SEWAGE COLLECTION SYSTEM
FOR
HALFTIME #1 – CONVENIENCE STORE

SAN ANTONIO ETJ, BEXAR COUNTY, TX

BULVERDE AND MARSHALL RD.

Prepared by:

ENGINEERING
+ SURVEYING

11903 Jones Maltsberger Rd, Suite 102
San Antonio, TX 78216
210-774-5504
TBPE FIRM 17992

Prepared for:

HALFTIME
Karim Ali
7410 Blanco Road, Suite 225
San Antonio, TX 78216

July 31, 2023

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

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

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

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

Technical Review

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

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

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

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

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Halftime 1					**2. Regulated Entity No.:**			
3. Customer Name: Bulverde Marshall LLC					**4. Customer No.:**			
5. Project Type: **(Please circle/check one)**	New		Modification		Extension		Exception	
6. Plan Type: **(Please circle/check one)**	(WPAP)	CZP	(SCS)	(UST) AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential		**8. Site (acres):**		12.30	
9. Application Fee:			**10. Permanent BMP(s):**					
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**					
13. County:	Bexar		**14. Watershed:**				Salado Creek Watershed	

Application Distribution

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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	__	__	__
Region (1 req.)	__	__	__
County(ies)	__	__	__
Groundwater Conservation District(s)	__Edwards Aquifer Authority __Barton Springs/ Edwards Aquifer __Hays Trinity __Plum Creek	__Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	__Austin __Buda __Dripping Springs __Kyle __Mountain City __San Marcos __Wimberley __Woodcreek	__Austin __Bee Cave __Pflugerville __Rollingwood __Round Rock __Sunset Valley __West Lake Hills	__Austin __Cedar Park __Florence __Georgetown __Jerrell __Leander __Liberty Hill __Pflugerville __Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	__	__	__	__	__
Region (1 req.)	__	__	__	__	__
County(ies)	__	__	__	__	__
Groundwater Conservation District(s)	X Edwards Aquifer Authority __Trinity-Glen Rose	__Edwards Aquifer Authority	__Kinney	__EAA __Medina	__EAA __Uvalde
City(ies) Jurisdiction	__Castle Hills __Fair Oaks Ranch __Helotes __Hill Country Village __Hollywood Park __San Antonio (SAWS) __Shavano Park	__Bulverde __Fair Oaks Ranch __Garden Ridge __New Braunfels __Schertz	NA	X 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.
Karim Ali Print Name of Customer/Authorized Agent
 06/01/2023 Signature of Customer/Authorized Agent Date

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

General Information Form

In this Section:

TCEQ-0587
General Information Form

Attachment A
Road Map

Attachment B
USGS/Edwards Recharge Zone Map

Attachment C
Project Description

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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.

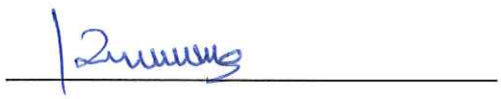
Signature

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: Karim Ali

Date: 03/24/2023

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Halftime 1
2. County: Bexar
3. Stream Basin: Salado Creek Watershed
4. Groundwater Conservation District (If applicable): Edwards Aquifer Authority
5. Edwards Aquifer Zone:

   [X] Recharge Zone
   [ ] Transition Zone

6. Plan Type:

   [X] WPAP
   [X] SCS
   [ ] Modification
   [ ] AST
   [X] UST
   [ ] Exception Request

7. Customer (Applicant):

Contact Person: Karim Ali
Entity: Bulverde Marshall LLC
Mailing Address: 7410 Blanco Rd, St. 225
City, State: San Antonio, Texas Zip: 78216
Telephone: _____ FAX: _____
Email Address: _____

8. Agent/Representative (If any):

Contact Person: Tyler Smith
Entity: UP Engineering LLC
Mailing Address: 11903 Jones Maltsberger Rd, Suite 102
City, State: TX Zip: 78216
Telephone: 210-774-5504 FAX: _____
Email Address: _____

9. Project Location:

☐ The project site is located inside the city limits of _____.
☒ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of San Antonio
☐ 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.

Summit Church Rd and Bulverde Rd, City of San Antonio ETJ, Texas, 78259

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: N/A

14. [X] **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:

- [X] Area of the site
- [X] Offsite areas
- [X] Impervious cover
- [X] Permanent BMP(s)
- [X] Proposed site use
- [X] Site history
- [N/A] 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)
- [X] Undeveloped (Undisturbed/Uncleared)
- [ ] Other: _____

Prohibited Activities

16. [X] 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. [N/A] 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:

- [X] For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- [X] For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- [X] 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. [X] 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)
- [X] San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. [X] 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. [X] 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

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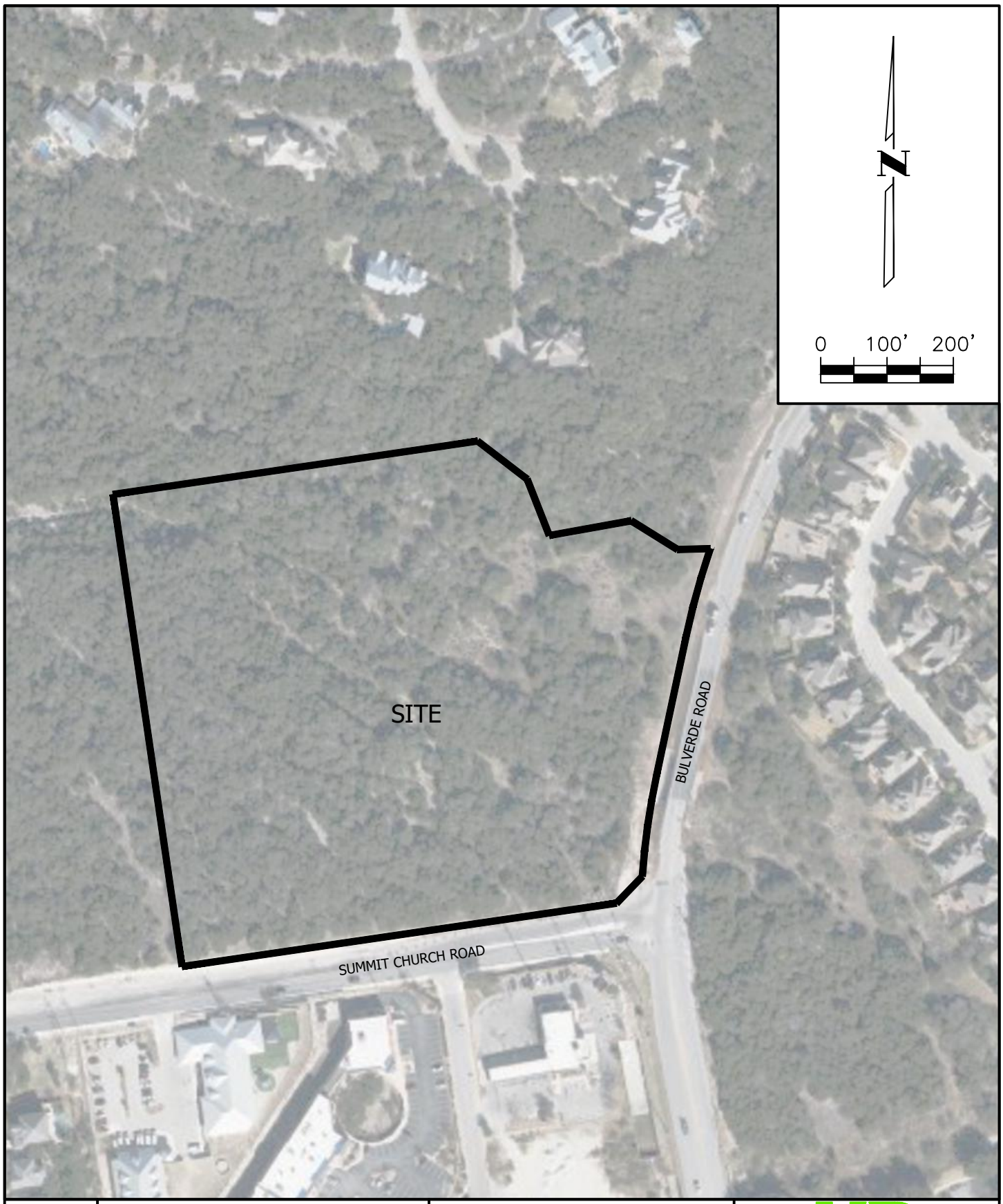

EXHIBIT			
A	HALFTIME 1 BULVERDE RD AND SUMMIT CHURCH ROAD	ROAD MAP	ENGINEERING + SURVEYING 11903 JONES MALTSBERGER RD., SUITE 102 SAN ANTONIO, TX 78216 TEL 210-774-5504 WWW.UPENGINEERING.COM TBPE F-17992 TBPLS F-10194606

Attachment B

USGS/Edwards Recharge Zone Map

ENGINEERING
+ SURVEYING

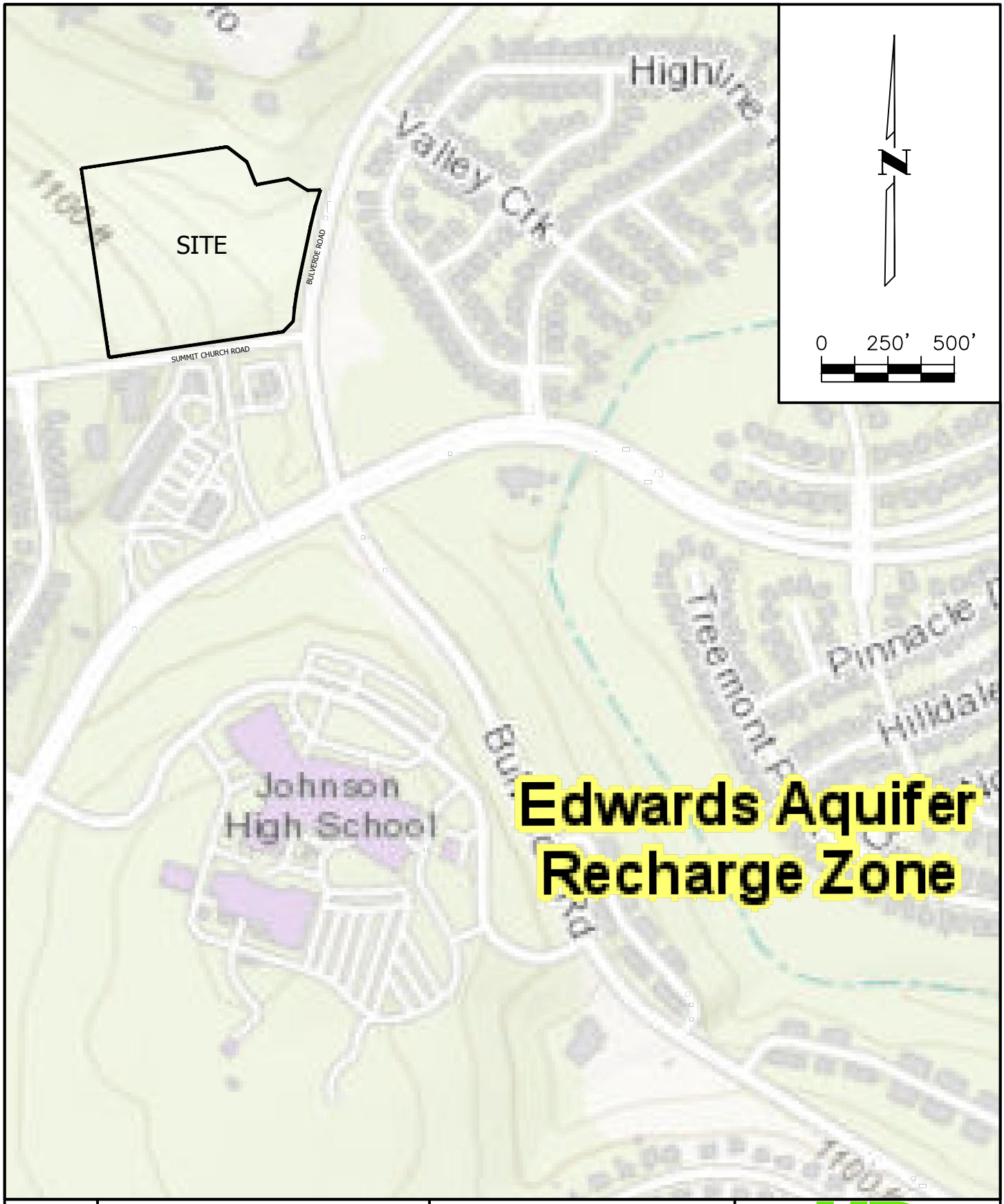

EXHIBIT			
B	HALFTIME 1 BULVERDE RD AND SUMMIT CHURCH ROAD	EDWARDS AQUIFER RECHARGE ZONE MAP EXHIBIT	UP ENGINEERING + SURVEYING 11903 JONES MALTSBERGER RD., SUITE 102 SAN ANTONIO, TX 78216 TEL 210-774-5504 WWW.UPENGINEERING.COM TBPE F-17992 TBPLS F-10194606

Attachment C

Project Description

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Project Description

The project site consists of approximately 12.3 acres located at the intersection of the Summit Church Road (Previously Marshall Road) and Bulverde Rd. in the City of San Antonio ETJ. The site is currently undeveloped. The proposed development will be the development of a convenience store with fuel stations, driveways, and parking areas. Approximately 7.55 acres of undeveloped offsite runoff is conveyed onto the site from the west. A earthen drainage channel will be used to bypass all offsite runoff.

The proposed improvements for the site consist of a convenience store with fuel stations, driveways, and parking areas. The proposed impervious cover will consist of parking and associated access drives. Due to the SAWS Category letter the site will be limited to 15% impervious cover. A water quality pond and vegetative filter strips are proposed to reduce TSS exiting the site. A portion of the site lies within the 100-year floodplain area. Runoff from the site is ultimately conveyed to Mud Creek.

Geologic Assessment

In this Section:

TCEQ-0585
Geologic Assessment Form

Attachment A
Geologic Assessment Table

Attachment B
Stratigraphic Column

Attachment C
Site Geology

Attachment D
Site Geologic Map(s)

Geologic Assessment of the 2.5-Acre Marshall and Bulverde Roads Project, San Antonio, Bexar County, Texas

MAY 2021

PREPARED FOR

UP Engineering + Surveying

PREPARED BY

SWCA Environmental Consultants

Texas Board of Professional Geoscientists, Firm Registration No. 50159

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GEOLOGIC ASSESSMENT OF THE 2.5-ACRE MARSHALL AND BULVERDE ROADS PROJECT, SAN ANTONIO, BEXAR COUNTY, TEXAS

Prepared for

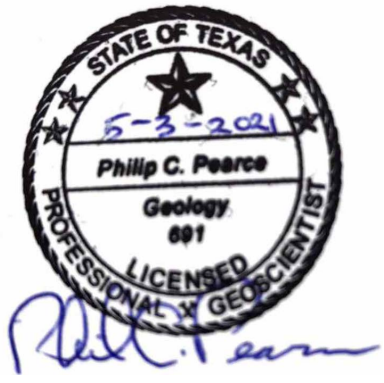
UP Engineering + Surveying
11903 Jones Maltsberger Rd.,
Suite 102
San Antonio, TX 78216

Prepared by

Philip Pearce, P.G.
Debbie J. Duran, G.I.T.
SWCA ENVIRONMENTAL CONSULTANTS
Texas Board of Professional Geoscientists, Firm Registration No. 50159
4949 N Loop 1604 W, Suite 235
San Antonio, TX 78249
www.swca.com

SWCA Project Number 66055

May 2021



CONTENTS

FIGURES

APPENDICES

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1 INTRODUCTION

This narrative Geologic Assessment accompanies the Texas Commission on Environmental Quality (TCEQ) Geologic Assessment form TCEQ-0585 completed of a 2.5-acre tract and a proposed off-site sanitary sewer line located northwest of the intersection of Bulverde Road and Marshall Road (Project Site) in San Antonio, northern Bexar County, Texas (Figure 1).

2 METHODOLOGY

An SWCA scientist conducted a field survey on 5 April 2021. The pedestrian survey was completed by walking parallel transects spaced approximately 50 feet apart as directed by the TCEQ in the Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones (Rev. 10-01-04). Closer spacing was used where vegetation inhibited clear observation. The SWCA scientist carefully examined all potential karst features, including depressions, holes, and animal burrows, for subsurface extent evidence. SWCA used several techniques for this effort, including probing with a digging implement to determine the thickness and consistency of fill material and feeling for air flow which may indicate the presence of a sub-surface void space. Other techniques included recording notable feature site characteristics such as vegetation types or a semi-circular burrow mound produced by small mammal activity.

3 RESULTS

3.1 Site Overview

The Project Site lies within the Edwards Aquifer Recharge Zone (TCEQ 2020). Topography generally slopes to the east towards Elm Waterhole Creek, with an elevations ranging from approximately 1,100 to 1,040 feet above mean sea level.

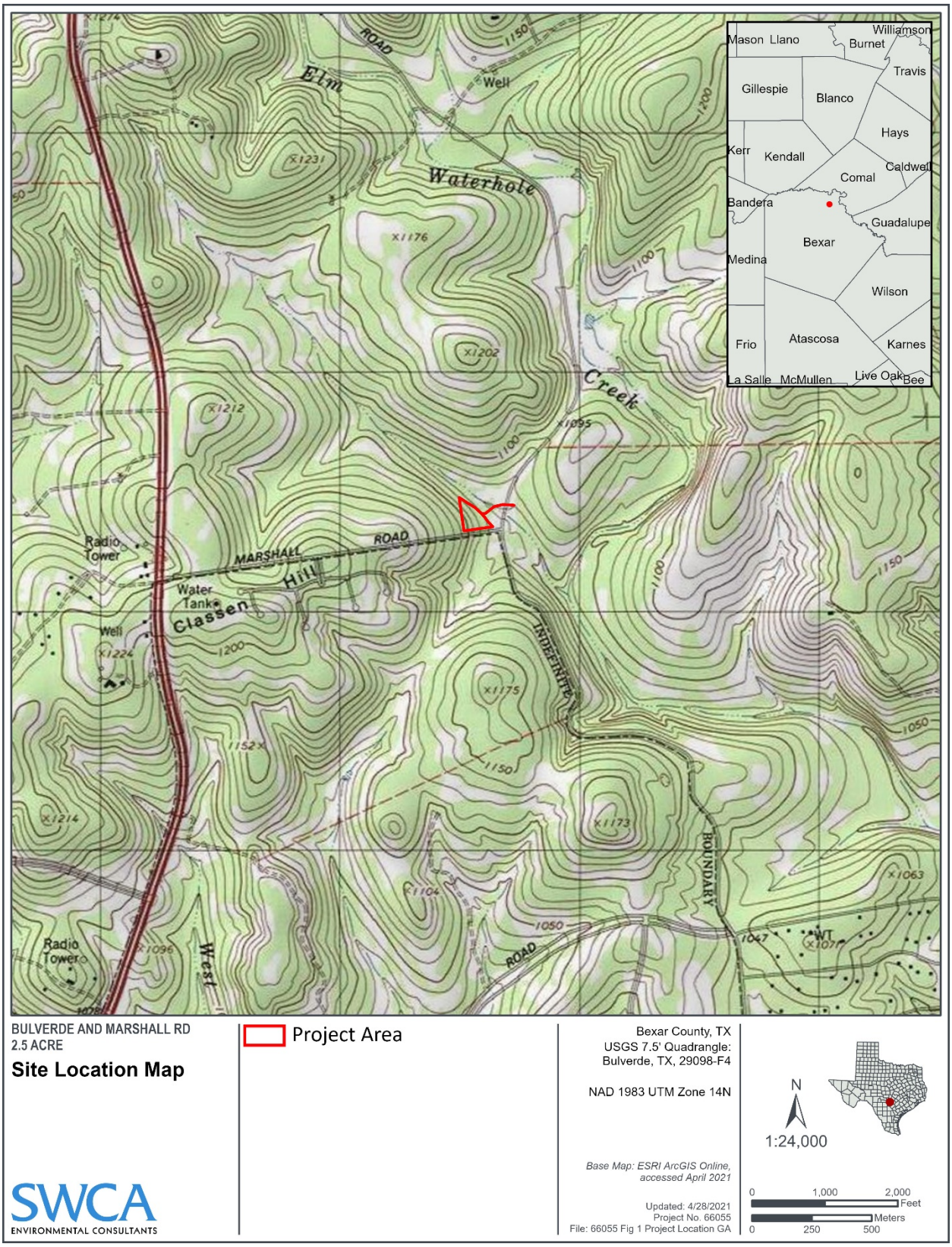

Figure 1. Project Site location map.

3.2 Geology

The Project Site is underlain by the Kainer Formation (Blome 2005) (Attachment D). The geology of the Project Site has been mapped most recently at a useful scale by Blome (2005) and SWCA finds this interpretation of the geology to be generally accurate. A Stratigraphic Column is included as Attachment B within Appendix A.

The Project Site occurs along the Balcones Fault Zone (BFZ) within the Edwards Aquifer Recharge Zone. Structural down-warping occurred with the Gulf of Mexico's ancestral formation during the middle Tertiary. The earth's crust was stretched in response and the BFZ formed along a zone of weakness, which currently marks the boundary between the Edwards Plateau and the Gulf Coastal Plain in central Texas. This zone is characterized by a series of northeast trending, predominantly normal, nearly vertical, en echelon faults. No faults cross the Project Site (Blome 2005).

The Project Site is within the Edwards Aquifer Recharge Zone (EARZ). Recharge into the Edwards Aquifer primarily occurs in areas where the Edwards Group and Georgetown Formation are exposed at the surface. Most recharge is from direct infiltration via precipitation and streamflow loss. Recharge occurs predominantly along secondary porosity features such as faults, fractures, and karst features (caves, solution cavities, sinkholes, etc.). Karst features are commonly formed along joints, fractures, and bedding plane surfaces in the Edwards Group and Georgetown Formation.

3.3 Soils

The Natural Resources Conservation Service (NRCS) identifies two soil unit within the Project Area (NRCS 2021).

- Eckrant very cobbly clay, 5 to 15 percent slopes (TaC)
- Eckrant cobbly clay, 1 to 8 percent slopes (TaD)

The TaC and TaD soil types are considered in the "D" hydrologic soil group classification, which have a very slow infiltration rate when thoroughly wet. A map of the Project Site displaying soil units is included in Attachment D.

3.4 Site Hydrogeologic Assessment

SWCA did not identify any geologic or manmade features on the Project Site, other than an existing sanitary sewer line that will be tied into (Feature S-1). The overall potential for fluid migration to the Edwards Aquifer for the site appears relatively low compared to background infiltration rates due to the presence of no geologic recharge features.

Feature S-1 is an existing sanitary sewer line that will be tied into. Typically trenches for sanitary sewer lines are cut into bedrock, and the trenches are backfilled with a mixture of fine and coarse material, which might have a greater probability for rapid infiltration than the surrounding undisturbed areas. Therefore, the probability of rapid infiltration is intermediate.

4 REFERENCES

Blome, C.D., Faith, J.R., Pedraza, D.E., Ozuna, G.B., Cole, J.C., Clark, A.K., Small, T.A., and Morris, R.R. 2005. Geologic Map of the Edwards Aquifer Recharge Zone, South-central Texas. U.S. Geological Survey, Scientific Investigations Map SIM-2873. 1:200,000.

Natural Resource Conservation Service (NRCS). 2021. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available at: http://websoilsurvey.nrcs.usda.gov/. Accessed April 2021.

Texas Commission on Environmental Quality. 2021. Edwards Aquifer Viewer v3.8. Available at: http://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=2e5afa3ba8144c30a49d3dc1ab49edcd. Accessed April 2021.

Texas Water Development Board (TWDB). 2021. Water Data Interactive, interactive GIS database. Available at: http://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer. Accessed April 2021.

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APPENDIX A

Texas Commission on Environmental Quality (TCEQ) Forms

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: Philip Pearce, P.G. Telephone: 210.877.2847

Date: _____ Fax: 210.877.2848

Representing: SWCA Environmental Consultants- TBPG No. 50159 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:

Regulated Entity Name: 2.5-acre Marshall and Bulverde Roads Project

Project Information

1. Date(s) Geologic Assessment was performed: April 5, 2021
2. Type of Project:
   - ☒ WPAP
   - ☒ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☐ Transition Zone
   - ☐ Contributing Zone within the Transition Zone

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

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

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)

Soil Name	Group*	Thickness(feet)
Eckrant very cobbly clay, 5 to 15 percent slopes (TaC)	D	<2.0
Eckrant cobbly clay, 1 to 8 percent slopes (TaD)	D	<2.0

** 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" = 30'
   Site Geologic Map Scale: 1" = 30'
   Site Soils Map Scale (if more than 1 soil type): 1" = 416'

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.

ATTACHMENT A

Geologic Assessment Table

GEOLOGIC ASSESSMENT TABLE			PROJECT NAME: 2.5-Acre Marshall and Bulverde Roads Project																	
LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-1	29.663592°	-98.434756°	MB	30	Kek	2.5	100	?	--	0	--	--	Fine	20	50		X		X	Floodplain

* DATUM: NAD 83

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

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

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

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

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

_____

Date

Sheet __1__ of __1__

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

ATTACHMENT B

Stratigraphic Column

Stratigraphic Column

Note: The shaded areas represent the lithology that outcrops on the property.[1]

Upper Cretaceous	Upper Confining Units			Navarro and Taylor Groups, undivided; 600 feet thick	
				Austin Group; 130-150 feet thick	
				Eagle Ford Group; 30-50 feet thick	
				Buda Limestone; 40-50 feet thick	
				Del Rio Clay; 40-50 feet thick	
Lower Cretaceous	I	Edwards Aquifer		Georgetown Formation	10-40 feet thick
	II		Edwards Group	Person Formation; 170-200 feet thick	Cyclic and Marine member, undivided
	III				Leached and Collapsed member, undivided
	IV				Regional Dense member
	V			Kainer Formation; 260-310 feet thick	Grainstone member
	VI				Kirschberg Evaporite member
	VII				Dolomitic member
	VIII				Basal Nodular member
	Lower Confining Units			Upper member of Glen Rose Formation; 350-500 feet thick	

[1] Blome, C.D., Faith, J.R., Pdraza, D.E, Ozuna, G.B, Cole, J.C., Clark, A.K., Small, T.A., and Morris, R.R. 2005. Geologic map of the Edwards aquifer recharge zone, south-central-Texas. U.S. Geological Survey SIM-2873. Scale 1:200,000.

ATTACHMENT C

Narrative Description of Site Geology

PLEASE REFER TO SECTION 3.0 OF THIS REPORT FOR GEOLOGIC NARRATIVE DESCRIPTION

ATTACHMENT D

Site Geologic and Soil Unit Maps


Nopalito
TaD - Eckrant-Rock outcrop complex, 15 to 60 percent slopes
Highline Trl
Western
Valley Crk
Bulverde Rd
Marshall Rd
Marshall Rd
TaC - Eckrant cobbly clay, 5 to 15 percent slopes
TPC Pkwy
Bulverde Rd
BULVERDE AND MARSHALL RD
2.5 ACRE
Soils Map
Project Area
Soils Unit
Bexar County, TX
USGS 7.5' Quadrangle:
Bulverde, TX, 29098-F4
NAD 1983 UTM Zone 14N
N
1:5,000
Base Map: ESRI ArcGIS Online, accessed April 2021
0 200 400 Feet
0 50 100 Meters
Updated: 4/28/2021
Project No. 66055
File: 66055 Fig 3 Soils Map
SWCA
ENVIRONMENTAL CONSULTANTS

BULVERDE AND MARSHALL RD 2.5 ACRE

Geology Map

1 inch = 30 feet

SWCA
ENVIRONMENTAL CONSULTANTS

Feature
Project Area
Geologic Unit
Kek - Kainer Formation

Bexar County, TX
USGS 7.5' Quadrangle:
Bulverde, TX, 29098-F4

NAD 1983 UTM Zone 14N

Base Map: ESRI ArcGIS Online, accessed May 2021

Updated: 5/4/2021
Project No. 65055
File: 65055 Fig 2 Geology Map

N

1:360

0 10 20 Feet
0 3.5 7 Meters

STATE OF TEXAS
5-5-2021
Philip C. Pearce
Geology
691
LICENSED
PROFESSIONAL GEOSCIENTIST

Organized Sewage Collection System Plan

In this Section:

TCEQ-0582
Organized Sewer Collection System Plan

Attachment A
SCS Engineering Design Report

Attachment B
Justification and Calculations for Deviation in Straight Alignment Without Manholes

Attachment C
Justification For Variance from Maximum Manhole Spacing

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

Site Plan

Final Plan and Profile Sheets

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: Halftime 1

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

Customer Information

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

   Contact Person: Karim Ali
   Entity: Bulverde Marshall LLC
   Mailing Address: 7410 Blanco Rd, St. 225
   City, State: San Antonio, Texas Zip: 78216
   Telephone: _____ Fax: _____
   Email Address: _____
   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: Natasha Uhlrich
   Texas Licensed Professional Engineer's Number: _____
   Entity: UP Engineering and Surveying
   Mailing Address: 11903 Jones Maltsberger Rd, St. 102
   City, State: San Antonio, Texas Zip: 78216
   Telephone: _____ Fax: _____
   Email Address: natasha@upengineering.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: _____

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

100 % Domestic	1,125 gallons/day
0 % Industrial	_____ gallons/day
0 % Commingled	_____ gallons/day

Total gallons/day: 1,125

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 Concurrently, 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

Pipe Diameter(Inches)	*Linear Feet (1)*	*Pipe Material (2)*	*Specifications (3)*
8"	846	PVC	SDR 26 ASTM D3034

Total Linear Feet: 846

(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 San Antonio Water Systems standard specifications.
   ☐ 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

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)

Table 2 - Manholes and Cleanouts

Line	*Shown on Sheet*	*Station*	*Manhole or Clean-out?*
A	CU200	10+00	MH A-1
A	CU200	11+45	MH A-2
A	CU200	12+70	MH A-3
A	CU200	13+85	MH A-4
A	CU200	16+20	MH A-5
A	CU200	18+11	MH A-7
	Of		

Line	*Shown on Sheet*	*Station*	*Manhole or Clean-out?*
	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:

Pipe Diameter (inches)	Max. Manhole Spacing (feet)
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" = 40 '.

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.)
☒ 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

Line	*Sheet*	*Station*
A	CU200	13+85 to 16+20
	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.)
☒ 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

Line	*Sheet*	*Station*
A	CU200	13+85 to 16+20
	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

Line	*Station or Closest Point*	*Crossing or Parallel*	*Horizontal Separation Distance*	*Vertical Separation Distance*
8" PVC	11+20	30" DI SAWS 86-1551		
8" PVC	10+00	8" PVC SAWS 03-1729		

27. Vented Manholes:

☐ **No part** of this sewer line is within the 100-year floodplain and vented manholes are not required by 30 TAC Chapter 217.
☐ **A portion** of this sewer line is within the 100-year floodplain and vented manholes will be provided at less than 1500 foot intervals. These water-tight manholes are listed in 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

Line	*Manhole*	*Station*	*Sheet*

Line	*Manhole*	*Station*	*Sheet*

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

Line	*Manhole*	*Station*	*Sheet*

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

Line	*Profile Sheet*	*Station to Station*	*FPS*	*% Slope*	*Erosion/Shock Protection*

33. Assuming pipes are flowing full, where flows are ≥ 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

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

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

36. ☒ All organized sewage collection system general construction notes (TCEQ-0596) are included on the construction plans for this sewage collection system.

37. ☒ All proposed sewer lines will be sufficiently surveyed/staked to allow an assessment prior to TCEQ executive director approval. If the alignments of the proposed sewer lines are not walkable on that date, the application will be deemed incomplete and returned.

    ☐ Survey staking was completed on this date: _____

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

39. ☒ Any modification of this SCS application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Signature

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

Print Name of Licensed Professional Engineer: Natasha Uhlrich

Date: 08/31/2023

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

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

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

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

Figure 1 - Manning's Formula

Where:

v = velocity (ft/sec)
n = Manning's roughness coefficient (0.013)
Rh = hydraulic radius (ft)
S = slope (ft/ft)

Attachment A

SCS Engineering Design Report

ENGINEERING
+ SURVEYING

SCS Engineering Design Report

Under existing conditions the site is undeveloped and covered in natural vegetation and trees. The proposed commercial development will establish a convenience store with fuel sales. The site is within the San Antonio Water Systems (SAWS) CCN. The site will be services by a public water main located within Summit Church Road. An sanitary sewer extension will be require to service the site. The proposed sewer extension will connect to the existing SAWS public sewer main on the east side of Bulverde Road. Approximately +/- 846 linear feet of 8 inch main will be extended to service the site. See exhibit A for the current service area and proposed service area. At this time no areas are being proposed for future expansion.

As-previously mentioned, the proposed commercial development will establish a convenience store with fuel sales. The development will not include any fast food or restaurant, only an area for meal prep and quick service items. Based on the usage the design flow required for the development was determined using the SAWS design guidelines and EDU calculation sheet. It is anticipated the commercial development estimate sewer design flow is 1,125 GPD.

SAWS DESIGN GUIDELINES FOR RETAIL SPACES IS 0.07 GPD/SF

$$7500\ SF\ X\ \frac{0.07\ GPD}{SF} = 525\ GPD$$

FOR SERVICE STATIONS 1 EDU FOR FUEL SALES AND 2 EDU FOR TAKE OUT

$$3\ EDU\ X\ \frac{200\ GPD}{EDU} = 600\ GPD$$

The slope design of the sewer pipes was based velocities such that the velocity when flowing full is not less than 2 fps and no more than 10 fps. Manning formula with an assumed value of 0.013, to determine the maximum velocity of an 8 inch pipe is 0.33% and maximum slope is 8.40%. The site is within the SAWS CCN therefore the SAWS standard of minimum 0.40% slope was adhered to.

Attachment B

Justification and Calculations for Deviation in Straight

ENGINEERING
+ SURVEYING

Justification and Calculations for Deviation in Straight

Not Applicable

ENGINEERING
+ SURVEYING

Attachment C

Justification for Variance from Maximum Manhole Spacing

ENGINEERING
+ SURVEYING

Justification for Variance from Maximum Manhole Spacing

Not Applicable

ENGINEERING
+ SURVEYING

Attachment D

Exception to the Required Geologic Assessment

ENGINEERING
+ SURVEYING

Exception to the Required Geologic Assessment

Not Applicable

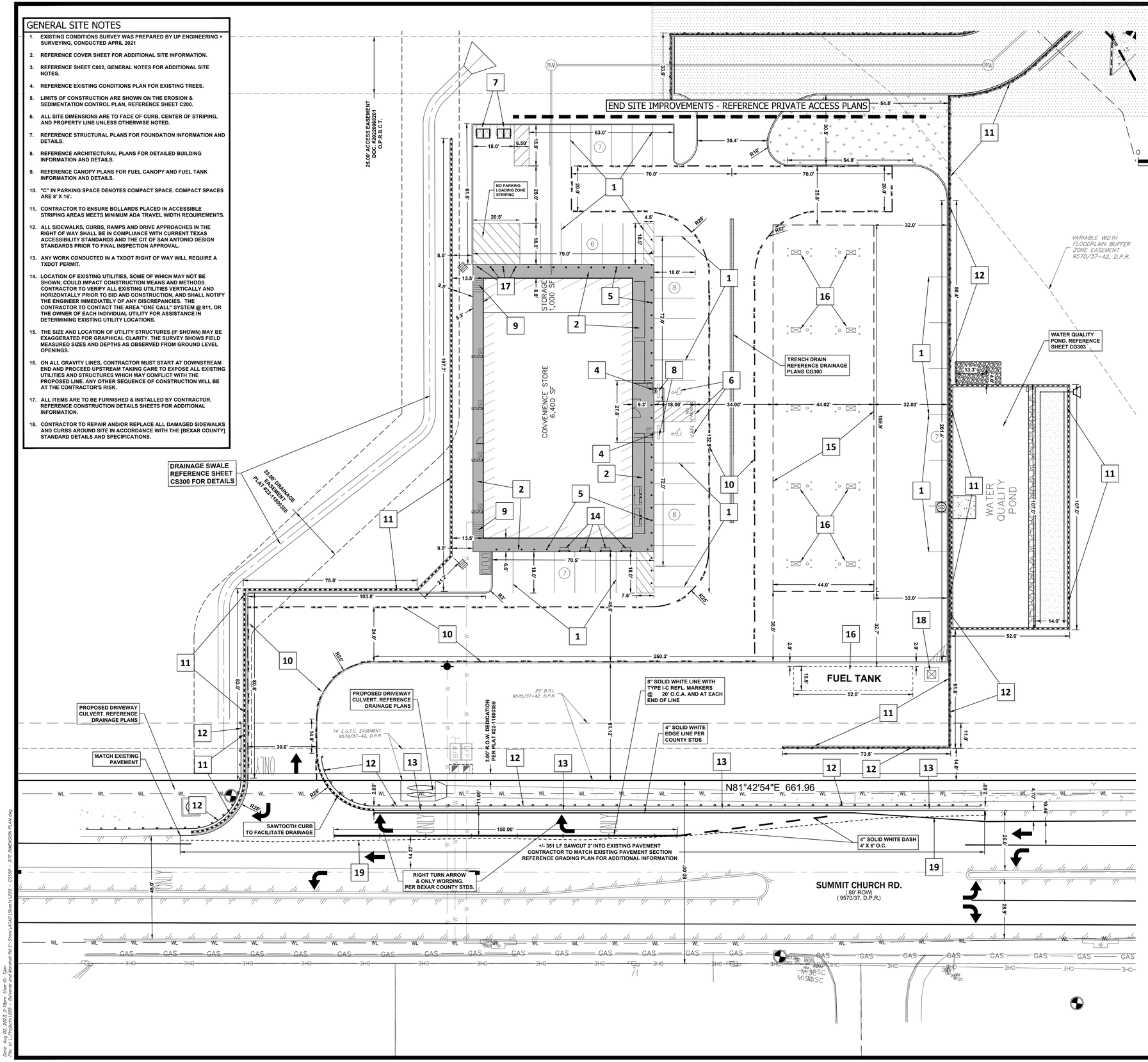
ENGINEERING
+ SURVEYING

Site Plan

ENGINEERING
+ SURVEYING

GENERAL SITE NOTES

1. EXISTING CONDITIONS SURVEY WAS PREPARED BY UP ENGINEERING + SURVEYING, CONDUCTED APRIL 2021
2. REFERENCE COVER SHEET FOR ADDITIONAL SITE INFORMATION.
3. REFERENCE SHEET C002, GENERAL NOTES FOR ADDITIONAL SITE NOTES.
4. REFERENCE EXISTING CONDITIONS PLAN FOR EXISTING TREES.
5. LIMITS OF CONSTRUCTION ARE SHOWN ON THE EROSION & SEDIMENTATION CONTROL PLAN, REFERENCE SHEET C200.
6. ALL SITE DIMENSIONS ARE TO FACE OF CURB, CENTER OF STRIPING, AND PROPERTY LINE UNLESS OTHERWISE NOTED.
7. REFERENCE STRUCTURAL PLANS FOR FOUNDATION INFORMATION AND DETAILS.
8. REFERENCE ARCHITECTURAL PLANS FOR DETAILED BUILDING INFORMATION AND DETAILS.
9. REFERENCE CANOPY PLANS FOR FUEL CANOPY AND FUEL TANK INFORMATION AND DETAILS.
10. "C" IN PARKING SPACE DENOTES COMPACT SPACE. COMPACT SPACES ARE 8' X 16'.
11. CONTRACTOR TO ENSURE BOLLARDS PLACED IN ACCESSIBLE STRIPING AREAS MEETS MINIMUM ADA TRAVEL WIDTH REQUIREMENTS.
12. ALL SIDEWALKS, CURBS, RAMPS AND DRIVE APPROACHES IN THE RIGHT OF WAY SHALL BE IN COMPLIANCE WITH CURRENT TEXAS ACCESSIBILITY STANDARDS AND THE CIT OF SAN ANTONIO DESIGN STANDARDS PRIOR TO FINAL INSPECTION APPROVAL.
13. ANY WORK CONDUCTED IN A TXDOT RIGHT OF WAY WILL REQUIRE A TXDOT PERMIT.
14. LOCATION OF EXISTING UTILITIES, SOME OF WHICH MAY NOT BE SHOWN, COULD IMPACT CONSTRUCTION MEANS AND METHODS. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO BID AND CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. THE CONTRACTOR TO CONTACT THE AREA "ONE CALL" SYSTEM @ 811, OR THE OWNER OF EACH INDIVIDUAL UTILITY FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS.
15. THE SIZE AND LOCATION OF UTILITY STRUCTURES (IF SHOWN) MAY BE EXAGGERATED FOR GRAPHICAL CLARITY. THE SURVEY SHOWS FIELD MEASURED SIZES AND DEPTHS AS OBSERVED FROM GROUND LEVEL OPENINGS.
16. ON ALL GRAVITY LINES, CONTRACTOR MUST START AT DOWNSTREAM END AND PROCEED UPSTREAM TAKING CARE TO EXPOSE ALL EXISTING UTILITIES AND STRUCTURES WHICH MAY CONFLICT WITH THE PROPOSED LINE. ANY OTHER SEQUENCE OF CONSTRUCTION WILL BE AT THE CONTRACTOR'S RISK.
17. ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
18. CONTRACTOR TO REPAIR AND/OR REPLACE ALL DAMAGED SIDEWALKS AND CURBS AROUND SITE IN ACCORDANCE WITH THE [BEXAR COUNTY] STANDARD DETAILS AND SPECIFICATIONS.



TRAFFIC SUMMARY TABLE

SITE USE	
CONVENIENCE STORE	7,400 SF
PARKING STORAGE STANDARDS	
MINIMUM PARKING RATIO	6 PER 1,000 SF GFA
MAXIMUM PARKING RATIO	10 PER 1,000 SF GFA
REGULAR	
MINIMUM REQUIRED PARKING	45
PARKING SPACES	37
PARKING BY GAS PUMPS	20
ACTUAL/PROPOSED PARKING (INCLUDING H.C. PARKING)	57
HANDICAPPED (ADA)	
REQUIRED REGULAR H.C. PARKING	2 TOTAL
PROPOSED H.C. PARKING	2 (1 V.A. INCLUDED)
REQUIRED V.A. PARKING	1 (1 INCLUDED IN TOTAL)

LEGEND

	BOUNDARY / RIGHT OF WAY LINE
	CONCRETE CURB
	EASEMENT / SETBACK LINE
FIRE LANE	FIRE LANE
OE	OVERHEAD UTILITIES
	PROPOSED RETAINING WALL
E.G.T.C.	ELECTRIC, GAS, TELEPHONE AND CABLE T.V. EASEMENT
D.P.R.	DEED AND PLAT RECORDS OF BEXAR COUNTY, TEXAS
O.P.R.B.C.T.	OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS
20001/659	VOLUME/PAGE
V.N.A.E.	VEHICULAR NON-ACCESS EASEMENT DOCUMENT
DOC.	
ROW	RIGHT OF WAY
	PROPOSED LIGHT POLES
	EXISTING LIGHT POLE
	UTILITY POLE
	WATER VALVE
	WATER VAULT
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
CO	WASTEWATER CLEAN-OUT
T	TELEPHONE MANHOLE
T	TELEPHONE PEDESTAL
	CONCRETE WHEEL STOP
	SIGN
	BICYCLE RACK
9	PARKING STALL COUNT
	ACCESSIBLE PARKING

CIVIL KEY NOTES

1	PAVEMENT STRIPING (TYPICAL) (REFERENCE SHEET C500)
2	CONCRETE SIDEWALK (REFERENCE SHEET C500)
3	6" CONCRETE CURB (TYPICAL) (REFERENCE SHEET C500)
4	HANDICAP SIGN (REFERENCE ARCHITECTURAL PLANS FOR DETAILS)
5	BOLLARDS (REFERENCE SHEET C500)
6	ACCESSIBILITY STRIPING (REFERENCE SHEET C500)
7	GARBAGE DUMPSTER (REFERENCE ARCHITECTURAL PLANS FOR DETAILS)
8	CONCRETE WHEEL STOP (REFERENCE SHEET C500)
9	CURB RAMP (REFERENCE SHEET C500)
10	FIRE LANE STRIPING (TYPICAL) (REFERENCE DETAILS)
11	STRUCTURAL RETAINING WALL. REFERENCE GRADING PLAN FOR WALL ELEVATIONS, AND STRUCTURAL PLANS FOR DETAILS
12	FENCE / GUARDRAIL ON TOP OF WALL OR AS DESIGNATED. REFERENCE ARCHITECTURAL PLANS FOR DETAILS
13	CITY OF SAN ANTONIO STANDARD 7" CURB IN PUBLIC RIGHT-OF-WAY, REFERENCE TURN LANE SHEET.
14	APPROXIMATE LOCATION OF EV CHARGING STATION - TO BE DESIGNED BY OTHERS. CONTRACTOR TO COORDINATE CHARGER AND BOLLARD LOCATION WITH INSTALLATION PRIOR TO CONSTRUCTION
15	FUEL CANOPY-TO BE DESIGNED BY OTHERS. REFERENCE FUEL CANOPY PLANS
16	APPROXIMATE LOCATION OF FUEL STATIONS AND FUEL TANK - TO BE DESIGNED BY OTHERS. REFERENCE FUEL PLANS
17	REMOVABLE BOLLLARD OR OWNER APPROVED EQUIVALENT
18	AIR & WATER REFILL STATION
19	SAWCUT EXISTING PAVEMENT TO FACILITATE EXTENSION OF ROAD FOR TURN LANE

UP ENGINEERING + SURVEYING
11903 JONES MALTSBERGER, SUITE 102
SAN ANTONIO, TX 78216 TEL: 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992
TBPELS F-10194605

STATE OF TEXAS
NATASHA L. UHLRICH
89502
LICENSED PROFESSIONAL ENGINEER
8/4/23

MARSHALL AND BULVERDE , LLC
7410 BLANCO RD.
SAN ANTONIO, TEXAS 78216

HALFTIME 1
3125 SUMMIT CHURCH ROAD, SAN ANTONIO, TX 78259

SITE DIMENSION PLAN

REV	DATE	DESCRIPTION	BY

DESIGNED BY: JOS/TS
DRAFTED BY: JOS
CHECKED BY: NFU/TS

SHEET
CS100
07 OF 21

Date: Aug 02, 2023, 2:19pm User ID: Tyler
File: C:_Projects\JOS - Bulverde and Marshall Rd C-Store\ACAD\Sheets\JOS - CS100 - SITE DIMENSION PLAN.dwg

Final Plan and Profile Sheets

ENGINEERING
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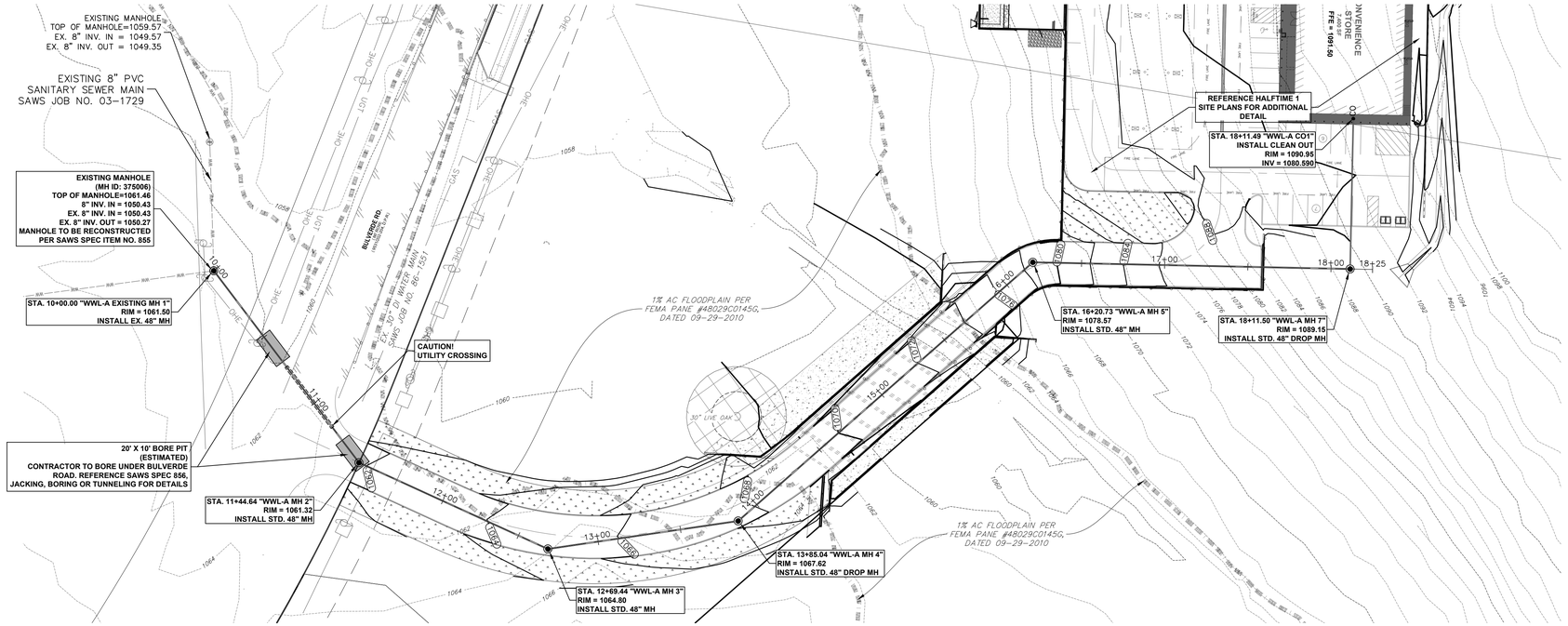


CAUTION!!!
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING ALL EXISTING UTILITIES BY CALLING DIGTESS @ 1-800-DIG-TESS FOR LOCATION OF ALL UTILITIES, AT LEAST 2 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.

N

0 20' 40' 80

LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- CURB / EDGE OF PAVEMENT
- EXIST. GRADE ELEVATIONS
- PROP. GRADE ELEVATIONS
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING OVERHEAD UTILITIES
- EXISTING OVERHEAD UTILITIES
- EXISTING SANITARY SEWER LINE
- PROPOSED SANITARY SEWER LINE
- EXISTING GAS LINE
- EXISTING UTILITY POLE
- EXISTING SIGN
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED WATER METER
- EXISTING GUY WIRE
- EXISTING WASTEWATER MANHOLE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED 6" WASTEWATER LATERAL SANITARY SEWER/WATER CROSSING

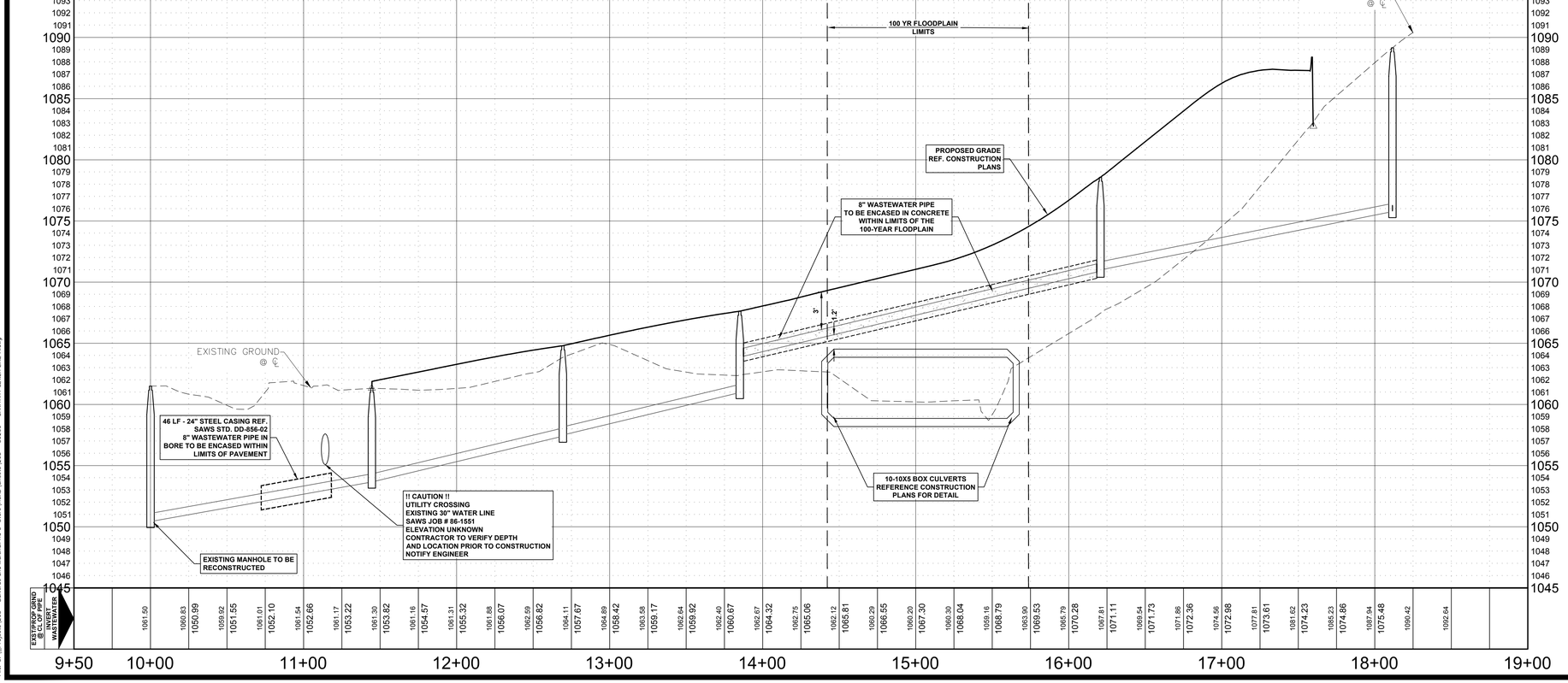
SAWS STANDARD DETAILS:

DD-804-01
DD-848-01 1 OF 2
DD-848-01 2 OF 2
DD-852-01 1 OF 2
DD-852-07 1 OF 5
DD-852-07 2 OF 5
DD-854-02 2 OF 2
DD-854-03
DD-858-01

TOTAL OF 8" SANITARY SEWER PVC PIPE (GRAVITY) :846 L.F.

WW-LINE-A STA 9+50 TO STA 19+00

SCALE:
1" = 5' VERT.
1" = 40' HORIZ.



UTILITY SHEET NOTES

1. EXISTING CONDITIONS SURVEY WAS PREPARED BY UP ENGINEERING + SURVEYING IN JANUARY OF 2022.
2. REFERENCE COVER SHEET FOR ADDITIONAL SITE INFORMATION.
3. REFERENCE SHEET C002, GENERAL NOTES FOR ADDITIONAL SITE NOTES.
4. LIMITS OF CONSTRUCTION ARE SHOWN ON THE EROSION & SEDIMENTATION CONTROL PLAN, REFERENCE SHEET C200.
5. REFERENCE SHEET CU100 FOR OVERALL UTILITY LAYOUT.
6. REFERENCE LANDSCAPE ARCHITECT PLANS FOR IRRIGATION PLANS FOR DETAILS.
7. LOCATION OF EXISTING UTILITIES, SOME OF WHICH MAY NOT BE SHOWN, COULD IMPACT CONSTRUCTION MEANS AND METHODS. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO BID AND CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. THE CONTRACTOR TO CONTACT THE AREA "ONE CALL" SYSTEM @ 811, OR THE OWNER OF EACH INDIVIDUAL UTILITY FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS.
8. CONTRACTOR TO SHALL EXPOSE ALL EXISTING UTILITIES CROSSING PROPOSED GRAVITY LINES AND INSURE THERE WILL BE NO CONFLICT PRIOR TO BEGINNING CONSTRUCTION. ADDITIONALLY, CONTRACTOR TO PLAN UTILITY INSTALLATIONS IN A MANNER TO AVOID CONFLICTS WITH PROPOSED GRAVITY LINES.
9. THE SIZE AND LOCATION OF UTILITY STRUCTURES (IF SHOWN) MAY BE EXAGGERATED FOR GRAPHICAL CLARITY. THE SURVEY SHOWS FIELD MEASURED SIZES AND DEPTHS AS OBSERVED FROM GROUND LEVEL OPENINGS.
10. ON ALL GRAVITY LINES, CONTRACTOR MUST START AT DOWNSTREAM END AND PROCEED UPSTREAM TAKING CARE TO EXPOSE ALL EXISTING UTILITIES AND STRUCTURES WHICH MAY CONFLICT WITH THE PROPOSED LINE. ANY OTHER SEQUENCE OF CONSTRUCTION WILL BE AT THE CONTRACTORS RISK.
11. THERE ARE EXISTING HERITAGE TREES AND OTHER PROTECTED TREES ON THE SITE. REFERENCE EXISTING CONDITIONS PLAN FOR ADDITIONAL DETAIL.
12. ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
13. AFTER ALL WASTE WATER CONSTRUCTION HAS BEEN COMPLETED, FINAL STABILIZATION OF THE CONSTRUCTION AREA ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES SHALL BE COMPLETED BY EVENLY DISTRIBUTING SEEDING AND WATERING TO A MIN. 70% OF THE NATIVE BACKGROUND VEGETATIVE COVER.
14. ALL WASTE WATER MANHOLES SHALL BE CONSTRUCTION IN ACCORDANCE WITH THE SAWS SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION (LATEST EDITION).
15. CONTRACTOR SHALL PROVIDE MANUFACTURED STUB OUT CAP & PLUG TO MEET 30 TAC 213.5(3)(G) STANDARDS AND TO MEET ASTM D3034 SPECIFICATIONS UNLESS OTHERWISE NOTED.
16. ALL WASTE WATER PIPE TO BE SDR 26 PER ASTM D3034 SPECIFICATIONS UNLESS OTHERWISE NOTED. PIPE JOINTS TO BE SDR 26 PER ASTM D3139 SPECIFICATIONS.
17. ALL WASTE WATER LINES WHICH CROSS WATER LINES ARE TO HAVE A MINIMUM OF A SINGLE LENGTH OF SDR 26(ASTM D2241-09), PRESSURE RATED (150 PSI) PIPE, CENTERED ON THE WATERLINE SUCH THAT EACH WASTE WATER JOINT IS A MINIMUM OF NINE FEET FROM THE WATERLINE.
18. DOMESTIC WATER SHALL BE PVC C900 FOR PIPES <12" OR C905 FOR PIPES >12" OR COPPER TUBING AS SPECIFIED IN THE SAWS SPECIFICATIONS.
19. ALL WATER LINE JOINTS ARE TO BE RESTRAINED PER MANUFACTURERS RECOMMENDATIONS.
20. CONTRACTOR TO COORDINATE WITH CPS ELECTRIC AND GAS ON ELECTRICAL SERVICE CONNECTION AND INSTALLATION OF RISER POLES AND TRANSFORMER PADS.
21. INSTALL CLEANOUTS EVERY 100 FEET ALONG SANITARY SEWER LINES OR PER SAWS SPECIFICATIONS. CLEANOUTS IN PAVEMENT SHALL HAVE TRAFFIC RATED COVERS. MATCH TOP TO PROPOSED GRADE.
22. CONTRACTOR SHALL COORDINATE WITH THE CITY FIRE INSPECTOR PRIOR TO INSTALLING FIRE LANE STRIPING AND EXACT LOCATION OF FIRE LANE SIGNS.
23. CONTRACTOR TO COORDINATE WITH MEP ENGINEER ON WATER SERVICE CONNECTION TO BUILDING (CONVENIENCE STORE AND LEASE SPACE IF APPLICABLE)
24. ALL SITE DIMENSIONS ARE TO FACE OF CURB, CENTER OF PIPE, CENTER OF STRIPING, AND PROPERTY LINE UNLESS OTHERWISE NOTED.
25. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE ENGINEER MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
26. REFERENCE CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION ON DRAINAGE STRUCTURES & APPURTENANCES. CONTRACTOR TO REFER TO SAWS STANDARD DETAILS FOR ALL SAWS APPURTENANCES AND STRUCTURES.
27. CONTRACTOR TO REPAIR AND/OR REPLACE ALL DAMAGED SIDEWALKS AND CURBS AROUND SITE IN ACCORDANCE WITH THE [BEXAR COUNTY] STANDARD DETAILS AND SPECIFICATIONS.

UPPER SEWERSHED

Developer: MARSHALL AND BULVERDE, LLC
Address: 7410 BLANCO RD.
City: SAN ANTONIO State: Texas Zip: 78216
Phone: (210) 960-5540 Fax:
SAWS Block Map: 178-664 178-666 Total EDUs: 8 Total Acreage: 2.7989
Total Linear Footage of Pipe: 8": 846 Plat No.: 22-11800385
Number of Lots: 1 N.S.F. SAWS Job No.:

UP ENGINEERING + SURVEYING
11903 JONES MALTSBERGER, SUITE 102
SAN ANTONIO, TX 78216 TEL 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992

STATE OF TEXAS
NATASHA D. UHLRICH
89502
LICENSED PROFESSIONAL ENGINEER
8/9/23

MARSHALL AND BULVERDE , LLC
7410 BLANCO RD.
SAN ANTONIO, TEXAS 78216

HALFTIME 1
3125 SUMMIT CHURCH ROAD, SAN ANTONIO, TX 78259

SANITARY SEWER LINE A

REV	DATE	DESCRIPTION	BY

DESIGNED BY: JOS/TS
DRAFTED BY: JOS
CHECKED BY: NFU/TS

SHEET
CU200
17 OF 21

Date: Aug 02, 2023, 4:59pm User ID: Tyler
File: U:\Projects\202 - Bulverde and Marshall Rd C-Store\ACAD\Sheets\202 - CU200 - SANITARY SEWER LINE A.dwg

Temporary Stormwater Section

In this Section:

Attachment A

Spill Response Actions

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Spill Response Action

Spill Prevention and Control

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

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

Education

1. Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is an appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spills must be reported to the TCEQ. Information available in 30 TAC 372.4 and 40 CFR 302.4.
2. Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
3. Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
4. Establish a continuing education program to indoctrinate new employees.
5. Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

1. To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110, 117, and 302, and sanitary and septic wastes should be contained and cleaned u immediately.
2. Store hazardous materials and wastes in covered containers and protect from vandalism.
3. Place a stockpile of spill cleanup materials where it will be readily accessible.
4. Train employees in spill prevention and cleanup.
5. Designate responsible individuals to oversee and enforce control measures.
6. Spills should be covered and protected from stormwater run-on during rainfall to the extent that it doesn't compromise cleanup activities.
7. Do not bury or wash spills with water.
8. Store and dispose of used cleanup materials, contaminated materials and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

9. Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
10. Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
11. Place Safety Data Sheets (SDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
12. Keep waste storage areas clean, well-organized, and equipment with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

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

Minor Spills

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

Semi-Significant Spills

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

Spills should be cleaned up immediately:

1. Contain spread of the spill.

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

Significant/Hazardous Spills

For significant or hazardous spills, that are in reportable quantities:

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

More information on spill rules and appropriate responses is available on the TCEQ website at:
https://www.tceq.texas.gov/response/spills

Vehicle and Equipment Preventative Maintenance

1. If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.
2. Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
3. Check incoming vehicles and equipment (including delivery trucks and employee/subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.

4. Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
5. Place drip pans or absorbent materials under paving equipment when not in use.
6. Use absorbent materials on small spills rather than hosing down or burying the spill. Remove absorbent materials promptly and dispose of properly.
7. Promptly transfer used fluids to the proper waste or recycle drums. Don't leave full drip pans or other open containers lying around.
8. Oil filters disposed of in trash cans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
9. Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

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

Attachment B

Potential Sources of Contamination

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Potential Sources of Contamination

1. Oil, grease, fuel and hydraulic contamination from construction equipment and vehicle leakage.
   Remedy: Lubrication and fueling will be performed in a designated area. This area will be monitored daily for contamination.

2. Miscellaneous trash and litter from construction works.
   Remedy: Designated receptacles will be strategically located, and works will be directed to deposit trash there.

3. Construction debris.
   Remedy: Debris will be collected weekly and deposited in bins for offsite disposal. Situations requiring immediate attention will be handled on a case-by-case basis.

4. Asphalt products.
   Remedy: After placement of asphalt, emulsion or coatings, the contractor will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt product curing time, the contractor will maintain standby personnel and equipment to control asphalt wash-off should an unexpected rain occur. The contractor will be instructed not to place asphalt products on the ground within 48 hours of a forecasted rain.

5. Tar, fertilizers, cleaning solvents, detergents, and petroleum-based products.
   Remedy: The contractor will be responsible for immediate cleanup should an unexpected rain occur. Debris will be collected weekly and deposited in bins for offsite disposal. Situations requiring immediate attention will be handled on a case-by-case basis.

Attachment C

Sequence of Major Activities

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Sequence of Major Activities

1. Install erosion and sedimentation controls (i.e. silt fences and stabilized construction entrances) as indicated on the approved construction plans.
2. Perform mass grading of the site (~12.3 acres).
3. Install utilities.
4. Establish building foundation and pour concrete.
5. Install landscaping or hydromulch to disturbed areas.
6. Re-vegetate disturbed areas.
7. Remove temporary erosion and sedimentation controls.

Attachment D

Temporary Best Management Practices and Measures

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Temporary Best Management Practices and Measures

The temporary Best Management Practices (BMP's) shall be installed as the first construction activity and will remain in place until all construction activities are complete and 70% of the vegetative cover has been established. Construction will be conducted in one phase, with a designated construction exit, a silt fence along the down gradient side of the tract, and tree protection for the undisturbed trees where applicable. The existing native grasses will be left undisturbed in areas not under construction. Rock berms will be placed where streets end at discharge points and flood plain crossings are to be installed. The temporary BMP's shall be installed according to details on the Water Pollution Abatement Plan detail sheet. The silt fences will be anchored six (6) inches into the soil and shall be monitored weekly for any failures of the silt fence or problems associated with silt build up. Buffer areas for recharge features shall be established prior to any construction on the site.

a. To prevent pollution of surface water, groundwater or storm water that originates upgradient from the site and flows across the site, silt fencing will be placed along the down gradient side of the site and around indicated sensitive features.

b. To prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated storm water runoff from the site, silt fencing will be placed along the down gradient sides of the site and rock berms will be placed at the grade-to-drain areas at the ends of the streets (if applicable). A construction exit will also be installed at the entrance to the location and a storage and refueling area will be designated on the site for the unit.

c. To prevent pollutants from entering surface streams, sensitive features, or the aquifer, the silt fence and rock berms mentioned in item b above will be installed. Once identified, sensitive features will be protected using hay bale dikes, sand bag berms or other methods acceptable to TCEQ.

d. To maintain flow to naturally occurring sensitive features identified in the geologic assessment, inspections, or during construction, the hay bale dikes or sand bag berms mentioned in item c above will be installed. If a feature must be sealed, when possible the feature will be filled with boulders and gravel and capped with concrete.

Attachment E

Request to Temporarily Seal a Feature

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Request to Temporarily Seal a Feature

Not Applicable

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Attachment F

Structural Practices

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STRUCTURAL PRACTICES

Silt fences will be used on site to trap sediments and pollutants from leaving the areas of construction. A rock berm will trap excess sediment and debris from travelling downstream and filter the storm water that passes through it.

Attachment G

Drainage Area Map

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Drainage Area Map

The drainage area is not greater than 10 acres that will be disturbed at one time. A water quality pond and silt fences will be used to limit pollutant discharges before becoming concentrated channel flow. A rock berm will be used to further limit runoff discharge of pollutants from the site.

Existing Runoff Flow Rates

Ref Point	Drainage Areas	C	Drainage Area (ac)	Tc (min)	I_5 (in/hr)	I_{10} (in/hr)	I_{25} (in/hr)	I_{100} (in/hr)	Q_5 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
1	E-OFFSITE	0.52	7.55	25.4	4.04	4.70	5.61	6.99	15.9	18.5	22.0	27.4
2	E-ONSITE	0.52	13.65	15.0	5.31	6.19	7.39	9.26	37.7	44.0	52.5	65.7

N

0 50' 100' 200'

1 DRAINAGE POINT

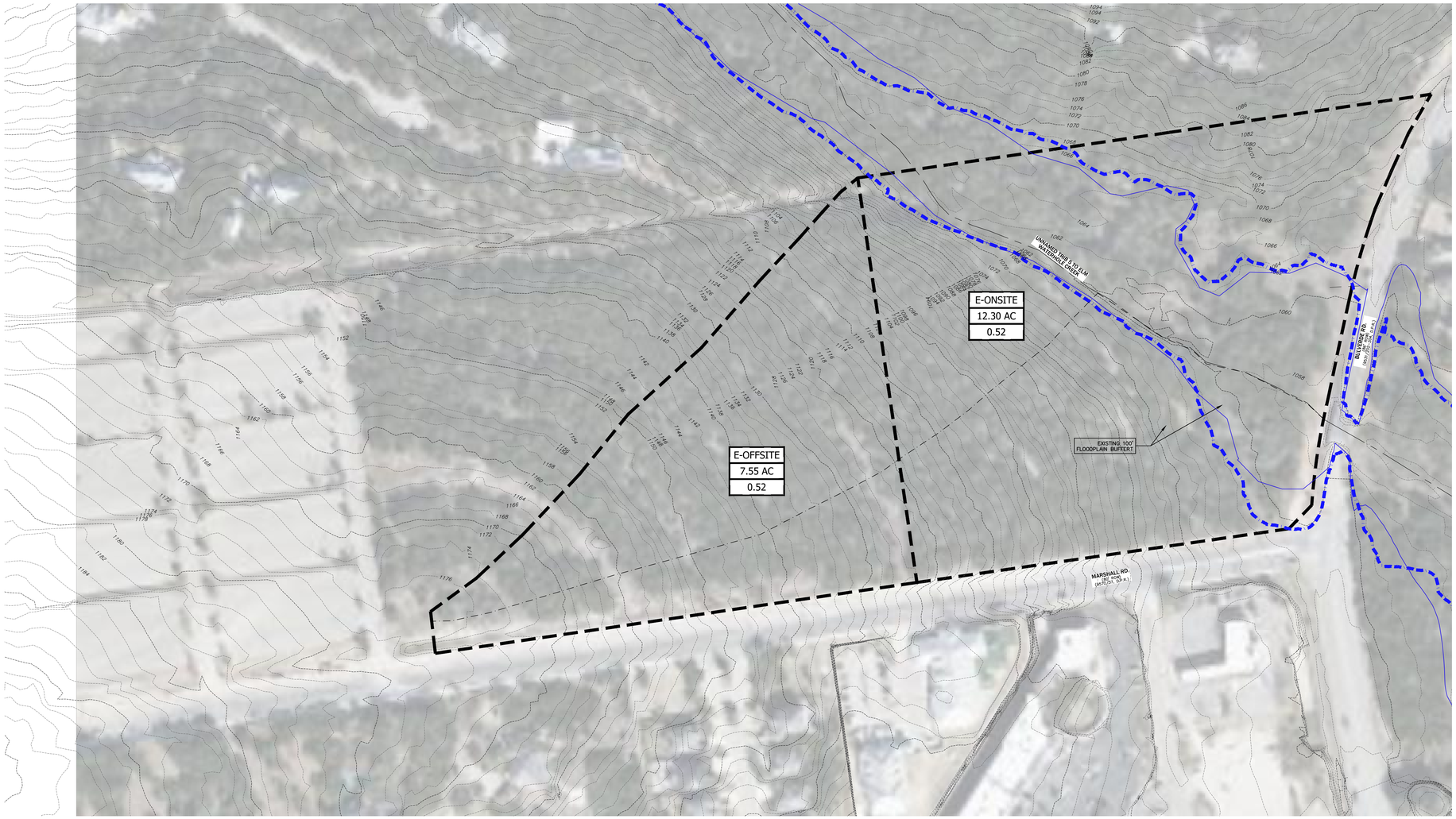
1 / 5.2 / 0.47 DRAINAGE AREA / ACREAGE / C-VALUE

920 EXIST. CONTOUR

Tc PATH

FEMA REGULATORY 100-YR FLOODPLAIN

ATLAS 14 ULTIMATE 100-YR FLOODPLAIN



UP ENGINEERING + SURVEYING
11903 JONES MALTSBERGER, SUITE 102
SAN ANTONIO, TX 78216 TEL 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992
TBPELS F-10194605

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

PREPARED UNDER THE SUPERVISION OF RYAN R. PLAGENS, P.E. #111640 ON January 24, 2023

MARSHALL AND BULVERDE , LLC
2402 LAKE AUSTIN BLVD
AUSTIN, TEXAS 78703

HALFTIME 1

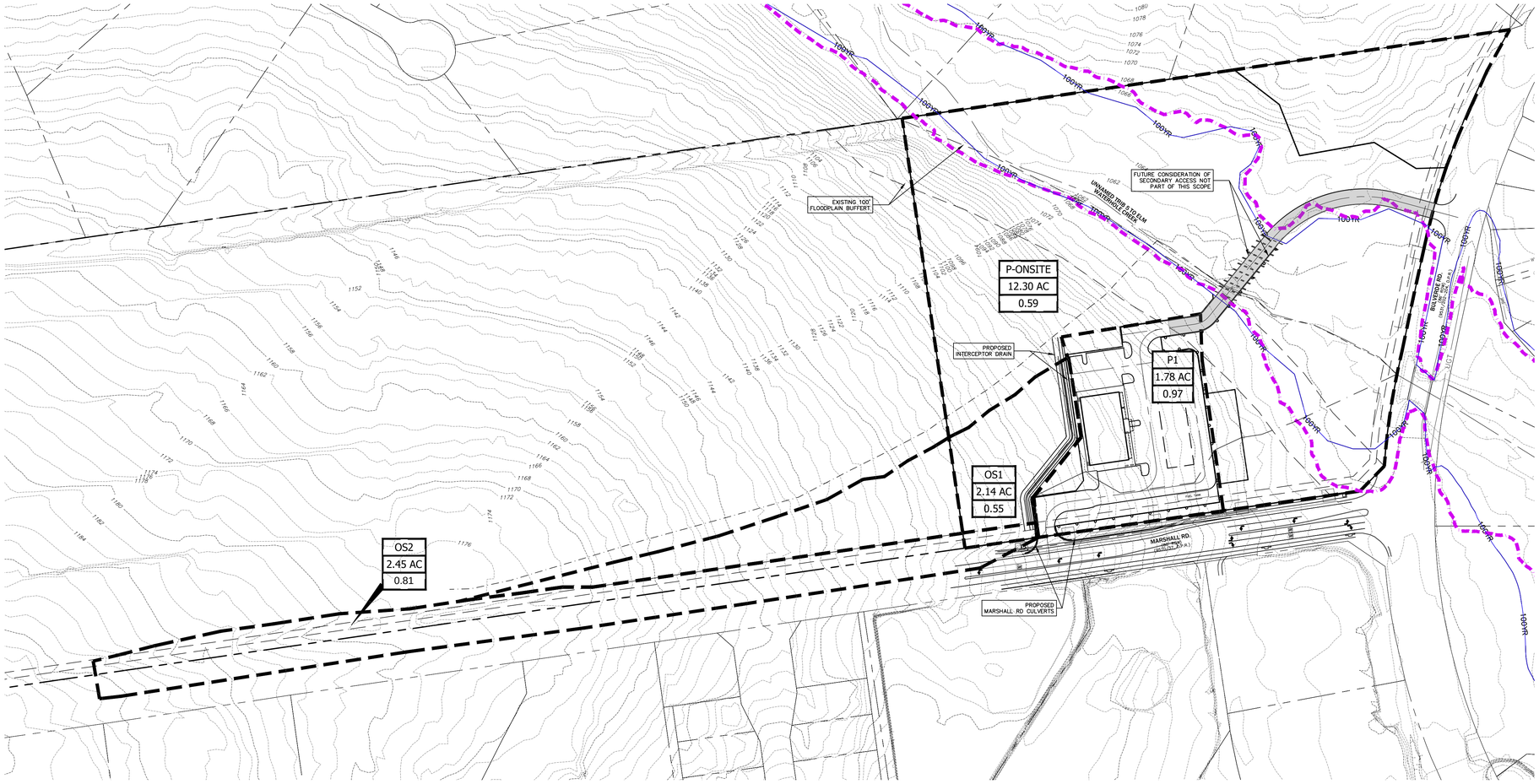
EXISTING CONDITIONS DRAINAGE AREA MAP

FIG 5

048

Date: Jan 24, 2023, By: Mark Ident ID: mark
File: U:_Projects\205 – Bulverde and Marshall Rd C–Store\ACAD\Exhibits\04 Map.dwg

Proposed Runoff Flow Rates												
Ref Point	Drainage Areas	C	Drainage Area (ac)	Tc (min)	I_5 (in/hr)	I_{10} (in/hr)	I_{25} (in/hr)	I_{100} (in/hr)	Q_5 cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
1	OS1	0.65	2.14	25.4	4.04	4.70	5.61	6.99	5.6	6.5	7.8	9.7
2	OS2	0.81	2.45	15.0	5.31	6.19	7.39	9.26	10.5	12.3	14.7	18.4
3	P1	0.97	1.78	15.8	5.18	6.03	7.19	9.01	8.9	10.4	12.4	15.5
4	P-ONSITE	0.58	13.65	11.9	5.94	6.94	8.28	10.45	47.0	54.9	65.6	82.7



UP ENGINEERING + SURVEYING
11903 JONES MALTSBERGER, SUITE 102
SAN ANTONIO, TX 78216 TEL 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992
TBPELS F-10194605

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

PREPARED UNDER THE SUPERVISION OF RYAN R. PLAGENS, P.E. #111640 ON January 24, 2023

MARSHALL AND BULVERDE , LLC
2402 LAKE AUSTIN BLVD
AUSTIN, TEXAS 78703

HALFTIME 1

PROPOSED/ULTIMATE CONDITIONS DRAINAGE AREA MAP

FIG 6

048

Date: Jan 24, 2023, By: Mark Ulen ID: mark
File: U:_Projects\205 – Bulverde and Marshall Rd C- Store\ACAD\Exhibits\04 Map.dwg

Attachment H

Temporary Sediment Pond(s) Plans and Calculations

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Temporary Sediment Pond(s) Plans and Calculations

Not Applicable

Attachment I

Inspection and Maintenance for BMPs

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INSPECTION AND MAINTENANCE FOR BMP'S

The temporary BMP's will be scheduled for inspection and repair once every week (7 days) and following any rainfall event that is greater than 0.5 inch. The contractor is responsible for logging all inspections, rainfall events and repairs. The contractor is also responsible for cleaning up any sediment that is released onto adjacent roadways after any rainfall event. The following forms shall be used for inspection and maintenance reports that are required to be kept on the project site by the contractor.

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

_____

_____

_____

_____

REASONS FOR CHANGES:

_____

_____

_____

_____

INSPECTOR'S SIGNATURE:_____ DATE:_____

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Silt Fence

Description

This item shall consist of providing and placing a filter fabric fence including maintenance of the fence, removal of accumulated silt and removal of the fence upon completion of the project.

Materials

(1) Fabric

(a) General: The filter fabric shall be of nonwoven polypropylene, polyethylene or polyamide thermoplastic fibers with non-raveling edges. The fabric shall be non-biodegradable, inert to most soil chemicals, ultraviolet resistant, unaffected by moisture or other weather conditions, and permeable to water while retaining sediment. The filter fabric shall be supplied in rolls a minimum of 36 inches wide.

(b) Physical Requirements: The fabric shall meet the following requirements when sampled and tested in accordance with the methods indicated.

Physical Properties	Method	Requirements
Fabric Weight(oz/sy)	TEX-616-J	4.5 minimum
Water Flow Rate (gal/sq. ft/minute)	TEX-616-J	40 maximum
Equivalent Opening Size: US Standard sieve(number)	CW-02215, US Army Corps of Engineers	40 to 100
Mullen Burst Strength(psi)	ASTM D 3786	300 minimum
Ultraviolet Resistance; Strength retention (%)	ASTM D 1682	70 minimum

(2) Posts: Posts shall be painted or galvanized steel Tee or Y-posts with anchor plates, not less than 4 feet in length with a minimum weight of 1.25 pounds per foot with a minimum Brinell Hardness of 140. Hangers shall be adequate to secure fence and fabric to posts. Posts and anchor plates shall conform to ASTM A 702.

(3) Wire Fence: Wire fence shall be woven wire backing to support the fabric should be 2” x 4” welded wire, 12 gauge minimum.

Construction Methods

The silt fence fabric shall be securely attached to the posts and the wire support fence with the bottom 12 inches of the filter material buried in a trench a minimum of 6 inches deep and 6 inches wide to prevent sediment form passing under the fence. When the silt fence is constructed on impervious material, a 12-inch flap of fabric shall be extended upstream from the bottom of the silt fence and weighted to limit particulate loss. No horizontal joints will be allowed in the filter fabric. Vertical joints shall be overlapped a minimum of 12 inches with the ends sewn or otherwise securely tied.

The silt fence shall be a minimum of 24 inches high. Posts shall be embedded a minimum of 12 inches in the ground, placed a maximum of 8 feet apart and set on a slight angle toward the anticipated runoff source. When directed by the Engineer, posts shall be set at specified intervals to support concentrated loads.

The silt fence shall be repaired, replaced, and/or relocated when necessary or as directed by the Engineer. Accumulated silt shall be removed when it reaches a depth of 6 inches.

Measurement

The work performed, and the materials furnished under this item will be measured by the linear foot of “Silt Fence”, complete in place.

Stabilized Construction Exit

Description

This item involves constructing a stabilized pad of crushed stone located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking or deposition of sediment onto public right-of-way.

Materials

Aggregate for construction shall conform to the following gradation:

Table 1: Aggregate Gradation Chart (TEX 401-A, Percent Retained)		
8 inch	5 inch	2 inch
0	90-100	100

Construction Methods

All trees, brush, stumps, obstructions and other objectionable material shall be removed and disposed of so as not to interfere with the excavation and construction of the entrance as indicated. The entrance shall not drain onto the public right-of-way or leave the construction site.

When necessary, vehicle wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch or watercourse through use of sand bags, gravel, boards, silt fence or other approved methods.

The entrance shall be maintained in a condition which will prevent tracking or disposition of sediment onto public right-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 onto public right-of-way must be removed immediately.

Measurement

Acceptable work performed as prescribed in this item will be measured by unit of each stabilized construction entrance installed.

Rock Filter Dams

Description

This Item shall govern for the materials to be furnished and for the installation, maintenance and removal of rock filter dams of the dimensions shown on the plans. The rock filter dams shall be constructed at the locations shown on the plans and as directed by the Engineer. This Item will be used during construction to control erosion and sedimentation.

Materials

Unless otherwise specified, all aggregate used for the construction of the rock filter dams shall be hard, durable, clean, open-graded, and shall naturally resist crumbling, flaking and eroding. Aggregate gradation shall be 3 to 6 inches for rock filter dams Types 1, 2 and 4 and shall be 4 to 8 inches for Type 3.

The galvanized steel wire mesh and tie wires for Types 2 and 3 shall be a minimum 20 gauge unless specified otherwise on the plans.

For Type 4: Steel wire mesh shall utilize a double twisted hexagonal weave; mesh opening shall be a nominal 2.50" x 3.25"; steel wire for netting shall be 0.0866" (U.S. Gauge No. 13) minimum; steel wire for selvedges and corners shall be 0.1063" (U.S. Gauge No. 110 minimum; and binding or tie wire shall be 0.0866" (U.S. Gauge No. 13) minimum.

Unless otherwise specified, the sandbag material shall be made of polypropylene, polyethylene or polyamide woven fabric, minimum unit weight four (4) ounces per square yard, Mullen burst strength exceeding 300 psi and ultraviolet stability exceeding 70 percent. The sandbag size shall be 24 to 30 inches in length, 16 to 18 inches in width, six (6) to eight (8) inches thick and weight 90 to 125 pounds. The sand shall be course grade.

Construction Methods

Trees, brush, stumps and other objectionable material shall be removed and disposed of as necessary so as not to interfere with the construction of the filter dams.

The filter dams shall be constructed according to the following criteria unless otherwise shown on the plans:

1. Type 1 (non-reinforced)
    a. Height -
        i. 18 inches minimum, measured vertically from existing ground to top of filter dam.
    b. Top Width

i. 2 feet minimum

c. Slopes

i. 2:1 maximum

2. Type 2 (reinforced)

a. Height

i. 18 inches minimum, measured vertically from existing ground to top of filter dam.

b. Top Width

i. 2 feet minimum

c. Slopes

i. 2:1 maximum

The aggregate shall be placed on the galvanized wire mesh to the lines, height and slopes specified without resulting in undue voids, and to the satisfaction of the Engineer. The mesh shall be folded at the upstream side over the aggregate and secured to itself on the downstream side. The mesh shall be attached to itself with wire ties, hog rings, or as directed by the Engineer.

3. Type 3 (reinforced)

a. Height

i. 36 inches minimum, measured vertically from existing ground to top of filter dam.

b. Top Width

i. 2 feet minimum

c. Slopes

i. 2:1 maximum

The aggregate shall be placed on the galvanized wire mesh to the lines, height and slopes specified without resulting in undue voids, and to the satisfaction of the Engineer. The mesh shall be folded at the upstream side over the aggregate and secured to itself on the downstream side. The mesh shall be attached to itself with wire ties, hog rings, or as directed by the Engineer.

4. Type 4 (Sack Gabions)

Sack gabions are supplied folded flat, packed in bundles. Single sacks shall be removed from the bundle, unfolded flat on the ground, and all kinks and bends stepped out.

For vertical filling, the two sides edge wires are connected by using the lacing wire in a “single loop – double loop” pattern on a 4” to 5” spacing. At one end, the “end lacing rod” must be pulled tight, wrapped around the end and twisted 4 times. At the filling end, the rod shall be pulled tight, cut, leaving about 6” length and twisted 4 times.

For horizontal filling, the sack shall be placed flat in a filling trough, filled with stone and then sides connected as described above. The ends shall be secured as described above.

Lifting and placing shall be accomplished by placing a No. 6 rebar (or equal) 5' long in the mesh, perpendicularly to the longitudinal axis and close to the knot of one end. Lifting should be made from the central point. Sack gabions shall conform to existing contours.

5. Type 5. Type 5 as shown on the plans.

Maintenance

The area upstream from the filter dams shall be maintained in a condition which will allow sediment to be removed following the runoff of a rainfall event. When the silt reaches a depth equal to 1/3 the height of the dam or 1 foot, whichever is less, the Contractor shall remove the accumulated sediment and dispose of it at an approved site in a manner that will not contribute to additional siltation. The filter dams shall be reshaped as needed and as directed by the Engineer.

The filter dams shall be maintained in place until all upstream areas are adequately stabilized. When the special Specification, "Temporary Erosion, Sedimentation and Water Pollution Prevention and Control" is in the contract, stabilization shall be as described in Subarticle 4.C of that specification. The area beneath the filter dams and area damaged by the removal process shall then be stabilized by the Contractor using appropriate methods as approved by the Engineer.

Measurement

This Item will be measured by the linear foot or by the cubic yard, as shown on the plans. When measured by the linear foot, measurement will be along the centerline of the top of the dam. When measured by the cubic yard, measurement will be the volume for rock computed in its final position by the method of average end areas or in vehicles at the point of delivery. The measured volume will include sandbags, if they are used.

Each time the Engineer directs that the filter dam (or portions thereof) be removed or removed and replaced, it will be measured for payment.

INSPECTIONS

DATE OF INSPECTION	CONTROL INSPECTED	OBSERVATIONS	COMPLIANCE WITH SWPPP		INSPECTOR'S SIGNATURE	TITLE/ QUALIFICATIONS
			YES	NO		

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RECORD OF CONSTRUCTION ACTIVITY

DATE STARTED	DATE ENDED	TYPE OF ACTIVITY	CONTROL MEASURES	INSPECTOR SIGNATURE	TITLE/ COMPANY

ENGINEERING
+ SURVEYING

NON-STORMWATER DISCHARGES

DATE	INSPECTOR	TITLE	COMPANY	DISHARGE TYPE	POLLUTION CONTROL MEASURE

CONSTRUCTION MATERIALS

DATE STORED ONSITE	DATE REMOVED FROM SITE	DESCRIPTION	INSPECTOR'S SIGNATURE	TITLE	COMPANY

STABILIZATION RECORD

CONSTRUCTION/GRADING		STABILIZATION			SIGNATURE		
DATE BEGAN	DATE ENDED	DATE BEGAN	AREA OF SITE STABILIZATION	TYPE OF STABILIZATION USED	INSPECTOR	TITLE	COMPANY

RAINFALL DATA

DATE OF RECORDED RAINFALL	AMOUNT OF RAINFALL (INCHES)	SIGNATURE OF INSPECTOR	TITLE/COMPANY

SUBCONTRACTOR RESPONSIBILITIES

				INITIALS	
DATE	**SUBCONTRACTOR COMPANY**	**CONSTRUCTION ACTIVITY TO BE PERFORMED**	**DESCRIPTION OF POLLUTION PREVENTION RESPONSIBILITY**	**SUBCONTRACTOR**	**CONTRACTOR**

Attachment J

Schedule of Interim and Permanent Soil Stabilization Practices

Schedule of Interim and Permanent Soil Stabilization Practices

Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

After all sanitary sewer construction has been completed, final stabilization of the construction area on all unpaved areas and areas not covered by permanent structures shall be completed by even distribution of 70% of the native background vegetative cover or equivalent permanent stabilization measures.

Revegetation will be necessary for soil stabilization of any offsite sanitary sewer construction. Seeding should be used for these areas. The specified seeding requirements are based on the seasonal San Antonio District Seeding Requirement as specified by Item 164 of the 2004 Texas Department of Transportation specifications Book.

Agent Authorization Form (TCEQ-0599)

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

I Karim Ali,
Print Name

Owner,
Title - Owner/President/Other

of Marshall Bulverde LLC,
Corporation/Partnership/Entity Name

have authorized UP Engineering + Surveying
Print Name of Agent/Engineer

of UP Engineering + Surveying
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.

Filed by Alamo Title Company
GF# 4000412100434 JG

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A ~~NATURAL PERSON, YOU~~ MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

SPECIAL WARRANTY DEED WITH VENDOR'S LIEN

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS THAT:
COUNTY OF BEXAR §

THAT, SUMMIT CHRISTIAN CHURCH, a Texas Non-Profit Corporation fka EAGLE'S NEST CHRISTIAN FELLOWSHIP CHURCH, INC. ("Grantor"), for and in consideration for cash and a Note of even date executed by MARSHALL AND BULVERDE, LLC., a Texas limited liability company, Grantee, and payable to the order of FIRST NATIONAL BANK in the principal amount of Two Million Twenty-Five Thousand Dollars ($2,025,000.00). The note is secured by a first and superior vendor's lien and superior title retained in this deed in favor of FIRST NATIONAL BANK and by a first-lien deed of trust of even date from Grantee to Greg Massey, trustee, the receipt and sufficiency of which are hereby acknowledged and confessed, subject to the exceptions, liens, encumbrances, terms and provisions hereinafter set forth and described, has **GRANTED, BARGAINED, SOLD and CONVEYED and by these presents does hereby GRANT, BARGAIN, SELL and CONVEY unto Grantee** the property situated in Bexar County, Texas, and being described in **Exhibit "A"** attached hereto and incorporated herein by reference for all purposes

TOGETHER WITH, any and all improvements, located thereon; Grantor's right, title and interest in and to any and all oil, gas and mineral rights associated with the Land, if any; and all of Grantor's right, title and interest in and to any easements, interests, benefits, privileges, rights and appurtenances pertaining to the Land, including any right, title and interest of Grantor in and to any adjacent strips, gores, roads, streets, alleys or rights-of-way to the extent that the same relate to the Land (all of the Land, improvements, mineral rights, easements, interests, benefits, privileges, rights and appurtenances being herein collectively referred to as the "**Subject Property**").

This conveyance is made and accepted subject to all items set forth on **Exhibit "B"** attached hereto, to the extent same are valid and affect the Property (such matters being referred to herein as the "**Permitted Exceptions**").

Real property ad valorem taxes and assessments having been prorated to the date hereof, Grantee hereby assumes and agrees to pay when due all such ad valorem property taxes and assessments for the year 2022.

TO HAVE AND TO HOLD the Subject Property, subject to the Permitted Exceptions as aforesaid, unto Grantee and Grantee's heirs, executors, administrators, personal representatives, successors and assigns forever; and Grantor does hereby bind Grantor and Grantor's heirs, executors, administrators, personal representatives, successors and assigns to **WARRANT and**

FOREVER DEFEND, all and singular, the Subject Property, subject to the Permitted Exceptions, unto Grantee and Grantee's heirs, executors, administrators, personal representatives, successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof by, through or under Grantor, but not otherwise.

A first and prior Vendor's Lien and Superior Title in and to the Subject Property are hereby retained until the above referenced note has been fully paid according to its terms. For consideration received, the first and prior Vendor's Lien and Superior Title are hereby transferred, assigned, sold and conveyed to FIRST NATIONAL BANK without recourse. When the note is fully paid, this Deed shall become absolute.

EXECUTED as of March 15, 2022.

SELLER: SUMMIT CHRISTIAN CENTER

By: _____
Richard L. Godwin, President

ACKNOWLEDGMENT

STATE OF TEXAS §
COUNTY OF BEXAR §

This instrument was acknowledged before me on this 15th day of March, 2022 by Richard L. Godwin, President of SUMMIT CHRISTIAN CHURCH, a Texas Non-Profit Corporation fka EAGLE'S NEST CHRISTIAN FELLOWSHIP CHURCH, INC on behalf of said entity.

JOSEPH PAUL GIMBLET
My Notary ID # 11407961
Expires November 12, 2022

By: _____
Notary Public, State of Texas

AFTER RECORDING, RETURN TO:
Marshall and Bulverde, LLC
2402 Lake Austin Boulevard
Austin, Texas 78703

EXHIBIT "A"
LEGAL DESCRIPTION

12.30 ACRES OF LAND

A metes and bounds description of a 12.30 acre (535,792 sq. ft.) tract of land, being out of a 67.50 acre tract, recorded in Volume 9570, Pages 37-42, Deed and Plat Records of Bexar County, Texas (D.P.R.B.C.T.), situated in the WM Brisbin, Survey No. 89 1/2, Abstract No. 54, County Block 4900, situated in Bexar County, Texas, being more particularly described as follows:

BEGINNING: at a found 1/2-inch iron rod on the north right-of-way line of Marshall Road, an 80-foot right-of-way recorded in Volume 9570, Pages 37-42, D.P.R.B.C.T., the west right-of-way line of Bulverde Road, an 86-foot right-of-way recorded in Volume 9531, Pages 202-204, D.P.R.B.C.T., an angle of the aforementioned 67.50 acre tract, and the herein described tract, having a State Plane Grid Coordinate NAD 83, Texas South Central Zone, (N: 13,788,970.77, E: 2,147,772.21);

THENCE: South 81°42'54" West, departing the west right-of-way line of Bulverde Road, along and with the north right-of-way line of Marshall Road, a distance of 661.96 feet to a set 1/2-inch iron rod with green plastic cap "UP ENG & SURVEY", the southwest corner of the herein described tract;

THENCE: North 08°18'45" West, departing the north right-of-way line of Marshall Road, a distance of 719.41 feet to a set 1/2-inch iron rod with green plastic cap "UP ENG & SURVEY", on the south line of a 58.99 acre tract, recorded in Volume 9535, Page 173, D.P.R.B.C.T., on the north line of the aforementioned 67.50 acre tract, the northwest corner of the herein described tract;

THENCE: North 81°41'15" East, a distance of 555.47 feet to a set 1/2-inch iron rod with green plastic cap "UP ENG & SURVEY", the north corner of the herein described tract;

THENCE: over and across the 67.50 acre tract, the following five (5) courses and distances:

1. South 52°24'01" East, a distance of 94.24 feet to a set 1/2-inch iron rod with green plastic cap "UP ENG & SURVEY", an angle of the herein described tract;

2. South 21°33'35" East, a distance of 91.18 feet to a set 1/2-inch iron rod with green plastic cap "UP ENG & SURVEY", an angle of the herein described tract;

3. North 79°51'18" East, a distance of 125.45 feet to a set 1/2-inch iron rod with green plastic cap "UP ENG & SURVEY", an angle of the herein described tract;

4. South 58°10'15" East, a distance of 81.93 feet to a set 1/2-inch iron rod with green plastic cap "UP ENG & SURVEY", an angle of the herein described tract;

5. North 88°22'08" East, a distance of 49.53 feet to a set 1/2-inch iron rod with green plastic cap "UP ENG & SURVEY", on the west right-of-way line of Bulverde Road, the east corner of the herein described tract, being the beginning of a non-tangent curve to the left, whose radius bears

South 71°20'55" East, a distance of 1,184.31 feet;

THENCE: along and with the west right-of-way line of Bulverde Road, the following three (3) courses and distances:

1. 136.75 feet with the curve to the left, having a radius of 1,184.31 feet, a central angle of 06°36'56", and a chord bearing and length of South 15°20'37" West, 136.67 feet to a found 1/2-inch iron rod, the end of a curve, an angle of the herein described tract;

2. South 12°02'08" West, distance of 214.58 feet to a found X on concrete, an angle of the herein described tract, being the beginning of a curve to the left, whose radius bears South 77°57'51" East, a distance of 1,085.00 feet;

3. 154.28 feet with the curve to the left, having a radius of 1,085.00 feet, a central angle of 08°08'50", and a chord bearing and length of South 07°57'44" West, 154.15 feet to a set 1/2-inch iron rod with green plastic cap "UP ENG & SURVEY", the end of a curve, on the southeast corner of the herein described tract;

THENCE: South 44°01'50" West, a distance 56.25 feet to the **POINT OF BEGINNING** and containing 12.30 acres (535,792 sq. ft.) more or less.

Schedule B Exceptions
Summit – Marshall & Bulverde

20 foot building setback line along Bulverde Road, as shown on plat recorded in Volume 9570, Pages 37-42, Deed and Plat Records, Bexar County, Texas.

14 foot electric, gas, telephone and catv easement along Bulverde Road, as shown on plat recorded in Volume 9570, Pages 37-42, Deed and Plat Records, Bexar County, Texas.

Portion of a 78 foot wide floodplain buffer zone easement along Bulverde Road, as shown on plat recorded in Volume 9570, Pages 37-42, Deed and Plat Records, Bexar County, Texas.

Remainder of a 0.0446 acre drainage easement along Bulverde Road, recorded in Volume 4747, Page 2077, Real Property Records, Bexar County, Texas , as depicted on plat recorded in Volume 9570, Pages 37-42, Deed and Plat Records, Bexar County, Texas.

A 0.08 acre Quit Clamed in Volume 7015, Page 581, Real Property Records, Bexar County, Texas , as depicted on plat recorded in Volume 9570, Pages 37-42, Deed and Plat Records, Bexar County, Texas.

150' Radius Septic System setback line as shown on plat recorded in Volume 9570, Page s 37-42, Deed and Plat Records, Bexar County, Texas.

Terms and provisions of Sewer Service Allocation Agreement recorded in Volume 8496, Page 1769, Real Property Records, Bexar County, Texas.

Terms and provisions of sewer service allocation agreement, recorded in Volume 8496, Page 1789, Real Property Records, Bexar County, Texas.

Terms and provisions of Edwards Aquifer Protection Plan referenced by Affidavit recorded in Volume 11919, Page 1571, Volume 14412, Page 2435, Real Property Records, Bexar County, Texas.

File Information

eFILED IN THE OFFICIAL PUBLIC eRECORDS OF BEXAR COUNTY
LUCY ADAME-CLARK, BEXAR COUNTY CLERK

Document Number:	20220068200
Recorded Date:	March 17, 2022
Recorded Time:	3:12 PM
Total Pages:	6
Total Fees:	$42.00

**** THIS PAGE IS PART OF THE DOCUMENT ****

**** Do Not Remove ****

Any provision herein which restricts the sale or use of the described real property because of race is invalid and unenforceable under Federal law

STATE OF TEXAS, COUNTY OF BEXAR

I hereby Certify that this instrument was eFILED in File Number Sequence on this date and at the time stamped hereon by me and was duly eRECORDED in the Official Public Record of Bexar County, Texas on: 3/17/2022 3:12 PM

Lucy Adame-Clark
Lucy Adame-Clark
Bexar County Clerk

SIGNATURE PAGE:

Applicant's Signature

4-4-2023
Date

THE STATE OF Texas §

County of Bexar §

BEFORE ME, the undersigned authority, on this day personally appeared KARIM ALI 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 4TH day of April, 2023.

NOTARY PUBLIC

Trayce L. Cerwick
Typed or Printed Name of Notary

Trayce L Cerwick
My Commission Expires
12/9/2025
Notary ID
133483210

MY COMMISSION EXPIRES: 12/9/2025

Application Fee Form (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Halftime 1
Regulated Entity Location: Corner of Bulverde Rd and Marshall Rd
Name of Customer: Bulverde Marshall LLC
Contact Person: Karim Ali Phone: _____
Customer Reference Number (if issued):CN _____
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☐ Williamson

San Antonio Regional Office (3362)

☒ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***		***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling		Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks		Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	12.30	Acres	$ $6,500
Sewage Collection System	845	L.F.	$ $650
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: Tyler Smith Date: 07/31/2023

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

Core Data Form (TCEQ-10400)

TCEQ Core Data Form

TCEQ Use Only

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

SECTION I: General Information

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

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

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

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

SECTION II: Customer Information

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

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership

☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

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

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

Marshall and Bulverde, LLC

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (*if applicable*)
803843003			

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ State ☐ Other ☐ Sole Proprietorship ☒ Other: LLC

12. Number of Employees

☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?

☒ **Yes** ☐ **No**

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

☐ Owner ☐ Operator ☒ Owner & Operator

☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

7410 Blanco Road

Suite 225

City	San Antonio	State	TX	ZIP	78216	ZIP + 4	4363

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

18. Telephone Number	19. Extension or Code	20. Fax Number (*if applicable*)
(210) 960- 5540		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected below this form should be accompanied by a permit application*)

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

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

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

Halftime 1

23. Street Address of the Regulated Entity: *(No PO Boxes)*	3125 Summit Church Road							
	City	San Antonio	State	TX	ZIP	78259	ZIP + 4	2189
24. County	Bexar							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	NW corner of Summit Church Road and Bulverde Road

26. Nearest City	State	Nearest ZIP Code
San Antonio	TX	78261

27. Latitude (N) In Decimal:	29.66306	28. Longitude (W) In Decimal:	- 98.43639

Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	39	47	98	26	11

29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)	31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)
5983	5541	457110	N/A

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

Convenience Store with Fuel Sales

34. Mailing Address:	7410 Blanco Road							
	Suite 225							
	City	San Antonio	State	TX	ZIP	78216	ZIP + 4	4363
35. E-Mail Address:	kns3bigs@gmail.com							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(210)960- 5540		( ) -

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

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

SECTION IV: Preparer Information

40. Name:	UP Engineering + Surveying	41. Title:	Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 774- 5504		( ) -	

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Marshall and Bulverde, LLC	Job Title:	President/Owner
Name *(In Print)*:	Karim Ali	Phone:	(210) 960-5504
Signature:		Date:	5/16/2023