FREEMAN RANCH MOBILE HOME

At
Freeman Ranch Rd
San Marcos, Texas 78666

Recharge Zone Exception Request Application

Hays County

Submitted to:

TCEQ

Austin Regional Office
12100 Park 35 Circle
Austin, TX 78753

OCTOBER 2023

Halff AVO 37200.008

TBPELS Engineering Firm No. 312
13620 Briarwick Drive, Building C, Suite 100
Austin, TX 78729

Recharge Zone Exception Request Application

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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: Texas State University – Freeman Center						**2. Regulated Entity No.: 105862007**			
3. Customer Name: Texas State University – San Marcos						**4. Customer No.: 602644106**			
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):**		2.4	
9. Application Fee:	$500		**10. Permanent BMP(s):**			NA			
11. SCS (Linear Ft.):	NA		**12. AST/UST (No. Tanks):**			NA			
13. County:	Hays		**14. Watershed:**			Sink Creek			

Application Distribution

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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	_1_	___	___
Region (1 req.)	_1_	___	___
County(ies)	_1_	___	___
Groundwater Conservation District(s)	___Edwards Aquifer Authority _x_Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City _x_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)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village ___Hollywood Park ___San Antonio (SAWS) ___Shavano Park	___Bulverde ___Fair Oaks Ranch ___Garden Ridge ___New Braunfels ___Schertz	NA	___San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Jason Bass
Print Name of Customer/Authorized Agent Signature of Customer/Authorized Agent 10/17/2023 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):	

Section I

General Information Form (TCEQ-0587)

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: Jason Bass, P.E.

Date: 10/17/2023

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: Texas State University - Freeman Center
2. County: Hays
3. Stream Basin: Guadalupe River Basin
4. Groundwater Conservation District (If applicable): NA
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

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

7. Customer (Applicant):

   Contact Person: Donnie Kincaid
   Entity: Texas State University - Freeman Center
   Mailing Address: 151-2 East Sessom Drive
   City, State: San Marcos, TX Zip: 78666
   Telephone: (512) 245-5271 FAX: _____
   Email Address: dk20015@txstate.edu

8. Agent/Representative (If any):

   Contact Person: Jason Bass, P.E.
   Entity: Halff Associates, Inc.
   Mailing Address: 13260 Briarwick Dr., Building C, Suite 100
   City, State: Austin, TX Zip: 78729
   Telephone: (512) 777-4615 FAX: _____
   Email Address: jbass@halff.com

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 Marcos.
   ☐ 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.

    Exit 202 off I 35 S, .08 miles turn right onto Ranch Rd 12 / Wonder World Dr, 5.2 miles turn right onto Fulton Ranch Rd, 2.1 miles turn right onto Freeman Ranch Rd, 0.6 miles the site is on the left

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

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

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

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

☐ Survey staking will be completed by this date: _____

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

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

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

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

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

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

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

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

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

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

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

Administrative Information

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

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

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

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

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

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

Attachment A – Road Map

N.T.S

Freeman Ranch Road – Mobile Home

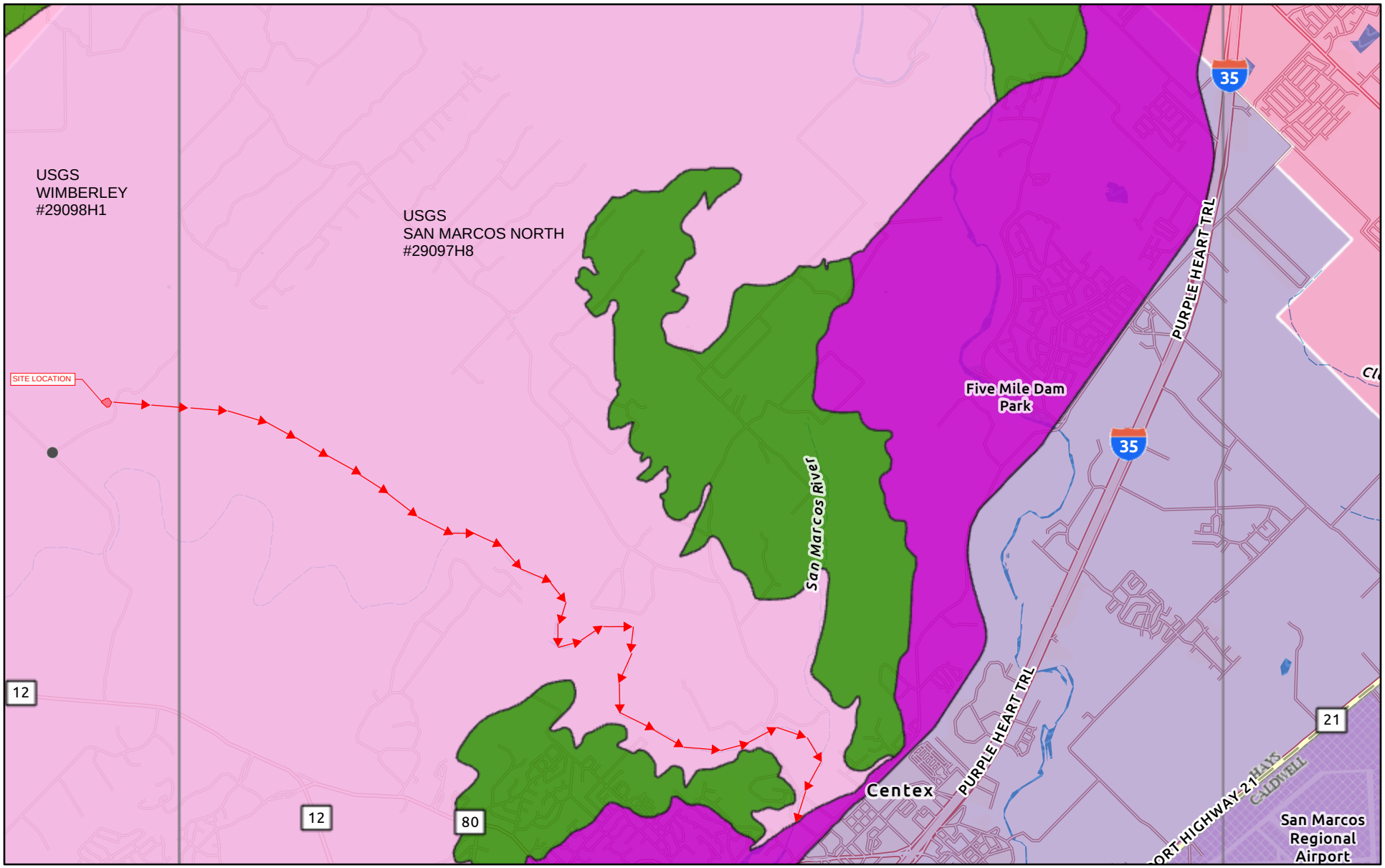
Freeman Ranch Rd
San Marcos, Texas 78666
AVO #37200.008

Directions from TCEQ Austin Reginal Office

- Get on I 35 S from I 35 S frontage road
- 33.5 miles, Take Exit 202 toward Wonder World Dr / Farm to Market Rd 3407
- 0.8 miles, Turn right onto Ranch Rd 12 / Wonder World Dr
- 5.2 miles, Turn right onto Fulton Ranch Rd
- 2.1 miles, Turn right onto Freeman Ranch Rd
- 0.6 miles, The destination is on your left

Attachment B – USGS Quadrangle Map

Edwards Aquifer Viewer Custom Print



9/14/2023, 11:43:30 AM

7.5 Minute Quad Grid

TX Counties

Groundwater Conservation Districts

Barton Springs/Edwards Aquifer CD

Edwards Aquifer Authority

Hays Trinity GCD

Plum Creek CD

1:72,224

0 0.5 1 2 mi

0 0.75 1.5 3 km

City of Austin, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, Foursquare, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA,

Web AppBuilder for ArcGIS

TCEQ | City of Austin, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, Foursquare, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA | City of Austin, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin,

Attachment 1C – Project Description

The 2.4-acre site is located northwest of Freeman Ranch Rd in San Marcos, Texas. The subject site will consist of mobile home building, associated drives, parking, drainage, and utilities. Driveway and parking will be gravel. The table below includes the site's proposed impervious cover areas.

Impervious Cover	
Building/Roof	0.05 Acres
Gravel Drive/Parking	0.02 Acres
Total	0.07 Acres

The existing site is currently undeveloped and occupied by grass mixture and generally slopes from northwest to southeast with an average grade of about four percent. The existing site has a total impervious cover of 0.07 acres. The owner is removing 2,771 square feet stable, which will make the proposed impervious cover less than the existing impervious cover. No detention pond will be proposed. The project is in the ETJ and is located over the Edwards Aquifer Recharge Zone.

Temporary water quality controls will be provided during construction of the site improvements and will consist of silt fence and dust control.

No permanent water quality controls will be provided.

Existing water is on site.

Wastewater from the site will be routed to a proposed septic system located northeast the mobile home. The wastewater from the site will be 100% and produce approximately 240 gallons/day daily. The septic system consists of 3-4" SCH 40 PVC pipe, NuWater B-550, 1" Purple PVC supply line, and 2 K-Rain Gear Driven pop-up sprinkler (#6 nozzles), see the OSSF plan in **Attachment 5F** for more detail.

Only 0.387 acres of the undeveloped site will be disturbed for this project as outlined by the limit of construction (LOC) on Erosion Control Plan, see **Attachment 5F.**

Section II

Geologic Assessment Form (TCEQ-0585)

ZARA
ENVIRONMENTAL LLC
Integrity | Science | Expertise
2104 Hunter Road
San Marcos, Texas 78666
512-291-4555
www.zaraenvironmental.com

GEOLOGIC ASSESSMENT FOR TEXAS STATE UNIVERSITY FREEMAN CENTER SAN MARCOS, HAYS COUNTY, TEXAS

View to northeast of 9-ac tract for proposed development on the Freeman Ranch, San Marcos Texas.

Prepared for
Halff Associates, Inc.
Briarwick Drive, Suite 100
Austin, TX, 78729

3 October 2023

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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.

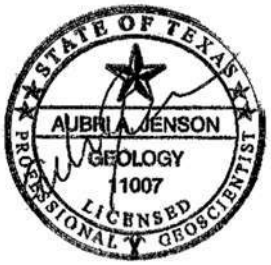
Print Name of Geologists: Date: 10/3/2023

Aubri Jenson, P.G. Telephone: 512-291-4555

Kara Posso, P.G. Fax: 866-908-9137

Representing: Zara Environmental LLC/ TBPG No. 50365 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: TEXAS STATE UNIVERSITY FREEMAN CENTER

Project Information

1. Date(s) Geologic Assessment was performed: 14 September 2023

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)
RUD- Rumple-Comfort, rubbly association, 1 to 8 percent slopes	D	2.3
TaB- Tarpley clay, 1 to 3 percent slopes	D	1.4

** Soil Group Definitions (Abbreviated)*

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

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

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

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

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site-specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

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

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

9. Method of collecting positional data:

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

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.

11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.

12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

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

13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.

14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☐ There are 0 (#) 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	PROJECT NAME: *TEXAS STATE UNIVERSITY FREEMAN CENTER*

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	
FRA-01	29.94110	-98.00855	SH	20	Kplc	2.5	3	2.75	270	-	-	0.5 x 0.75	C,O,F	20	40		X	X		Hillside

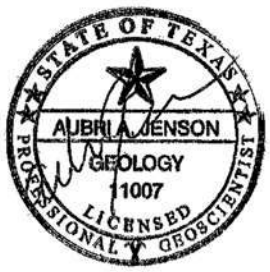
* DATUM: NAD 83

2A	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.

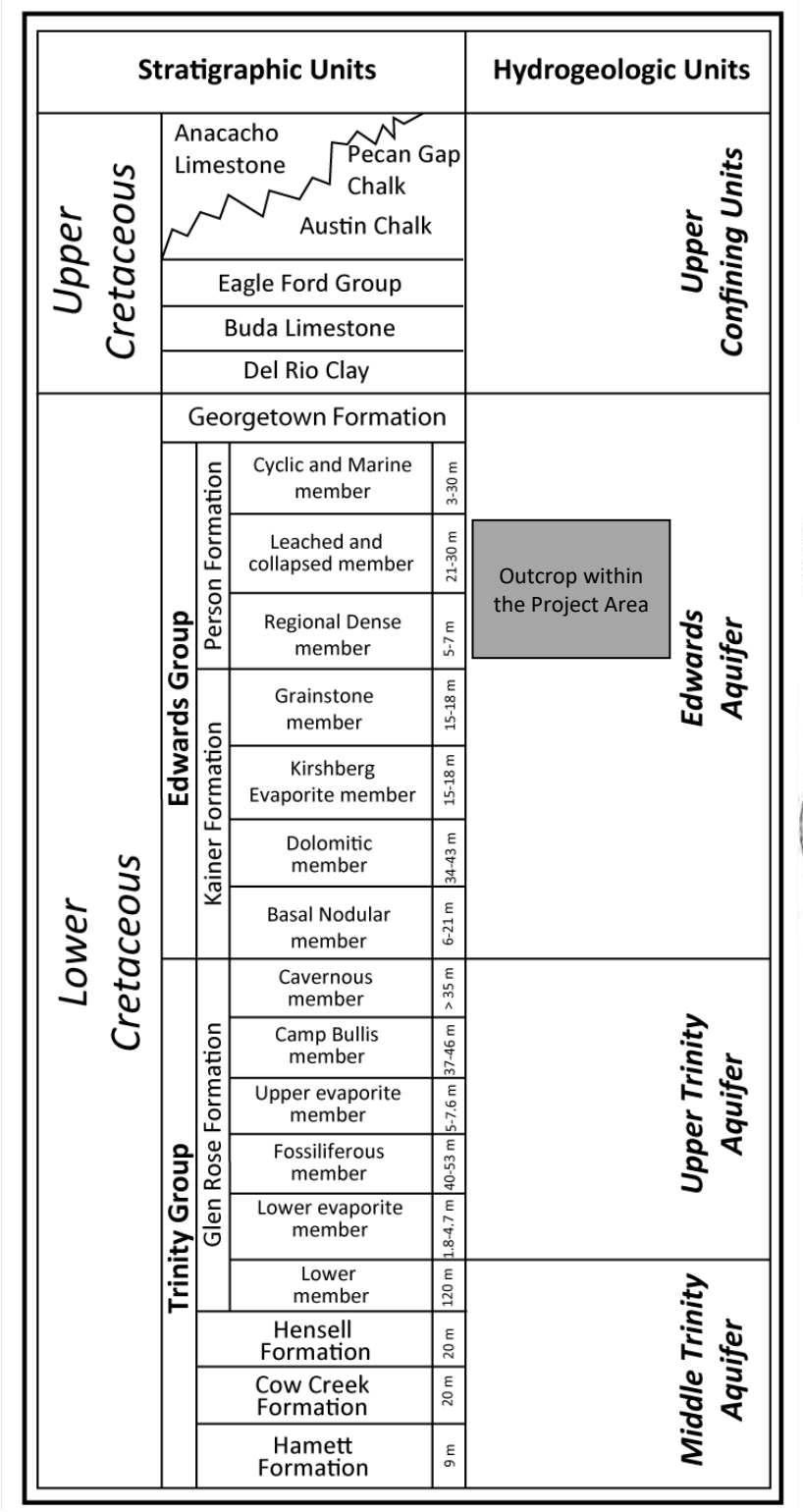


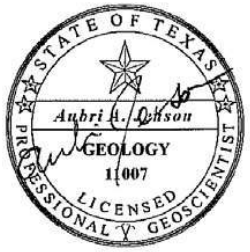
Date 14 September 2023

Sheet 1 of 1

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

ATTACHMENT B: Stratigraphic Table





This stratigraphic column shows the regional geologic units and indicates the zones of rocks that outcrop in the project site. Adapted from Lindgren et al. (2004).

ATTACHMENT C

ZARA
ENVIRONMENTAL LLC
Integrity | Science | Expertise
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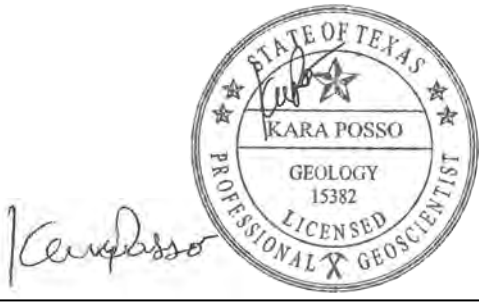
GEOLOGIC ASSESSMENT FOR
TEXAS STATE UNIVERSITY FREEMAN CENTER
SAN MARCOS, HAYS COUNTY, TEXAS

Prepared for
Halff Associates, Inc.
Briarwick Drive, Suite 100
Austin, TX, 78729

3 October 2023

In accordance with the Texas Board of Professional Geologists rules at 22 Texas Administrative Code, Part 39, Chapter 851, Subchapter C, §851.156, this report is signed and sealed on the title page to assure the user that the work has been performed by or directly supervised by the following professional geologist who takes full responsibility for this work.

The computer-generated seal appearing on this document was authorized by Aubri Jenson, P.G. 11007 & Kara Posso, P.G. 15382 on 3 October 2023.



Aubri Jenson, Texas Professional Geoscientist No. 11007
Kara Posso, Texas Professional Geoscientist No. 15382
Zara Environmental LLC Geoscience Firm Registration No. 50365

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Introduction

A geologic assessment (GA) was conducted within a 9-acre portion of the Texas State University (TSU) Freeman Center that has been proposed for construction of a mobile home with septic system and driveway in Hays County, Texas (Project Area; Figure 1). The site has been previously cleared and is currently in use as agricultural land for cattle, with several structures for livestock and storage. As the Project Area is entirely inside the Edwards Aquifer Recharge Zone, it meets the Texas Commission of Environmental Quality's (TCEQ) requirements for regulation under the Edwards Rules at Title 30 Texas Administrative Code (TAC) Chapter 213.5. An exemption was requested to assess only the parcel in which regulated activity would occur for the Project, due to the large expanse of the entire property (the 3,300-acre Freeman Ranch) of which the Freeman Center is a part. Correspondence between TSU and the TCEQ regarding the exemption is provided as Attachment E, and a metes and bounds description of the 9-acre tract proposed for regulated constructions activity is included as Attachment F. A detailed walking survey of the Project Area was conducted on 14 September 2023, documenting one karst feature.

Methods

Background Data Collection

Surface geologic maps from Blome et al. (2005) and the Geologic Atlas of Texas (GAT 2010) were reviewed. Soil descriptions were compiled from the Web Soil Survey of the U.S. Department of Agriculture ([USDA] 2023). Available Texas Water Development Board (TWDB) and TCEQ water well information was also reviewed for the Project Area. Available floodplain maps from the Federal Emergency Management Agency (FEMA) were reviewed. Background information was collected from the TCEQ using the central registry database online query (TCEQ 2023). Additionally, a data request was submitted to the Texas Speleological Society (TSS) for any documented caves or karst features on or within 0.5 miles of the Project Area boundaries.

Field Survey

Karst survey methods followed protocols outlined in TCEQ Instructions to Geologists for Geologic Assessments (TCEQ 2004). Walking ground surveys, as defined by Veni and Reddell (2002), TCEQ (2004), and Barrett (2005), were conducted throughout the Project Area and reconnaissance excavations were conducted at all potential karst features. Positions of all features were documented using a Garmin Oregon 450t handheld GPS unit (+/- 10 feet) and checked against field maps based on digital orthoimagery. All features identified were evaluated for potential impact to Edwards Aquifer recharge. This is completed by ranking the recharge sensitivity of each feature using the point scheme defined by TCEQ (2004). Fieldwork was conducted by Texas licensed Professional Geoscientists Aubri Jenson (TX PG# 11007) and Kara Posso (TX PG# 15382) on 14 September 2023.

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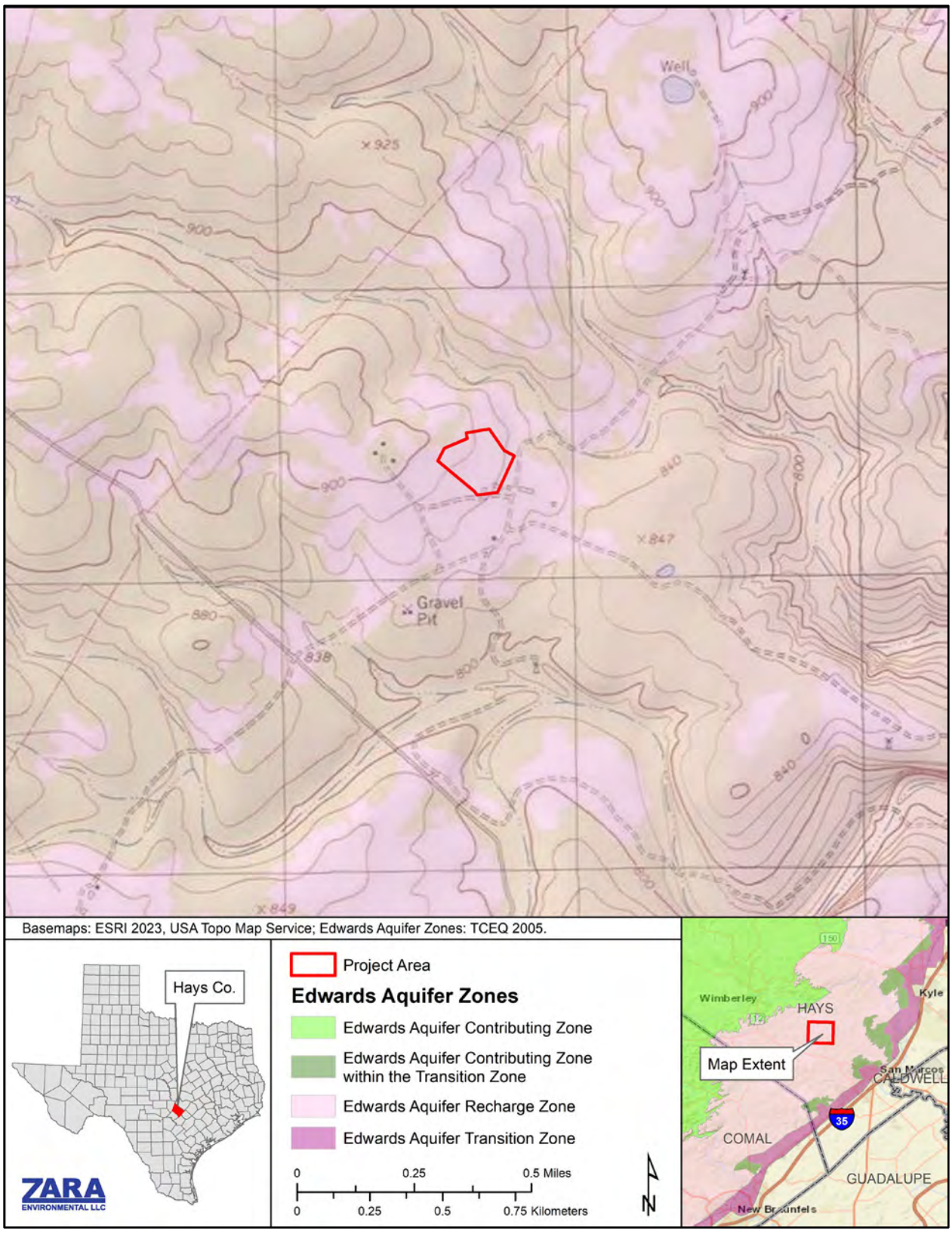

Figure 1. Location map displaying the survey area in San Marcos, Hays County, Texas and Edwards Aquifer Zones (TCEQ 2005).

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Results

Background Data

Soils

Two soil types were identified in the Project Area by the USDA (Figure 2). A brief description of each soil type is below.

Rumple-Comfort, rubbly association, 1 to 8 percent slopes (RUD) This ridge forming soil is characterized as a very gravelly clay loam with depths between 0 and 28 inches (USDA 2022). The soil's capacity to transmit water is moderately low to moderately high (0.06 to 0.2 in/hr) through its most limiting layer, placing it in Hydrologic Soil Group D. This soil comprises 66% of the survey area.

Tarpley clay, 1 to 3 percent slopes (TaB) This soil occuring on low hillslopes is a clayey residuum weathered from limestone with depths between 0 and 17 inches (USDA 2022). The soil's capacity to transmit water is very low to moderately low (0.0 to 0.6 in/hr) through its most limiting layer, placing it in Hydrologic Soil Group D. This soil comprises 33% of the survey area.

Site Geology

Mapped surface geology from Blome et al. 2005 is presented as Figure 3 and Attachment D. The Project Area is overlain by the Leached and Collapsed Member (Kplc) and the Regional Dense Member (Kprd) of the Person formation in the Edwards Group. The topography and outcropping bedrock observed in the Project Area were consistent with these designations, where the Kplc is described as a crystalline limestone with chert and extensive collapsed breccia identifiable by iron-stained beds and fossil coral, and the Kprd is described as a dense, clay-rich mudstone susceptible to erosion with some minor iron traces (Blome, 2005). A geologic contact between members is mapped following a topographic contour along the eastern edge of the Project Area; however, its surface expression in the field was obscured by ground disturbance and agricultural land use. Generally, smooth outcropping bedrock was observed along the eastern edge of the Project Area, while the rest of the site contained remnants of surficial weathering (float rock or epikarst).

The contact between the Leached and Collapsed Member and the Regional Dense Member is consistent with regional stratigraphy. There was one sensitive feature discovered within the Leached and Collapsed Member during pedestrian surveys and the Regional Dense Member underlies it, thus rapid infiltration into the subsurface is likely. The Person formation is regionally underlain by the Kainer formation, a denser unit with moderate permeability. It is likely that water could rapidly infiltrate into the subsurface within the Project Area; however, it should be noted that runoff is likely to enter a drainage to the northeast and could potentially recharge the aquifer at locations outside the Project Area. No mapped faults cross the Project Area, and no indications of faulting were apparent from surface observations.

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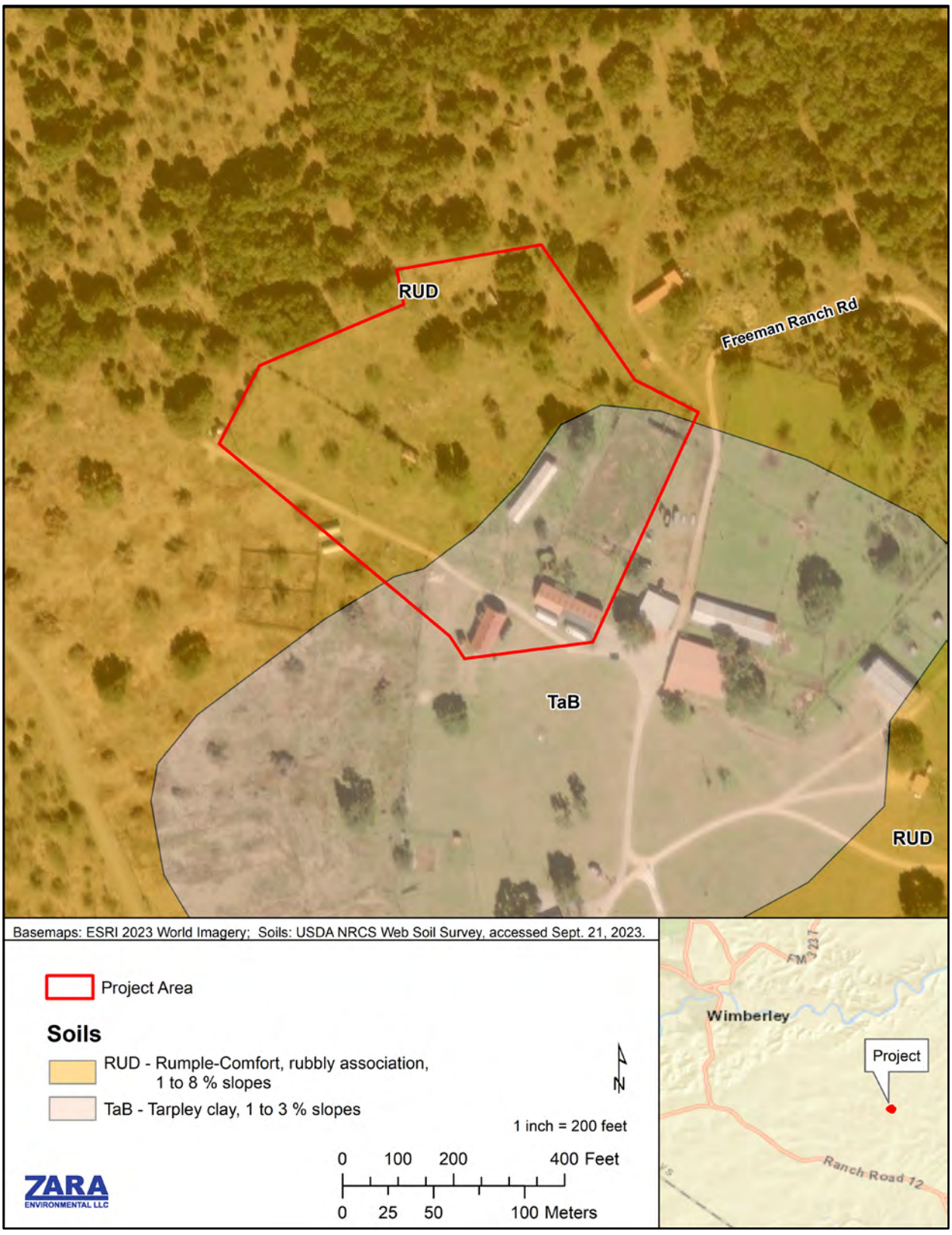

Figure 2. Soil types occurring in the Project Area as identified by the USDA (2023).

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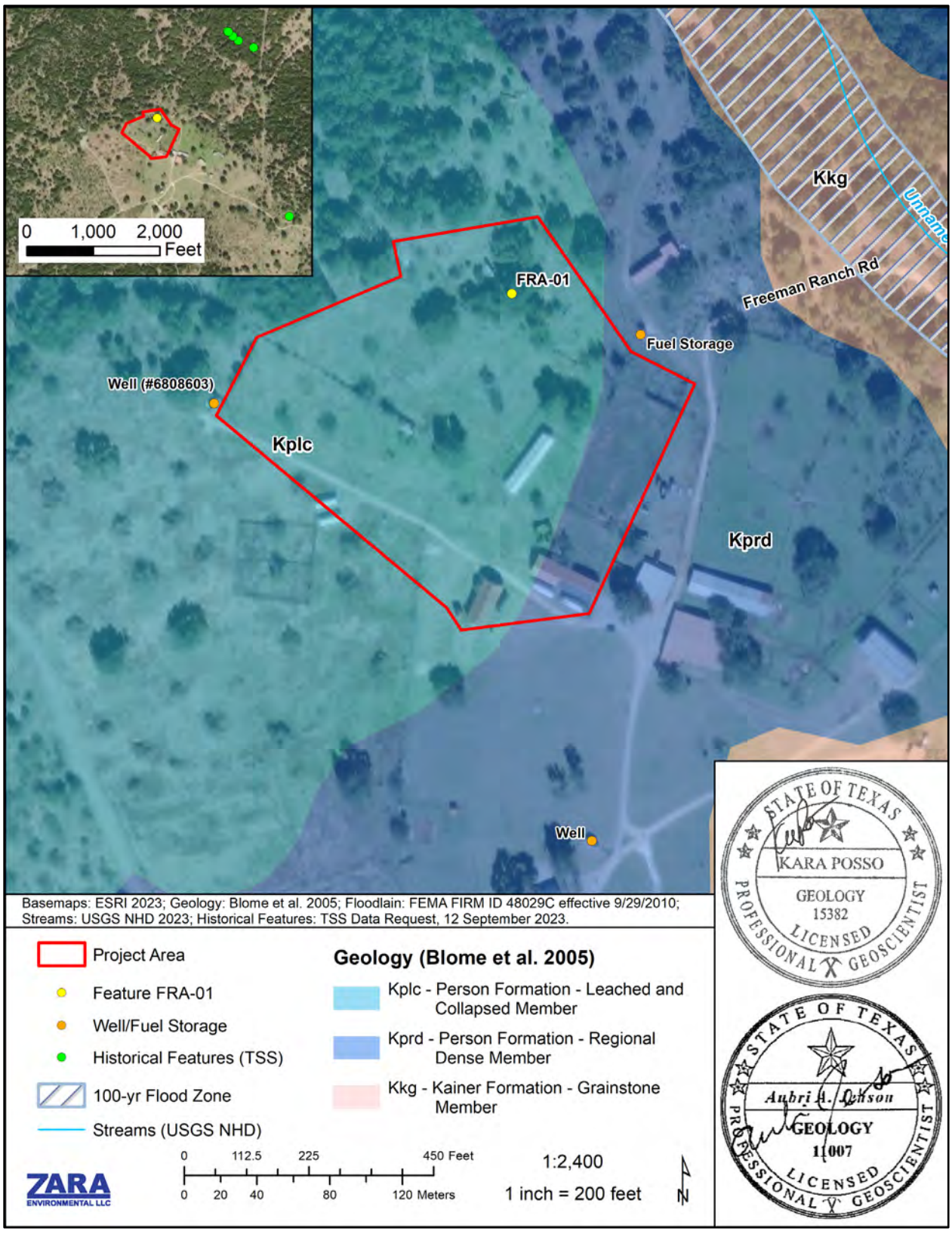

Figure 3. Geology of Project Area including locations of all features discovered during pedestrian surveys.

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Regional Geology

The Project Area is located in the southeastern portion of the Edwards Plateau Physiographic Province of Central Texas, along the Balcones Fault Zone (BFZ). The BFZ also forms the Balcones Escarpment, which is a highly eroded region bordering the Edwards Plateau on its southern and western boundaries. The region is typified by higher elevations to the north and west, generally sloping in a southeastern direction. Canyons and drainage basins were formed by surface flow of the Guadalupe River and San Marcos Rivers, and their tributaries including Sink Creek, which drains the Project Area.

The geologic formations occurring within the region are comprised mostly of Cretaceous age-rocks with some overlaying Quaternary alluvium along surface drainages. The limestone bedrock developed from the accumulation of thick sequences of marine sediments deposited in a lagoon environment on the San Marcos Platform protected by a barrier reef during the Cretaceous about 100 million years ago (Rose 1972). In Central Texas, the Cretaceous strata slightly dip to the southeast at about 10 to 15 feet per mile toward the Gulf of Mexico. The soils that have formed on top of these limestones are a result of rocks eroded off the Balcones Escarpment and Edwards Plateau and re-deposited downstream. Soils in the area are relatively thin and offer minimal filtering capability.

Regional Stratigraphy

The geological formations that comprise the Edwards Aquifer are from top to bottom the Georgetown, Person, and Kainer formations. A stratigraphic column showing regional geology is included as Attachment B.

The Georgetown Limestone can be up to about 20 feet thick and unconformably overlies the Person Formation. The Georgetown Limestone is a shaley, relatively impervious yellow limestone that is not known to yield water and sometimes can be considered part of the upper confining unit to the Edwards Aquifer. The formation can be readily identified by the presence of the index fossil brachiopod *Waconella wacoensis*.

The Person and Kainer Formations comprise the Edwards Group (Rose 1972). The Person Formation is about 130 feet thick in northern Hays County. The composition of the Person Formation ranges from crystalline limestone to grainstone to mudstone and is divided into three informal hydrogeologic units: the Cyclic and Marine members, undivided; the Leached and Collapsed members, undivided; and the Regional Dense member. The Kainer Formation has an approximate total thickness of 285 feet. The lithology of the Kainer Formation ranges from mudstone to *miliolid* grainstone to crystalline limestone. The Kainer is subdivided into four informal members that include the grainstone, Kirschberg Evaporate, Dolomitic and Basal Nodular members.

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Regional Groundwater

The Project Area is located in a region of humid subtropical climate with average annual rainfall of approximately 33 inches per year (NOAA 2014). Many of the rainfall events occur as thermal convection thunderstorms that can produce excessive amounts of precipitation in short periods of time. Some of this water makes its way into the aquifers, usually through concentrated areas along creeks and rivers in outcrop areas of the recharge zone.

The Edwards Aquifer is one of the most permeable and productive limestone aquifers in the United States. In the San Antonio region, the aquifer supplies drinking water to more than 1.7 million people and provides habitat for several endangered aquatic species. Karst aquifers are, by their nature, extremely vulnerable to contamination. Soils in karst areas tend to be thin and patchy. Thus, the filtration of diffuse recharge afforded by soils is at best low and is only decreased by human activity. Recharge in karst systems commonly occurs as point recharge into specific karst features, bypassing what little filtration a limited soil zone might afford.

The Project Area is within the Recharge Zone of the San Antonio Segment of the Edwards Aquifer, as delineated by the TCEQ Edwards Rules (30 TAC §213). The Recharge Zone of the Edwards Aquifer is defined as the land surface area where caves, sinkholes, faults, fractures, or other permeable features provide pathways for recharge of surface waters into the Edwards Aquifer. This zone is regulated due to the vulnerability of this karst aquifer to pollution. Recharge into the Edwards Aquifer occurs primarily in losing streams, where surface water from the contributing zone flows over faults, fractures, and karst features that have been solutionally enlarged in the Recharge Zone (Sharp and Banner 1997).

Water Wells and Fuel Storage Tanks

No wells were mapped within the Project Area according to the TWDB groundwater database (TWDB 2023). However, two wells were observed near the survey boundaries during field inspection (Figure 3). The first well was located at the western corner of the property and was identified by the TWDB database as State Well #6808603, a water supply well in use and owned by Texas State University Freeman Center (Figure 4). The well was drilled in June 2009 to a depth of 1040 feet below ground surface, where it draws water from the Lower Glen Rose (Kgru) and Cow Creek (Kcc) formations of the Trinity Aquifer. The well was set in a concrete pad next to a pump house and water storage tank, all of which were surrounded by a chain link fence. The second well was located approximately 400 feet south of the Project Area on the west side of the road near the Freeman Ranch headquarters building. No records of this well were found in the TWDB database. The well was housed in a shed and appeared to be in use by the Freeman Center (Figure 5).

A fuel storage station was noted near the northeast boundary of the Project Area (Figure 3). Two Aboveground Storage Tanks (AST) were located under a concrete-lined pavilion with secondary containment around each tank (Figure 6). The ASTs were estimated to be 500 gallons and 1000 gallons, respectively, and were likely to contain diesel and/or gasoline. The storage area

appeared to be in good operating condition and there was no indication of leaked fuel or staining near the storage area.

Figure 4. Overview of the well located near the western Project Area boundary (Well #6808603).

Figure 5. Overview of the well pump house located south of the Project Area.

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Figure 6. Fuel storage area with two ASTs and secondary containment located northeast of the Project Area.

Floodplains

An unnamed tributary to Sink Creek is mapped approximately 500 feet northeast of the Project Area (Figure 3, Attachment D). There is a 100-year floodplain associated with the tributary; however, no portion of the Project Area was mapped within a flood zone (FEMA 2023).

Previously Identified Features

Information on karst features obtained from the TSS indicated that no karst features have been reported within the Project Area; however, within a 0.5-mile radius, there are TSS records for two solution cavities, three small horizontal caves, and one sinkhole (TSS 2023, Figure 3). The solution cavities were described as natural depressions with soil drains, with a minimum size of 0.5 feet diameter and 1 foot deep; these were noted as having no airflow and possibly in use as animal burrows. The caves were all situated in the southside of a drainage into a tributary of Sink Creek and were described as low crawlways extending 6 to 10 feet into the bedrock before becoming too small to be humanly passable. The sinkhole was identified as Pea Soup Pond and described as a wide shallow depression about 300 feet in diameter that can hold water for livestock. The location of these features relative to the Project Area are shown on Figure 3 and Attachment D. No other features proximal to the Project Area were identified in records available through the TCEQ Central Registry.

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Description of Features

Results of the surface karst feature survey are presented in the TCEQ Geologic Assessment Table (Attachment A) and are discussed below. One feature was identified within the Project Area through pedestrian surveys. The feature was evaluated for recharge sensitivity according to TCEQ standards. The feature location is displayed on maps in Figure 3 and Attachment D.

Feature FRA-01; Sinkhole

This feature was a sinkhole located in the northern portion of the Project Area (Figure 3; Figure 7 - Figure 10). The surface depression measured approximately 3.0 feet in diameter by 2.75 feet deep, but it appeared to have been enlarged by a burrowing animal. A drain was visible in the center of the sinkhole with an aperture 0.5 feet wide by 0.75 feet high. The interior of the feature contained leaf litter, loose organic soil, and limestone fragments. Hand excavation revealed loose sediment at least 0.75 feet thick, and horizontal continuation at least 2.5 feet following a fracture with a trend of 270°. The sinkhole would receive sheet flow from catchment area of less than 1.6 acres. There is a moderate potential for this feature to rapidly transmit water to the subsurface due to development along a fracture. This feature is rated as sensitive according to the Edwards Aquifer Rules (30 TAC §213.5(b)(3)).

Figure 7. Overview of FRA-01, a sinkhole with a visible drain developed along a fracture.

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Figure 8. FRA-01 contained an open aperture in the center of the sinkhole.

Figure 9. The interior of FRA-01 was horizontal and contained leaf litter, organic soil, and limestone fragments.

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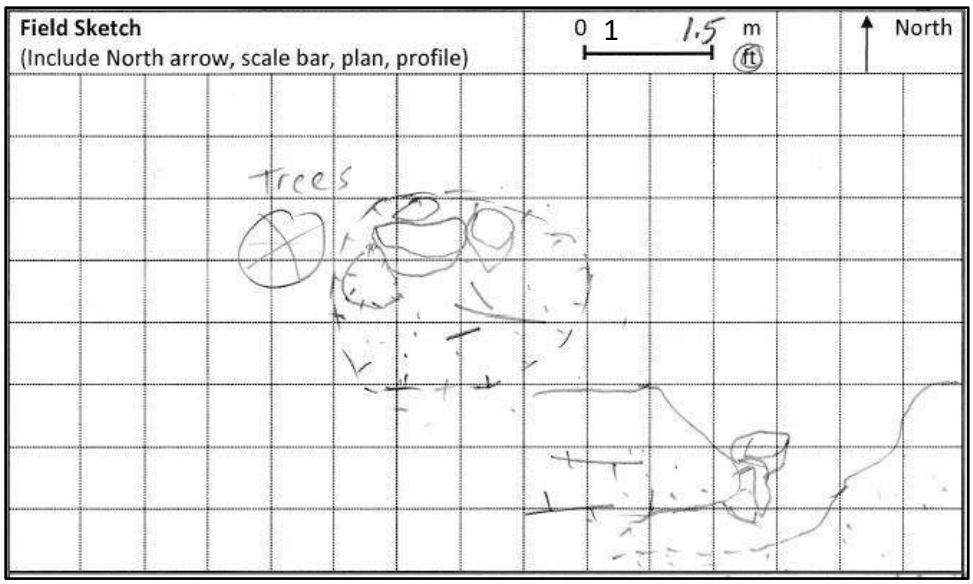

Figure 10. Field sketch of Feature FRA-01.

Discussion and Recommendations

The overall potential for rapid infiltration of runoff into the subsurface within the Project Area is moderate, but higher in the western portion, which is underlain by the Leached and collapsed Member of the Person formation. Additionally, soils in that portion of the Project Area are relatively thin, offering little filtration capacity. An appropriate buffer should be placed around the karst feature identified as FRA-01. The TCEQ guidelines suggest a natural buffer around each sensitive feature extending a minimum of 50 feet in all directions from the footprint of the feature. FRA-01 is a small feature, and a 50-foot buffer is assessed to be sufficient relative to the size of the surface catchment and the limited extent of the proposed regulated activity.

Proper use of stormwater BMPs are recommended throughout the duration of the Project to prevent untreated runoff from entering the unnamed tributary to Sink Creek to the northeast of the Project Area. BMPs should be developed, installed, inspected, and maintained through construction in accordance with TCEQ requirements under the Edwards Aquifer Protection Program. Disturbance to natural bedrock surfaces and existing infrastructure should be minimized wherever possible. Care should be taken when working around any existing infrastructure. If any karst features are discovered during excavation activities, all work within 50 feet of the feature should stop and a Professional Geoscientist should evaluate the feature for sensitivity and coordinate with the TECQ Edwards Aquifer Protection Program, as necessary.

ATTACHMENT C

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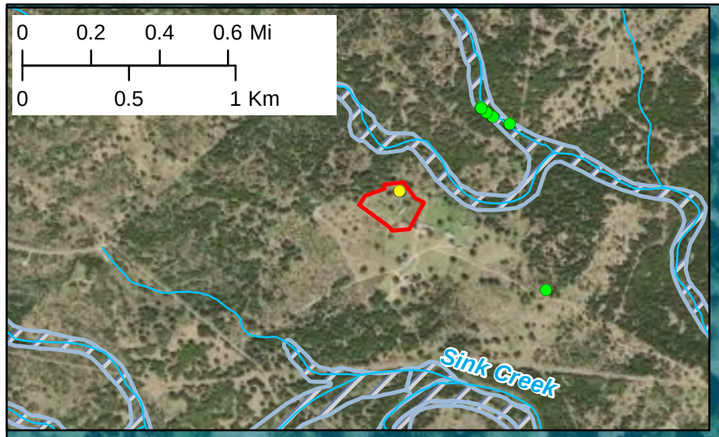
ATTACHMENT D

Attachment D. Site Geologic Map



FRA-01

Fuel Storage

Well (#6808603)

Kplc

Kprd

Unnamed

Freeman Ranch Rd

Kkg

Kprd

Kkke

Well

Kkg

Basemaps: ESRI 2023; Geology: Blome et al. 2005; Floodlain: FEMA FIRM ID 48029C effective 9/29/2010; Streams: USGS NHD 2023; Historical Features: TSS Data Request, 12 September 2023.

Project Area

100-yr Flood Zone

Streams (USGS NHD)

Geology (Blome et al. 2005)

Kplc - Person Formation - Leached and Collapsed Member

Kprd - Person Formation - Regional Dense Member

Kkg - Kainer Formation - Grainstone Member

Kkke - Kainer Formation Kirschberg Evaporite Member

Feature FRA-01

Historical Features (TSS)

Well/Fuel Storage

N

0 100 200 400 Feet

0 25 50 100 Meters

1 inch = 200 feet

1:2,400

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Aubri A. Dawson
GEOLOGY
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PROFESSIONAL GEOSCIENTIST

ATTACHMENT E

Attachment E. TCEQ Correspondence

From:	James Slone
To:	Cowan, Mark
Cc:	Kincaid, Donnie; Miki Chilarescu; Lillian Butler
Subject:	RE: TXST University Freeman Center - Proposed new mobile home for ranch foreman
Date:	Wednesday, May 24, 2023 3:57:13 PM

Mark,
There seems to be a bit of confusion regarding the term “exception;” I will attempt to explain.
There is an plan type we refer to as an Exception Plan. This type of plan has a reduced fee ($500) and is usually reserved for small projects. A common example we use is a sidewalk in a park. The project is small and impact of the project is relatively low. We believe your project falls into this category.

There is another use of the word “exception” in the Edwards program. There is an attachment to Water Pollution Abatement Plans (WPAP) called Exception to the Geologic Assessment. A request is made in the application, but we usually discuss and decide prior to the application being submitted to the TCEQ. One example is where a box store exists and a restaurant is being proposed in the parking lot. The WPAP for the restaurant will ask for an Exception to the Geologic Assessment because nothing is gained by have a geologist assess the parking lot – there is basically no geology to see. We would grant the Exception the Geologic Assessment during the approval process but we would have already had the discussion so there are no surprises when the application is submitted.

The Edwards rules (30 TAC 213) require a Geologic Assessment for the entire site, and the site is defined in the rules by legal boundary. We understand the burden of a Geologic Assessment for 3300 acres when the project is relatively small. We do need a Geologic Assessment for your project; there are lots of sensitive features in the area. So, we came up with a bit of a work around. If you can define the area of regulated activity (area of the trailer, gravel pad, driveway, etc.) using metes and bounds, we will require you to get a Geologic Assessment for only that regulated activity area. You will need to request an Exception to the Geologic Assessment for the area located outside of the metes and bounds but within the legal boundary of the property.

In summary, you can submit an Exception Plan for your project. You will need a Geologic Assessment for the regulated activity area, but you will ask for the Exception the Geologic Assessment for the area located outside of the defined project area.

Please retain this email for your records and please let me know if you have any questions.
Bo

James “Bo” Slone, P.G.
Geoscientist
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
(512) 239-5711

From: Cowan, Mark <mdc140@txstate.edu>
Sent: Tuesday, May 23, 2023 4:51 PM

To: James Slone <james.slone@tceq.texas.gov>
Cc: Kincaid, Donnie <dk20015@txstate.edu>; Miki Chilarescu <miki.chilarescu@tceq.texas.gov>; Lillian Butler <Lillian.Butler@Tceq.Texas.Gov>
Subject: RE: TXST University Freeman Center - Proposed new mobile home for ranch foreman

Bo,

Thank you for your reply and for your explanation of the reasoning behind the interpretation.

When you state that, "A Geologic Assessment is required for the entire site which is based on the legal boundary" does this mean that the entire 3300 + acre ranch must be included in the assessment - or can we have the actual construction site surveyed/legally described and focus the Geologic Assessment on that?

Is the exception request submitted as part of the Edwards Aquafer Protection Plan Application? - If so, does this mean that if the exception is not granted, we'd have to modify and resubmit our EAPP, restarting the review process timeline?

Sincerely,

Mark D. Cowan

Construction Coordination Manager
Facilities Planning, Design & Construction
mdc140@txstate.edu
(512) 507-0243 cell

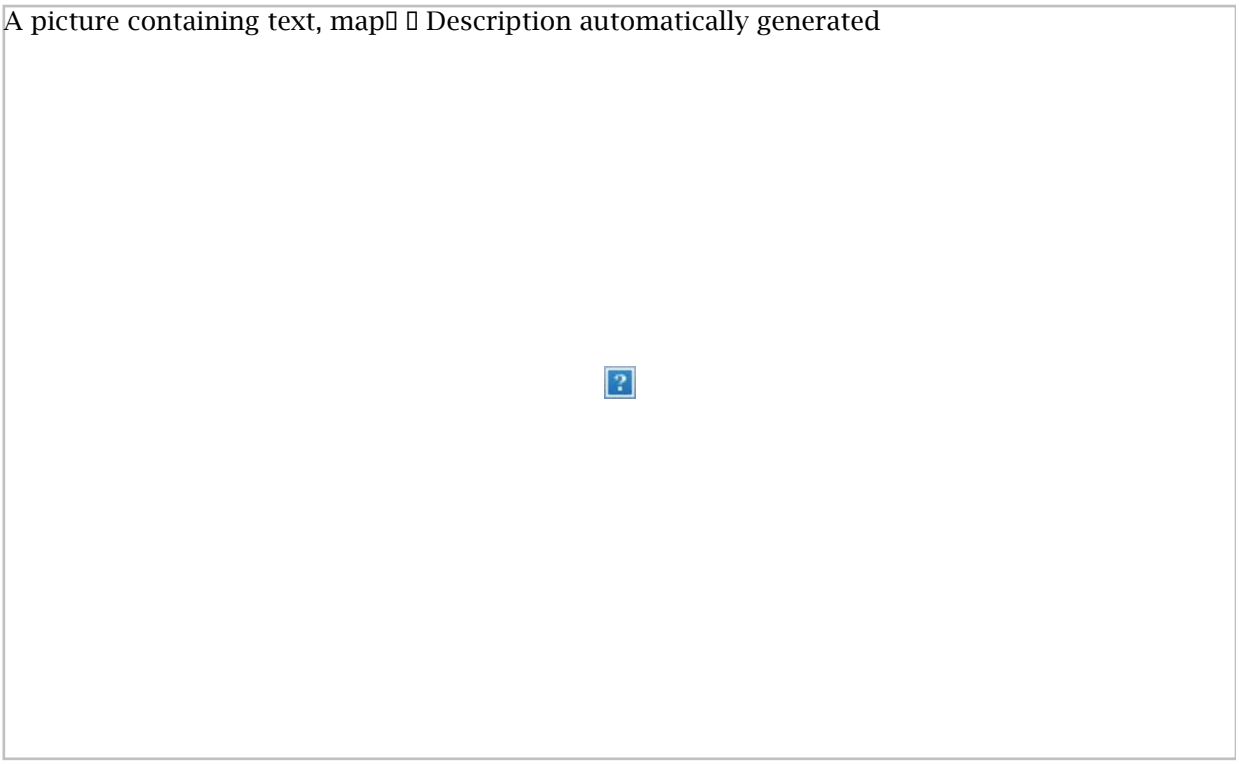
From: James Slone <james.slone@tceq.texas.gov>
Sent: Tuesday, May 23, 2023 4:01 PM
To: Cowan, Mark <mdc140@txstate.edu>
Cc: Kincaid, Donnie <dk20015@txstate.edu>; Miki Chilarescu <miki.chilarescu@tceq.texas.gov>; Lillian Butler <Lillian.Butler@Tceq.Texas.Gov>
Subject: RE: TXST University Freeman Center - Proposed new mobile home for ranch foreman

Mark,
I talked to the team and my manger to help determine the requirements for the site and associated project.

The request is to determine if the following activity would be deemed regulated by the TCEQ Edwards Aquifer Protection Program.

The project was described as:

A mobile home will be set up for the new ranch foreman located on Freeman Ranch. This particular area is highlighted with the provided exhibit (below). The proposed mobile home will be a single-family residence for the new ranch foreman. It is to be placed in the present bull pasture and will include demolition of an existing stables, relocation of fencing, placement of a new double wide mobile home on a gravel home pad, creation of a gravel driveway, a new septic system, and connection to existing water and power already at the site.



Regulated activity does not include the construction of single-family residences on lots that are larger than five acres, where no more than one single-family residence is located on each lot. However, according to Hays County Appraisal District parcel **R15916** is approximately 3380.819-acres designated as rural land owned by the Freeman Harold M Education Foundation. The area highlighted in the attachment is not designated as a residential parcel and is not owned by a single-family landowner.

The proposed activity is associated to education and does not meet the requirements of a single-family landowner. The proposed activity would require an Edwards Aquifer protection plan to be submitted for review and approval. Considering what is being proposed, the program suggest an Exception Request application. A Geologic Assessment is required for the entire site which is based on the legal boundary.

Details are available at: https://www.tceq.texas.gov/permitting/eapp/except.html

Please let me know if you have additional questions,

Bo

James “Bo” Slone, P.G.
Geoscientist
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
(512) 239-5711

From: James Slone

Sent: Monday, May 22, 2023 12:47 PM
To: Cowan, Mark <mdc140@txstate.edu>
Cc: Kincaid, Donnie <dk20015@txstate.edu>
Subject: RE: TXST University Freeman Center - Proposed new mobile home for ranch foreman

Mark,
I received your voicemails; I was out at the end of the week last week
I have posted your question to the team and will get you an answer ASAP, hopefully later today.
Bo

James "Bo" Slone, P.G.
Geoscientist
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
(512) 239-5711

From: Cowan, Mark <mdc140@txstate.edu>
Sent: Monday, May 22, 2023 11:52 AM
To: James Slone <james.slone@tceq.texas.gov>
Cc: Kincaid, Donnie <dk20015@txstate.edu>
Subject: TXST University Freeman Center - Proposed new mobile home for ranch foreman

Mr. Slone,

I work in for Texas State University, Facilities Planning Design & Construction and am assisting with a project to set up a mobile home at the Freeman Center located on the Freeman Ranch. This property is located in the Edwards Aquafer Recharge Zone at 2101 Freeman Ranch Rd, San Marcos, TX 78666. (A Google Earth link for the proposed location is attached.)

Shea Cockrell the environmental supervisor with Texas State University's EHSRM, recommended that I contact you to determine if this project is a "Regulated activity," as this appears to fall within the exclusion "construction of single-family residences on lots that are larger than five acres, where no more than one single-family residence is located on each lot."

The proposed mobile home will be a single-family residence for the new ranch foreman. It is to be placed in the present bull pasture and will include demolition of an existing stables, relocation of fencing, placement of a new double wide mobile home on a gravel home pad, creation of a gravel driveway, a new septic system, and connection to existing water and power already at the site.

- The fenced lot for this residence will be in excess of 5 acres. The attached aerial image shows the proposed fence line for the lot as presently envisioned.
- The placement of the new mobile home together with the demolition of the existing stables will result in a *decrease* in the impermeable area on the lot, if the new gravel driveway is excepted. If the new gravel driveway is included, there may be a small increase in impermeable area, depending on the length of the drive.
- Construction-related temporary BMPs will be used.
- The new septic system has yet to be designed, but it will be within this lot and will only serve this residence. This system will be permitted through Hays County.

The Freeman Center Director hopes to hire a new ranch foreman soon, and the provision of the new mobile home for the ranch foreman is necessary for the hiring process. Because of this, time is our main concern. We hope to install the mobile home this summer.

Our primary question is, "Is this project a 'Regulated activity' under Title 30 Texas

Administrative Code, 30 TAC 213.3(28)?"

The mission of the Freeman Center includes environmental research, and we want to ensure that we comply with all applicable regulations. Given the time pressure, we also need to move this project forward as expeditiously as possible. We appreciate you responding to us and are happy to discuss this project with you in further detail if you wish.

Sincerely,

Mark D. Cowan

Construction Coordination Manager
Facilities Planning, Design & Construction
mdc140@txstate.edu
(512) 507-0243 cell

CAUTION:. This email originated from outside the TXST network. Do not click links or download files unless you know the sender and content are safe.

ATTACHMENT F

Attachment F. Metes and Bounds Description of Regulated Activity Area

SURVEYORS NOTES

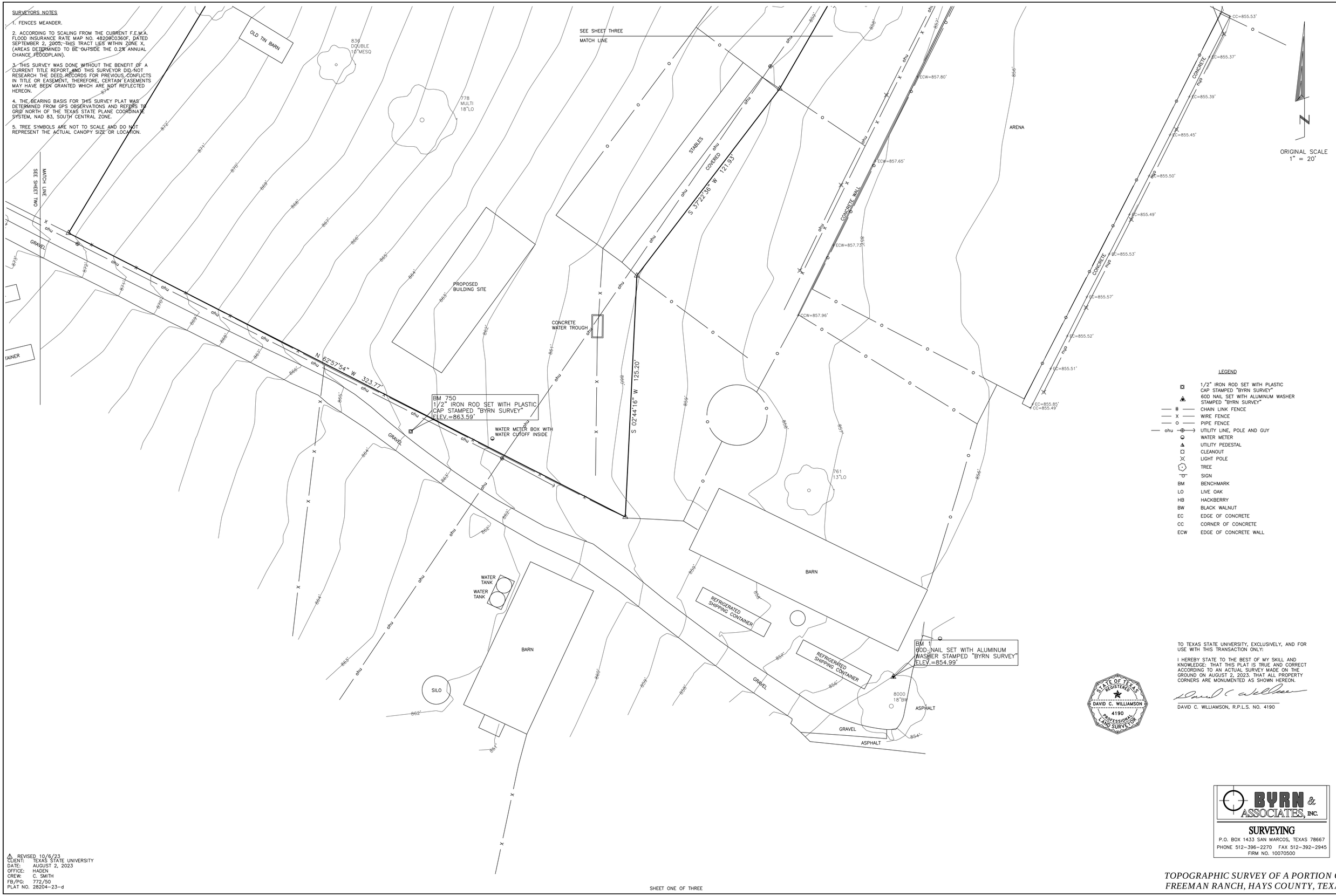
1. FENCES MEANDER.

2. ACCORDING TO SCALING FROM THE CURRENT F.E.M.A. FLOOD INSURANCE RATE MAP NO. 48209C0360F, DATED SEPTEMBER 2, 2005, THIS TRACT LIES WITHIN ZONE X. (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).

3. THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT, AND THIS SURVEYOR DID NOT RESEARCH THE DEED RECORDS FOR PREVIOUS CONFLICTS IN TITLE OR EASEMENT, THEREFORE, CERTAIN EASEMENTS MAY HAVE BEEN GRANTED WHICH ARE NOT REFLECTED HEREON.

4. THE BEARING BASIS FOR THIS SURVEY PLAT WAS DETERMINED FROM GPS OBSERVATIONS AND REFERS TO GRID NORTH OF THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, SOUTH CENTRAL ZONE.

5. TREE SYMBOLS ARE NOT TO SCALE AND DO NOT REPRESENT THE ACTUAL CANOPY SIZE OR LOCATION.



LEGEND

⊠	1/2" IRON ROD SET WITH PLASTIC CAP STAMPED "BYRN SURVEY"
⊛	60D NAIL SET WITH ALUMINUM WASHER STAMPED "BYRN SURVEY"
—#—	CHAIN LINK FENCE
—X—	WIRE FENCE
—o—	PIPE FENCE
ohu	UTILITY LINE, POLE AND GUY
⊖	WATER METER
▲	UTILITY PEDESTAL
□	CLEANOUT
☼	LIGHT POLE
⊛	TREE
⊙	SIGN
BM	BENCHMARK
LO	LIVE OAK
HB	HACKBERRY
BW	BLACK WALNUT
EC	EDGE OF CONCRETE
CC	CORNER OF CONCRETE
ECW	EDGE OF CONCRETE WALL

TO TEXAS STATE UNIVERSITY, EXCLUSIVELY, AND FOR USE WITH THIS TRANSACTION ONLY:

I HEREBY STATE TO THE BEST OF MY SKILL AND KNOWLEDGE; THAT THIS PLAT IS TRUE AND CORRECT ACCORDING TO AN ACTUAL SURVEY MADE ON THE GROUND ON AUGUST 2, 2023. THAT ALL PROPERTY CORNERS ARE MONUMENTED AS SHOWN HEREON.

STATE OF TEXAS REGISTERED DAVID C. WILLIAMSON 4190 PROFESSIONAL LAND SURVEYOR

DAVID C. WILLIAMSON, R.P.L.S. NO. 4190

BYRN & ASSOCIATES, INC.
SURVEYING
P.O. BOX 1433 SAN MARCOS, TEXAS 78667
PHONE 512-396-2270 FAX 512-392-2945
FIRM NO. 10070500

⚠ REVISED 10/6/23
CLIENT: TEXAS STATE UNIVERSITY
DATE: AUGUST 2, 2023
OFFICE: HADEN
CREW: C. SMITH
FB/PG: 772/50
PLAT NO. 28204-23-d

TOPOGRAPHIC SURVEY OF A PORTION OF FREEMAN RANCH, HAYS COUNTY, TEXAS

SURVEYORS NOTES

1. FENCES MEANDER.

2. ACCORDING TO SCALING FROM THE CURRENT F.E.M.A. FLOOD INSURANCE RATE MAP NO. 48209C0360F, DATED SEPTEMBER 2, 2005, THIS TRACT LIES WITHIN ZONE X, (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).

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4. THE BEARING BASIS FOR THIS SURVEY PLAT WAS DETERMINED FROM GPS OBSERVATIONS AND REFERS TO GRID NORTH OF THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, SOUTH CENTRAL ZONE.

5. TREE SYMBOLS ARE NOT TO SCALE AND DO NOT REPRESENT THE ACTUAL CANOPY SIZE OR LOCATION.

LEGEND

- 1/2" IRON ROD SET WITH PLASTIC CAP STAMPED "BYRN SURVEY"
- 60D NAIL SET WITH ALUMINUM WASHER STAMPED "BYRN SURVEY"
- CHAIN LINK FENCE
- WIRE FENCE
- PIPE FENCE
- UTILITY LINE, POLE AND GUY
- WATER METER
- UTILITY PEDESTAL
- CLEANOUT
- LIGHT POLE
- TREE
- SIGN
- BM BENCHMARK
- LO LIVE OAK
- HB HACKBERRY
- BW BLACK WALNUT
- EC EDGE OF CONCRETE
- CC CORNER OF CONCRETE
- ECW EDGE OF CONCRETE WALL

BM 764
1/2" IRON ROD SET WITH PLASTIC CAP STAMPED "BYRN SURVEY"
ELEV.=882.75'

BM 750
1/2" IRON ROD SET WITH PLASTIC CAP STAMPED "BYRN SURVEY"
ELEV.=863.59'

WELL AREA

GRAVEL

OLD TIN BARN

SHIPPING CONTAINER

SHIPPING CONTAINER

SHIPPING CONTAINER

PROPOSED BUILDING SITE

STABLES

CONCRETE WATER TROUGH

SEE SHEET THREE
MATCH LINE

SEE SHEET ONE
MATCH LINE

N 31°03'20" E 367.66'

S 64°02'15" E 275.57'

N 62°57'54" W 323.77'

S 37°22'36" W

2.38 Acres

ORIGINAL SCALE
1" = 20'

950 7"HB
948 12"LO
945 19"LO
943 9"LO
949 DOUBLE 14"HB
944 14"LO
942 9"LO
947 16"LO
941 6"LO
946 14"LO
952 4"LO
927 7"HB
925 7"HB
926 10"HB
924 12"HB
903 11"HB
836 DOUBLE 18"MESQ
778 MULTI 18"LO

BYRN & ASSOCIATES, INC.
SURVEYING
P.O. BOX 1433 SAN MARCOS, TEXAS 78667
PHONE 512-396-2270 FAX 512-392-2945
FIRM NO. 10070500

⚠ REVISED 10/6/23
CLIENT: TEXAS STATE UNIVERSITY
DATE: AUGUST 2, 2023
OFFICE: HADEN
CREW: C. SMITH
FB/PG: 772/50
PLAT NO. 28204-23-d

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5. TREE SYMBOLS ARE NOT TO SCALE AND DO NOT REPRESENT THE ACTUAL CANOPY SIZE OR LOCATION.

N

ORIGINAL SCALE
1" = 20'

LEGEND

⊡	1/2" IRON ROD SET WITH PLASTIC CAP STAMPED "BYRN SURVEY"
⛬	60D NAIL SET WITH ALUMINUM WASHER STAMPED "BYRN SURVEY"
—#—	CHAIN LINK FENCE
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⬡	TREE
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BM	BENCHMARK
LO	LIVE OAK
HB	HACKBERRY
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EC	EDGE OF CONCRETE
CC	CORNER OF CONCRETE
ECW	EDGE OF CONCRETE WALL

S 64°02'15" E 275.57'

N 31°03'20" E 367.68'

S 30°00'27" W 138.04'

2.38 Acres

OLD TIN BARN

CONCRETE WATER TROUGH

CONCRETE WALL

MATCH LINE
SEE SHEET TWO

MATCH LINE
SEE SHEET ONE

SHEET THREE OF THREE

989 5"LO
988 6"LO
815 9"LO
812 7"LO
811 8"LO
809 10"LO
810 7"LO
802 7"LO
813 10"LO
814 8"LO
803 8"LO
804 9"LO
805 9"LO
806 8"LO
807 7"LO
808 8"LO
993 8" & 9"LO
992 41"LO
948 12"LO
945 19"LO
950 7"HB
943 9"LO
949 DOUBLE 14"HB
944 14"LO
942 9"LO
947 16"LO
941 6"LO
946 11"LO
951 10"HB
995 14"HB
927 7"HB
925 7"HB
924 12"HB
903 11"HB
839 DOUBLE 19"MESQ
795 34"LO
794 DOUBLE 19"LO
ECW=857.74'
ECW=857.68'
ECW=857.80'
CC=855.53'
EC=855.37'

⚠	REVISED 10/6/23
CLIENT:	TEXAS STATE UNIVERSITY
DATE:	AUGUST 2, 2023
OFFICE:	HADEN
CREW:	C. SMITH
FB/PG:	772/50
PLAT NO.	28204-23-d

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FIRM NO. 10070500

TOPOGRAPHIC SURVEY OF A PORTION OF FREEMAN RANCH, HAYS COUNTY, TEXAS

Section III

Recharge and Transition Zone Request Form (TCEQ-0628)

Recharge and Transition Zone Exception Request Form

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

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.
Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Recharge and Transition Zone Exception Request Form** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Jason Bass, P.E.
Date: 10/17/2023
Signature of Customer/Agent:

Regulated Entity Name: Texas State University - Freeman Center

Exception Request

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

Administrative Information

3. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
4. ☒ The applicant understands that no exception will be granted for a prohibited activity in Chapter 213.
5. ☒ The applicant understands that prior approval under this section must be obtained from the executive director for the exception to be authorized.

Attachment 3A – Nature of Exception

The 2.4-acre site is located northwest of Freeman Ranch Rd in San Marcos, Texas. The subject site will consist of mobile home building, associated drives, parking, drainage, and utilities. The development is designated as education and non-residential. The total area of soil being disturbed is 0.55 ac. The existing site has a total impervious cover of 0.07 acre. The owner is removing 2,771 SF stable and the total proposed impervious is 0.07 acre.

Since this project is not expected to increase impervious cover, there is not an anticipated increase in total suspended solids that would require any permanent BMPs. As such we are requesting exception from providing any permanent BPMs.

The proposed condition of the project will preserve natural runoff conditions including the approximate 2.6 miles of overland flow path from the site to Sink Creek.

Additionally as outlined in the May 2023 email correspondence (attached) between Texas State University and the EAPP, the deeded site is 3,381 acres. The disturbed area for this project is only 2.4 acres as defined by the survey file in Attachment F of the Geological Assessment. The Geological Assessment included with this application is for approximately 9 acres surrounding the project site. The owner is seeking an exception to providing a full Geological Assessment of the entire 3,381 acres that lies outside of the 2.4 acres defined by the survey.

From: James Slone <james.slone@tceq.texas.gov>
Sent: Wednesday, May 24, 2023 3:57 PM
To: Cowan, Mark
Cc: Kincaid, Donnie; Miki Chilarescu; Lillian Butler
Subject: RE: TXST University Freeman Center - Proposed new mobile home for ranch foreman

Mark,
There seems to be a bit of confusion regarding the term "exception;" I will attempt to explain.
There is an plan type we refer to as an Exception Plan. This type of plan has a reduced fee ($500) and is usually reserved for small projects. A common example we use is a sidewalk in a park. The project is small and impact of the project is relatively low. We believe your project falls into this category.

There is another use of the word "exception" in the Edwards program. There is an attachment to Water Pollution Abatement Plans (WPAP) called Exception to the Geologic Assessment. A request is made in the application, but we usually discuss and decide prior to the application being submitted to the TCEQ. One example is where a box store exists and a restaurant is being proposed in the parking lot. The WPAP for the restaurant will ask for an Exception to the Geologic Assessment because nothing is gained by have a geologist assess the parking lot – there is basically no geology to see. We would grant the Exception the Geologic Assessment during the approval process but we would have already had the discussion so there are no surprises when the application is submitted.

The Edwards rules (30 TAC 213) require a Geologic Assessment for the entire site, and the site is defined in the rules by legal boundary. We understand the burden of a Geologic Assessment for 3300 acres when the project is relatively small. We do need a Geologic Assessment for your project; there are lots of sensitive features in the area. So, we came up with a bit of a work around. If you can define the area of regulated activity (area of the trailer, gravel pad, driveway, etc.) using metes and bounds, we will require you to get a Geologic Assessment for only that regulated activity area. You will need to request an Exception to the Geologic Assessment for the area located outside of the metes and bounds but within the legal boundary of the property.

In summary, you can submit an Exception Plan for your project. You will need a Geologic Assessment for the regulated activity area, but you will ask for the Exception the Geologic Assessment for the area located outside of the defined project area.

Please retain this email for your records and please let me know if you have any questions.
Bo

James "Bo" Slone, P.G.
Geoscientist
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
(512) 239-5711

From: Cowan, Mark <mdc140@txstate.edu>
Sent: Tuesday, May 23, 2023 4:51 PM
To: James Slone <james.slone@tceq.texas.gov>
Cc: Kincaid, Donnie <dk20015@txstate.edu>; Miki Chilarescu <miki.chilarescu@tceq.texas.gov>; Lillian Butler <Lillian.Butler@Tceq.Texas.Gov>
Subject: RE: TXST University Freeman Center - Proposed new mobile home for ranch foreman

Bo,

Thank you for your reply and for your explanation of the reasoning behind the interpretation.

When you state that, "A Geologic Assessment is required for the entire site which is based on the legal boundary" does this mean that the entire 3300 + acre ranch must be included in the assessment - or can we have the actual construction site surveyed/legally described and focus the Geologic Assessment on that?

Is the exception request submitted as part of the Edwards Aquafer Protection Plan Application? - If so, does this mean that if the exception is not granted, we'd have to modify and resubmit our EAPP, restarting the review process timeline?

Sincerely,

Mark D. Cowan

Construction Coordination Manager
Facilities Planning, Design & Construction
mdc140@txstate.edu
(512) 507-0243 cell

From: James Slone <james.slone@tceq.texas.gov>
Sent: Tuesday, May 23, 2023 4:01 PM
To: Cowan, Mark <mdc140@txstate.edu>
Cc: Kincaid, Donnie <dk20015@txstate.edu>; Miki Chilarescu <miki.chilarescu@tceq.texas.gov>; Lillian Butler <Lillian.Butler@Tceq.Texas.Gov>
Subject: RE: TXST University Freeman Center - Proposed new mobile home for ranch foreman

Mark,
I talked to the team and my manger to help determine the requirements for the site and associated project.

The request is to determine if the following activity would be deemed regulated by the TCEQ Edwards Aquifer Protection Program.

The project was described as:

A mobile home will be set up for the new ranch foreman located on Freeman Ranch. This particular area is highlighted with the provided exhibit (below). The proposed mobile home will be a single-family residence for the new ranch foreman. It is to be placed in the present bull pasture and will include demolition of an existing stables, relocation of fencing, placement of a new double wide mobile home on a gravel home pad, creation of a gravel driveway, a new septic system, and connection to existing water and power already at the site.

Regulated activity does not include the construction of single-family residences on lots that are larger than five acres, where no more than one single-family residence is located on each lot. However, according to Hays County Appraisal District parcel **R15916** is approximately 3380.819-acres designated as rural land owned by the Freeman Harold M Education Foundation. The area highlighted in the attachment is not designated as a residential parcel and is not owned by a single-family landowner.

The proposed activity is associated to education and does not meet the requirements of a single-family landowner. The proposed activity would require an Edwards Aquifer protection plan to be submitted for review and approval. Considering what is being proposed, the program suggest an Exception Request application. A Geologic Assessment is required for the entire site which is based on the legal boundary.

Details are available at: https://www.tceq.texas.gov/permitting/eapp/except.html

Please let me know if you have additional questions,

Bo

James “Bo” Slone, P.G.
Geoscientist
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
(512) 239-5711

From: James Slone
Sent: Monday, May 22, 2023 12:47 PM
To: Cowan, Mark <mdc140@txstate.edu>
Cc: Kincaid, Donnie <dk20015@txstate.edu>
Subject: RE: TXST University Freeman Center - Proposed new mobile home for ranch foreman

Mark,
I received your voicemails; I was out at the end of the week last week
I have posted your question to the team and will get you an answer ASAP, hopefully later today.
Bo

James “Bo” Slone, P.G.
Geoscientist
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
(512) 239-5711

From: Cowan, Mark <mdc140@txstate.edu>
Sent: Monday, May 22, 2023 11:52 AM
To: James Slone <james.slone@tceq.texas.gov>
Cc: Kincaid, Donnie <dk20015@txstate.edu>
Subject: TXST University Freeman Center - Proposed new mobile home for ranch foreman

Mr. Slone,

I work in for Texas State University, Facilities Planning Design & Construction and am assisting with a project to set up a mobile home at the Freeman Center located on the Freeman Ranch. This property is located in the Edwards Aquafer Recharge Zone at 2101 Freeman Ranch Rd, San Marcos, TX 78666. (A Google Earth link for the proposed location is attached.)

Shea Cockrell the environmental supervisor with Texas State University’s EHSRM, recommended that I contact you to determine if this project is a “Regulated activity,” as this appears to fall within the exclusion “construction of single-family residences on lots that are larger than five acres, where no more than one single-family residence is located on each lot.”

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- The fenced lot for this residence will be in excess of 5 acres. The attached aerial image shows the proposed fence line for the lot as presently envisioned.
- The placement of the new mobile home together with the demolition of the existing stables will result in a *decrease* in the impermeable area on the lot, if the new gravel driveway is excepted. If the new gravel driveway is included, there may be a small increase in impermeable area, depending on the length of the drive.
- Construction-related temporary BMPs will be used.
- The new septic system has yet to be designed, but it will be within this lot and will only serve this residence. This system will be permitted through Hays County.

The Freeman Center Director hopes to hire a new ranch foreman soon, and the provision of the new mobile home for the ranch foreman is necessary for the hiring process. Because of this, time is our main concern. We hope to install the mobile home this summer.

Our primary question is, “Is this project a ‘Regulated activity’ under Title 30 Texas Administrative Code, 30 TAC 213.3(28)?”

The mission of the Freeman Center includes environmental research, and we want to ensure that we comply with all applicable regulations. Given the time pressure, we also need to move this project forward as expeditiously as possible. We appreciate you responding to us and are happy to discuss this project with you in further detail if you wish.

Sincerely,

Mark D. Cowan

Construction Coordination Manager
Facilities Planning, Design & Construction
mdc140@txstate.edu
(512) 507-0243 cell

CAUTION:. This email originated from outside the TXST network. Do not click links or download files unless you know the sender and content are safe.

Attachment 3B – Documentation of Equivalent Water Quality Protection

The flow discharge and impervious cover for proposed conditions do not exceed the existing conditions. The existing area is currently undeveloped and occupied by grass mixture and vegetated. The owner is removing 2,771 square feet of. The impervious cover for existing condition is 0.07 acres. The impervious cover for proposed condition is 0.07 acres.

The table below show the discharge information on existing and proposed conditions.

PROPOSED RUNOFF RATES				
STORM EVENT	2-YEAR	10-YEAR	25-YEAR	100-YEAR
SP-1 EXISTING CONDITION RUNOFF (CFS)	6.47	12.8	17.7	27.17
SP-1 PROPOSED CONDITION RUNOFF (CFS)	6.47	12.8	17.7	27.17

Since this project is not expected to increase impervious cover, there is not an anticipated increase in total suspended solids that would require any permanent BMPs. The proposed condition of the project will preserve natural runoff conditions including the approximate 2.6 miles of overland flow path from the site to Sink Creek.

See **Attachment 4G – Drainage Area Maps** for more discharge information.

Section IV

Temporary Stormwater Section (TCEQ-0602)

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

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

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

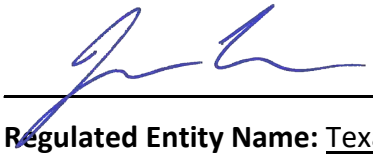
Signature

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

Print Name of Customer/Agent: Jason Bass, P.E.

Date: 10/17/2023

Signature of Customer/Agent:



Regulated Entity Name: Texas State University - Freeman Center

Project Information

Potential Sources of Contamination

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

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

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

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

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

☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

☒ Fuels and hazardous substances will not be stored on the site.

2. ☒ **Attachment A - Spill Response Actions**. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.

3. ☒ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. ☒ **Attachment B - Potential Sources of Contamination**. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

5. ☒ **Attachment C - Sequence of Major Activities**. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.

   ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

   ☐ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Sink Creek

Temporary Best Management Practices (TBMPs)

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

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

☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

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

☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. ☒ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. ☒ **Attachment F - Structural Practices**. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.

10. ☒ **Attachment G - Drainage Area Map**. A drainage area map supporting the following requirements is attached:

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

☒ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.

11. ☐ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations**. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.

☒ N/A

12. ☒ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.

13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

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

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

18. ☒ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

Attachment 4A – Spill Response Actions

No spills of hydrocarbons or hazardous substances are expected. However, in the event such an incidence does occur, the contractor should carefully follow the TCEQ guidelines outlined below:

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.

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 materials on small spills rather than hosing down or burying the spill.
(3) Absorbent materials should be promptly removed and disposed of properly.
(4) Follow the practice below for a minor spill:

- Contain the spread of the spill.
- Recover spilled materials.
- Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills:

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 by 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:

From any event, the Reportable Quantity (RQ) = for highly toxic materials the RQ>25 gals. For petroleum/hydrocarbon liquids, spills the RQ>250 gallons (on land) or that which creates "a sheen" on water. Only certified Hazmat teams will be responsible for handling the material at the site.

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. Additionally in the event of a hazardous material spill, local Williamson County and/or City of Georgetown police, fire and potentially EMS should be contacted in order to initiate the hazardous material response team.

(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 of which one copy is to be kept onsite in the report binder and one copy provided to the TCEQ.

(4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.

(5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tceq.state.tx.us/response/spills.html

Attachment 4B – Potential Sources of Contamination

No particular activity or process during construction of the facility is anticipated to present a significant risk of being a potential source of contamination. However, during regular construction operations, several common and minor risks of contamination are anticipated. Should the unforeseeable mishap occur during construction or regular operation of the facility, the contractor shall follow the guidelines set forth in "Attachment 4A – Spill Response Plan."

Potential sources of sediment to stormwater runoff:

- Clearing and grubbing
- Grading and excavation
- Vehicle Tracking
- Topsoil stripping and stockpiling
- Landscaping

Potential pollutants and sources, other than sediment, to stormwater runoff:

- Combined Staging Area – small fueling, minor equipment maintenance, sanitary facility.
- Materials Storage Area – solvents, adhesives, paving materials, aggregates, trash, etc.
- Construction Activities – gravel pouring
- Concrete washout area

Potential onsite pollutants:

- Fertilizer
- Gravel
- Glue, adhesives
- Gasoline, diesel fuel, hydraulic fluids, antifreeze
- Sanitary toilets

Attachment 4C – Sequence of Major Activities

1. Temporary erosion and sedimentation controls are to be installed as indicated on the site plan. Estimated quantities of each are below:

- 266 LF of Silt Fence

2. The environmental project manager, and/or site supervisor, and/or designated responsible party, and the general contractor will follow Erosion Control Plan. Temporary erosion and sedimentation controls will be revised, if needed, to comply with inspectors' directives. Estimated quantities of each are below:

- 266 LF of Silt Fence

3. Temporary erosion and sedimentation controls will be inspected and maintained in by the contractor. Estimated quantities of each are below:

- 260 SF of gravel drive will be installed and used as construction entrance.
- 266 LF of Silt Fence

4. Begin site clearing/construction (or demolition) activities.

- 0.55 acres (limits of construction)

5. Complete construction, including excavation, filling, utilities, paving, and buildings, and start revegetation and landscaping of the site.

- 0.55 acres (limits of construction)

6. Upon completion of the project general contractor will revegetate disturbed area back to existing ground cover condition.

- 0.55 acres (limits of construction)

7. After construction is complete and all disturbed areas have been revegetated per plan to at least 90 percent established, remove the temporary erosion and sedimentation controls and complete any necessary final revegetation resulting from removal of the controls. Conduct any maintenance and rehabilitation of the water quality ponds or controls.

- 0.55 acres (limits of construction)

Attachment 4D – Temporary Best Management Practices and Measures

Prior to the commencement of any construction activity whatsoever, the contractor shall install the silt fencing and the stabilized construction entrance per the Erosion Control Plan, see Attachment 5F. All BMP's shall be installed per TCEQ and local requirements. The proposed temporary BMP's, such as silt fencing are intended to control increased TSS from construction activities in the following manner:

Additional notes regarding temporary BMP's:

A. The temporary BMPs proposed during construction activities will prevent pollution of surface water by filtering the increased sediment loads and other pollutant sources listed in "Attachment 4B, Potential Sources of Contamination". The primary method of treating sediment-laden stormwater runoff is through silt control fencing and a stabilized construction entrance. The silt control fencing will be placed per plan along the downslope edges of the project area to filter runoff before passing offsite and in strategic locations of drainage.

B. The control measures in place are silt fences. After construction is complete, the site will be stabilized by permanent landscaping vegetation throughout the project area.

C. According to the geologic assessment, there are no naturally occurring features identified on this site that need stormwater runoff to be maintained.

Attachment 4E – Request to Temporarily Seal a Feature

No temporary sealing of naturally occurring sensitive features on the site are proposed.

Section not applicable to this project.

Attachment 4F – Structural Practices

The following temporary BMP structural practices will be employed on the site:

A. Silt Fence – used as barrier protection around the downslope perimeter of the project. The fence retains sediment primarily by retarding flow and promoting deposition on the uphill side of the slope. Runoff is filtered as is passes through the geotextile.

The placement of structural practices in the floodplain has been avoided.

Attachment 4G – Drainage Area Maps

SCALE IN FEET: 0, 40, 80

LEGEND:

— — — —	DRAINAGE AREA
— — XXX — —	EXISTING CONTOUR
→ → → →	TC FLOW PATH
XX.X	DRAINAGE AREA NO.

STORMWATER DESIGN METHODOLOGIES

1. STORMWATER RUNOFF RATES FOR THE PRE AND POST DEVELOPMENT CONDITIONS WERE COMPUTED USING SOIL CONSERVATION SERVICES (SCS) UNIT HYDROGRAPH.
2. THE SCS 24-HOUR STORM WAS UTILIZED USING PRECIPITATION VALUES FROM NOAA ATLAS 14.
3. COMPOSITE RUNOFF CURVE NUMBERS (RCNS) WERE COMPUTED USING THE AREA WEIGHTING FORMULA.
   - 3.1. UNDEVELOPED - 84
   - 3.2. DEVELOPED IMPERVIOUS COVER
     - 3.2.1. GRAVEL - 91
     - 3.2.2. ROOF/CONCRETE - 98
   - 3.3. DEVELOPED PERVIOUS AREA - 84
4. TIME OF CONCENTRATIONS WERE DERIVED USING THE TR-55 METHOD.

TR-55 Tc Calculations

Sheet Flow			**EX-1**
Manning's roughness coef.*	n	n/a	0.150
US Flowline	-	feet	872.44
DS Flowline	-	feet	867.41
Flow Length	L	feet	100
2-year, 24-hour rainfall	P2	inches	4.19
Slope	s	ft/ft	0.050
Travel time	Tt	hours	0.099
Shallow Concentrated Flow 1			
Flow Length	L	feet	297
US Flowline	-	feet	867.41
DS Flowline	-	feet	859.84
Slope	s	ft/ft	0.025
Surface (1=paved or 2=unpaved)		n/a	2
Velocity	V	ft/sec	2.58
Travel time	Tt	hours	0.032
			EX-1
Total Time of Concentration	Tc	hours	0.131
	Tc	min.	**7.84**
Lag Time	T_L	hours	0.078
	T_L	min.	**4.71**

*SOURCE: USDA NRCS TR-55 URBAN HYDROLOGY FOR SMALL WATERSHEDS, TABLE 3-1

EXISTING DRAINAGE CONDITIONS

DA - ID	AREA	IC	CN	Tc	Q-2	Q-10	Q-25	Q-100
	ACRES	ACRES	-	MIN	CFS	CFS	CFS	CFS
EX-1	2.44	0.07	84	10.38	6.47	12.8	17.7	27.17
SP-1	-	-	-	-	**6.47**	**12.8**	**17.7**	**27.17**

Know what's **below.**
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FREEMAN MOBILE HOME
FREEMAN RANCH ROAD
SAN MARCOS, TEXAS
HAYS COUNTY

halff
1201 NORTH BOWSER RD.
RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200

REVISION NO.	DATE	DESCRIPTION

10/16/2023

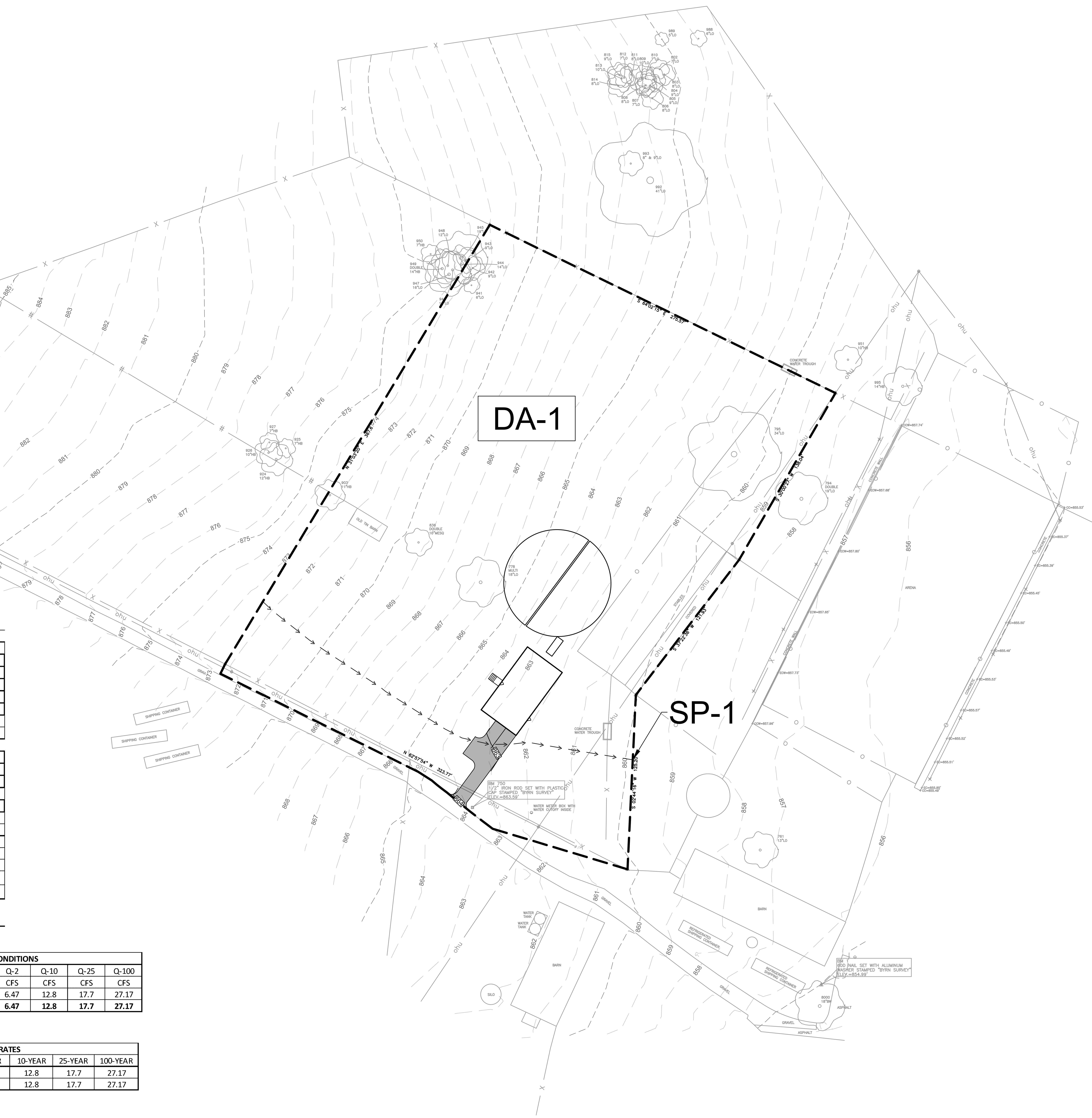
STATE OF TEXAS
JASON A. BASS
109708
LICENSED PROFESSIONAL ENGINEER

TBPELS FIRM #F-312

PROJECT NO.: 37200.008
ISSUED: 10/16/2023
DRAWN BY: PN
CHECKED BY: JAB
SCALE:
SHEET TITLE
EXISTING DRAINAGE AREA MAP

FILE NAME: A:\37000s\37200\008\LD\CADD\Sheets\C-EDAM-37200.008.dwg DATE: October 16, 2023, TIME: 2:42 PM, USER: ah4231 AVO: XXXXX

FREEMAN MOBILE HOME
FREEMAN RANCH ROAD
SAN MARCOS, TEXAS
HAYS COUNTY



0 40 80
SCALE IN FEET

LEGEND:

- DRAINAGE AREA
- EXISTING CONTOUR
- PROPOSED CONTOUR
- TC FLOW PATH
- XX.X — DRAINAGE AREA NO.

TR-55 Tc Calculations			
Sheet Flow			**DA-1**
Manning's roughness coef.*	n	n/a	0.150
US Flowline	-	feet	872.44
DS Flowline	-	feet	867.41
Flow Length	L	feet	100
2-year, 24-hour rainfall	P2	inches	4.19
Slope	s	ft/ft	0.050
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Shallow Concentrated Flow 1			
Flow Length	L	feet	297
US Flowline	-	feet	867.41
DS Flowline	-	feet	859.84
Slope	s	ft/ft	0.025
Surface (1=paved or 2=unpaved)		n/a	2
Velocity	V	ft/sec	2.58
Travel time	Tt	hours	0.032
			DA-1
Total Time of Concentration	Tc	hours	0.131
	Tc	min.	**7.84**
Lag Time	T_L	hours	0.078
	T_L	min.	**4.71**

*SOURCE: USDA NRCS TR-55 URBAN HYDROLOGY FOR SMALL WATERSHEDS, TABLE 3-1

PROPOSED DRAINAGE CONDITIONS

DA - ID	AREA	IC	CN	Tc	Q-2	Q-10	Q-25	Q-100
	ACRES	ACRES	-	MIN	CFS	CFS	CFS	CFS
DA-1	2.44	0.07	84	10.38	6.47	12.8	17.7	27.17
SP-1	-	-	-	-	**6.47**	**12.8**	**17.7**	**27.17**

PROPOSED RUNOFF RATES

STORM EVENT	2-YEAR	10-YEAR	25-YEAR	100-YEAR
SP-1 EXISTING CONDITION RUNOFF (CFS)	6.47	12.8	17.7	27.17
SP-1 PROPOSED CONDITION RUNOFF (CFS)	6.47	12.8	17.7	27.17

STORMWATER DESIGN METHODOLOGIES

1. STORMWATER RUNOFF RATES FOR THE PRE AND POST DEVELOPMENT CONDITIONS WERE COMPUTED USING SOIL CONSERVATION SERVICES (SCS) UNIT HYDROGRAPH.
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3. COMPOSITE RUNOFF CURVE NUMBERS (RCNS) WERE COMPUTED USING THE AREA WEIGHTING FORMULA.
   - 3.1. UNDEVELOPED - 84
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     - 3.2.1. GRAVEL - 91
     - 3.2.2. ROOF/CONCRETE - 98
   - 3.3. DEVELOPED PERVIOUS AREA - 84
4. TIME OF CONCENTRATIONS WERE DERIVED USING THE TR-55 METHOD.

Know what's below.
Call before you dig.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SAN MARCOS AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS)48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR-DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

halff
1201 NORTH BOWSER RD.
RICHARDSON, TEXAS 75081-2275
TEL. (214) 346-6200

REVISION		
NO.	DATE	DESCRIPTION

10/16/2023

STATE OF TEXAS
JASON A. BASS
109708
LICENSED
PROFESSIONAL ENGINEER

TBPELS FIRM #F-312

PROJECT NO.: 37200.008
ISSUED: 10/16/2023
DRAWN BY: PN
CHECKED BY: JAB
SCALE:
SHEET TITLE

PROPOSED DRAINAGE AREA MAP

Attachment 4H – Temporary Sediment Pond(s) Plans and Calculations

No temporary sedimentation pond is proposed for this project.

Section not application to this project.

Attachment 4I – Inspection and Maintenance for BMPs

The inspection and maintenance of temporary BMP's will be made according to TCEQ RG-348, Complying with the Edwards Aquifer Rules Technical Guidance on Best Management Practices, July 2005 Revision.

Inspection Personnel:

Inspections shall be conducted by qualified representatives of the contractor acting on behalf of the owner or a designated party if hired separately by the owner. Each operator must delegate authority to the specifically described position or person performing inspections, as provided by 30 TAC 305.128, as an authorized person for signing reports and performing certain activities requested by the director or required by the TPDES general permit.

Inspection Schedule and Procedures - Inspections must comply with the following:

An inspection shall occur weekly and after any rain event.

The authorized party shall inspect all disturbed areas of the site, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site.

Disturbed areas and areas used for storage of materials that are exposed to precipitation or within limits of the 1% annual chance (100 year) floodplain must be inspected for evidence of, or the potential for, pollutants entering the runoff from the site. Erosion and sediment control measures identified in the plan must be observed to ensure that they are operating correctly. Observations can be made during wet or dry weather conditions. Where discharge locations or points are accessible, they must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. This can be done by inspecting receiving waters to see whether any signs or erosion or sediment are associated with the discharge location. Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

Based on the results of the inspection, the site description and the pollution prevention measures identified in the plan must be revised as soon as possible after an inspection that reveals inadequacies. The inspection and plan review process must provide for timely implementation of any changes to the plan with 7 calendar days following the inspection.

Maintenance and Corrective Actions - Maintenance of erosion control facilities shall consist of the minimum requirements as follows:

A. In ongoing construction areas inspect erosion control improvements to confirm facilities are in place and operable. Where facilities have been temporarily set aside or damaged due to construction activity, place facilities in service before leaving job site.

B. If weather forecast predicts possibility of rain, check entire facilities throughout site to assure facilities are in place and operable. If job site weather conditions indicate high probability of rain, make special inspection of erosion control facilities.

C. After rainfall events review erosion control facilities as soon as site is accessible. Clean rock berms, berm/swales and other structural facilities. Determine where additional facilities or alternative techniques are needed to control sediment leaving site.

D. After portions of site have been seeded, review these areas on regular basis in accordance with project specifications to assure proper watering until grass is established. Reseed areas where grass is not well established.

E. Spills are to be handled as specified by the manufacturer of the product in a timely safe manner by personnel. The site superintendent will be responsible for coordinating spill prevention and cleanup operations.

F. Concrete trucks will discharge extra concrete or wash out drum only at an approved location on site. Residual product shall be properly disposed of.

G. Inspect vehicle entrance and exits for evidence of off-site tracking and correct as needed.

H. Remove sediment from traps/ponds no later than when the design capacity has been reduced by 50%.

I. If sediment escapes the site, the contractor where feasible and where access is available shall collect and remove sedimentation material by appropriate non-damaging methods. Additionally, the contractor shall correct the condition causing discharges.

J. If inspections or other information sources reveal a control has been used incorrectly, or that a control is performing inadequately, the contractor must replace, correct or modify the control as soon as practical after discovery of the deficiency.

Attachment 4J – Schedule of Interim and Permanent Soil Stabilization Practices

The schedule of interim and permanent soil stabilization practices will be according to the following general schedule. The contractor shall keep adequate records at the site detailing the dates of when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

Prior to Disturbance – Install all temporary erosion and sedimentation control features including but not limited to silt fencing, stabilized construction entrances, rock berms/riprap, tree protection, inlet protection, and sediment pond.

During Construction – Maintain all temporary erosion and sedimentation control structures. Inspect all temporary erosion and sedimentation control structures on a weekly basis and after rain events. Any stockpiles of topsoil or other earthen piles left undisturbed for 14 days or more must be revegetated.

After Completion of Permanent Erosion and Sediment Controls – Stabilize and restore all areas disturbed during construction. Permanent seeding will be applied immediately after the final design grades are achieved on portions of the site but no later than 14 days after construction activities have permanently ceased. After the entire site is stabilized, any sediment that has accumulated will be removed and hauled off-site for disposal. Construction debris, trash and temporary BMPs including silt fences, material storage areas, sanitary toilets, etc. will also be removed and any areas disturbed during removal will be seeded immediately.

Section V

Permanent Stormwater Section (TCEQ-0600)

Permanent Stormwater Section

Texas Commission on Environmental Quality

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

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

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

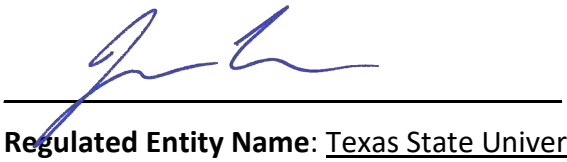
Signature

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

Print Name of Customer/Agent: Jason Bass, P.E.

Date: 10/17/2023

Signature of Customer/Agent



Regulated Entity Name: Texas State University - Freeman Center

Permanent Best Management Practices (BMPs)

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

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

   ☒ N/A

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

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

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

☒ N/A

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

   ☒ N/A

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

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

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

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

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

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

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

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

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

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

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

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

☒ N/A

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

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

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

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

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

☒ N/A

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

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

    ☒ N/A

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

    ☒ N/A

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

    ☒ N/A

Responsibility for Maintenance of Permanent BMP(s)

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

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

    ☒ N/A

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

    ☒ N/A

Attachment 5A – 20% or Less Impervious Cover Waiver

The 20% or less Impervious Cover Waiver is being requested due to the total proposed impervious for the 2.4 ac site is 0.07 ac or 2.9%, which is less than 20%. Improvements proposed for the subject property will be designated as education and non-residential development. The subject site will consist of a 2,050 SF mobile home building, associated gravel drives and gravel parking. The existing site has a total impervious cover of 0.07 acre. The owner is removing 2,771 SF stable, which will make the proposed impervious equal or less than the existing impervious cover.

Impervious Cover	
Total Site	2.4 Acres
Building/Roof	0.05 Acre
Gravel Drive/Parking	0.02 Acre
Total Impervious (Ac)	0.07 Acre
Total Impervious (%)	2.9 %

Attachment 5B – BMPs for Upgradient Stormwater

Permanent BMPs are not required on site. An existing area of approximately 2.05 acres includes 1.6 acres offsite and 0.45 acres on site will drain across the proposed construction area. The existing area is currently undeveloped and occupied by grass mixture and vegetated with an average grade of about four percent. This existing area has no impervious cover and no existing impervious cover is running across the proposed construction area. The owner is removing 2,771 square feet of existing stable downstream of the proposed construction area. The impervious cover for existing condition is 0.07 acres. The impervious cover for proposed condition is 0.07 acres. A request to waive the requirements for permanent BMPs has been submitted in Attachment 5A.

Section not applicable to this project.

Attachment 5C – BMPs for On-site Stormwater

Permanent BMPs are not required on site. An existing area of approximately 2.05 acres includes 1.6 acres offsite and 0.45 acres on site will drain across the proposed construction area. The existing area is currently undeveloped and occupied by grass mixture and vegetated with an average grade of about four percent. This existing area has no impervious cover and no existing impervious cover is running across the proposed construction area. The owner is removing 2,771 square feet of existing stable downstream of the proposed construction area. The impervious cover for existing condition is 0.07 acres. The impervious cover for proposed condition is 0.07 acres. A request to waive the requirements for permanent BMPs has been submitted in Attachment 5A.

Section not applicable to this project.

Attachment 5D – BMPs for Surface Streams

The Project Area is located in the southeastern portion of the Edwards Plateau Physiographic Province of Central Texas, along the Balcones Fault Zone (BFZ). The BFZ also forms the Balcones Escarpment, which is a highly eroded region bordering the Edwards Plateau on its southern and western boundaries. The region is typified by higher elevations to the north and west, generally sloping in a southeastern direction.

Project Area is overlain by the Leached and Collapsed Member (Kplc) and the Regional Dense Member (Kprd) of the Person formation in the Edwards Group. The topography and outcropping bedrock observed in the Project Area were consistent with these designations, where the Kplc is described as a crystalline limestone with chert and extensive collapsed breccia identifiable by iron-stained beds and fossil coral, and the Kprd is described as a dense, clay-rich mudstone susceptible to erosion with some minor iron traces (Blome, 2005). A geologic contact between members is mapped following a topographic contour along the eastern edge of the Project Area; however, its surface expression in the field was obscured by ground disturbance and agricultural land use. Generally, smooth outcropping bedrock was observed along the eastern edge of the Project Area, while the rest of the site contained remnants of surficial weathering (float rock or epikarst). The proposed development is located southwest corner of the property. Temporary silt fence is proposed along downstream of disturbance area to prevent runoff. The proposed condition of the project will preserve natural runoff to the southern boundary and does not discharge into the eastern edge of the property.

A small karst feature was found and located at the northern end of the 9 acres site that the Geological Assessment (GA) was performed and shown in the Geological Assessment report. The surface depression measured approximately 3.0 feet in diameter by 2.75 feet deep, but it appeared to have been enlarged by a burrowing animal. A drain was visible in the center of the sinkhole with an aperture 0.5 feet wide by 0.75 feet high. The interior of the feature contained leaf litter, loose organic soil, and limestone fragments. Hand excavation revealed loose sediment at least 0.75 feet thick, and horizontal continuation at least 2.5 feet following a fracture with a trend of 270°. The sinkhole would receive sheet flow from catchment area of less than 1.6 acres. There is a moderate potential for this feature to rapidly transmit water to the subsurface due to development along a fracture. This feature is rated as sensitive according to the Edwards Aquifer Rules (30 TAC §213.5(b)(3)). An appropriate buffer should be placed around this karst feature identified as FRA-01 per GA report. The TCEQ guidelines suggest a natural buffer around each sensitive feature extending a minimum of 50 feet in all directions from the footprint of the feature. The proposed construction area is located at the southwest corner and approximately 300 ft from this feature and does not discharge into this feature.

No wells were mapped within the Project Area according to the TWDB groundwater database (TWDB 2023). However, two wells were observed near the survey boundaries during field inspection per the Geological Assessment report. The first well was located at the western corner of the property and was identified by the TWDB database as State Well #6808603, a water supply well in use and owned by Texas State University Freeman Center. The well was drilled in June

2009 to a depth of 1040 feet below ground surface, where it draws water from the Lower Glen Rose (Kgru) and Cow Creek (Kcc) formations of the Trinity Aquifer. The well was set in a concrete pad next to a pump house and water storage tank, all of which were surrounded by a chain link fence. The second well was located south of the Project Area on the west side of the road near the Freeman Ranch headquarters building. No records of this well were found in the TWDB database. The well was housed in a shed and appeared to be in use by the Freeman Center. The proposed construction area does not discharge into these two wells and has no affect on them.

A fuel storage station was noted near the northeast boundary of the Project Area. Two Aboveground Storage Tanks (AST) were located under a concrete-lined pavilion with secondary containment around each tank. The ASTs were estimated to be 500 gallons and 1000 gallons, respectively, and were likely to contain diesel and/or gasoline. The storage area appeared to be in good operating condition and there was no indication of leaked fuel or staining near the storage area. The proposed construction area is located at southwest corner and approximately 300 ft from this fuel storage station. The construction area does not discharge into this area.

The entire construction area is located southwest corner of the property. The proposed condition of the project will preserve natural runoff to the southeast corner of the property and will not discharge into any of the sensitive features mentioned above.

Attachment 5E – Request to Seal Features

The permanent sealing of or diversion of flow from a naturally-occurring “sensitive” or “possibly sensitive” feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-occurring “sensitive” or “possibly sensitive” features on this site.

Section not applicable to this project.

Attachment 5F – Construction Plans

No construction plans or permanent BMP's is proposed. Attached is the Site Plan, Erosion Control Plan and OSSF Plans for reference.

Section not applicable to this project.

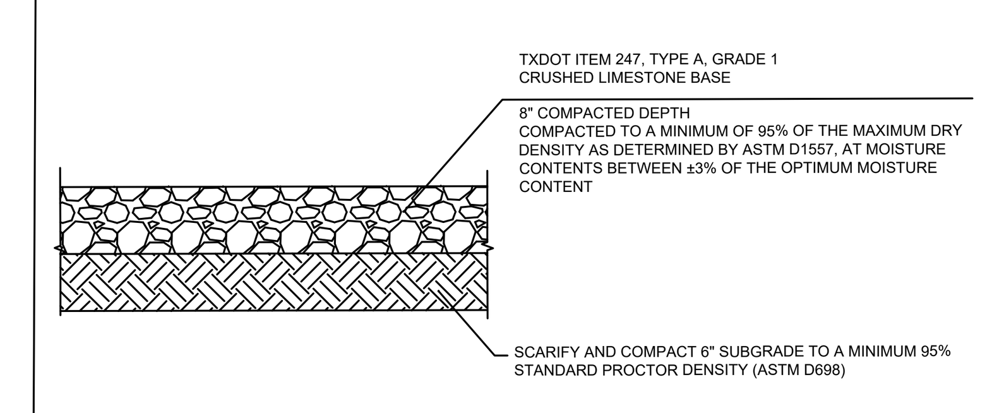
SCALE IN FEET

LEGEND:

(shaded box)	PROPOSED GRAVEL REF DETAIL THIS SHEET
— — XXX — —	EXISTING CONTOUR
—[XXX]—	PROPOSED CONTOUR
EG XXX	EXISTING GRADE
FG XXX	PROPOSED GRADE

NOTE:

1. EXISTING UTILITIES WERE PROVIDED BY CLIENT. ENGINEER TAKES NO RESPONSIBILITY FOR ACCURACY OF EXISTING UTILITIES.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATION OF ALL UTILITIES WITHIN THE SITE VICINITY.
3. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEANOUTS, VALVE BOXES, FIRE HYDRANTS, ETC. WITHIN THE SITE VICINITY.



AGGREGATE DRIVE DETAIL
N.T.S.

Know what's below.
Call before you dig.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SAN MARCOS AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS)48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR-DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

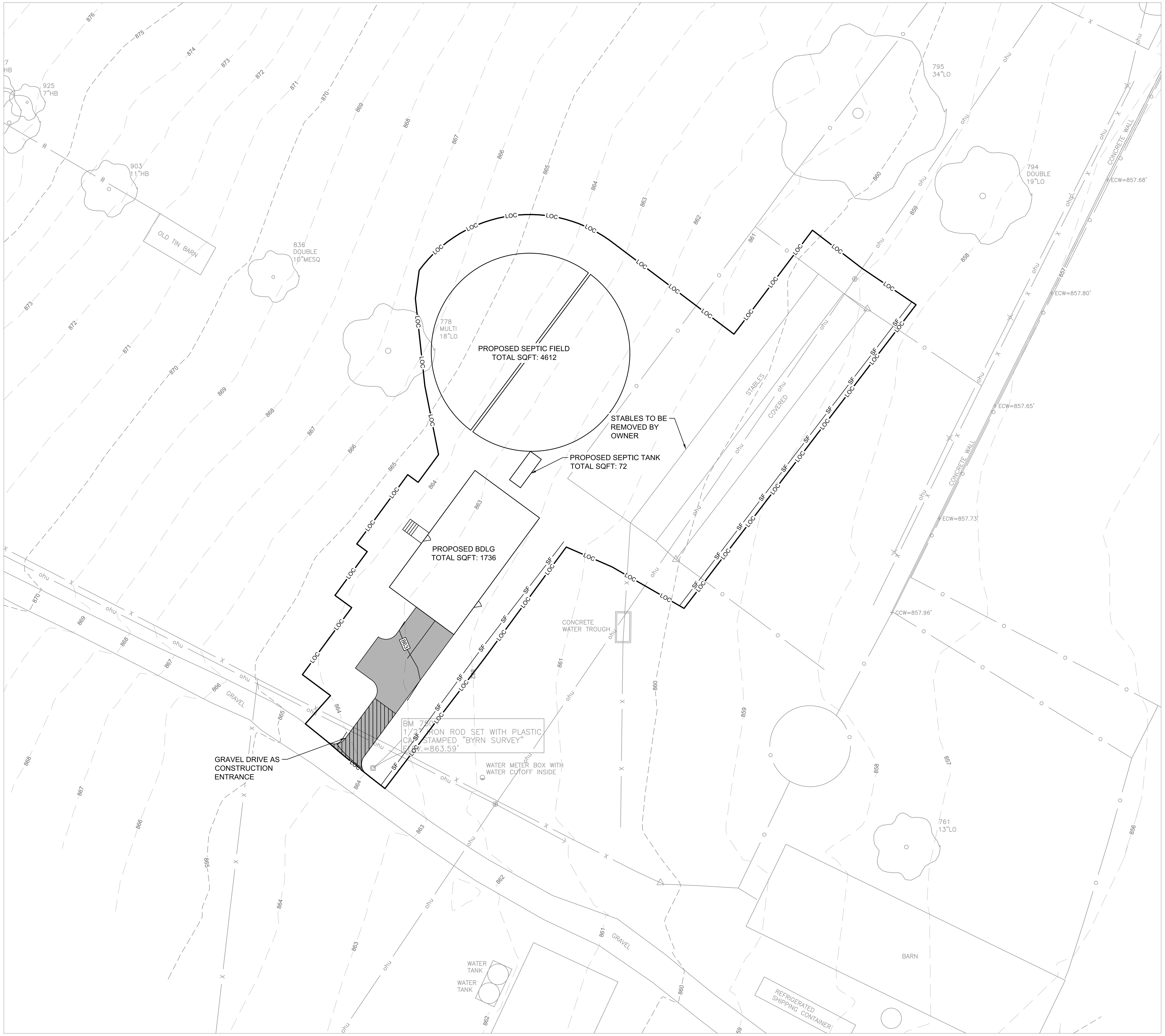
FREEMAN MOBILE HOME
FREEMAN RANCH ROAD
SAN MARCOS, TEXAS
HAYS COUNTY

halff
1201 NORTH BOWSER RD.
RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200

REVISION		
NO.	DATE	DESCRIPTION

10/16/2023
STATE OF TEXAS
JASON A. BASS
109708
LICENSED
PROFESSIONAL ENGINEER
TBPELS FIRM #F-312

PROJECT NO.:	37200.008
ISSUED:	9/5/2023
DRAWN BY:	PN
CHECKED BY:	JAB
SCALE:	
SHEET TITLE	SITE PLAN



0 20 40
SCALE IN FEET

LEGEND:

EXISTING CONTOUR
PROPOSED CONTOUR
LIMITS OF CONSTRUCTION
SILT FENCE
GRAVEL DRIVE AS CONSTRUCTION ENTRANCE

LIMIT OF CONSTRUCTION: 0.55 AC

NOTE:

1. THE CONTRACTOR SHALL COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS REGARDING STORM WATER DISCHARGE AND EROSION AND SEDIMENT CONTROL.
2. EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE BEGINNING SOIL DISTURBING ACTIVITIES.
3. CONTRACTOR TO ADJUST EROSION CONTROL AS REQUIRED FOR FIELD CONDITIONS TO MEET THE INTENT OF THE CONSTRUCTION DOCUMENTS.
4. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR
5. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
6. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY MULCH, TARP OR REVEGETATION.
7. THE STAGING AND SPOILS AREA SHALL ONLY BE ALLOWED DURING THE CONSTRUCTION PERIOD. NO SPOILS SHALL REMAIN STAGED AFTER COMPLETION OF THE PROJECT.
8. SITE AREA SHALL BE STRIPPED OF VEGETATION AND LOOSE TOP SOIL. ANY POCKETS OF DEBRIS ENCOUNTERED SHOULD ALSO BE REMOVED.

811
Know what's below.
Call before you dig.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SAN MARCOS AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS)48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR-DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

FREEMAN MOBILE HOME
FREEMAN RANCH ROAD
SAN MARCOS, TEXAS
HAYS COUNTY

halff
1201 NORTH BOWSER RD.
RICHARDSON, TEXAS 75081-2275
TEL. (214) 346-6200

REVISION		
NO.	DATE	DESCRIPTION

10/16/2023
STATE OF TEXAS
JASON A. BASS
109708
LICENSED PROFESSIONAL ENGINEER
TBPELS FIRM #F-312

PROJECT NO.: 37200.008
ISSUED: 10/19/2023
DRAWN BY: PN
CHECKED BY: JAB
SCALE:
SHEET TITLE
EROSION CONTROL PLAN

FILE NAME: A:\37000s\37200\008\LD\CADD\Sheets\C-ERCN-37200.008.dwg DATE: October 19, 2023, TIME: 3:14 PM, USER: ah4231 AVO: XXXXX

NOTES:
- WATER LINE WILL MAINTAIN GREATER THAN 10' SEPARATION FROM ANY PART OF THE OSSF. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE SETBACK REQUIREMENTS OF TAC 290.
- CLEANOUT WITHIN 3' OF STRUCTURE.
- PVC CONNECTING THE STRUCTURE TO THE TANK MUST HAVE AT MINIMUM 1/8" FALL PER 1'.
- USE 3" OR 4" SCH 40 SEWER PIPE TO CONNECT STRUCTURE(S) TO TANK.
- TANK TO BE > 5' FROM STRUCTURES. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE SETBACK REQUIREMENTS OF TAC 285.
- TANK WILL BE WATER TIGHT AND MANUFACTURED ACCORDING TO ASTM DESIGNATION: C 1227.
- TOP OF TANK IS TO BE BACKFILLED WITH NATIVE SOILS TO GROUND LEVEL.
- TANK/RISER LIDS ARE TO BE INSTALLED TO GROUND LEVEL SO TO CONFORM WITH 30 TAC CHAPTER 285.38.
- A MINIMUM OF 4" OF SAND, SANDY LOAM, OR CLAY LOAM FREE OF ROCK IS TO BE PLACED UNDER AND AROUND TANK.
- AUDIBLE AND VISUAL ALARM SHALL BE INSTALLED FOR THE FIELD DOSING PUMP, AND IN THE EVENT OF A PUMP MALFUNCTION, SHALL ACTIVATE.
- IF CONTROL PANEL IS NOT IN VIEW OF BREAKER BOX, A SERVICE DISCONNECT IN VIEW OF THE PUMP TANK TO ENSURE SAFE PUMP SERVICING SHALL BE ADDED.
- PUMP AND ALARM MUST BE ON SEPARATE CIRCUITS.
- 1" SCH 40 PURPLE PIPE TO ALL SPRAY HEADS.
- SPRAY HEADS SHALL BE LOCATED AT LEAST 15' AWAY FROM TREES WITHIN THE DISTRIBUTION AREA.
- TOTAL SPRAY AREA = 4536 SQFT.
- THE ENTIRE DISPOSAL FIELD SHALL BE COVERED WITH GROUND COVER SUCH AS GRASS SEED OR SOD PRIOR TO FINAL INSPECTION.

- PROPOSED OSSF LOCATED OUTSIDE THE 100-YEAR FLOODPLAIN

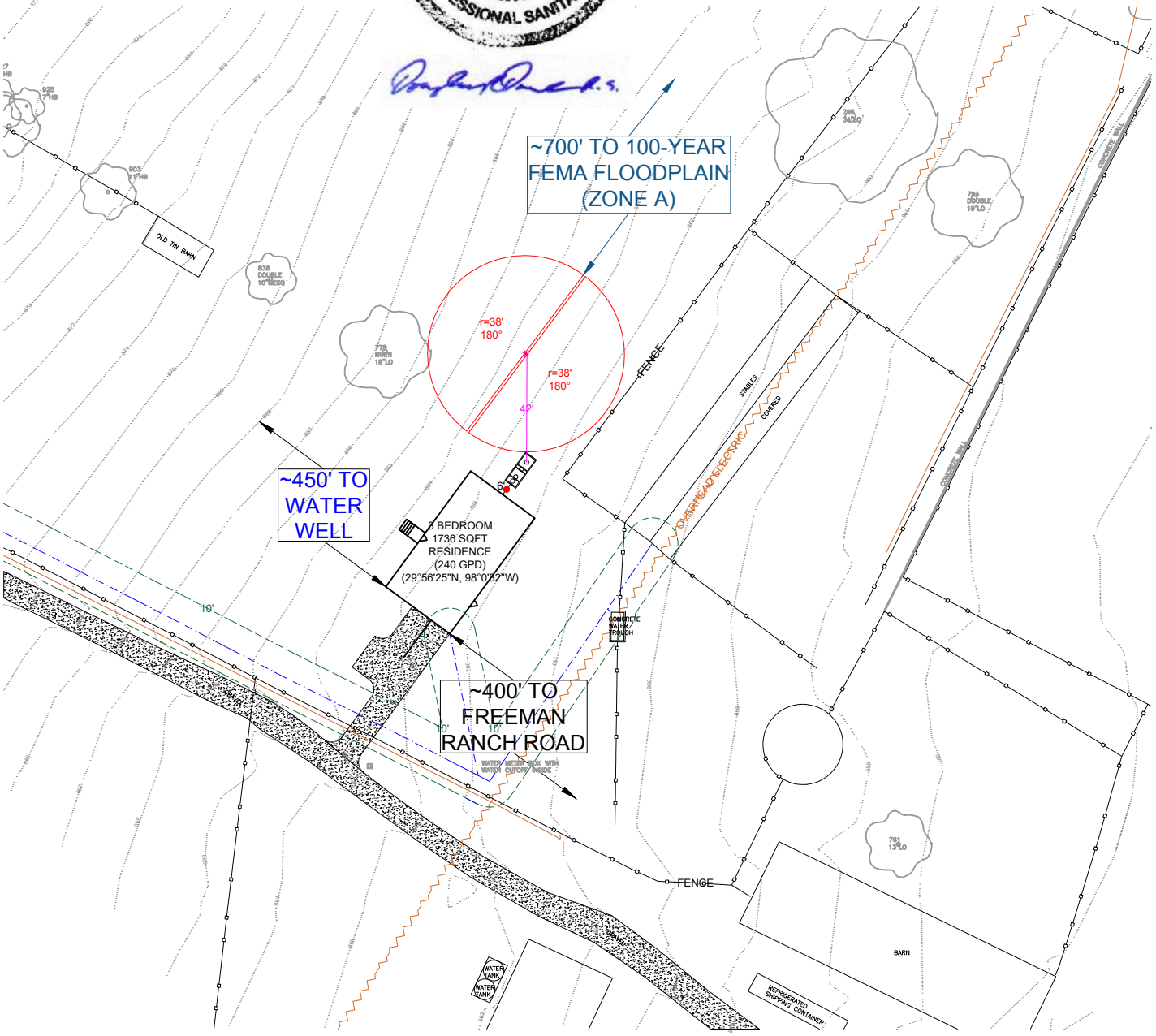
FREEMAN HAROLD M
EDUCATIONAL FOUNDATION
2101 FREEMAN RANCH ROAD
SAN MARCOS, TX. 78666
ABS 283, ABS 80, ABS 308,
ABS 147, ABS 476, TR 1
R S LOVE, J CARSON,
P MCGREAL, M DUNN,
D WILSON, GEO#90202679
HAYS COUNTY / 3,380.819 ACRES

N
1" = 60'

LEGEND
- 2-WAY CLEANOUT
- SPRAY NOZZLE/BOUNDARY
- 1" SCH 40 PURPLE PVC
- WATER LINE
- OSSF SETBACK
- EASEMENT/FEATURE
- 0 SQFT OF SPRAY OVERLAP
- NUWATER B-550 (600 GPD ATU)

9.25.23

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN



D.A.D SERVICES, INC.
DOUG DOWLEARN
PO BOX 212, BULVERDE, TX. 78163
Designed for:
Freeman Harold M Educational Foundation

The installation site is a 3,380.819 Acre tract located at 2101 Freeman Ranch Road (ABS 283, ABS 80, ABS 308, ABS 147, ABS 476, TR 1 R S LOVE, J CARSON, P MCGREAL, M DUNN, D WILSON, GEO#90202679) in Hays County, TX. The proposed OSSF will treat the wastewater from a 3-bedroom (1736 sqft) residence. The proposed method of wastewater management is aerobic treatment with spray irrigation. This method was chosen because of unsuitable soil conditions.

PROPOSED SYSTEM:
A 3" or 4" PVC pipe will discharge from the structure to a NuWater B-550 aerobic treatment plant, containing a 353-gallon pretreatment tank, a 600 GPD aerobic treatment unit, and a 768-gallon pump tank equipped with a liquid chlorinator and a 20-gpm submersible pump. Distribution is through 2 K-Rain Gear Driven pop-up sprinklers, with low angle (13 degrees) spray nozzles at 40psi; each at 180 degrees of arc and 38' radii. An audio and visual alarm monitoring both high water and aerator failure will be placed in a noticeable location.

DESIGN SPECIFICATIONS:
Daily Waste Flow: 240 gpd
Application rate: 0.064
Application area required: 240/.064 = 3750 sqft.
Application area utilized: 4536 sqft.
Pump tank reserve capacity: 240 gal minimum

9.25.23

SYSTEM COMPONENTS:
3-4" SCH 40 PVC sewer line
NuWater B-550
- 353-gallon Pretreatment tank
- 600 GPD Aerobic Treatment Unit
- 768-gallon Pump tank with manual controls
  - C-1 20X, Model no. 20XC1-05P4-2W115 (or equivalent) submersible pump
  - Liquid chlorinator

1" purple PVC supply line
2 K-Rain Gear Driven pop-up sprinklers (#6 Nozzles)

LANDSCAPING:
The native vegetation in the distribution area should consist of low-level shrubs, plains grass, bluestem or bermuda. The entire surface application area must consist of an area with vegetation capable of growth, before system start up. In the event the surface application area does not have vegetation capable of growth, the bare area shall be seeded or sodded. If the non-vegetative area consists of rock or caliche, 3" of class II or III soil, capable of growing and sustaining vegetative growth, will be added before it is seeded or sodded.

Assembly Details

OSSF

36-53" - (17") RESERVE - 246.33 GAL
36" - ALARM ON
19-36" - (17") BUFFER - 246.33 GAL
19" - PUMP ON
10-19" - (9") WORKING LEVEL - 130.41 GAL
10" - PUMP OFF
0-10" - (10") SUMP - 144.9 GAL

NOTE: SET TO DOSE ON DEMAND
130.41 GALLONS PER DOSE

240 GALLONS PER DAY MAXIMUM

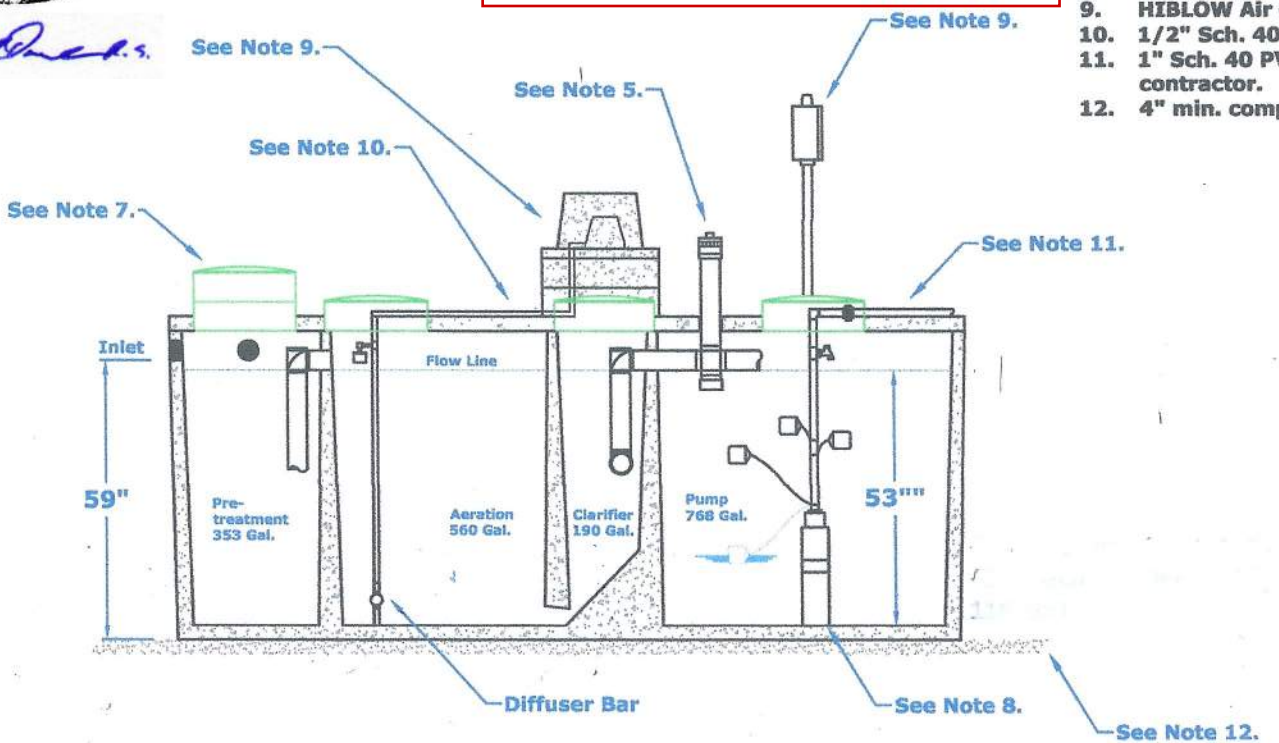
LIQUID DEPTH = 53"
14.49 GAL/INCH

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

9.25.23

GENERAL NOTES:

1. Plant structure material to be precast concrete and steel.
2. Maximum burial depth is 30" from slab top to grade.
3. Weight = 14,900 lbs.
4. Treatment capacity is 600 GPD. Pump compartment set-up for a 360 GPD Flow Rate (4 beedroom, < 4,000 sq/ft living aera). Please specify for additional set-up requirements. BOD Loading = 1.62 lbs. per day.
5. Standard tablet chlorinator or Optional Liquid chlorinator. NSF approved chlorinators (tablet & liquid) available.
6. Bio-Robix B-550 Control Center w/ Timer for night spray application. Optional Micro Dose (min/sec)timer available for drip applications. Electrical Requirement to be 115 Volts, 60 Hz, Single Phase, 30 AMP, Grounded Receptacle.
7. 20" Ø acess riser w/ lid (Typical 4). Optional extension risers available.
8. 20 GPM 1/2 HP, high head effluent pump.
9. HIBLOW Air Compressor w/ concrete housing.
10. 1/2" Sch. 40 PVC Air Line (Max. 50 Lft from Plant).
11. 1" Sch. 40 PVC pipe to distribution system provided by contractor.
12. 4" min. compacted sand or gravel pad by Contractor



DIMENSIONS:
Outside Height: 67"
Outside Width: 63"
Outside Length: 164"

MINIMUM EXCAVATION DIMENSIONS:
Width: 76"
Length: 176"

NuWater B-550 (600 GPD) Aerobic Treatment Plant (Assembled)

Model: B-550-PC-400PT

March, 2012 - Rev 1
By: A.S.

Scale:
* All Dimensions subject to allowable specification tolerances.

Dwg. #: ADV-B550-3

Advantage Wastewater Solutions llc.
444 A Old Hwy No 9
Comfort, TX 78013
830-995-3189
fax 830-995-4051

Spray Distribution Calculations

Daily Flow (GPD)	240
PSI	40

Sprinkler #	Nozzle #	Arc(°)	Radius(ft)	Area (ft^2)	PSI	GPM	GPD/SF
1	6	180	38	2268	40	6.5	0.052910053
2	6	180	38	2268	40	6.5	0.052910053

Total GPM	13
Spray Area (ft^2)	4536
Overlap Area (ft^2)	0
Total Spray Area(ft^2)	4536
Pump Run Time(minutes)	18.46
Inner Diameter purple pipe(in)	1.029
Hazen-Williams Constant(C)	145

LOW ANGLE PERFORMANCE DATA

NOZZLE	PRESSURE (PSI)	MAX RADIUS	FLOW RATE
#1.0	30	22	1.2
	40	24	1.7
#3.0	30	29	3
	40	32	3.1
#4.0	30	31	3.4
	40	34	3.9
#6.0	40	38	6.5

From	To	Pressure(psi)	Distance(ft)	Flow(gpm)	Friction loss(per 100')	Friction Loss(ft head)	Factor for fittings	Friction Head(ft)
Tank	SP1	40	42	13	10.53	4.422838718	1.2	5.307406461
SP1	SP2	40	1	6.5	2.92	0.029170526	1.2	0.035004631

Zone 1

Total Friction Head (ft)	5.342411092
Elevation Head (ft)	8
Pressure Head (ft)	92.4
Total Head (ft)	105.74

Pump Demand	13	GPM @	105.74	ft of head.

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

9.25.23

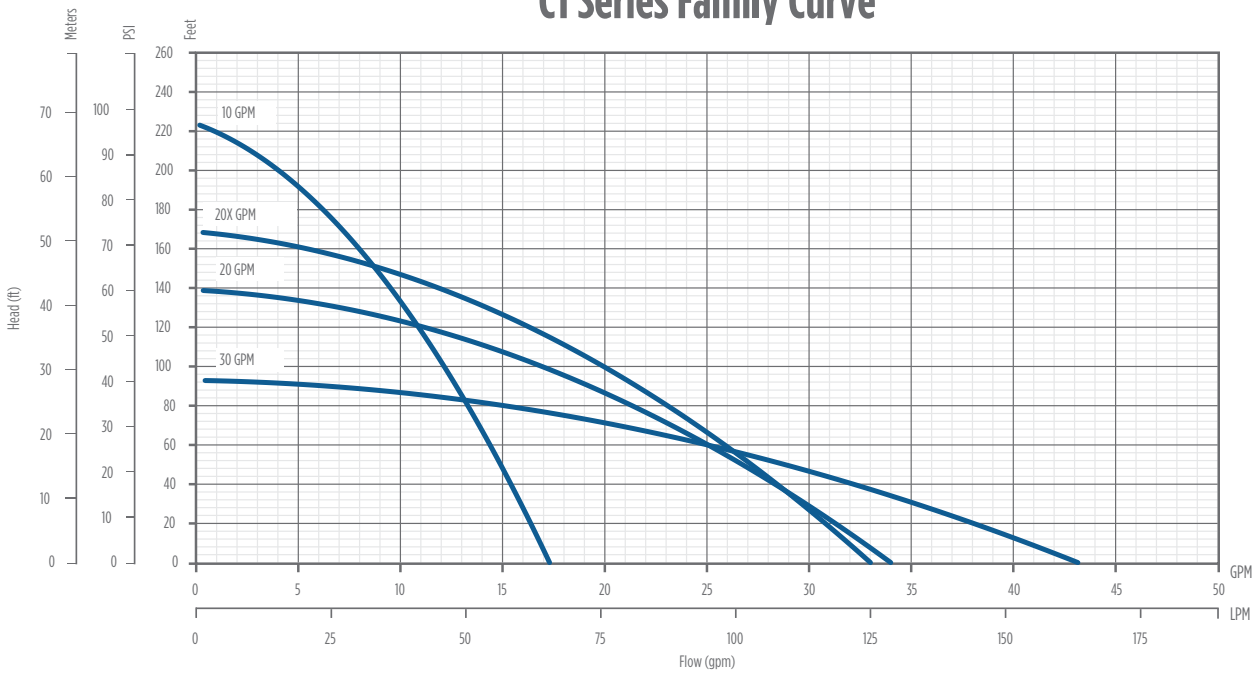
C1 SERIES
CISTERN PUMPS

Designed for use in gray water / filtered effluent service applications, the C1 Series cistern pump provides high performance and long life in less than ideal water conditions. The C1 Series pump is able to pass solids up to 1/8" without having a negative effect on the internal hydraulic components.

The pump's unique bottom suction design allows for maximum fluid drawdown without compromising durability or overall life, and it does not require the use of a flow induction sleeve. Intended specifically for use in a cistern or tank, C1 Series pumps are suitable for use in agricultural, residential, and commercial installations.

Franklin Electric

C1 Series Family Curve



FEATURES

- Supplied with a removable 5" base for secure and reliable mounting
- Bottom suction design
- Robust thermoplastic discharge head design resists breakage during installation and operation
- Single shell housing design provides a compact unit while ensuring cool and quiet operation
- Hydraulic components molded from high quality engineered thermoplastics
- Optimized hydraulic design allows for increased performance and decreased power usage
- All metal components are made of high grade stainless steel for corrosion resistance
- Available with a high quality 115 V or 230 V, ½ hp motor
- Fluid flows of 10, 20, and 30 gpm, with a max shut-off pressure of over 100 psi
- Heavy duty 600 V 10 foot SJOOW jacketed lead

APPLICATIONS

- Gray water pumping
- Filtered effluent service water pumping
- Water reclamation projects such as pumping from rain catchment basins
- Aeration and other foundation or pond applications
- Agriculture and livestock water pumping

ORDERING INFORMATION

C1 Series Pumps							
GPM	HP	Volts	Stage	Model No.	Order No.	Length (in)	Weight (lbs)
10	1/2	115	7	10C1-05P4-2W115	90301005	26	17
		230	7	10C1-05P4-2W230	90301010	26	17
20		115	5	20C1-05P4-2W115	90302005	25	16
		230	5	20C1-05P4-2W230	90302010	25	16
20X		115	6	20XC1-05P4-2W115	90302015	26	17
		230	6	20XC1-05P4-2W230	90302020	26	17
30		115	4	30C1-05P4-2W115	90303005	25	16
		230	4	30C1-05P4-2W230	90303010	25	16

Note: All units have 10 foot long SJOOW leads.

Attachment 5G – Inspection, Maintenance, Repair and Retrofit Plan

No permanent BMP's is proposed.

Section not applicable to this project.

Attachment 5H – Pilot-Scale Field Testing Plan

Section not applicable to this project.

Attachment 5I – Measures for Minimizing Surface Stream Contamination

No permanent BMP's is proposed

Section not applicable to this project.

Section VI

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 Eric Algoe,
Print Name

Executive Vice President for Operations and Chief Financial Officer,
Title - Owner/President/Other

of Texas State University,
Corporation/Partnership/Entity Name

have authorized Donnie Kincaid
Print Name of Agent/Engineer

of Texas State University - San Marcos
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

12/1/2023
Date

THE STATE OF TEXAS §

County of HAYS §

BEFORE ME, the undersigned authority, on this day personally appeared ERIC ALGOE 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 1 day of DECEMBER 2023

NOTARY PUBLIC

DUSTIN Adair
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 7/22/2024

DUSTIN JOSEPH ADAIR
Notary Public, State of Texas
Comm. Expires 07-22-2024
Notary ID 132580759

Section VII

Application Fee Form (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Texas State University - Freeman Center
Regulated Entity Location: 2021 Freeman Ranch Road, San Marcos, TX 78666
Name of Customer: Texas State University - San Marcos
Contact Person: Donnie Kinciad Phone: (512) 245-5271
Customer Reference Number (if issued):CN 602644106
Regulated Entity Reference Number (if issued):RN 105862007

Austin Regional Office (3373)

☒ Hays ☐ Travis ☐ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

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

Signature: _____

Date: 10/17/2023

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

Section VIII

Core Data Form (TCEQ-10400)

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 602644106		**RN 105862007**

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:*

TEXAS STATE UNIVERSITY - SAN MARCOS

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

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

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

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

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

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

15. Mailing Address:	151-2 EAST SESSOM DR						
	City	SAN MARCOS	**State**	TX	**ZIP**	78666	**ZIP + 4**

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	DK20015@TXSTATE.EDU

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

(512) 245-5271		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

TEXAS STATE UNIVERSITY - FREEMAN CENTER

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	2021 FREEMAN RANCH RD							
	City	SAN MARCOS	**State**	TX	**ZIP**	78666	**ZIP + 4**	
24. County	HAYS							

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

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**
SAN MARCOS			TX		78866

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

27. Latitude (N) In Decimal:	29.940024		**28. Longitude (W) In Decimal:**	-98.008714	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
8221		611310	

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

EDUCATION

34. Mailing Address:	**151-2 EAST SESSOM DR**							
	City	**SAN MARCOS**	**State**	**TX**	**ZIP**	**78666**	**ZIP + 4**	
35. E-Mail Address:	**DK20015@TXSTATE.EDU**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 245-5271		( ) -

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

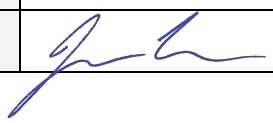
☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water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

SECTION IV: Preparer Information

40. Name:	JASON BASS	**41. Title:**	SR. PROJECT MANAGER
42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512 **)** 777-4615		**( ) -**	JBASS@HALFF.COM

SECTION V: Authorized Signature

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

Company:	HALFF	**Job Title:**	SR. PROJECT MANAGER
Name *(In Print):*	JASON BASS	**Phone:**	**(** 512 **)** 777- **4615**
Signature:		**Date:**	10/17/2023