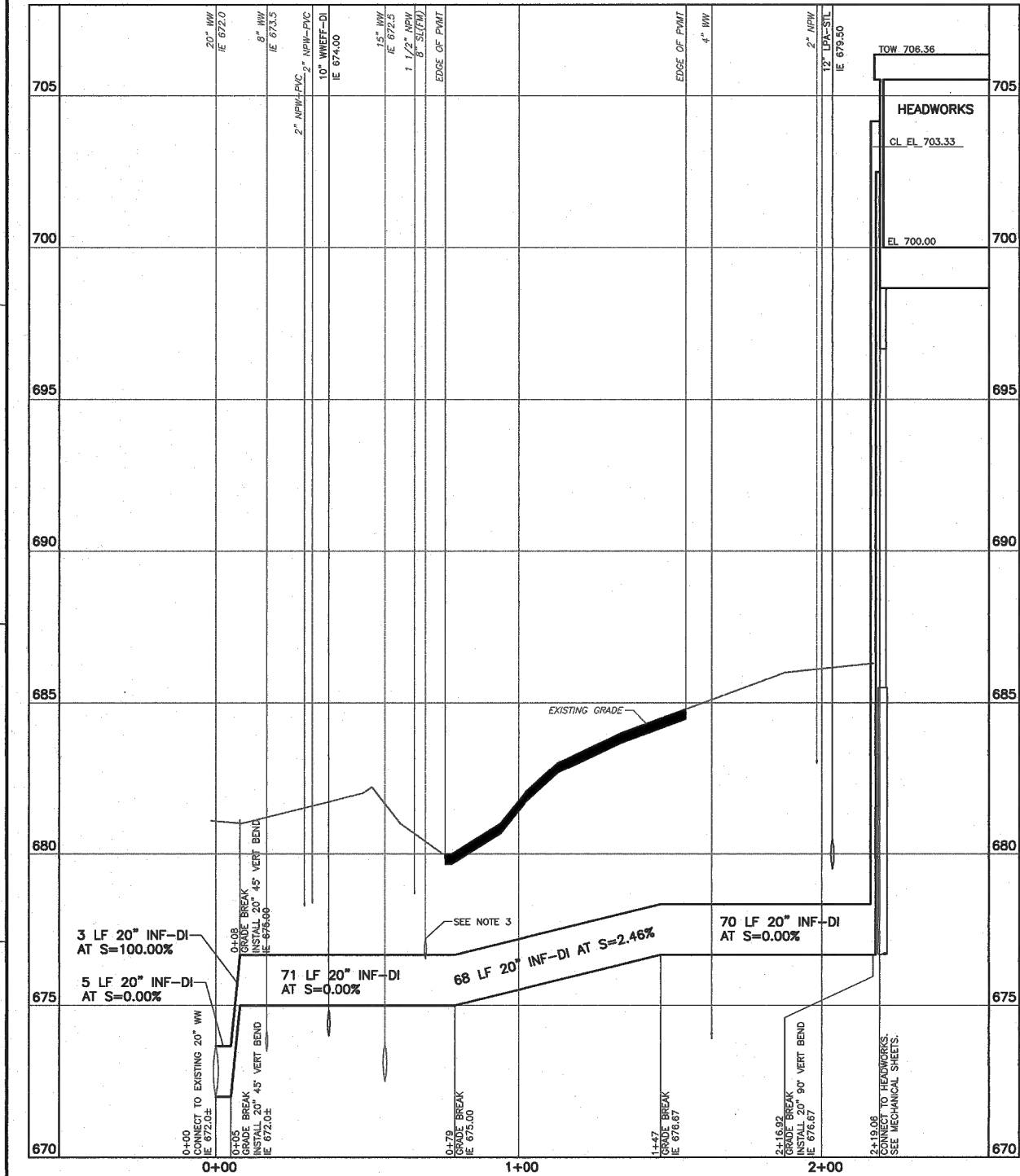
- NOTES
1. PIPE CRADLE SCHEDULE FOR HEADWORKS YARD PIPING.
  2. CONTRACTOR SHALL FIELD VERIFY PROPOSED CENTERLINE ELEVATION OF 682.75 FOR 18" INFLUENT LINE. PROPOSED LINE SHALL SLOPE DOWNWARD FROM HEADWORKS TO EXISTING 18" AERATION BASIN INFLUENT TIE-IN. SEE YARD PIPING SHEET.



DESIGNED BY: RAMIREZ, R.G.	CDM	CITY OF GEORGETOWN, TEXAS	HEADWORKS SECTIONS & DETAILS	PROJECT No: 80475
CHECKED BY: RAMIREZ, R.G.	City Engineer & Motion Inc.	SAN GABRIEL WASTEWATER TREATMENT PLANT		FILE NAME: M-SGWT2
DATE: APRIL 2011	1800 Corporate Park, 12357-A Rialto Texas Parkway, Suite 210 Austin, TX 78727 Tel: (512) 340-4100 Texas Registration Number P-3043 consulting - engineering - construction - operations	WET WEATHER & IRRIGATION WATER IMPROVEMENTS		SHEET No: MA-2

PROJECT NO. 2023-130			KASBERG, PATRICK & ASSOCIATES, LP CONSULTING ENGINEERS TEMPLE, TEXAS 76501	CITY OF GEORGETOWN, TEXAS SAN GABRIEL FORCE MAIN REPLACEMENT AS-BUILT SAN GABRIEL WWTP - HEADWORKS	SHEET NO. D-10 OF 12
DRAWN BY: Jared A. Chandler					
DESIGNED BY: Thomas D. Valle, P.E.					
APPROVED BY:	DATE: 06-17-2024				
© 2024 Kasberg, Patrick & Associates, LP KPA Firm Registration Number F-510	Plot Date: Jun 17, 2024 - 9:50am Plotted By: JCHANDLER				





PROFILE 1  
1" = 20' H  
1" = 2' V

REV	NO	DATE	DRWN	CHKD	REMARKS
1	11/08	TG	JR		FIELD ORDER - 10" WVEFF MODIFICATION

DESIGNED BY: RAMIREZ  
DRAWN BY: JF, TG  
SHEET CHK'D BY: WOELKE  
CROSS CHK'D BY: WOELKE  
APPROVED BY: [Signature]  
DATE: APRIL 2011

**CDM**  
Camp Dresser & McKee Inc.  
Rialta Corporate Park, 12357-A Rialta Trace Parkway, Suite 210  
Austin, TX 78727  
Tel: (512) 346-1100  
Texas Registration Number F-3043  
consulting • engineering • construction • operations

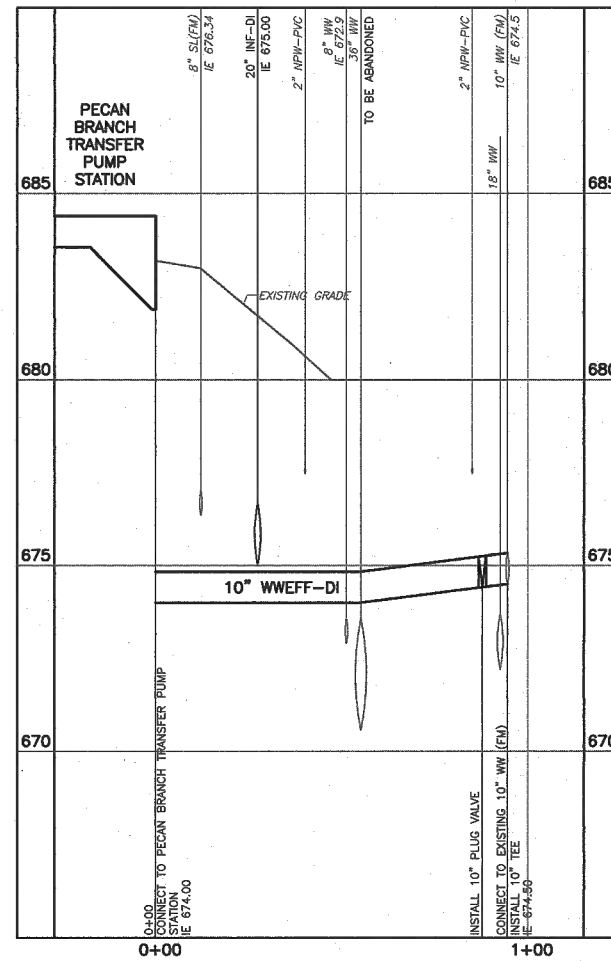
CITY OF GEORGETOWN, TEXAS  
**SAN GABRIEL WASTEWATER TREATMENT PLANT  
WET WEATHER & IRRIGATION WATER IMPROVEMENTS**

YARD PIPING PROFILES I

PROJECT No: 60475  
FILE NAME: C-PROFIL  
SHEET No:  
**C-5**

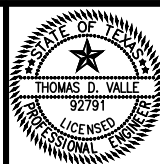
NOTES

- 1 THE INVERT ELEVATIONS AND PIPELINE PROFILES SHOWN ON THE YARD PIPING PROFILE SHEETS ARE SHOWN TO EMPHASIZE THAT NO DIPS, SAGS, HUMPS, OR OTHER IRREGULARITIES IN VERTICAL ALIGNMENT ARE ACCEPTABLE. THE PROFILES SHOWN ARE THE INTENDED PROFILES CONSIDERING TOPOGRAPHY, EXISTING KNOWN UTILITIES, AS-BUILT PIPE ELEVATIONS, AND OTHER KNOWN CONDITIONS. VARIANCES FROM THE 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.
- 2 ALL EXISTING PIPELINE INVERT ELEVATIONS OBTAINED OR CALCULATED FROM AS-BUILT DRAWINGS HAVE BEEN ADJUSTED BY INCREASING THE ELEVATION BY 0.5 FEET TO ACCOUNT FOR ELEVATION DIFFERENCES NOTED BETWEEN AS-BUILT DRAWINGS AND SURVEY PERFORMED BY INLAND GEODETICS, ROUND ROCK IN 2007.
- 3 CONTRACTOR SHALL VERTICALLY RELOCATE EXISTING 8" SLUDGE FORCE MAIN AS NECESSARY TO OBTAIN A MINIMUM SEPARATION DISTANCE OF AT LEAST ONE FOOT. 8" SLUDGE FORCE MAIN SHALL BE INSTALLED ABOVE 20" INFLUENT LINE.



PROFILE 2  
1" = 20' H  
1" = 2' V

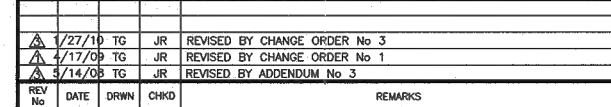
**RECORD DRAWING**  
DATE: 4/20/11 BY: [Signature]  
CAMP DRESSER & MCKEE INC.



**KASBERG, PATRICK & ASSOCIATES, LP**  
CONSULTING ENGINEERS  
TEMPLE, TEXAS 76601

**CITY OF GEORGETOWN, TEXAS**  
SAN GABRIEL  
FORCE MAIN REPLACEMENT  
  
AS-BUILT  
SAN GABRIEL WWTP - FM YARD PIPING





DESIGNED BY: WOELKE  
DRAWN BY: JF  
SHEET CHK'D BY: WOELKE  
CROSS CHK'D BY: WOELKE  
APPROVED BY: \_\_\_\_\_  
DATE: APRIL 2011

CITY OF GEORGETOWN, TEXAS

**SAN GABRIEL WASTEWATER TREATMENT PLANT  
WET WEATHER & IRRIGATION WATER IMPROVEMENTS**


**RECORD DRAWING**  
DATE: 4/20/11 BY: *John R. Rimmer*  
CAMP DRESSER & McKEE INC.

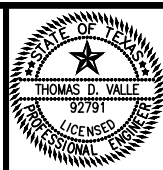


PROJECT No 60475  
FILE NAME: C-PIPE

SHEET No  
C-4

NO.	DATE	REVISION	BY
© 2024 Kasberg, Patrick & Associates, LP KPA Firm Registration Number F-510		Plot Date: Jun 17, 2024 - 9:50am Plotted By: JCHANDLER	

PROJECT NO. 2023-130  
DRAWN BY Jared A. Chandler  
DESIGNED BY Thomas D. Valle, P.E.  
APPROVED BY   
DATE 06-17-2024



**KASBERG, PATRICK & ASSOCIATES, LP**  
**CONSULTING ENGINEERS**  
**TEMPLE, TEXAS 76501**

<p><b>CITY OF GEORGETOWN, TEXAS</b>  <b>SAN GABRIEL</b>  <b>FORCE MAIN REPLACEMENT</b></p>
<p><b>AS-BUILT</b>  <b>SAN GABRIEL WWTP - YARD PIPING</b></p>

SHEET NO. **D-12**  
OF **12**

# 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: Jake Blair, P.E.

Date: 6/20/24

Signature of Customer/Agent:



Regulated Entity Name: San Gabriel Force Main Replacement

## 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. ☒ **N/A** 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: 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).
- ☒ N/A
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.



**TEMPORARY STORMWATER SECTION  
TCEQ-0602**

**ATTACHMENT A  
Spill Response Actions**

This project will prohibit the storage of hazardous substances, fuels, or oils on the project site and require they are stored at an approved offsite facility. The construction of the proposed wastewater line will require the use of several types of equipment that will be fueled at an approved location off-site. This will present a slight risk of hydrocarbon or hazardous substance spills. In the event of such spills the contaminated area will be sealed by the use of existing dirt or crushed limestone base material. This material will then be collected and disposed at an approved hazardous material location. All proper authorities will be notified as soon as the spill is discovered. The emergency response phone number for TCEQ is 1-800-832-8224.

**TEMPORARY STORMWATER SECTION  
TCEQ-0602**

**Attachment B**

**Potential Sources of Contamination**

The only potential source of contamination for the project during construction is that of the construction equipment. However, as previously mentioned, no fuels or hazardous substances will be stored on-site. In the case of a spill, the Spill Response Action of this report will be utilized.

**TEMPORARY STORMWATER SECTION  
TCEQ-0602**

**ATTACHMENT C  
Sequence of Major Activities**

The sequence of major activities in the disturbance of the natural terrain will be as follows:

1. Install all of the temporary water pollution and abatement control measures (3,210 LF of silt fence).
2. Begin proposed 20" DIP Force Main Line connect to existing 20" Force Main line at San Gabriel Lift Station.
3. Install proposed 98 LF of 20" DIP by open cut.
4. Backfill with embedment and base material (no excavated spoil) to existing asphalt or ground line where project is within existing floodplain. Concrete encase/backfill at areas where erosion could occur.
5. Install proposed 20" HDPE Force Main by directional bore under San Gabriel River at STA. 1+95 to 9+40.
6. Backfill with embedment and base material (no excavated spoil) to existing asphalt or ground line where project is within existing floodplain. Concrete encase/backfill at areas where erosion could occur.
7. Install proposed 2,226 LF (STA 9+40 to STA 31+66) of 20" DIP by open cut.
8. Install proposed 47 LF DIP (STA 31+66 to STA 32+13) including 36" Steel Encasement by Open Cut under WL Walden Drive.
9. Install proposed 117 LF (STA 32+13 to STA 33+30) of 20" DIP by open cut.
10. Install proposed 275 LF DIP (STA 33+30 to STA 36+05) including 36" Steel by Bore or Open Cut per Sheet FM-07.
11. Install proposed 361 LF (STA 36+05 to STA 39+65) of 20" DIP by open cut.
12. Connect proposed 20" DIP force main at STA 39+65 to existing 20" force main.
13. Remove temporary water pollution and abatement control measures.
14. Repair all existing asphalt, concrete and reestablish ground cover to limits shown on plans.

For placement of the San Gabriel Force Main, less than approximately 0.30-acres will be disturbed along the length of the project.



**TEMPORARY STORMWATER SECTION  
TCEQ-0602**

**ATTACHMENT D  
Temporary Best Management practices and Measures**

The temporary best management practices that will be utilized for the construction of this project are silt fences and rock berms. The silt fences will be utilized in small drainage areas and in areas of sheet overland flow that will pass through a natural filter area such as grassy areas. The rock berms will filter larger areas of drainage that are channeled. This project will require the contractor to install all temporary best management practices, silt fence and rock berms before the start of construction.

The natural drainage of the site will be maintained through the duration of the project. Silt fence and rock berms have been designed to filter sediments from stormwater before leaving the proposed construction site and to deter erosion at these points. Every construction project has periods of change and unknowns; therefore we will bid extra quantities of silt fence and rock berms into this project. This will allow for immediate response to any unforeseen circumstances that may require the need for additional temporary protection.

The majority of the upgradient stormwater receives a natural filtration by passing through grassy areas, but even this stormwater will eventually pass through one of the temporary filtration devices (silt fence or rock berms). Through this practice all stormwater leaving the site should be maintained to the maximum extent as possible to its natural state.

**TEMPORARY STORMWATER SECTION  
TCEQ-0602**

**ATTACHMENT F  
Structural Practices**

With the nature and layout of this project, structural practices are impractical. Since the project is the construction of approximately 4,000 feet of force main line, the project site is long and narrow. The use of the earlier described silt fence will be the most effective way to provide sediment and erosion control from stormwater.

**TEMPORARY STORMWATER SECTION  
TCEQ-0602**

**ATTACHMENT I  
Inspection and Maintenance for BMPs**

The contractor will be required to maintain, repair, or retrofit all curb inlet protection and silt fence, as it is required through the duration of the project until the permanent BMPs are constructed and established. The contractor will be required to inspect the BMPs on at least a bi-monthly basis and after every rainfall event. A log of the inspections will be maintained and kept on site identifying each individual BMP area and its condition (see next sheet). The project inspector, from the City of Georgetown, will also inspect the BMPs to ensure they are in proper working condition. If any BMP is found to be unacceptable, the inspector will notify the contractor to remedy the problem immediately.



**TEMPORARY STORMWATER SECTION  
TCEQ-0602**

**ATTACHMENT J**

**Schedule of Interim and Permanent Soil Stabilization Practices**

With the nature of this project, temporary or interim soil stabilization practices are impractical. The disturbance of topsoil will be limited to the trench width of the proposed force main per the embedment details on final plans. This area will be minor and will be returned to existing conditions or better.

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

I DANIEL HAVINS  
\_\_\_\_\_  
Print Name  
CIP Project Manager  
\_\_\_\_\_  
Title - Owner/President/Other  
of City of Georgetown  
\_\_\_\_\_  
Corporation/Partnership/Entity Name  
have authorized JAKE L BLAIR, P.E.  
\_\_\_\_\_  
Print Name of Agent/Engineer  
of KASBERG, PATRICK & ASSOCIATES, LP  
\_\_\_\_\_  
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:

Daniel Havins  
Applicant's Signature

6/21/2024  
Date

THE STATE OF TEXAS §  
County of WILLIAMSON §

BEFORE ME, the undersigned authority, on this day personally appeared DANIEL HAVINS 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 21<sup>ST</sup> day of JUNE, 2024

Sheila K. Mitchell  
NOTARY PUBLIC

SHEILA K. MITCHELL  
Typed or Printed Name of Notary



MY COMMISSION EXPIRES: NOVEMBER 10, 2025



# Application Fee Form

## Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: San Gabriel Force Main Replacement

Regulated Entity Location: Georgetown, Texas

Name of Customer: City of Georgetown

Contact Person: Daniel Havins

Phone: (512) 930-6513

Customer Reference Number (if issued): CN N/A

Regulated Entity Reference Number (if issued): RN N/A

### Austin Regional Office (3373)

☐ Hays

☐ Travis

☒ Williamson

### San Antonio Regional Office (3362)

☐ Bexar

☐ Medina

☐ Uvalde

☐ Comal

☐ Kinney

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

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

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

### Site Location (Check All That Apply):

☒ Recharge Zone

☐ Contributing Zone

☐ Transition Zone

Type of Plan	Size	Fee Due
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	\$
Sewage Collection System	3,869 L.F.	\$ 1,934.50
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: 6/29/24

# 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***

<b><i>Project</i></b>	<b><i>Project Area in Acres</i></b>	<b><i>Fee</i></b>
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***

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

### ***Underground and Aboveground Storage Tank System Facility Plans and Modifications***

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

### ***Exception Requests***

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

### ***Extension of Time Requests***

<b><i>Project</i></b>	<b><i>Fee</i></b>
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

<b>1. Reason for Submission</b> (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	
<b>2. Customer Reference Number</b> (if issued)	<a href="#">Follow this link to search for CN or RN numbers in Central Registry**</a>	<b>3. Regulated Entity Reference Number</b> (if issued)
CN 600412043		RN 0

## SECTION II: Customer Information

<b>4. General Customer Information</b>		<b>5. Effective Date for Customer Information Updates</b> (mm/dd/yyyy)			
<input checked="" 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>					
<b>6. Customer Legal Name</b> (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>	
City of Georgetown					
<b>7. TX SOS/CPA Filing Number</b>		<b>8. TX State Tax ID</b> (11 digits)		<b>9. Federal Tax ID</b> (9 digits)	
N/A		N/A		26-3772514	
<b>10. DUNS Number</b> (if applicable)		N/A			
<b>11. Type of Customer:</b>		<input type="checkbox"/> Corporation		<input type="checkbox"/> Individual	
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		Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited	
<b>12. Number of Employees</b>				<b>13. Independently Owned and Operated?</b>	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input checked="" type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>14. Customer Role</b> (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					
<b>15. Mailing Address:</b>					
300-1 Industrial Avenue					
City		Georgetown	State	TX	ZIP
				78626	ZIP + 4
					8445
<b>16. Country Mailing Information</b> (if outside USA)				<b>17. E-Mail Address</b> (if applicable)	



<b>18. Telephone Number</b>	<b>19. Extension or Code</b>	<b>20. Fax Number (if applicable)</b>
( 512 ) 930-6513		(   ) -   -

## SECTION III: Regulated Entity Information

<b>21. General Regulated Entity Information</b> (If 'New Regulated Entity' is selected, a new permit application is also required.)								
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information								
<i>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).</i>								
<b>22. Regulated Entity Name</b> (Enter name of the site where the regulated action is taking place.)								
San Gabriel Force Main Replacement								
<b>23. Street Address of the Regulated Entity:</b>  (No PO Boxes)	N/A							
	City		State		ZIP		ZIP + 4	
<b>24. County</b>								

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

<b>25. Description to Physical Location:</b>	The proposed san Gabriel Force Main site is generally located along North College Street and extending onto the City of Georgetown WWTP property in Georgetown, Williamson County, Texas.							
<b>26. Nearest City</b>					<b>State</b>	<b>Nearest ZIP Code</b>		
Georgetown				TX		78626		
<i>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).</i>								
<b>27. Latitude (N) In Decimal:</b>						<b>28. Longitude (W) In Decimal:</b>		
Degrees	Minutes		Seconds		Degrees	Minutes		Seconds
30	38		49.13		97	40		1.23
<b>29. Primary SIC Code</b> (4 digits)	<b>30. Secondary SIC Code</b> (4 digits)		<b>31. Primary NAICS Code</b> (5 or 6 digits)			<b>32. Secondary NAICS Code</b> (5 or 6 digits)		
6552			237210					
<b>33. What is the Primary Business of this entity?</b> (Do not repeat the SIC or NAICS description.)								
City of Georgetown								
<b>34. Mailing Address:</b>	N/A							
	City		State		ZIP		ZIP + 4	
<b>35. E-Mail Address:</b>								
<b>36. Telephone Number</b>			<b>37. Extension or Code</b>			<b>38. Fax Number (if applicable)</b>		
(   ) -   -						(   ) -   -		

**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.

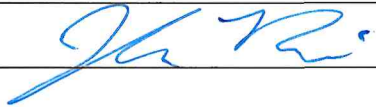
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source 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**

<b>40. Name:</b>	Jake L. Blair, P.E.	<b>41. Title:</b>	Associate
<b>42. Telephone Number</b>	<b>43. Ext./Code</b>	<b>44. Fax Number</b>	<b>45. E-Mail Address</b>
( 254 ) 773-3731		(   ) -	jblair@kpaengineers.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.

<b>Company:</b>	Kasberg, Patrick & Associates, LP	<b>Job Title:</b>	Associate
<b>Name (In Print):</b>	Jake L. Blair, P.E.	<b>Phone:</b>	( 245 ) 773- 3731
<b>Signature:</b>		<b>Date:</b>	6/20/2024