RECHARGE AND TRASITION ZONE EXCEPTION REQUEST
FOR
FREEMAN RANCH – SAN MARCOS

Prepared For:

Texas State University - Freeman Center
2102 Freeman Ranch Road
San Marcos, TX 78666

Prepared By:

Eckermann Engineering, Inc.
P.O. Box 388
Lampasas, TX 76550
TBPELS Firm No. F-10496

5/21/2025

Job No. 24034
May 2025

Recharge and Transition Zone Exception Request Form Checklist

- **Edwards Aquifer Application Cover Page (TCEQ-20705)**
- **General Information Form (TCEQ-0587)**

  Attachment A - Road Map
  Attachment B - USGS / Edwards Recharge Zone Map
  Attachment C - Project Description

- **Geologic Assessment Form (TCEQ-0585), if necessary**

  Attachment A - Geologic Assessment Table (TCEQ-0585-Table)
  Comments to the Geologic Assessment Table
  Attachment B - Soil Profile and Narrative of Soil Units
  Attachment C - Stratigraphic Column
  Attachment D - Narrative of Site Specific Geology
  Site Geologic Map(s)
  Table or list for the position of features' latitude/longitude (if mapped using GPS)

- **Recharge and Transition Zone Exception Request Form (TCEQ-0628)**

  Attachment A - Nature of Exception
  Attachment B - Documentation of Equivalent Water Quality Protection

- **Temporary Stormwater Section (TCEQ-0602), if necessary**

  Attachment A - Spill Response Actions
  Attachment B - Potential Sources of Contamination
  Attachment C - Sequence of Major Activities
  Attachment D - Temporary Best Management Practices and Measures
  Attachment E - Request to Temporarily Seal a Feature (if sealing a feature)
  Attachment F - Structural Practices
  Attachment G - Drainage Area Map
  Attachment H - Temporary Sediment Pond(s) Plans and Calculations
  Attachment I - Inspection and Maintenance for BMPs
  Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

- **Permanent Stormwater Section (TCEQ-0600), if necessary**

  Attachment A - 20% or Less Impervious Cover Waiver, if project is multi-family residential, a school, or a small business and 20% or less impervious cover is proposed for the site
  Attachment B - BMPs for Upgradient Stormwater
  Attachment C - BMPs for On-site Stormwater
  Attachment D - BMPs for Surface Streams
  Attachment E - Request to Seal Features, if sealing a feature

Attachment F - Construction Plans
Attachment G - Inspection, Maintenance, Repair and Retrofit Plan
Attachment H -Pilot-Scale Field Testing Plan, if BMPs not based on Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs
Attachment I -Measures for Minimizing Surface Stream Contamination

- **Agent Authorization Form (TCEQ-0599), if application submitted by agent**
- **Fee Application Form (TCEQ-0574)**
- **Check Payable to the "Texas Commission on Environmental Quality"**
- **Core Data Form (TCEQ-10400)**

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.

<table>
<tr><td colspan="5">1. Regulated Entity Name: Texas State University – Freeman Center</td><td colspan="5">2. Regulated Entity No.: RN105862007</td></tr>
<tr><td colspan="5">3. Customer Name:
Texas State University – Freeman Center</td><td colspan="5">4. Customer No.: 602644106</td></tr>
<tr><td>5. Project Type:
(Please circle/check one)</td><td>New</td><td>Modification</td><td>Extension</td><td><u>Exception</u></td><td colspan="5"></td></tr>
<tr><td>6. Plan Type:
(Please circle/check one)</td><td><u>WPAP</u></td><td>CZP</td><td>SCS</td><td>UST</td><td>AST</td><td>EXP</td><td>EXT</td><td>Technical Clarification</td><td>Optional Enhanced Measures</td></tr>
<tr><td>7. Land Use:
(Please circle/check one)</td><td>Residential</td><td colspan="3"><u>Non-residential</u></td><td colspan="2">8. Site (acres):</td><td colspan="2">3,373</td></tr>
<tr><td>9. Application Fee:</td><td>$500</td><td colspan="3">10. Permanent BMP(s):</td><td colspan="4">Exempt</td></tr>
<tr><td>11. SCS (Linear Ft.):</td><td>N/A</td><td colspan="3">12. AST/UST (No. Tanks):</td><td colspan="4">N/A</td></tr>
<tr><td>13. County:</td><td>Hays</td><td colspan="3">14. Watershed:</td><td colspan="4">Upper San Marcos River</td></tr>
</table>

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.)	_X_	___	___
Region (1 req.)	_X_	___	___
County(ies)	_X_	___	___
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.
Texas State University - Freeman Center
Print Name of (Customer)/Authorized Agent Texas State University - Freeman Center
Signature of (Customer)/Authorized Agent Date 5/15/24

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):	

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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.

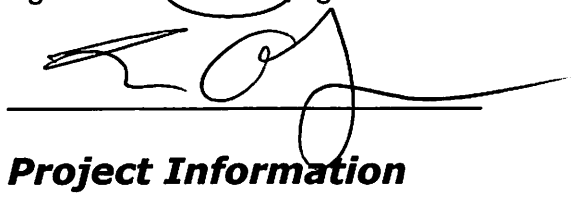
Signature

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: Texas State University - Freeman Center

Date: 5/15/24

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Texas State University - Freeman Center
2. County: Hays
3. Stream Basin: Upper San Marcos River
4. Groundwater Conservation District (If applicable): Edwards Aquifer Authority and Barton Springs Edwards Aquifer Conservation District
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☒ WPAP
   ☐ SCS
   ☐ Modification
   ☐ AST

☐ UST ☒ Exception Request

7. Customer (Applicant):

Contact Person: Eric Algoe
Entity: Texas State University - Freeman Center
Mailing Address: 2102 Freeman Ranch Rd.
City, State: San Marcos, TX Zip: 78666
Telephone: 512-245-2244 FAX: _____
Email Address: ealgoe@txstate.edu

8. Agent/Representative (If any):

Contact Person: Marshal Brewer, P.E.
Entity: Eckermann Engineering, Inc.
Mailing Address: P.O. Box 388
City, State: Lampasas, TX Zip: 76550
Telephone: 512-556-8160 FAX: _____
Email Address: marshal@eckermannengineering.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.

The site is located on the east side of Fulton Ranch Road approximately 1.7 miles north of RM 12

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: Existing University Research Facility

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:

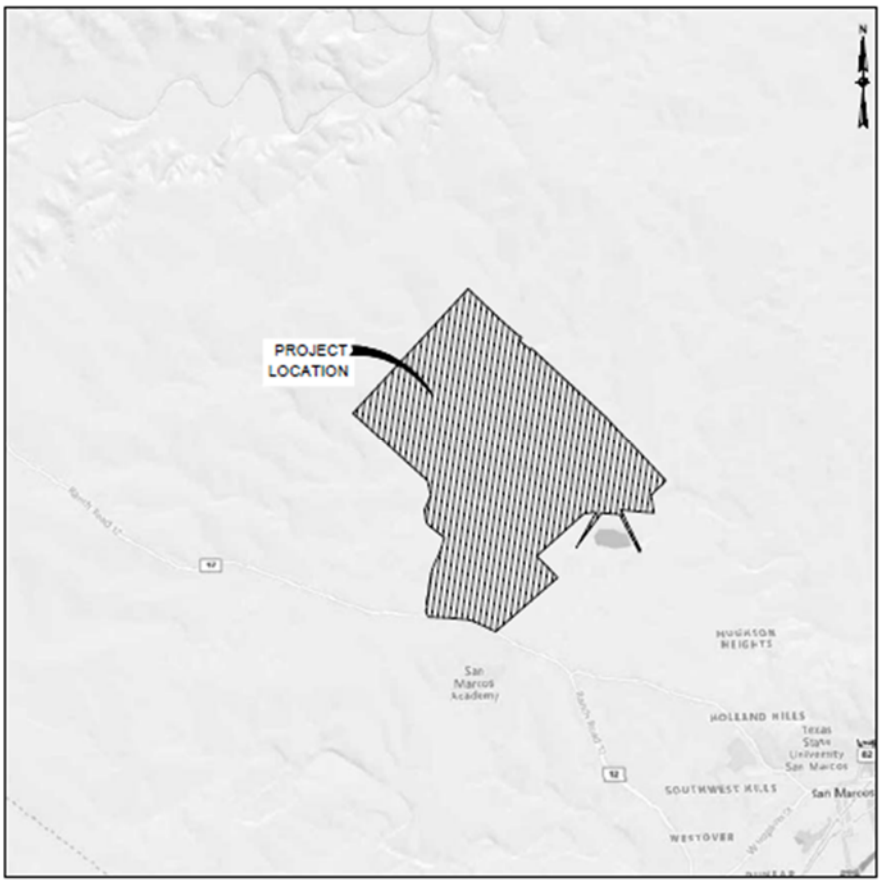
- ☒ TCEQ cashier
- ☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- ☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

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



X Bow Freeman Ranch

San Marcos, TX

ATTACHMENT B

USGS QUADRANGLE MAP

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 14. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information about the **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit their website at www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from Texas Natural Resources Information System Digital Orthophoto Quadrangles (DOQs) produced at a scale of 1:12,000 from photography dated 1995.

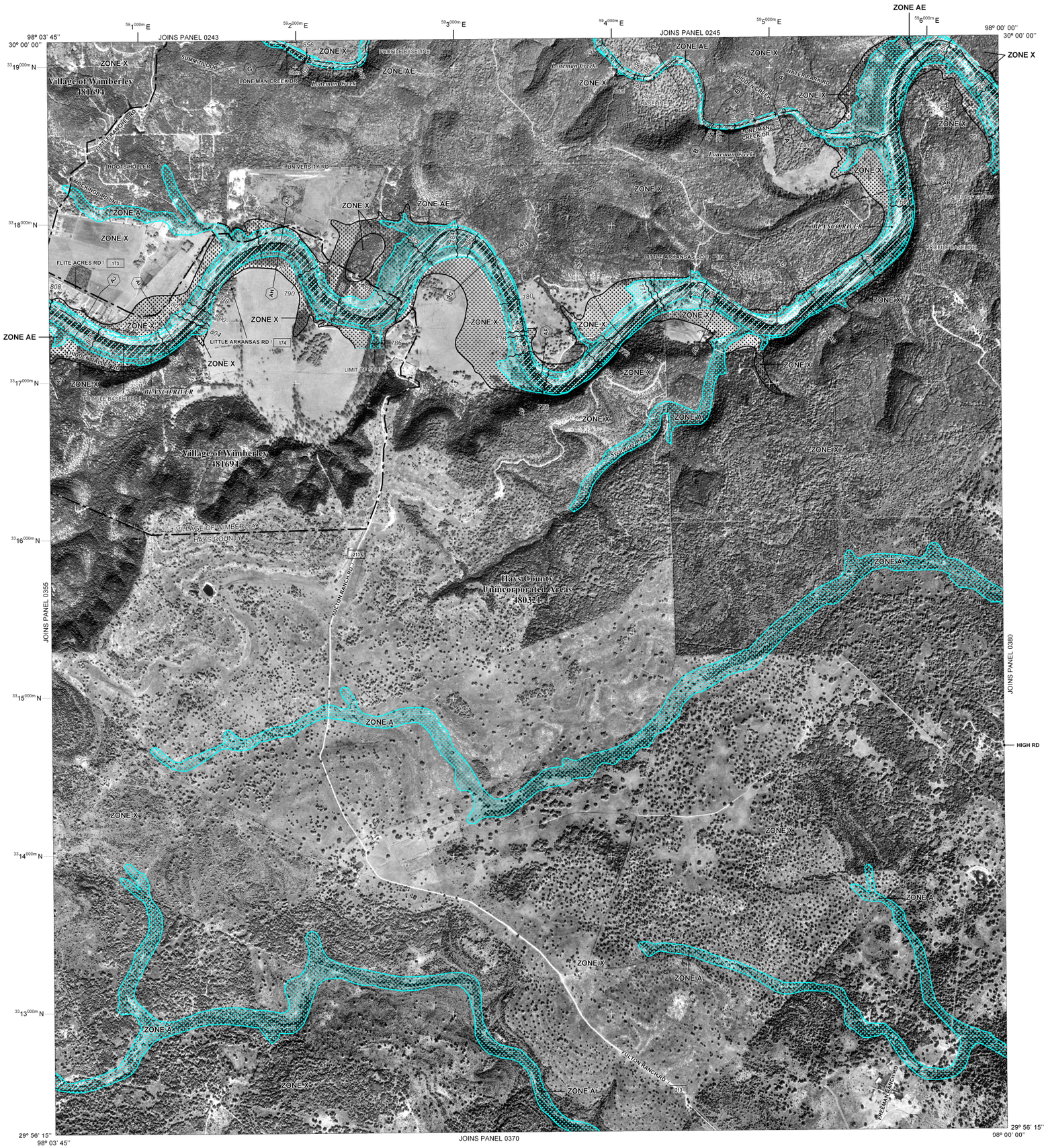
This map reflects more detailed up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and their website at www.fema.gov/msc.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1- 877- FEMA MAP** (1-877-336-2627) or visit the FEMA website at www.fema.gov.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% annual chance floodplain boundary
	0.2% annual chance floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum 1988

A — A	Cross section line
23 — 23	Transect line
45° 02' 08", 93° 02' 12"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4989000mN	1000-meter Universal Transverse Mercator grid values, zone 14
DX5510X	Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5	River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
FEBRUARY 18, 1998

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

September 2, 2005 - to update corporate limits and map format; to add roads and road names; and to incorporate previously issued Letters of Map Revision.

For Community map revision history prior to countywide mapping, refer to the community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0360F

FIRM

FLOOD INSURANCE RATE MAP

HAYS COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 360 OF 495

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HAYS COUNTY	480321	0360	F
WIMBERLEY, VILLAGE OF	481694	0360	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48209C0360F

MAP REVISED
SEPTEMBER 2, 2005

Federal Emergency Management Agency

NOTES TO USERS

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National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

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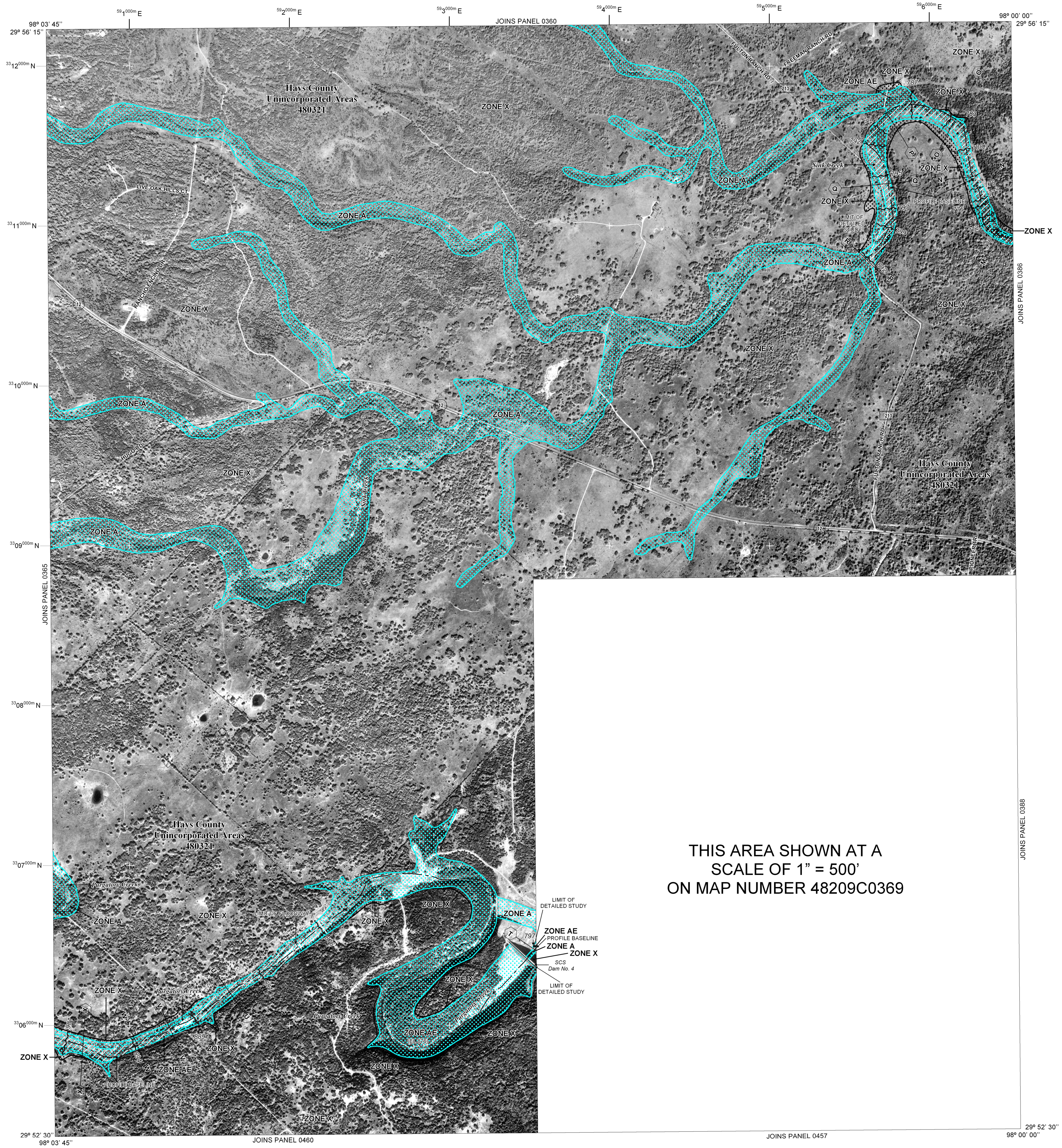

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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ZONE A	No Base Flood Elevations determined.
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ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
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FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
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COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum 1988

- (A)—(A) Cross section line
- (23)- - - -(23) Transect line
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 49 89 000m N — 1000-meter Universal Transverse Mercator grid values, zone 14
- DX5510× — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- • M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
FEBRUARY 18, 1998

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0370F

FIRM
FLOOD INSURANCE RATE MAP

HAYS COUNTY, TEXAS
AND INCORPORATED AREAS

PANEL 370 OF 495

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HAYS COUNTY	480321	0370	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48209C0370F

MAP REVISED
SEPTEMBER 2, 2005

Federal Emergency Management Agency

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LEGEND

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FLOODWAY AREAS IN ZONE AE

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OTHER FLOOD AREAS

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	0.2% annual chance floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
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(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

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FEBRUARY 18, 1998

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NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0380F

FIRM
FLOOD INSURANCE RATE MAP

HAYS COUNTY, TEXAS
AND INCORPORATED AREAS

PANEL 380 OF 495

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HAYS COUNTY	480321	0380	F

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MAP NUMBER
48209C0380F

MAP REVISED
SEPTEMBER 2, 2005

Federal Emergency Management Agency

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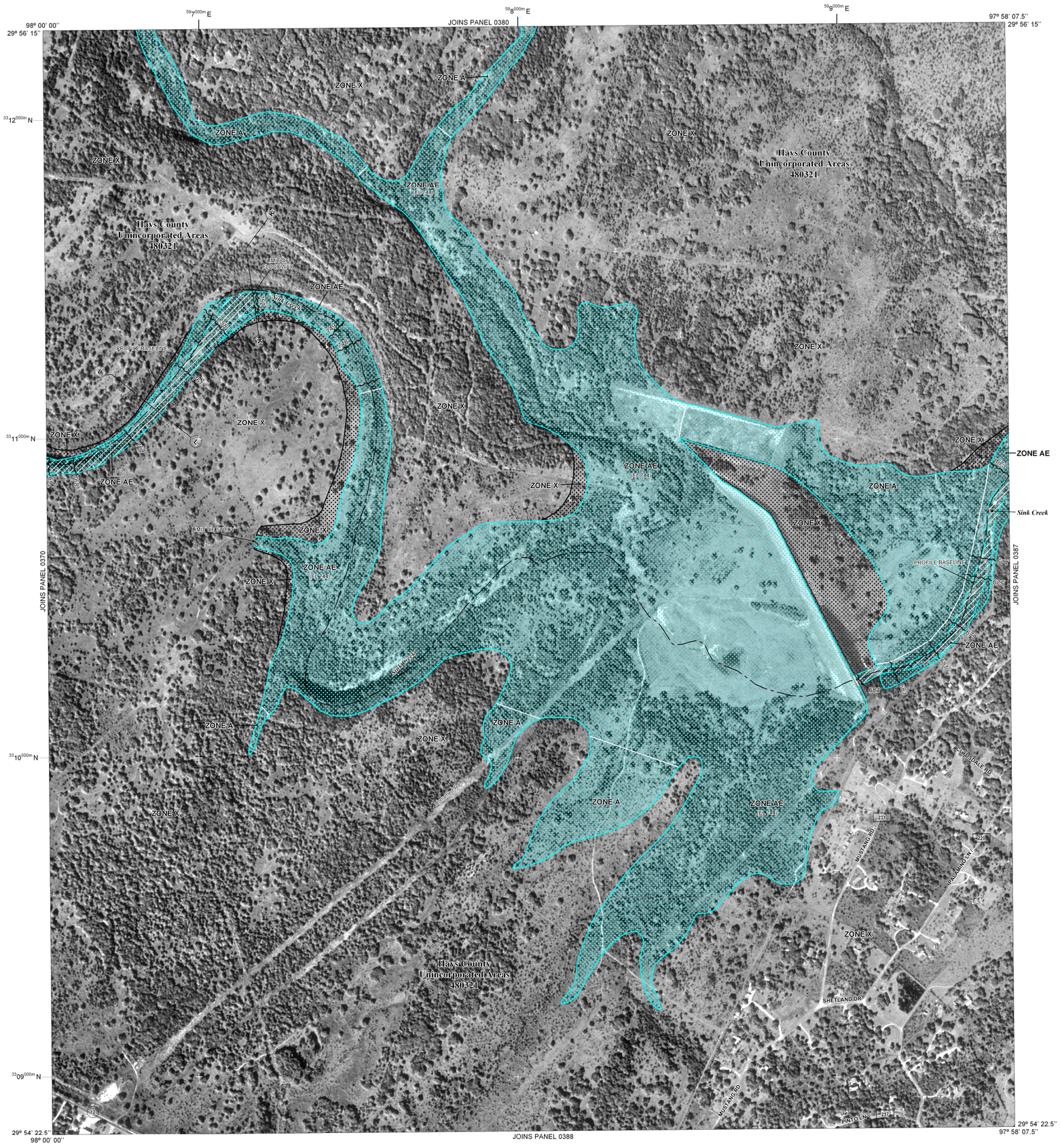

LEGEND

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FLOODWAY AREAS IN ZONE AE

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OTHER FLOOD AREAS

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*Referenced to the North American Vertical Datum 1988

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- DX5510X — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

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FEBRUARY 18, 1998

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MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0386F

FIRM

FLOOD INSURANCE RATE MAP

HAYS COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 386 OF 495

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HAYS COUNTY	480321	0386	F

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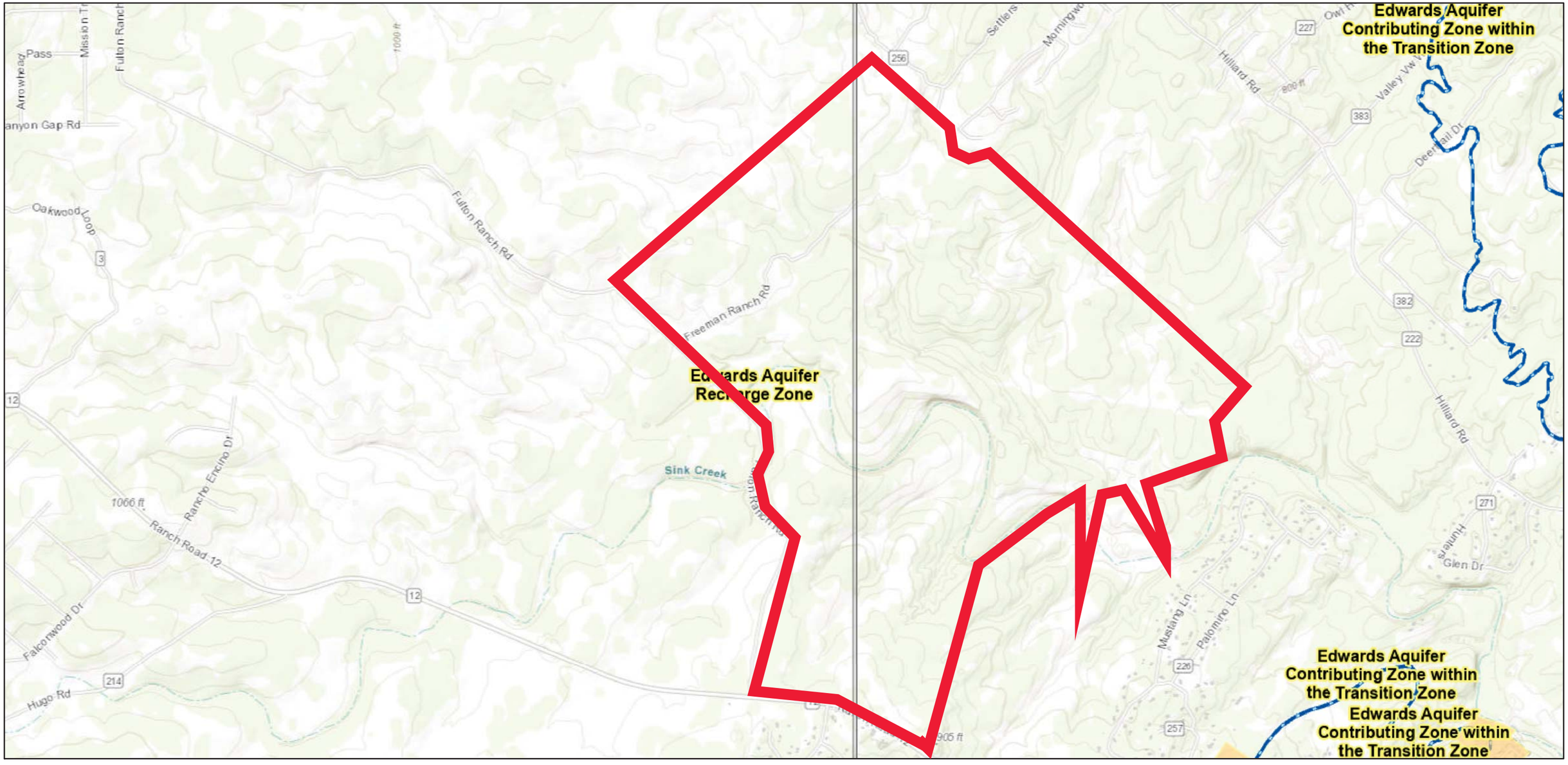
MAP NUMBER
48209C0386F

MAP REVISED
SEPTEMBER 2, 2005

Federal Emergency Management Agency

Edwards Aquifer Viewer Custom Print



12/6/2024, 4:45:46 PM

- Edwards Aquifer Boundary
- Edwards Aquifer Boundary central line
- Edwards Aquifer Label
- City/Place
- TX Counties
- 7.5 Minute Quad Grid
- TCEQ_EDWARDS_OFFICIAL_MAPS

1:36,112

0 0.35 0.7 1.4 mi

0 0.5 1 2 km

City of Austin, City of San Marcos, Comal County, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, TCEQ

Web AppBuilder for ArcGIS

City of Austin, City of San Marcos, Comal County, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | TCEQ |

ATTACHMENT C

PROJECT NARRATIVE

The Texas State University – Freeman Ranch is a research facility operated by Texas State University and consists of 3,373-acres of land located along Ranch Road 12 approximately 1.60 miles northwest from the intersection with Old Ranch Road 12 within Hays County, Texas. The subject site is located within the jurisdiction of City of San Marcos ETJ, Hays County and portions of the site lie within the FEMA 100-year floodplain per map numbers 48209C0360F, 48209C0370F, 48209C0380F, and 48209C0386F all dated September 2, 2005. The proposed development is located within the Edward's Aquifer Recharge Zone. The proposed improvements consist of the construction of 1 (50' X 36') concrete test pad and gravel road to access the test pad.

As stated above, the test pad will be a concrete pad approximately 50' X 36'. The test pad will include a monolithic concrete curb or similar containment structure to capture any liquid that may contain chemicals harmful to the environment created by the operations of the test pad.

The concrete test pad will be used to test solid fuel rocket motors. The fuel is made up of ammonium perchlorate, aluminum, HTPB, curatives and binders. The component of the fuel that creates the largest concern is ammonium perchlorate as it is water soluble.

Upon completion of a successful test, the motor case will be washed out with quench water to extinguish any smoldering fuel remaining in the case. The quench water will be captured in the containment and disposed of off-site.

In the unlikely event that the case containing solid rocket fuel comes apart and the fuel is disbursed, the plan is for staff to manually pick up all large pieces of fuel to be disposed of off-site. All remaining fuel will (small particles) will be burned off with a pear burner. The pear burner will be utilized in a systematic grid to ensure the largest amount of fuel possible is burned.

To accomplish this development grading and light clearing will be required. No domestic sewage will be created by operation of the test pad.

There is 18.45 acres of existing impervious cover. The proposed development will include approximately 0.24 acres of additional impervious cover for a total of 18.69 acres (0.55%) impervious cover once complete. No negative impact to downstream properties is anticipated.

II. Geological Assessment Form (TCEQ-0585)

Geologic Assessment

Texas Commission on Environmental Quality

For Regulated Activities on The Edwards Aquifer Recharge/transition Zones and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

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

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

Signature

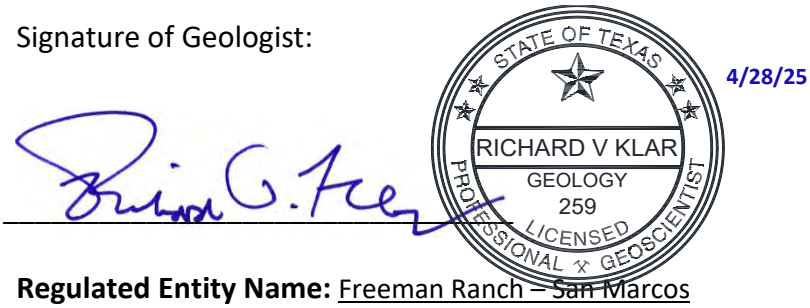
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Richard V. Klar, P.G. Telephone: 210-699-9090

Date: April 28, 2025 Fax: 210-699-6426

Representing: **Raba Kistner, Inc.**, TBPG Firm #50220 / TBPE Firm #3257 for X-Bow Systems, Inc. on behalf of the Texas State University – Freeman Center (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



4/28/25

Regulated Entity Name: Freeman Ranch – San Marcos

Project Information

1. Date(s) of Geologic Assessment was performed: March 11, 2025
2. Type of Project:

☒ WPAP ☐ AST

☐ SCS ☐ UST

3. Location of Project:

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

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

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

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness (feet)
Comfort Rock outcrop complex, 1 to 8 percent slopes (CrD)	D	Veneer to 1
Rumple-Comfort rubbly association, 1 to 8 percent slopes (RUD)	D	Veneer to 1.25

**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 thickness 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" = 60'
   Site Geologic Map Scale: 1" = 60'
   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 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 3 test holes present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
- ☒ The test holes are not in use and have been properly abandoned.
- ☐ The well is not in use and will be properly abandoned.
- ☐ The well is in use and complies with 16 TAC Chapter 76.

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

Administrative Information

☒ 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.

ATTACHMENTS

ATTACHMENT A

GEOLOGIC ASSESSMENT TABLE
(TCEQ-0585-TABLE)

COMMENTS TO GEOLOGIC ASSESSMENT TABLE

SOIL PROFILE

SITE SOILS MAP

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: ***Freeman Ranch - San Marcos***
San Marcos, Hays County, Texas *(**RKI** Project No. ASF25-031-00)*

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-1	29°55'37.25"N	97°59'36.89"W	SF	20	Kep	25.0	4.0		NE-SW (44°)	10	2	0.33	F	8	38	√		√		Hilltop
S-2	29°55'37.80"N	97°59'36.27"W	F	20	Kep	767.0	4.0		NE-SW (44°)	10			F	8	38	√		√		Hilltop
S-3	29°55'33.27"N	97°59'32.25"W	F	20	Kep	278.0	4.0		NE-SW (30°)	10			F	8	38	√		√		Hilltop
S-4	29°55'35.06"N	97°59'31.17"W	O (VR)	5	Kep	4.0	4.0	0.5			4	0.25	F	7	12	√		√		Hilltop
S-5	29°55'36.97"N	97°59'36.56"W	MB (PTH, B-1)	30	Kep	0.3	0.3	40					X	6	36	√		√		Hilltop
S-6	29°55'37.04"N	97°59'36.27"W	MB (PTH, B-2)	30	Kep	0.3	0.3	40					X	6	36	√		√		Hilltop
S-7	29°55'37.15"N	97°59'35.94"W	MB (PTH, B-3)	30	Kep	0.3	0.3	40					X	6	36	√		√		Hilltop

*** DATUM:** ***NAD83***

Feature: PTH = plugged test hole; boring identifier
Formation: Kep = Person Formation

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

	8A INFILLING
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials: ***Plugged to ground surface with site-derived (clay) soil cuttings and/or bentonite*** .

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

I have read, I understood, and I have followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.
My signature certifies that I am qualified as a geologist as defined by 30 TAC 213.

STATE OF TEXAS
RICHARD V. KLAR
GEOLOGY
259
LICENSED
PROFESSIONAL GEOSCIENTIST

Date: ***April 28, 2025***

Sheet 1 of 1

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

COMMENTS TO GEOLOGIC ASSESSMENT TABLE
Freeman Ranch – San Marcos
San Marcos, Hays County, Texas

The locations of the following features are indicated on the ***Site Geologic Map***, which is provided as ***Attachment D*** to this report. All features were mapped based on review of available aerial imagery, published geologic information (Clark, Pedraza, and Morris, 2018), and the geotechnical engineering report entitled *Subsurface Exploration, Laboratory Testing Program, and Foundation Recommendations Report*, which was prepared by UES Professional Solutions 44, LLC (UES, January 22, 2025), in addition to field observations.

Karst Features

Solution-Enlarged Fracture

Feature S-1 (SF)

Feature S-1 consists of a solution-enlarged fracture located in the west-central portion of the assessment area. The exposed outcrop area measures approximately 25 x 4 feet in length and width, respectively. Fractures are generally oriented NE-SW at 44 degrees with apertures measuring approximately 1 to 3 inches. The fractures generally contain fine-grained soil infilling. Evidence of drag folding was observed, which indicates vertical displacement or faulting. Based in part on these observations, ***Feature S-2*** was defined as discussed below.

Faults

Feature S-2 (F)

Feature S-2 consists of a normal fault that crosses the west portion of the assessment area. This fault was mapped based on observations of solution-enlarged fractures and drag folding associated with ***Feature S-1***, in addition to subtle indications of lineations observed in aerial imagery. The segment of the feature where direct evidence of faulting was observed is represented by a solid line on the attached ***Site Geologic Map***. It is inferred that the fault serves to facilitate internal displacement within the Kep, which underlies the assessment area.

Feature S-3 (F)

This inferred fault (***Feature S-3***) was mapped based solely upon review of published the geologic reference, *Geologic Framework and Hydrostratigraphy of the Edwards and Trinity Aquifers within Hays County* (Clark, Pedraza, and Morris, 2018). Evidence of this feature was not observed during field reconnaissance activities. The location of this fault is located along the southeast assessment boundary as indicated on the ***Site Geologic Map*** (i.e., long dashed lines).

Vuggy Rock Outcrop

Feature S-4 (O)

Feature S-4 is a vuggy rock outcrop generally exhibiting large vugs 1 to 3 inches in size. The outcrop measures approximately 4 x 4 feet in length and width, respectively, with the long axis oriented in the northwest-southeast direction, parallel the slope in topography. Vugs and solution openings associated with this exposure do not appear to extend past the surficial limestone bedding unit.

Manmade Features in Bedrock (MB)

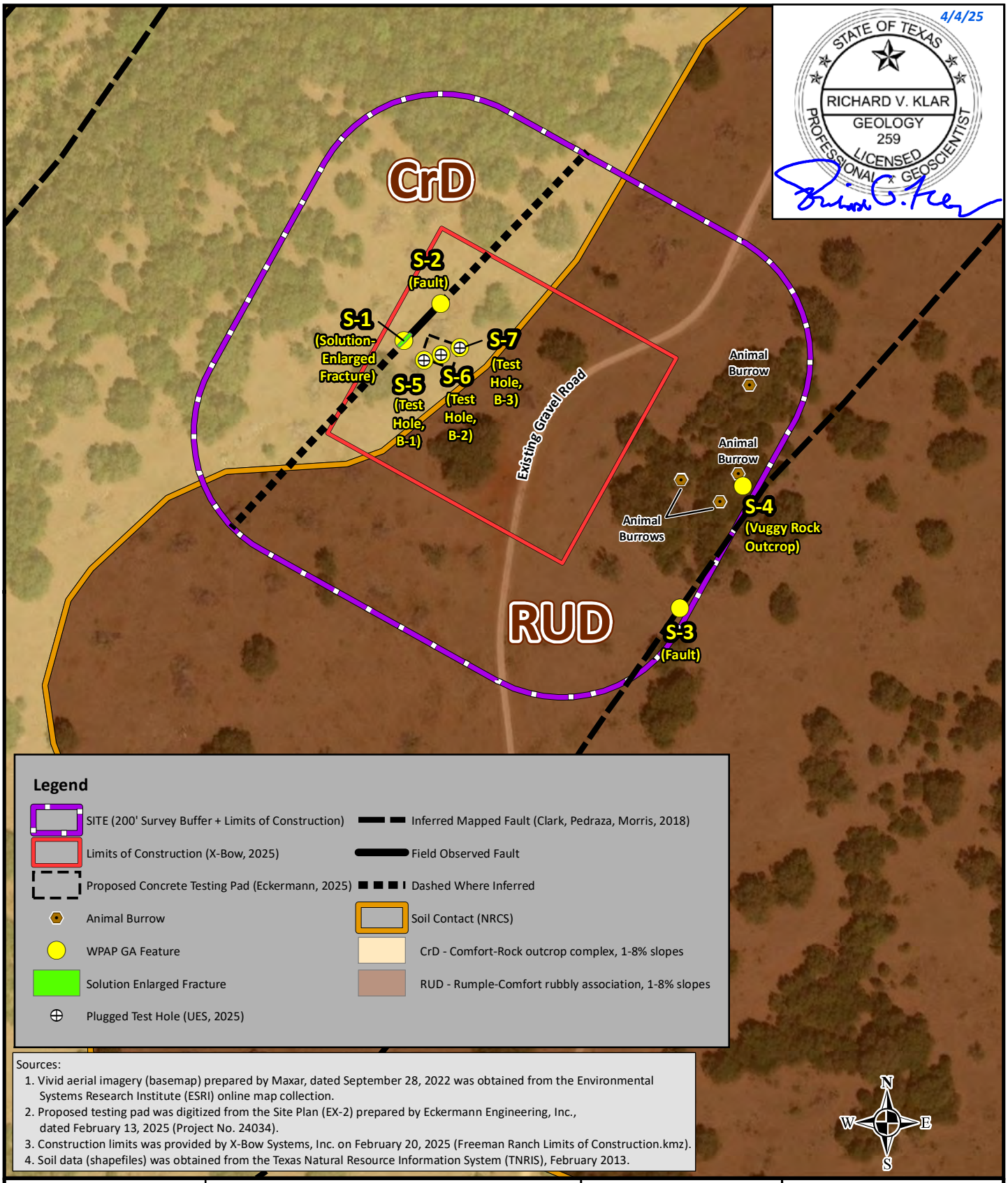
Features S-5 through S-7 consist of plugged geotechnical test holes installed on January 2, 2025 by UES to support planned improvements. The borings were drilled within the planned testing pad area using a drilling rig equipped with a rotary head and air rotary drilling methods to depths of 40 feet. The surface soil conditions logged in conjunction with these drilling activities generally consisted of a very stiff to hard dark brown clay with gravel to approximately 1 foot underlain by a very hard light reddish-brown to tan weathered limestone to approximately 6 feet in depth. Intermediate strata consisting of clayey sand or sandy clay were reported from 6 feet to approximately 12-16 feet in two test holes. The underlying material consists of very hard light reddish brown to tan limestone reported to depths ranging from 6 feet to 16 feet. A very hard tan limestone is reported from depths of 12-16 feet to boring termination depths of 40 feet The borings are no longer visible but are reported to have been plugged with soil cuttings and/or bentonite with a clay cap.

SOIL PROFILE
Freeman Ranch – San Marcos
San Marcos, Hays County, Texas

SOIL SERIES	THICKNESS ON SITE	DESCRIPTION
Comfort-Rock	**Veneer to 1 foot**	***Comfort-Rock outcrop complex, 1 to 8 percent slopes (CrD):*** This complex comprises shallow clayey soils and limestone outcrop on ridge tops in the Edwards Plateau. On average, Comfort soils make of 70% of the complex and occur between the bands in limestone outcrop areas that form horizonal bands. The surface layer of the Comfort soil is a dark brown, very stony clay, about 6 inches thick. Cobbles to 4 feet in diameter are abundant. The subsoil is a dark reddish-brown clay and extremely stony, that occurs to depths of approximately 13 inches.
Rumple-Comfort	**Veneer to 1 foot**	***Rumple-Comfort rubbly association, 1 to 8 percent slopes (RUD):*** Rumple soils comprise approximately 60% of this association and Comfort soils comprise approximately 20%. The surface layer of Rumple soils is comprised of a dark reddish brown very cherty clay loam about 10 inches thick. Chert and limestone cobbles cover approximately 20% of the surface. The subsoil extends to approximately 14 inches in depth and is comprised of dark reddish brown very cherty clay. The surface layer of Comfort soils is comprised of dark brown extremely stony clay about 7 inches thick. The subsoil is comprised of dark reddish brown extremely stony clay. The underlying material is indurated fractured limestone.

The preceding table was prepared on the basis of information provided in the *Soils Survey of Comal and Hays Counties, Texas (June 1984)* and the *NRCS Web Soil Survey (2019)*, in addition to field observations. As presented on the attached ***Site Soils Map***, native soils mapped in the northwest and southeast portions of the assessment area are classified as Comfort-Rock outcrop complex, 1 to 8 percent slopes (CrD) *[See Photograph to the right of observed CrD soil]* and Rumple-Comfort rubbly association, 1 to 8 percent slopes (RUD), respectively. Each of the referenced soils are weakly-developed and relatively thin, occurring over weathered limestone units of the Person Formation. The Comfort and Rumple soil units exhibit moderately low permeability, 0.06-0.2 inches/hour, while the rock outcrop exhibits a moderately low to high permeability, 0.06-1.98 inches/hour. Both the CrD and RUD soils are reported as having low to moderate shrink-swell potential.

Based on review of boring log data from the geotechnical engineering report prepared by UES Professional Solutions, LLC (UES), dated January 22, 2025, the soil conditions consist of approximately 1 foot of very stiff to hard dark brown clay underlain by weathered limestone with intermediate clayey sand or sandy clay stratums. Competent limestone is reported below depths ranging from 6 to 16 feet to boring termination depth of 40 feet.



4/4/25

STATE OF TEXAS
RICHARD V. KLAR
GEOLOGY
259
LICENSED
PROFESSIONAL GEOSCIENTIST

Sources:
1. Vivid aerial imagery (basemap) prepared by Maxar, dated September 28, 2022 was obtained from the Environmental Systems Research Institute (ESRI) online map collection.
2. Proposed testing pad was digitized from the Site Plan (EX-2) prepared by Eckermann Engineering, Inc., dated February 13, 2025 (Project No. 24034).
3. Construction limits was provided by X-Bow Systems, Inc. on February 20, 2025 (Freeman Ranch Limits of Construction.kmz).
4. Soil data (shapefiles) was obtained from the Texas Natural Resource Information System (TNRIS), February 2013.

RABA KISTNER
a kiwa company
12821 West Golden Lane
San Antonio, Texas 78249
P 210.699.9090
F 210.699.6426
www.rkci.com
TBPE Firm F-3257/TBPG #50220

SITE SOILS MAP

FREEMAN RANCH - SAN MARCOS
SAN MARCOS, HAYS COUNTY, TEXAS

REVISIONS:

No.	DATE	DESCRIPTION

PROJECT No.:	ASF25-031-00
ISSUE DATE:	3/25/2025
DRAWN BY:	LAW
CHECKED BY:	RAS
REVIEWED BY:	RVK

0 50 100 200 Feet

1 INCH = 200 FEET

NOTE: This Drawing is Provided for Illustration Only, May Not be to Scale and is Not Suitable for Design or Construction Purposes

ATTACHMENT B

STRATIGRAPHIC COLUMN

STRATIGRAPHIC COLUMN
Freeman Ranch – San Marcos
San Marcos, Hays County, Texas

STRATIGRAPHIC FORMATION	THICKNESS	DESCRIPTION
Edwards Limestone (Ked)		
<u>Person Formation</u> (Kep)	170-200 feet	Unit is bioturbated and consists of pelletal limestone that ranges from chalk to mudstone and miliolid grainstone. This member is composed of this to massive beds. A packstone containing large caprinids is present near the upper portion of the unit. Chert is common as beds and large nodules. Some crossbedding is evident. ***Not exposed at the assessment area.***
Cyclic and Marine Members, undivided (Kpcm)	80-90 feet	
Leached and Collapsed Members, undivided (Kplc)	70-90 feet	Unit consists of hard, dense recrystallized limestone. This member is generally a mudstone, wackestone, packstone, and grainstone containing chert beds and large nodules and iron-stained beds. The Kplc is often stromatolitic. Fossils and fragments of *Toucasia* sp. are found above the contact with the Regional Dense Member. Although rare, *Montastrea roemeriana*, oysters can be found. ***Patchy exposures are present within the west-central portion of the assessment area and along its east boundary.***
Regional Dense Member (Kprd)	20 feet	Unit consists of a dense, shaly limestone. The member generally consists of oyster shell mudstone and iron wackestone containing wispy shale partings. ***Not exposed within the assessment area.***

Note: Stratigraphic Column adapted from Clark, Pedraza, and Morris (2018).

ATTACHMENT C

NARRATIVE OF PROJECT SPECIFIC GEOLOGY

SITE GEOLOGY NARRATIVE
Freeman Ranch – San Marcos
San Marcos, Hays County, Texas

Introduction

The following is a site-specific discussion of existing geological conditions and potential recharge features for the Edwards Aquifer identified within the proposed Solid Rocket Test Facility, which comprises approximately 13.77 acres of land, and consists of the proposed limits of construction in addition to a surrounding 200-foot buffer zone (hereinafter referred to as the assessment area or SITE). The SITE is located within the larger Freeman Ranch property, which is addressed at 467 Freeman Ranch Road in San Marcos (Hays County), Texas. An exhibit depicting the full extent of the property and corresponding metes and bounds description prepared by Cuplin & Associates, Inc. (April 25, 2025), a Registered Professional Land Surveyor, is included herein immediately following the ***Site Geologic Map***. Planned improvements will include a 50 x 36 foot concrete pad and a 20-foot wide access road that will tie into an existing gravel road.

This assessment was performed by **Raba Kistner, Inc. (RKI)** for X-Box Systems, Inc. (CLIENT) on behalf of the Texas State University - Freeman Center in association with applicable Edwards Aquifer Protection Program Rules as specified in *Title 30 of the Texas Administrative Code, Section 213 (30 TAC §213, effective April 24, 2008).* This assessment report is in the format required by the Texas Commission on Environmental Quality (TCEQ) for the Geologic Assessment portion of the Water Pollution Abatement Plan (WPAP) submittal and was prepared in accordance with the revised *Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones (TCEQ-0585)*, which are applicable to submittals received by the TCEQ after October 1, 2004.

This geologic assessment report documents conditions observed by **RKI** within the SITE boundaries on March 11, 2025. Results of the field reconnaissance mapping activities are further discussed below.

Project Description

Project Location. As indicated in the inset of the attached ***Site Geologic Map***, the SITE is located within the southeast portion of the approximate 3,373-acre Freeman Ranch property. The SITE currently consists of an open upland area with grassland and cedar ashe juniper and mesquite trees. In accordance with TCEQ requirements, the full extent of the SITE was assessed in conjunction with Geologic Assessment activities. The SITE is bounded on all sides by vacant, undeveloped pasture land associated with the Freeman Ranch. The following photographs depict the general SITE conditions.

Photograph 1: View to the north across the SITE.

Photograph 2: View to the west across the SITE.

Photograph 3: View to the south across the SITE.

Photograph 4: View to the east across the SITE.

Based on review of official maps prepared by TCEQ that are available from the Edwards Aquifer Protection Program website (http://www.tceq.texas.gov/field/eapp/program.html), the SITE is fully located within the Edwards Aquifer Recharge Zone (EARZ) as depicted on the ***Site Geologic Map***. As such, the performance of a geologic assessment is required to facilitate planned WPAP construction activities in accordance with applicable provisions set forth in the EAPP rules as specified in *Title 30 of the Texas Administrative Code, Section 213 (30 TAC 213, effective April 24, 2008).*

Topography and Drainage. Site-specific 1-foot topographic contours prepared by Eckermann Engineering, Inc. (Eckermann, 2025) as part of the WPAP submittal along with the U.S. Geological Survey (USGS) 7.5-Minute Series Topographic map (*San Marcos North Quadrangle*, 2019) were reviewed to evaluate general surface conditions and drainage patterns. The SITE consists of a northeast-southwest trending ridge characterized by gently sloping hilltop topography. The ground surface elevations range from a maximum of 795 feet above mean sea level (amsl) to a minimum of 766 feet amsl. To illustrate topographic conditions, the 10-foot topographic contours are depicted in ***Site Geologic Map***.

A review of U.S. Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM, Map No. 48209C0386G) indicates that no part of the SITE is located within the designated 100-year or 500-year floodplain. Surface runoff occurs generally to the northeast and west as sheet flow toward Sink Creek. As indicated in the inset of the attached ***Site Geologic Map***, Sink Creek is located approximately 400 to 1,010 feet to the northwest, northeast, and southeast of the SITE. No well-defined channels or drainage features exist on the SITE.

Historical Property Use. Although research pertaining historical land use activities was beyond the scope of this assessment, historical aerial imagery was reviewed to evaluate past property conditions. The following aerial photographs from Google Earth™ were reviewed: 1985, 1995, 1997, 2002, 2005, 2006, 2008, 2009, 2011 through 2019, and 2021 through 2023. Aerial imagery confirms that the SITE has been historically undeveloped and part of a larger ranch property. The 2006 and 2021 aerial photographs indicate an access roadway improved with gravel and minor vegetative clearing within the SITE.

Classification of Recharge Features: As further described herein, naturally occurring recharge features attributed to karstification of limestone terrain and/or surface erosional processes were identified within SITE boundaries. Features identified and discussed below include a solution-enlarged fracture outcrop, vuggy rock outcrop, two faults, and three test holes. The significance of these features was assessed using definitions and guidance provided in *Instructions to Geologists (TCEQ-0585-Instructions, revised October 1, 2004)*. All features within the SITE that met the criteria presented in this reference were mapped. The characteristics of all mapped features and the assessments of these features, as defined by the TCEQ, are presented in the attached ***Geologic Assessment Table (TCEQ-0585-Table)***.

Stratigraphy

As presented in the attached ***Stratigraphic Column***, information pertaining to the lithologies and thickness of geologic units underlying the SITE was adapted from Clark, Pedraza, and Morris (2018). Collective published data referenced indicate that the SITE is underlain by the Upper Edwards Limestone (Person Formation [Kep]). The Kep is commonly divided into three distinct members from top to bottom: (i) Cyclic and Marine Member, undivided – mudstone to packstone, grainstone, and chert; (ii) Leached and Collapsed Member, undivided - unit includes crystalline limestone, mudstone to grainstone, and chert; and (iii) Regional Dense Member - unit consists of dense, carbonate mudstone. The total thickness of the Kep is on the order of 170 to 200 feet. The Leached and Collapsed member of the Kep represents the portion of the Edwards Limestone directly underlying the SITE to depths on the order of 40+ feet. The Leached and Collapsed Member has a reported porosity of 20 percent, which is the most porous and permeable part of the Person Formation.

Structure

This SITE is located along the southern edge of the Balcones Fault Zone and, as such, exhibits a similar structural trend. The Balcones Fault Zone generally consists of a northeast-southwest trending, *en echelon* normal fault system, which juxtaposes Upper Cretaceous lithologies in the southeast with Lower Cretaceous lithologies in the northwest. As a result of this larger-scale, regional faulting, minor internal

fault sequences and fractures exist within this zone which generally follow the same structural trend and accommodate localized displacement, particularly within the extent of the EARZ.

In order to evaluate the presence of normal fault zones that could transect property boundaries, **RKI** reviewed historical aerial photographs and published maps. The aerial photographs did not indicate any prominent lineations within the assessment area, however, subtle lineations that correspond to ***Feature S-2*** were identified north and south of Sink Creek. ***Feature S-2*** was mapped based on a solution-enlarged fracture outcrop and drag folding associated with ***Feature S-1.*** The segment of ***Feature S-2*** where direct evidence of faulting was observed is represented by a solid line on the attached ***Site Geologic Map***. It is inferred that the fault serves to facilitate internal displacement within the Kep, which underlies the assessment area. No field indications were observed for the normal fault that is mapped (Clark, Pedraza, and Morris, 2018) along the east boundary of the SITE (***Feature S-3***).

Pursuant to point assignment criteria presented in the ***Geologic Assessment Table (TCEQ-0585)*** and professional judgment, ***Features S-2 and S-3*** are collectively classified as not sensitive, based upon the location on a hilltop setting with no directed recharge, or evidence of capacity for rapid infiltration.

Karst Feature

Two potential recharge features were identified within the SITE boundaries that are attributed to karstification of the limestone terrain. Neither of the features was ranked as sensitive based upon application of point assignment criteria presented in the ***Geologic Assessment Table (TCEQ-0585)*** and professional judgment. A brief description of the karst features is provided in the following paragraphs. Please see ***Comments to Geologic Assessment Table*** provided in ***Attachment A*** for complete descriptions of karst features.

Solution-Enlarged Fracture

Feature S-1 consists of a weathered limestone exposure exhibiting dissolution-enlarged fractures. The fractures, which trend roughly northeast-southwest, are apparently limited to the upper limestone bedding unit and were found to extend about 6 inches vertically into the subsurface, terminating in a lower limestone bedding unit. The fractures are partially filled with fine-grained soils. Based on observations of the solution-enlarged fracture outcrop and evidence of drag folding, a fault (***Feature S-2***) was mapped.

This is supported by the fact that dissolution features generally terminate in soil or the uppermost limestone bedding unit with no connection to the subsurface that would provide rapid infiltration. This feature is classified as not sensitive owing to its estimated low relative infiltration rate (i.e., no evidence of capacity for rapid infiltration).

Vuggy Rock Outcrop

One vuggy rock outcrop (***Feature S-4***) measuring approximately 4 feet x 4 feet in length and width, respectively was observed along the slope near the southwest corner of the SITE. The outcrop generally

exhibits vugs 1 to 3 inches in size. The zone of dissolution exhibiting vugs does not appear to extend beyond the surficial limestone bedding unit.

The potential for infiltration at this location is considered low. This feature is classified as not sensitive with regard to recharge potential.

Manmade Features

As presented on the ***Site Geologic Map***, a total of 3 manmade features were identified that may potentially serve to enhance the transmission of surface runoff to the subsurface. The features consist of plugged geotechnical test holes designated as ***Features S-5 through S-7***, which meet the criteria for assessment as manmade features in bedrock. Information regarding the locations of these borings were based on review of the geotechnical engineering report entitled *Laboratory Testing Program, and Foundation Recommendations Report* (UES, 2025). These were reportedly installed to approximately 40 feet in depth. No shallow groundwater was observed during drilling operations. These features are collectively classified as not sensitive as they have been plugged and no longer exist.

Potential for Fluid Migration to the Edwards Aquifer

The majority of the SITE is characterized by intact limestone with overlying clay soils having low infiltration rates. Based on our review of SITE geology, topography and drainage conditions, in addition to the results of our detailed mapping efforts, the overall potential for fluid movement (i.e. surface-derived flow) to the Edwards Aquifer via infiltration is considered to be low. The following assessment findings support this conclusion.

- The SITE is directly underlain to depths estimated on the order of 40+ feet by the Person Formation, the uppermost unit of the Edwards Aquifer. No sensitive karst features were identified at the SITE. The naturally-occurring recharge features identified within the SITE are collectively classified as not sensitive. The SITE is overlain by approximately 1 foot of clay soils that are classified as Group D soils that have reported slow to moderate infiltration rates.

- Although two normal faults were identified within the SITE, the features are classified as not sensitive, based the absence of discrete recharge openings along the fault trace and inferred low relative infiltration rates. Fault segments mapped within project limits as part of this assessment are not considered to be capable of rapidly transmitting surface runoff or contaminants to the subsurface.
- Manmade features (i.e., test holes) present at the SITE are collectively classified as not sensitive as these are plugged and no longer exist.

References

Clark, A.K., Pedraza, D.E., and Morris, R.R., 2018, *Geologic Framework and Hydrostratigraphy of the Edwards and Trinity Aquifers within Hays County*, Texas: U.S. Geological Survey Scientific Investigations Map 3418, 1 sheet, scale 1:24,000, https://pubs.usgs.gov/sim/3418/sim3418.pdf, pamphlet, https://pubs.usgs.gov/sim/3418/sim3418_pamphlet.pdf

Cuplin & Associates, Inc. (2025), *Surveyor Exhibit and Metes and Bounds Description for 13.77-Acre Geologic Assessment Area,* Project No. 25272, April 25, 2025.

Eckermann Engineering, Inc. (Eckermann), 2025, Site Plan, Figure EX-2, dated February 13, 2025, Project No. 24034, provided via email on March 5, 2025 (20250305_Site Plan.pdf).

Google Earth Pro, Version 7.3.6.9796. Aerial images: December 1985, January 1995, December 1997, December 2002, June 2005, April 2006, February 2008, February and November 2009, March and October 2011, August 2012, October 2013, January and October 2014, January, July, and December 2015, February 2016, January and February 2017, January and December 2018, November 2019, January and March 2021, and March and July 2022.

National Flood Insurance Program (NFIP), 2025, Flood Insurance Rate Map (FIRM), Hays County, Texas and Incorporated Areas; U.S. Federal Emergency Management Agency (FEMA), Map No. 48209C0386G, January 17, 2025.

Texas Commission on Environmental Quality (TCEQ), 2021, Edwards Aquifer Viewer, version 5.1, https://www.tceq.texas.gov/gis/edwards-viewer.html (accessed March 19, 2025).

Texas Water Development Board (TWDB), Water Data Interactive (WDI) Groundwater Data Viewer, https://www2.twdb.texas.gov/apps/WaterDataInteractive/GroundwaterDataViewer/?map=sdr, accessed March 19, 2025.

UES Professional Solutions 44, LLC (UES), 2025, Subsurface Exploration, Laboratory Testing Program, and Foundation Recommendations Report, Project Number 24-1468, January 22, 2025.

United States Geological Survey (USGS), 1988, San Marcos North Quadrangle; USGS, Denver, Colorado.

United States Department of Agriculture (USDA), 1984, Soil Survey of Comal and Hays Counties, Texas; USDA / Soil Conservation Service / Texas Agricultural Experiment Station.

United States Department of Agriculture (USDA), 1986, Urban Hydrology for Small Watersheds; USDA / Natural Resource Conservation Service, Technical Release (TR-) 55, June 1986.

ATTACHMENT D

FEATURE POSITION TABLE (GPS COORDINATES)

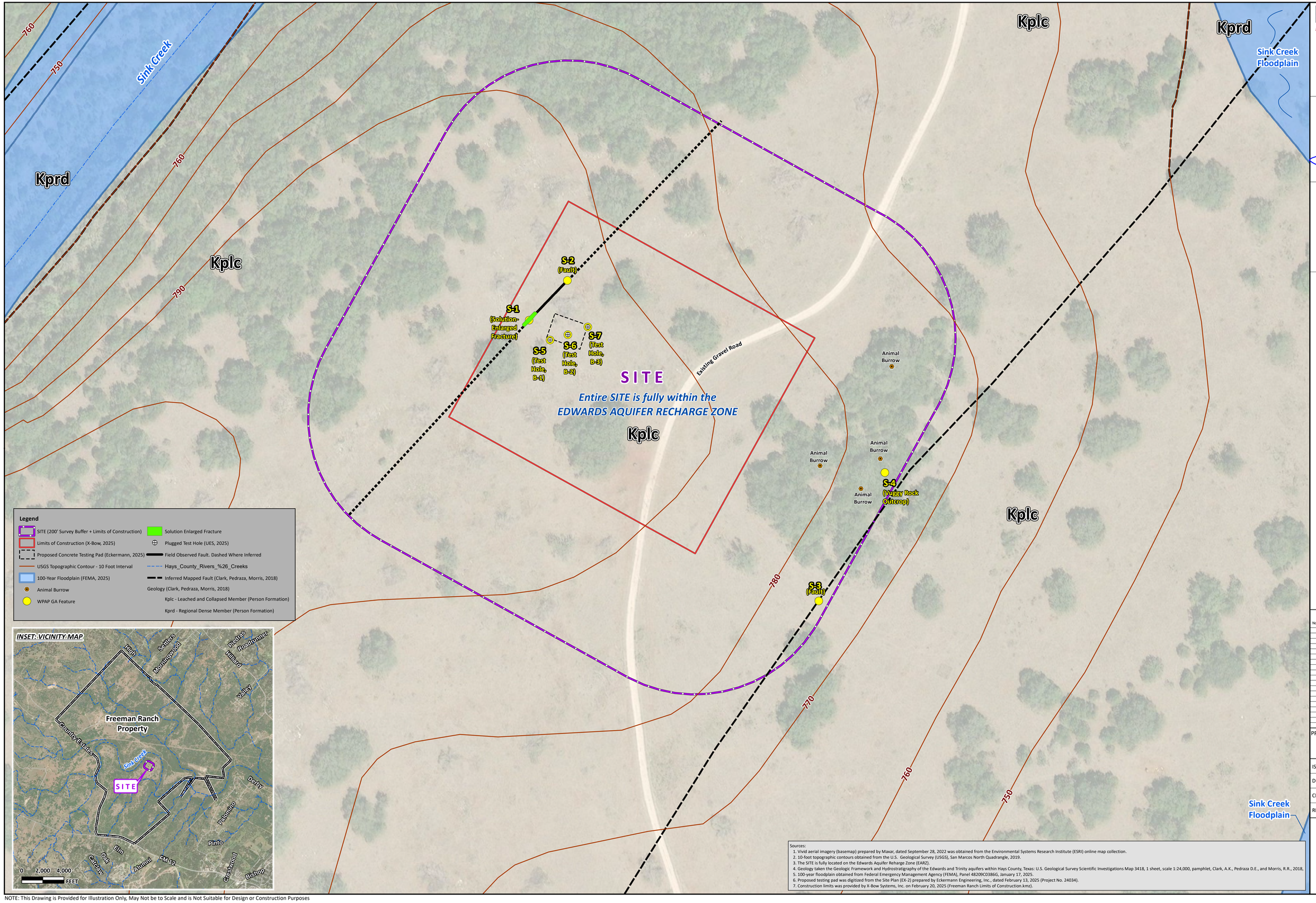
SITE GEOLOGIC MAP

SURVEY EXHIBIT AND METES AND BOUNDS DESCRIPTION – GEOLOGICAL ASSESSMENT AREA

FEATURE POSITION TABLE
Freeman Ranch - San Marcos
San Marcos, Hays County, Texas
RKI Project No. ASF25-031-00

Feature Designation	Feature Type	Date Collected	North Latitude	West Longitude	UTM Northing (meters)	UTM Easting (meters)
S-1	Solution-Enlarged Fracture	3/11/2025	29°55'37.25"N	97°59'36.89"W	3311123.5	597140
S-2	Fault	3/11/2025	29°55'37.80"N	97°59'36.27"W	3311140.7	597157
S-3	Fault	3/11/2025	29°55'33.27"N	97°59'32.25"W	3311002.1	597266
S-4	Other (Vuggy Rock Outcrop)	3/11/2025	29°55'35.06"N	97°59'31.17"W	3311058	597294
S-5	Manmade feature in bedrock (Plugged Test Hole, B-1)	3/11/2025	29°55'36.97"N	97°59'36.56"W	3311115	597149
S-6	Manmade feature in bedrock (Plugged Test Hole, B-2)	3/11/2025	29°55'37.04"N	97°59'36.27"W	3311117.2	597157
S-7	Manmade feature in bedrock (Plugged Test Hole, B-3)	3/11/2025	29°55'37.15"N	97°59'35.94"W	3311120.6	597166

Notes:
1. Geographic coordinates are presented Degrees, Minutes, Decimal Seconds
2. Reference Datum is NAD 83
3. Data were collected utilizing a Garmin GPS 60cx Global Positioning System.
4. Horizontal Accuracy: RMS Value < 3 meter ground resolution
5. GPS data was collected by Rick Sample (**RKI** Project Professional).
7. GPS coordinates correlate to the points on the map for each feature.



RABA KISTNER
a kiwa company
12821 West Golden Lane
San Antonio, Texas 78249
P 210.699.9090
F 210.699.6426
www.rkci.com
TBPE Firm F-3257 / TBPG #50220

4/4/2025
STATE OF TEXAS
RICHARD V. KLAR
GEOLOGY
259
LICENSED
PROFESSIONAL GEOSCIENTIST

SITE GEOLOGIC MAP

GEOLOGIC ASSESSMENT
PROPOSED PROPERTY ACQUISITION - ±84.31 ACRES
OVERLOOK TRACT - U.S. HIGHWAY 281 TO BULVERDE ROAD
SAN ANTONIO, BEXAR COUNTY, TEXAS

No.	DATE	DESCRIPTION

PROJECT No.: ASF25-031-00

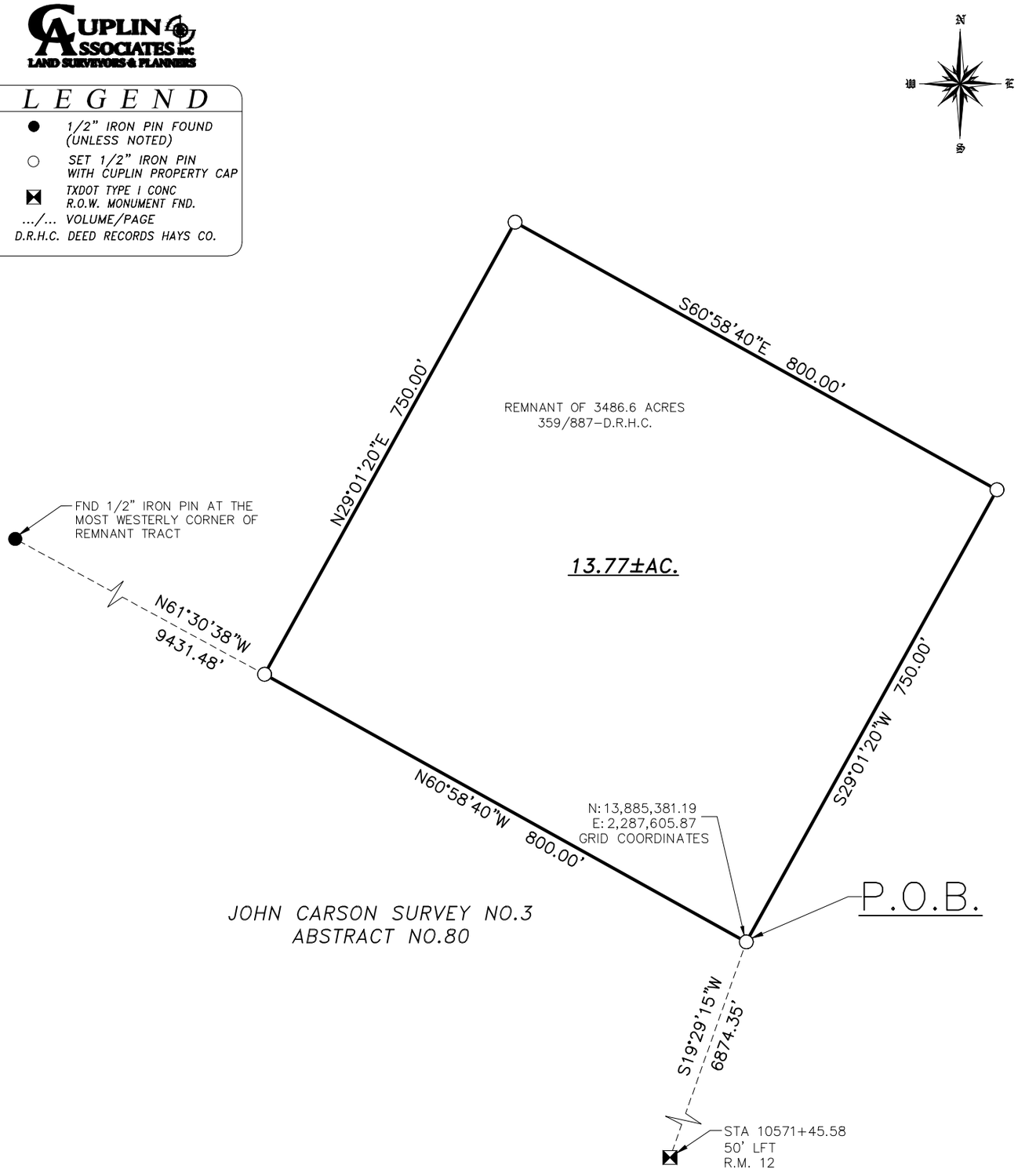
ISSUE DATE:	4/4/2025
DRAWN BY:	LAW
CHECKED BY:	RAS
REVIEWED BY:	RVK

NOTE: This Drawing is Provided for Illustration Only, May Not be to Scale and is Not Suitable for Design or Construction Purposes

CUPLIN ASSOCIATES INC
LAND SURVEYORS & PLANNERS

LEGEND

- ● 1/2" IRON PIN FOUND (UNLESS NOTED)
- ○ SET 1/2" IRON PIN WITH CUPLIN PROPERTY CAP
- ⊠ TXDOT TYPE I CONC R.O.W. MONUMENT FND.
- .../... VOLUME/PAGE
- D.R.H.C. DEED RECORDS HAYS CO.



NOTES:
1) BASIS OF BEARINGS ARE TO THE NORTH AMERICAN DATUM OF 1983, TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE.
2) DISTANCES SHOWN HEREON ARE IN GRID, TO OBTAIN SURFACE VALUES APPLY A SCALE FACTOR OF 1.00011771385.
3) THIS HEREIN EXHIBIT IS NOT INTENDED FOR USE OF LAND CONVEYANCE. IT IS SOLELY PREPARED TO SHOW THE EXTENTS AND ACREAGE OF A GEOLOGICAL ASSESSMENT AREA.

EXHIBIT OF GEOLOGICAL ASSESSMENT AREA

LOCAL ADDRESS: R.M. HIGHWAY NO. 12, SAN MARCOS, TEXAS.

LEGAL DESCRIPTION: BEING A 13.77 ACRE TRACT OF LAND SITUATED IN THE JOHN CARSON SURVEY NO. 3, ABSTRACT NO. 80, HAYS COUNTY, TEXAS, OUT OF THE REMNANT TRACT OF A CALLED 3486.6 ACRE TRACT AS DESCRIBED IN SPECIAL WARRANTY DEED TO FROST NATIONAL BANK, INDEPENDENT EXECUTOR AND TRUSTEE UNDER THE WILL OF JOSEPH FREEMAN, ACTING BY AND THROUGH ITS AUTHORIZED OFFICERS, RECORDED ON VOLUME 359, PAGE 887 OF THE DEED RECORDS OF HAYS COUNTY, TEXAS, SAID 13.77 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY SEPARATE METES AND BOUNDS DESCRIPTION TO ACCOMPANY THIS SURVEY OF EVEN DATE.

STATE OF TEXAS
REGISTERED
LEE P. FOX
7125
PROFESSIONAL
LAND SURVEYOR

I HEREBY CERTIFY EXCLUSIVELY THAT THIS SURVEY WAS PERFORMED ON THE GROUND AND WAS SURVEYED BY ME OR UNDER MY DIRECT SUPERVISION. COPYRIGHT 2025, CUPLIN & ASSOCIATES, INC. ©.

Lee P. Fox
DATED 04/25/2025
LEE P. FOX, R.P.L.S. NO. 7125

SHEET 1 OF 2

PROJ NO.25272
PREPARED FOR: TCEQ EDWARDS AQUIFER PROTECTION PROGRAM
TECH: C.CUPLIN
APPROVED: LEE P. FOX
FIELDWORK PERFORMED ON: APRIL 2025
COPYRIGHT:2025 PROFESSIONAL FIRM NO: 10126900

1500 OLLIE LANE
MARBLE FALLS, TX. 78654
PH.325-388-3300/830-693-8815
WWW.CUPLINASSOCIATES.COM

SCALE 1" = 200'
0 100 200

DATE	NO.	DESCRIPTION
	2	
	1	

REVISIONS

Prepared For: TCEQ Edwards Aquifer Protection Program
Project No.:25272
Date: 04/25/2025

GEOLOGICAL ASSESSMENT AREA:

BEING A 13.77 ACRE TRACT OF LAND SITUATED IN THE JOHN CARSON SURVEY NO. 3, ABSTRACT NO. 80, HAYS COUNTY, TEXAS, OUT OF THE REMNANT TRACT OF A CALLED 3486.6 ACRE TRACT AS DESCRIBED IN SPECIAL WARRANTY DEED TO FROST NATIONAL BANK, INDEPENDENT EXECUTOR AND TRUSTEE UNDER THE WILL OF JOSEPH FREEMAN, ACTING BY AND THROUGH ITS AUTHORIZED OFFICERS, RECORDED ON VOLUME 359, PAGE 887 OF THE DEED RECORDS OF HAYS COUNTY, TEXAS, SAID 13.77 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING at a 1/2" iron pin set with "CUPLIN" property cap, at the most southeasterly corner hereof, having a Northing of 13885381.19 and Easting of 2287605.87. Grid Coordinates, Texas State Plane Coordinate System, South Central Zone, **WHENCE** a concrete right-of-way highway marker at engineer's station 10571+45.58, 50' left of centerline of R.M. 12 as shown on State of Texas CSJ NO. 0285-03-023 project signed and sealed by RPLS No. 1882, dated July 24th, 1990, bears South 19°29'15" West, a distance of 6874.35';

THENCE over and across said remnant tract the following courses and distances:;

1) North 60°58'40" West, along the southerly line hereof, a distance of 800.00' to a 1/2" iron pin set with "CUPLIN" property cap, being the most westerly corner hereof, **WHENCE** a 1/2" iron pin found at the most westerly corner of said remnant tract bears North 61°30'38" West, a distance of 9431.48';
2) North 29°01'20" East, along the westerly line hereof, a distance of 750.00' to a 1/2" iron pin set with "CUPLIN" property cap, being the most northerly corner hereof;
3) South 60°58'40" East, along the northerly line hereof, a distance of 800.00' to a 1/2" iron pin set with "CUPLIN" property cap, being the most easterly corner hereof;
4) South 29°01'20" West, along the easterly line hereof, a distance of 750.00' to the **POINT OF BEGINNING**, calculated to contain 13.77 acres.

NOTE: A Plat of Survey of even date was prepared and is intended to accompany the herein described tract of land. Bearings are based on North American Datum of 1983, Texas South Central Zone, distances shown hereon are in grid, to obtain surface values apply a scale factor of 1.00011771385.

I HEREBY CERTIFY THAT THE ABOVE DESCRIPTION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, AND THAT THIS SURVEY WAS PERFORMED ON THE GROUND AND WAS SURVEYED BY ME OR UNDER MY DIRECT SUPERVISION; COPYRIGHT 2025, CUPLIN & ASSOCIATES, INC. ©.

Lee P. Fox **Dated: 4/25/2025**
Lee P. Fox, Registered Professional Land Surveyor No. 7125

1500 Ollie Lane, Marble Falls, Texas 78654
PH: 325.388.3300 Fax: 325.388.3320 Prof. Firm No. 10126900
www.cuplinassociates.com

III. Recharge and Transition Zone Exception Request Form (TCEQ-0628)

Recharge and Transition Zone Exception Request Form

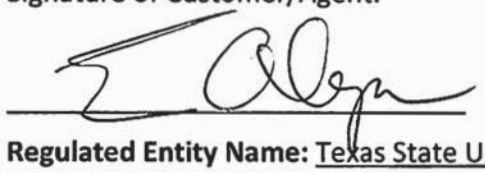
Texas Commission on Environmental Quality
30 TAC §213.9 Effective June 1, 1999

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: Texas State University - Freeman Center
Date: 5/15/25
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 A

NATURE OF EXCEPTION

The Texas State University – Freeman Ranch project is a 3,373-acre tract of land. The site is located on the east side of Fulton Ranch Road approximately 1.7 miles north for RM 12 within Hays County, Texas. The subject site is located within the jurisdiction of City of San Marcos ETJ, Hays County and portions of the site lie within the FEMA 100-year floodplain per map numbers 48209C0360F, 48209C0370F, 48209C0380F, and 48209C0386F all dated September 2, 2005. The proposed development is located within the Edward's Aquifer Recharge Zone. The project consists of the construction of 1 (50' X 36') concrete test pad and gravel road to access the test pad. The proposed development will include the addition of approximately 0.24 acres (0.007%) of impervious cover. The site's total impervious cover will be increased to 18.69 acres (0.55%). No negative impact to downstream properties is anticipated.

The developer is requesting a Recharge and Transition Zone Exception for the WPAP due to the site having less than 1% impervious cover.

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.

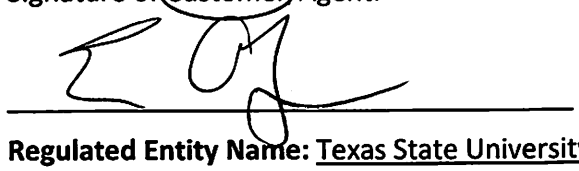
Signature

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: Texas State University - Freeman Center

Date: 5/15/24

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: Upper San Marcos River

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☒ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

ATTACHMENT A

SPILL RESPONSE ACTIONS

Spills will be prevented utilizing Best Management Practices such as proper material storage, handling, and disposal practices. However, despite such efforts, a spill may occur on site. If a spill occurs, the following procedures will be utilized.

- ***Stop the spill, if possible.*** This can include shutting off power to a pump, righting an overturned container, or plugging a hole in a damaged container.

- ***Contain the spill, safely.*** Spill containment can be accomplished using a variety of materials and methods such as the use of absorbents (i.e. sawdust, Oil Dri, rags, soil, polypropylene pads or booms, etc.) to dike the area around the spill, or placing a leaking container inside one which is not leaking. Spill containment should only be attempted if it is safe to do so. Proper safety equipment such as gloves and eye protection should be used as directed on the Material Safety Data Sheet for the spilled material.

- ***Report the spill, if necessary.*** Certain quantities of hazardous or toxic materials such as pesticides, paint thinners, gasoline, etc. are required by Federal Law to be reported to the National Response Center (NRC) at 1-800-424-8802 as soon as you have knowledge of the spill. Since most of the quantities which require reporting to the NRC are larger than that found on a typical construction site, spill reporting to the State or Local authorities is more likely. When in doubt, report the spill.

<u>The reporting requirements which may apply to the sites covered in this SWPPP are:</u>

Texas Commission on Environmental Quality (TCEQ)
1-800-832-8224

TCEQ requires reporting of spills of 25 gallons or greater, especially those which might impact a waterway.

- ***Clean the spill up, properly.*** Spill cleanup should be performed in accordance with applicable regulations or according to the manufacturer's recommendations on the Material Safety Data Sheet. In most cases, proper spill cleanup is to use a dry method such as absorbing the spill and containerize for disposal via a licensed disposal company. For non-hazardous and non-toxic materials this may be through your solid waste disposal service with prior approval.

- ***Fill in table on next page.***

The SWPPP must be modified within 14 days of a release to provide a description of the spill, the circumstances leading to the spill, and the date of the spill. Spill clean-up materials, methods, and additional Best Management Practices addressing spill prevention should also be included.

Spill Date	Material Spilled	Amount of spill (in gallons)	Circumstance of Spill (what caused the spill)	Corrective Action	Correction Date & Sign-off

ATTACHMENT B

POTENTIAL SOURCES OF CONTAMINATION

Potential Sources of Contamination associated with this project may include:

1. Construction equipment pollutants including hydraulic fluid, machine oil, and diesel,
2. Sediment from earth moving activities, and
3. Construction materials such as wood, paint, fertilizers, and concrete.

ATTACHMENT C

SEQUENCE OF MAJOR ACTIVITIES

1. Install construction fencing, stabilized construction entrance, erosion controls, and tree protection fencing per approved erosion and sedimentation control/tree protection plan. (Area Disturbed = 3.21 acres)
2. The contractor shall arrange and coordinate acceptable meeting times for an on-site pre-construction meeting with the Owner, Project Engineer, relevant contractors, and the Environmental Inspector. The Environmental Inspector shall be contacted 72 hours prior to the required on-site preconstruction meeting. (Area Disturbed = 0.0 acres)
3. Begin site clearing/demolition. Silt Fence and SCE must be installed prior to and maintained during operations. (Area Disturbed = 3.21 acres)
4. Rough grade the site and drainage swales in accordance with plans and specifications. Silt Fence, Rock Berms, and SCE must be maintained during operations. (Area Disturbed = 3.21 acres)
5. Construct all-weather driving surface. Silt Fence, Rock Berms, Inlet Protection, and SCE must be maintained during operations. (Area Disturbed = 3.21 acres)
6. Complete final grading, drainage, and pavement. Silt Fence, Rock Berms, and Inlet Protection must be maintained during operations. (Area Disturbed = 3.21 acres)
7. Hydromulch or sod all disturbed areas per landscape plan and general site cleanup. Silt Fence, Rock Berms, and Inlet Protection must be maintained during operations.
8. Environmental inspector visits site and issues certificate of acceptance only if all construction is in substantial conformance to the plans.

Total Disturbed Area = 3.21 acres

*Note: Areas identified above in the sequence of construction may overlap and should not be totaled.

ATTACHMENT D

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

- Silt Fence – Approximately 1,107 linear feet of silt fence will be installed along the limits of construction prior to the start of demolition or construction activities. The silt fence will prevent total suspended solids from leaving the site via sheet flow.

- Stabilized Construction Entrance – One (1) stabilized construction entrance will be installed at the location vehicles will leave the existing gravel road to access the site prior to the start of construction activities. The construction entrances will be located as shown on the erosion control plan and will prevent the tracking of mud onto the public road.

- Concrete Washout – A concrete washout area to be located near the Stabilized Construction Entrance.

  All of the above listed temporary BMPs will be removed upon the completion of site construction activities and the establishment of permanent stabilization on the site.

ATTACHMENT E

REQUEST TO TEMPORARILY SEAL A FEATURE

(Not Applicable)

ATTACHMENT F

STRUCTURAL PRACTICES

No permanent BMP's are proposed for the site. An exception is being requested due to the site having less than 1% impervious cover. Upgradient flows from this site will be routed around any future BMP's and permanent vegetation will be established in all disturbed areas upon completion of those grading activities. All on-site drainage during construction will flow through the proposed temporary BMP's listed in Attachment D.

ATTACHMENT G

DRAINAGE AREA MAPS

(Not Applicable)

ATTACHMENT H

TEMPORARY SEDIMENT POND PLANS AND CALCULATIONS

(Not Applicable)

ATTACHMENT I
INSPECTION AND MAINTENANCE FOR BMPs

PROJECT NAME: X Bow Freeman Ranch, San Marcos, TX
ADDRESS: 2102 Freeman Ranch Road
CITY, STATE: San Marcos, TX

SILT FENCE

- Inspections: Inspections shall be made weekly or after each rainfall event.
- Repair and Replacement: Repair or replacement of torn fabric shall be made promptly as needed or a second line of fencing parallel to the torn section shall be installed. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
- Sediment Removal: Accumulated silt shall be removed when it reaches a depth of 150mm (6 inches). The silt shall be disposed of on an approved site and in such a manner that will not contribute to additional siltation.

Silt fence shall be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.

STABILIZED CONSTRUCTION ENTRANCE

- Maintenance: The entrance shall be maintained in a condition that will prevent tracking or flowing of sediment onto public roadway. This may require periodic top dressing with additional stone as conditions demand, as well as repair and clean out of any measure devices used to trap sediment.
- All sediment that is spilled, dropped, washed or tracked onto public roadway must be removed immediately.
- When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it should be done on an area stabilized with crushed stone that drains into another approved BMP.

The stabilized construction entrance will be removed once the driveway to the proposed site is complete.

CONCRETE WASHOUT AREAS

- When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of.
- Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of.
- Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

Disposal of accumulated silt shall be accomplished following Texas Commission on Environmental Quality guidelines and specifications.

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information.

Responsible Party: Texas State University – Freeman Center
Mailing Address: 2102 Freeman Ranch Road
City, State: San Marcos, TX Zip: 78666
Telephone: (281) 467-0647 Fax: _____

Signature of Responsible Party _____ Date 5/15/24

ATTACHMENT J

SCHEDULE FOR INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Interim stabilization shall be achieved through the temporary erosion controls. All disturbed pervious areas shall receive permanent hydromulch or sod after final grading is completed or if construction activities stop for more than 14 days.

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)(li), (E), and (5), Effective June 1, 1999

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

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

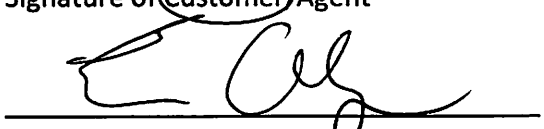
Signature

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

Print Name of Customer/Agent: Texas State University - Freeman Center

Date: 5/15/24

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 A

20% OR LESS IMPERVIOUS COVER WAIVER

(Not Applicable)

ATTACHMENT B

BMPS FOR UPGRADIENT STORMWATER

No permanent BMP's are proposed for this site since the developer is pursuing the exception request for the WPAP due to the site having less than 1% impervious cover.

ATTACHMENT C

BMPS FOR ON-SITE STORMWATER

The proposed Freeman Ranch improvements consist of the construction of 1 (50' X 36') concrete test pad and gravel road to access the test pad.

The developer is pursuing the exception request for the WPAP due to the site having less than 1% impervious cover.

ATTACHMENT D
BMPS FOR SURFACE STREAMS

Temporary BMPs will be installed to protect surface streams during construction. The developer is pursuing the exception request for the WPAP due to the site having less than 1% impervious cover.

ATTACHMENT E

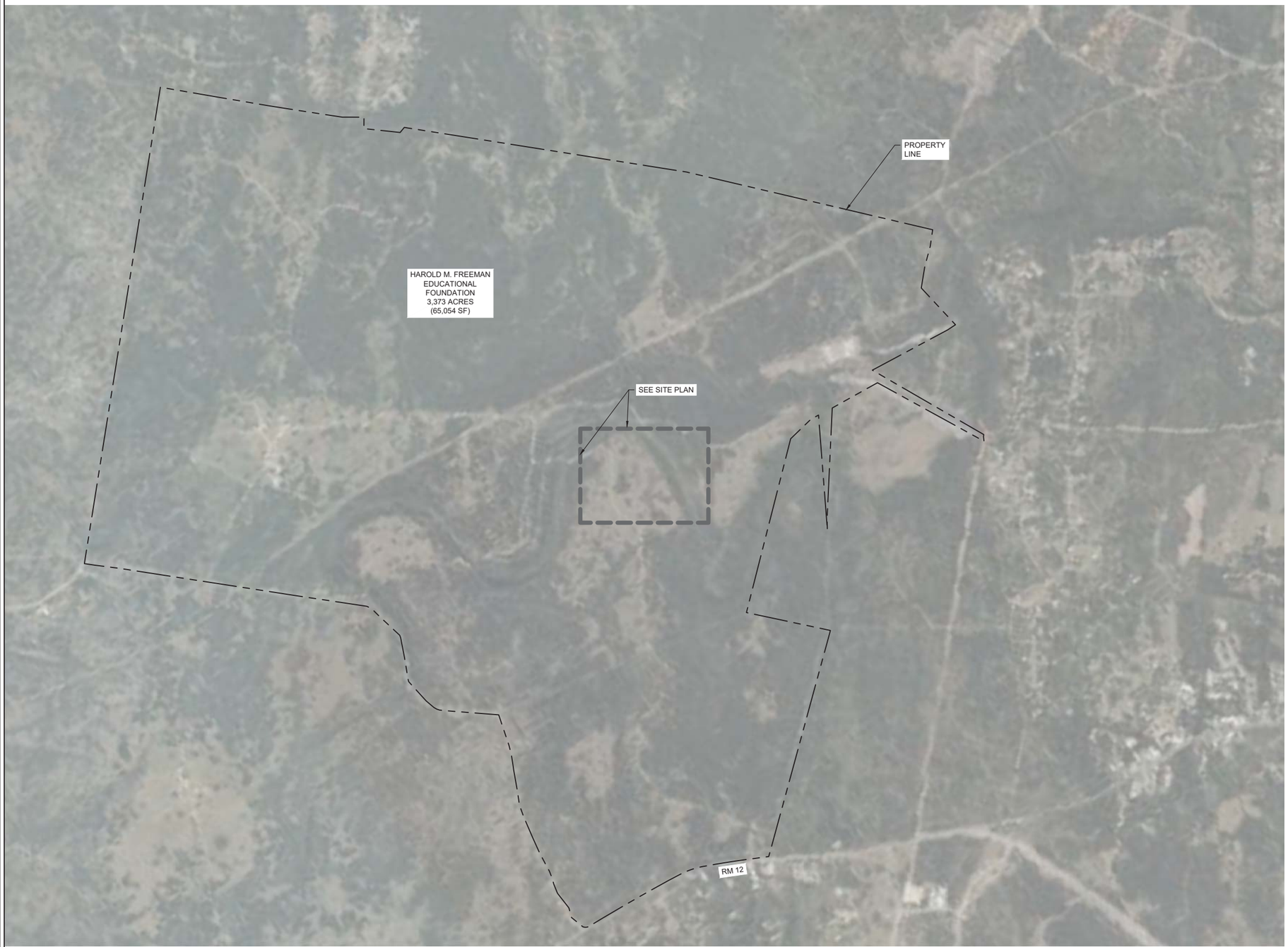
REQUEST TO TEMPORARILY SEAL A FEATURE

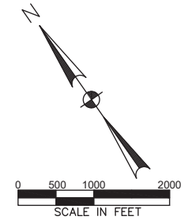
(Not Applicable)

ATTACHMENT F

CONSTRUCTION PLANS

(UNDER SEPARATE COVER)





LEGEND:

PROPERTY LINE

LOT LINE

NOTES:

1. FOR CONCEPT PLANNING PURPOSES ONLY. NOT FOR CONSTRUCTION OR PERMITTING.
2. EXISTING PROPERTY LINE WAS GENERATED BASED ON GIS DATA PROVIDED BY OTHERS. NO WARRANTY IS EXPRESSED OR IMPLIED AS TO ITS ACCURACY.

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No.	Date	Revisions	App.

ECKERMANN ENGINEERING, INC.
202 SPRING HO AVENUE
LAMPASAS, TEXAS 76550
PHONE: 512-556-8160
TBPELS FIRM NO. F-10496

FREEMAN RANCH

601 UNIVERSITY
SAN MARCOS, TEXAS 78666

PROPERTY LOCATION

2/13/2025

STATE OF TEXAS
MARSHAL BREWER
111299
LICENSED
PROFESSIONAL ENGINEER

Project No.:	24034
Issued:	2/13/2025
Drawn By:	TM
Checked By:	MB

EX-1

Sheet 1 OF 3

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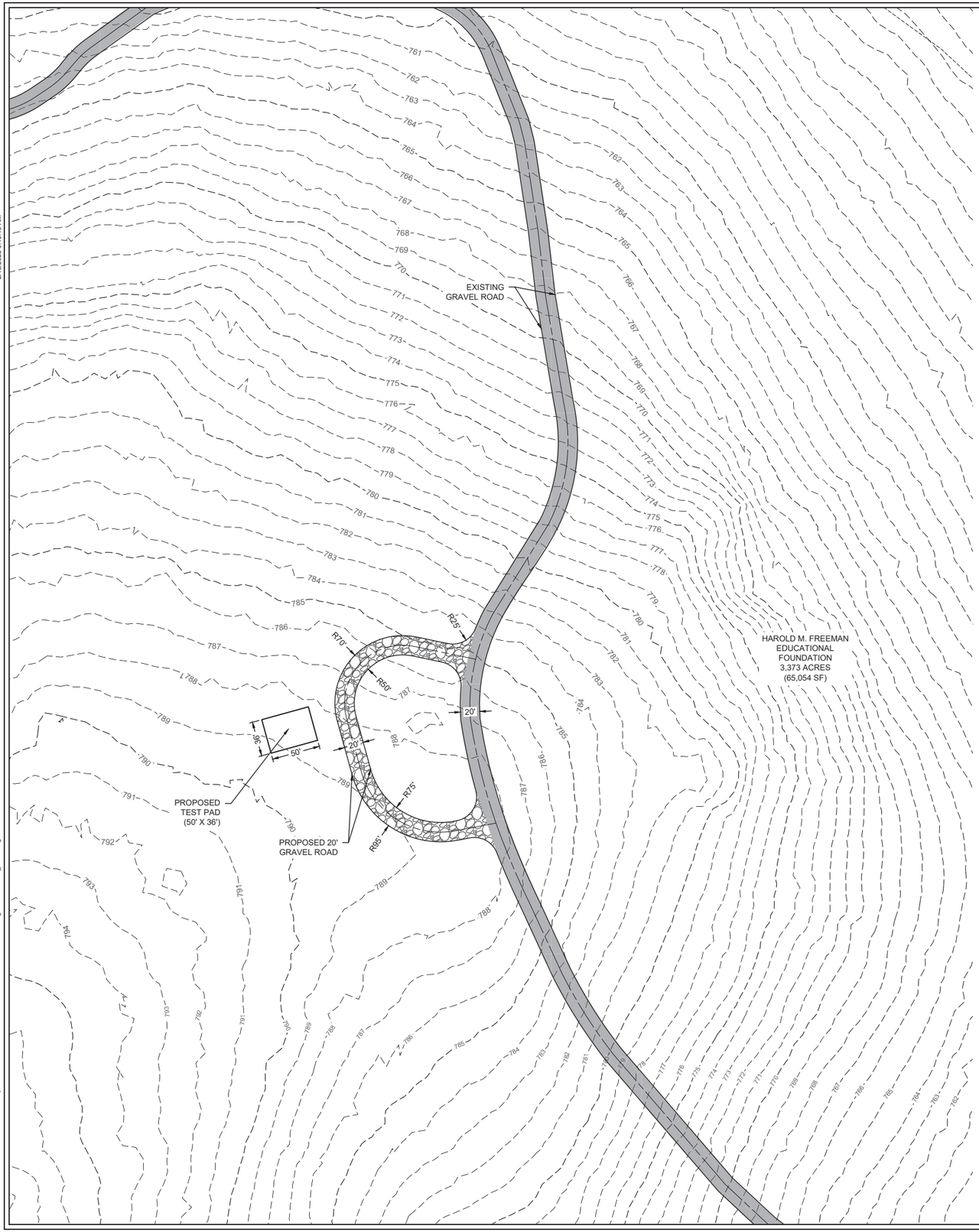

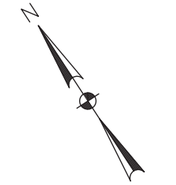

LEGEND:

- PROPERTY LINE
- LOT LINE
- EXISTING MAJOR CONTOUR — 480
- EXISTING MINOR CONTOUR — 481
- EXISTING GRAVEL PAVEMENT
- PROPOSED GRAVEL PAVEMENT

NOTES:

1. SURVEY INFORMATION AND EXISTING CONTOURS WERE PROVIDED BY GIS. NO WARRANTY IS EXPRESSED AS TO ITS ACCURACY.
2. NO UTILITIES PROPOSED AT THIS THIS TIME.
3. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMAL 14' VERTICAL CLEARANCE AND A MAXIMUM SLOPE OF 10% IN ANY DIRECTION.
4. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES,
5. REFER TO DETAILS FOR PAVEMENT SECTIONS.
6. COORDINATE LOCATION, SIZE AND TYPE OF LIGHTING WITH MEP PLANS.
7. CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND PROPOSED PAVEMENT.

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No.	Date	Revisions	App.

ECKERMANN ENGINEERING, INC.
202 SPRING HO AVENUE
LAMPASAS, TEXAS 76550
PHONE: 512-556-8160
TBPELS FIRM NO. F-10496

FREEMAN RANCH
601 UNIVERSITY
SAN MARCOS, TEXAS 78666

SITE PLAN

2/13/2025

STATE OF TEXAS
MARSHAL BREWER
111299
LICENSED
PROFESSIONAL ENGINEER

Project No.:	24034
Issued:	2/13/2025
Drawn By:	TM
Checked By:	MB

EX-2

Sheet 2 OF 3

2/13/2025 9:13:13 AM

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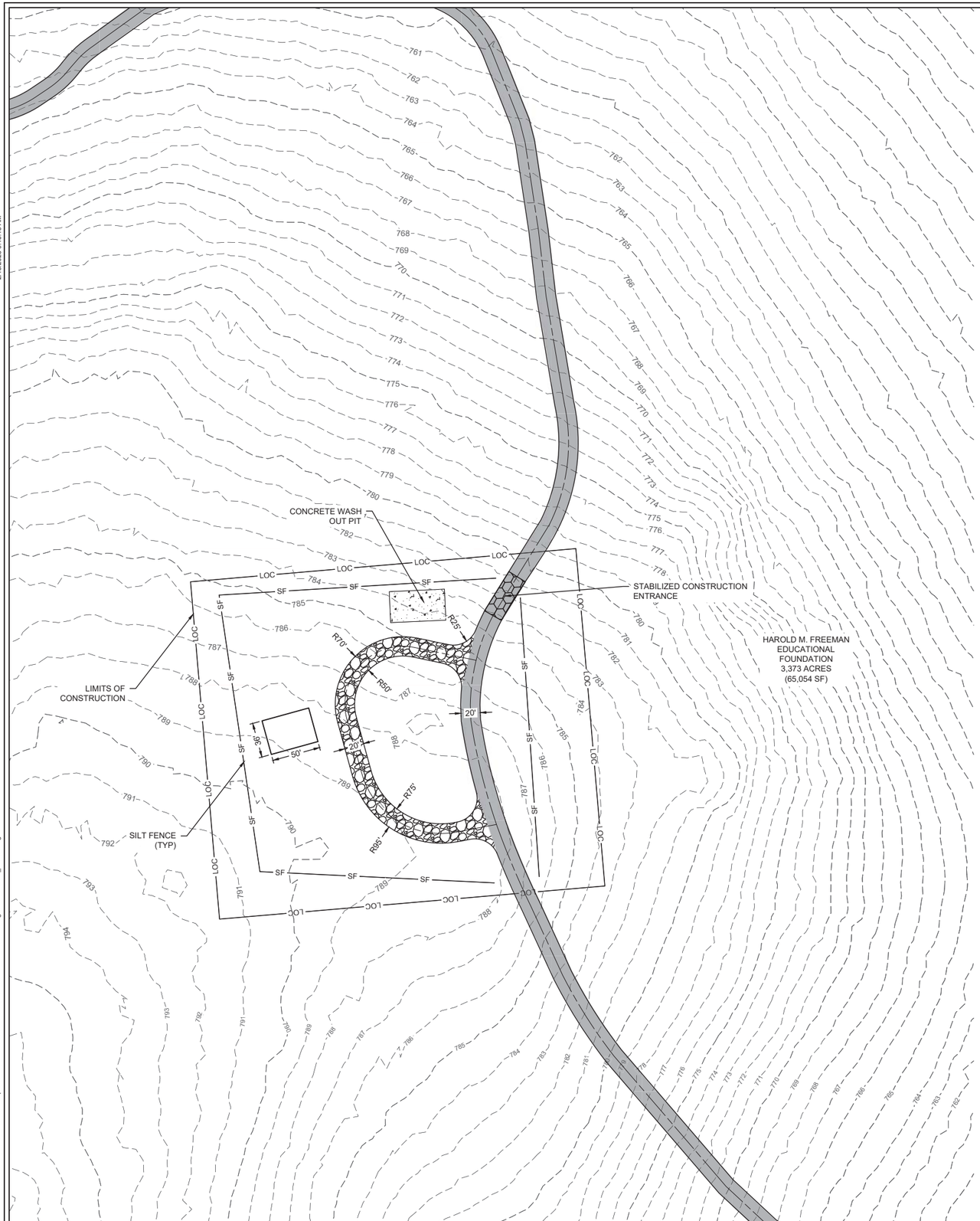

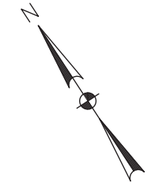

0 30 60 120
SCALE IN FEET

LEGEND:

- PROPERTY LINE
- PROPERTY LOT LINE
- PROPOSED UTILITY EASEMENT
- EXISTING MAJOR CONTOUR (1215)
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR (1215)
- PROPOSED MINOR CONTOUR
- LIMITS OF CONSTRUCTION (LOC)
- SILT FENCE (SF)
- TREE PROTECTION (TP)
- CONCRETE WASHOUT PIT
- STABILIZED CONSTRUCTION ENTRANCE

NOTES:

1. SURVEY INFORMATION AND EXISTING CONTOURS WERE PROVIDED BY GIS. NO WARRANTY IS EXPRESSED AS TO ITS ACCURACY.
2. CONTRACTOR IS RESPONSIBLE FOR DEWATERING OF WORK AREAS. WHEN REQUIRED CONTRACTOR SHALL DEWATER EXCAVATED AREAS USING A COUNTY METHOD (I.E. SILT FENCE, HAY BALE DIKE, ROCK BERM, ETC.)
3. CONTRACTOR SHALL PROVIDE TEMPORARY STAGING AND SPOILS AREA AS NEEDED AND PROVIDE ADDITIONAL SILT FENCE ALONG THE DOWNSTREAM SIDE OF THESE AREAS THROUGHOUT CONSTRUCTION.
4. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
5. CITY INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/ SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF BERTRAM RULES AND REGULATIONS.
6. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER COUNTY REQUIREMENTS, OR AS DIRECTED BY THE CITY INSPECTOR
7. REFER TO EROSION CONTROL NOTES FOR THE SEQUENCE OF CONSTRUCTION.
8. STAGING / SPOILS AREA MAY BE RELOCATED AS NEEDED TO COMPLETE CONSTRUCTION ACTIVITIES.
9. CONTRACTOR SHALL INSTALL J-HOOKS WHERE SILT FENCE IS NOT INSTALLED PARALLEL TO CONTOURS.

EROSION CONTROL QUANTITIES		
LIMITS OF CONSTRUCTION	3.21	AC
CONSTRUCTION ENTRANCE	1	EA
ROADWAY LENGTH	413	FT
SILT FENCE	1107	FT

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No.	Date	Revisions	App.

ECKERMANN ENGINEERING, INC.
202 SPRING HO AVENUE
LAMPASAS, TEXAS 76550
PHONE: 512-556-8160
TBPELS FIRM NO. F-10496

FREEMAN RANCH
601 UNIVERSITY
SAN MARCOS, TEXAS 78666

EROSION CONTROL PLAN

2/13/2025

STATE OF TEXAS
MARSHAL BREWER
111299
LICENSED
PROFESSIONAL ENGINEER

Project No.:	24034
Issued:	2/13/2025
Drawn By:	TM
Checked By:	MB

EX-3

Sheet 3 OF 3

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ATTACHMENT G
INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

(Not Applicable)

ATTACHMENT H

PILOT-SCALE FIELD TESTING PLAN

(Not Applicable)

ATTACHMENT I

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Temporary BMPs will be installed to protect surface streams during construction. The developer is pursuing the exception request for the WPAP due to the site having less than 1% impervious cover.

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 VP, Operations & CFO • VP for Finance & Support Services,
Title - Owner/President/Other

of Texas State University- The Freeman Center,
Corporation/Partnership/Entity Name

have authorized Marshal Brewer
Print Name of Agent/Engineer

of Eckermann Engineering, Inc.
Print Name of Firm

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

I also understand that:

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

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

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

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

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

SIGNATURE PAGE:

Applicant's Signature

5/15/24
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 15 day of May, 2025

NOTARY PUBLIC

DUSTIN ADAIR
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: July 24, 2028

DUSTIN ADAIR
Notary ID #132580759
My Commission Expires
July 24, 2028

VII. Fee Application Form (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Texas State University - Freeman Center
Regulated Entity Location: San Marcos, TX
Name of Customer: Texas State University - Freeman Center
Contact Person: Eric Algoe Phone: 512-245-2244
Customer Reference Number (if issued):CN 602644106
Regulated Entity Reference Number (if issued):RN 1055862007

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: 5/15/24

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

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 - Freeman Center

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
	1746022480	746002248	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 ☐ Other:
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address:

	2102 Freeman Ranch Road						
City	San Marcos	**State**	TX	**ZIP**	78666	**ZIP + 4**	

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*
	ealgoe@txstate.edu

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(281) 467-0647		( ) -

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)*	2102 Freeman Ranch Road							
	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**

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:	29.93		**28. Longitude (W) In Decimal:**	-97.99	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	55	48	97	59	24

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	8733	611310	541715

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

University Research Facility

34. Mailing Address:	2102 Freeman Ranch Road							
	City	San Marcos	**State**	TX	**ZIP**	78666	**ZIP + 4**	
35. E-Mail Address:	ealgoe@txstate.edu							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(281) 467-647		( ) -

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:

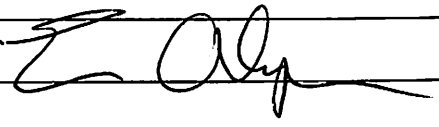
SECTION IV: Preparer Information

40. Name:	Marshal Brewer, P.E.	41. Title:	Project Manager

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 556-8160		( ) -	marshal@eckermannengineering.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:	Texas State University - Freeman Center	**Job Title:**	Executive VP, Operations & CFO VP for Finance & Support Services
Name *(In Print):*	Eric Algoe	**Phone:**	(512) 245- 2244
Signature:		**Date:**	5/15/24