
8570 River Road

A project by:
8570 River Road, LLC

Water Pollution Abatement Plan Report

New Braunfels, Texas
February 2023



Jessica Calhoun
2/24/23



Prepared by:

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TBPE FIRM F-10961

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 if not withdrawn the application will be denied and 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 to you:

- You can withdraw your application, and your fees will be refunded or credited for a resubmittal.
- 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 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 effected jurisdictions.

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

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

1. Regulated Entity Name: 8570 River Road					2. Regulated Entity No.:				
3. Customer Name: 8570 River Road, LLC					4. Customer No:				
5. Project Type: (Please circle/check one)	<input checked="" type="radio"/> New	Modification			Extension		Exception		
6. Plan Type: (Please circle/check one)	<input checked="" type="radio"/> WPAP	<input type="radio"/> CZP	<input type="radio"/> SCS	<input type="radio"/> UST	<input type="radio"/> AST	<input type="radio"/> EXP	<input type="radio"/> EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	<input type="radio"/> Residential	<input checked="" type="radio"/> Non-residential			8. Site (acres):		0.7380		
9. Application Fee:	\$3,000	10. Permanent BMP(s):			Vegetative Filter Strip				
11. SCS (Linear Ft.):	N/A	12. AST/UST (No. Tanks):			N/A				
13. County:	Comal	14. Watershed:			Guadalupe River				

Application Distribution

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

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

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

Austin Region			
County:	Hays	Travis	Williamson
Original (1 req.)	—	—	—
Region (1 req.)	—	—	—
County(ies)	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.

Jessica Calhoun, P.E., CFM

Print Name of Customer/Authorized Agent

Jessica Calhoun

02/24/2023

Signature of Customer/Authorized Agent

Date

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

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

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

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

Signature

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

Print Name of Customer/Agent: Jessica Calhoun, P.E., CFM

Date: 02/24/2023

Signature of Customer/Agent:

Jessica Calhoun

Project Information

1. Regulated Entity Name: 8570 River Road
2. County: Comal
3. Stream Basin: Guadalupe River
4. Groundwater Conservation District (If applicable): Edwards Aquifer Authority
5. Edwards Aquifer Zone:
 - Recharge Zone
 - Transition Zone
6. Plan Type:
 - WPAP
 - SCS
 - Modification
 - AST
 - UST
 - Exception Request

7. Customer (Applicant):

Contact Person: Kellie Jenks

Entity: 8570 River Road

Mailing Address: 1001 McKinney Street, Suite 525

City, State: Houston, Texas

Zip: 77002

Telephone: 713-876-1372

FAX: _____

Email Address: kjenks@trccapitalpartners.com

8. Agent/Representative (If any):

Contact Person: Jessica Calhoun, P.E., CFM

Entity: HMT Engineering & Surveying

Mailing Address: 290 S. Castell Avenue, Ste 100

City, State: New Braunfels, Texas

Zip: 78132

Telephone: 210-255-7873

FAX: 830-625-8556

Email Address: jessica.calhoun@hmtnb.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 New Braunfels.
- 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.

Beginning at TCEQ San Antonio regional office, turn right and head north on Judson Road, turn right onto Wenzel Road, turn left onto Topperwein Road, then turn right on FM 3009 N. Follow Nacogdoches for 2.4 miles then turn right onto Schoenthal Road N for 5.0 miles before turning right onto FM 1863 E. Turn left on Mission Valley Road, left onto TX-46 W, right onto Hueco Springs Loop Road, and then left onto River Road and the site will be on the right side of the roadway 5.3 miles down.

11. Attachment A – Road Map. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.
12. Attachment B - USGS / Edwards Recharge Zone Map. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:
- Project site boundaries.
 - USGS Quadrangle Name(s).
 - Boundaries of the Recharge Zone (and Transition Zone, if applicable).
 - Drainage path from the project site to the boundary of the Recharge Zone.

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

Survey staking will be completed by this date: _____

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

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

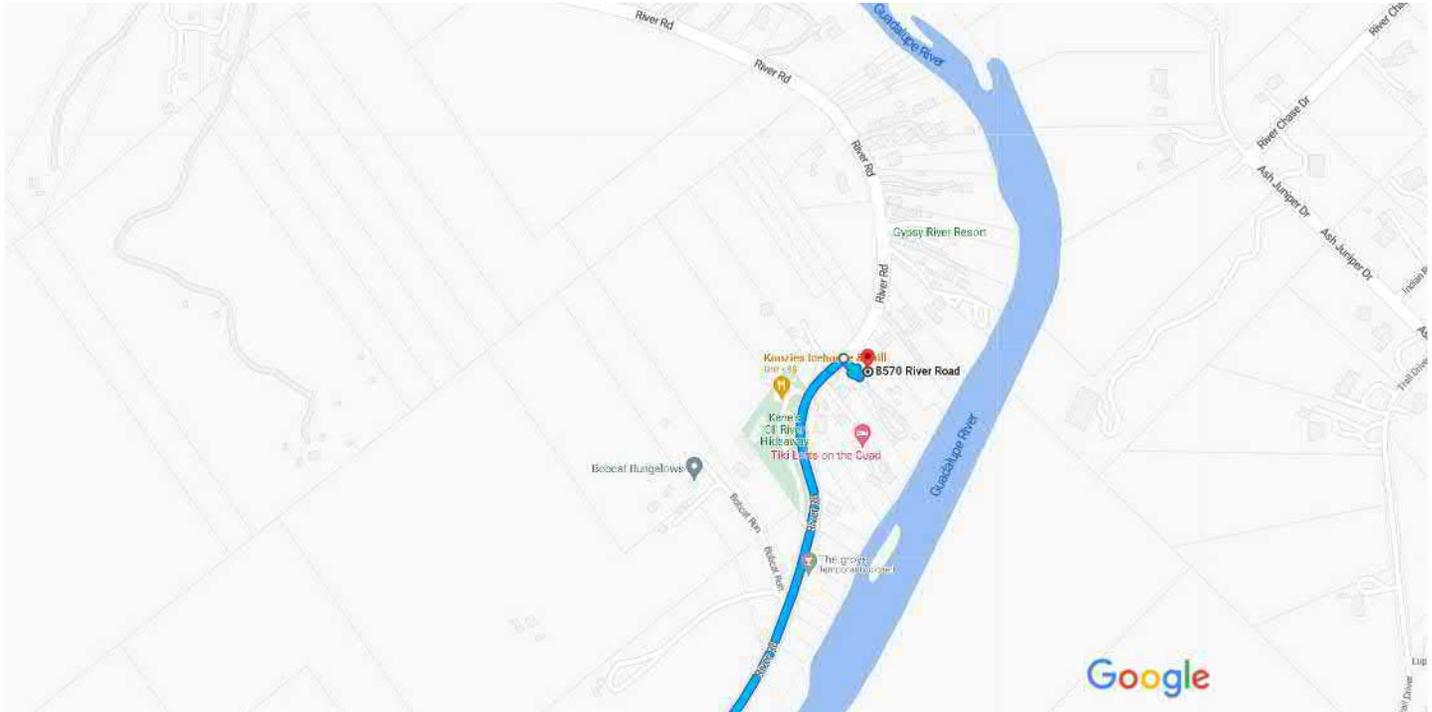
17. I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:
- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
 - (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and
 - (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:
- For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
 - For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
 - For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
 - A request for an exception to any substantive portion of the regulations related to the protection of water quality.
 - A request for an extension to a previously approved plan.
19. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:
- TCEQ cashier
 - Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
 - San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)
20. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
21. No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.



Texas Commission-Environmental, 14250 Judson Drive 27.3 miles, 44 min Rd, San Antonio, TX 78233 to 8570 River Rd, New Braunfels, TX 78132



Map data ©2023 Google 200 ft

Texas Commission-Environmental
14250 Judson Rd, San Antonio, TX 78233

Continue to Judson Rd

- 16 sec (200 ft)
- ↑ 1. Head southeast toward Judson Rd
- 115 ft
- ↘ 2. Turn right toward Judson Rd
- 85 ft

Take Nacogdoches Rd and Schoenthal Rd N to Mission Valley Rd in Comal County

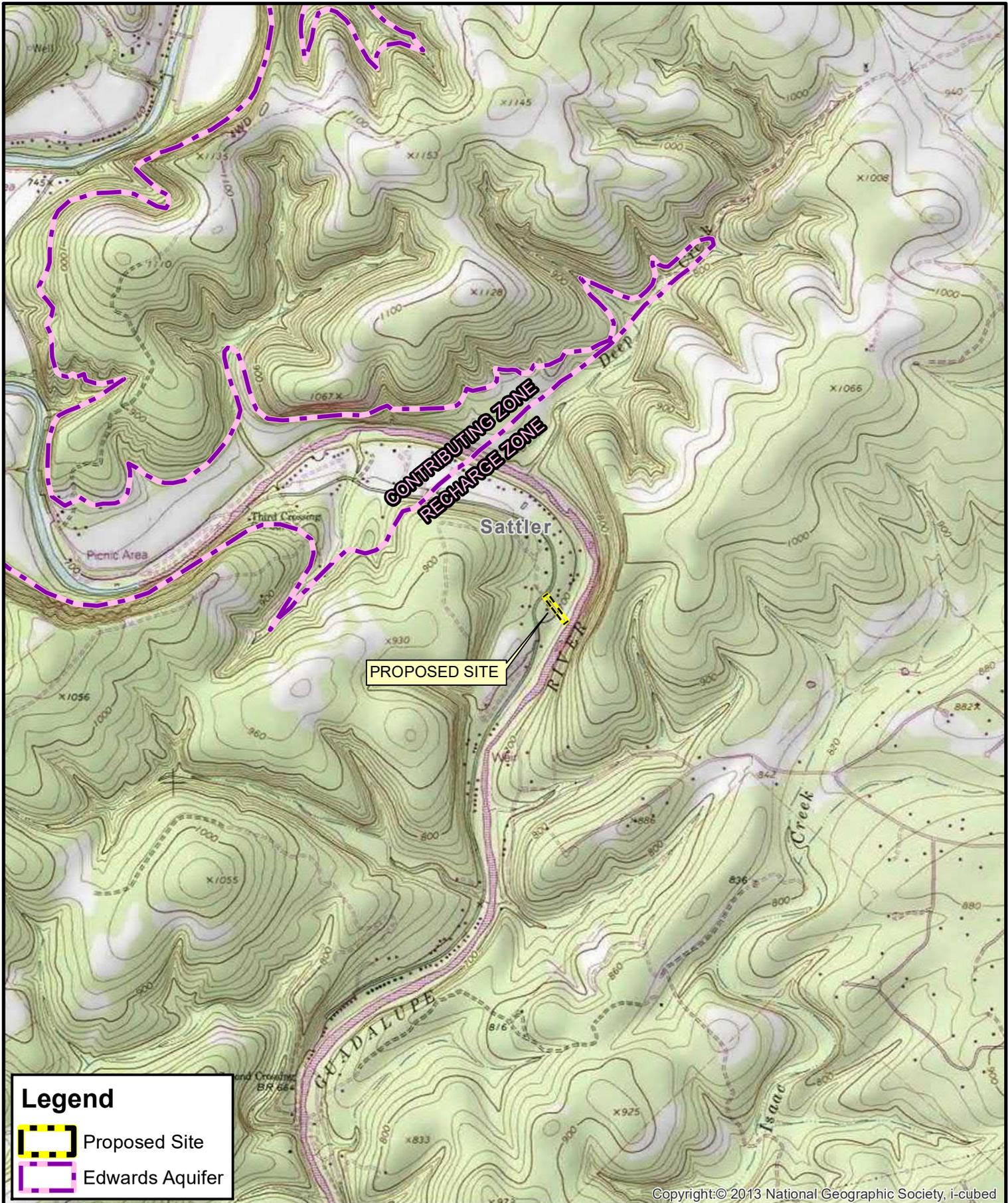
- 25 min (16.6 mi)
- ↘ 3. Turn right onto Judson Rd
- Pass by AutoZone Auto Parts (on the right in 0.6 mi)
- 0.6 mi
- ↘ 4. Turn right onto Nacogdoches Rd
- Pass by Wendy's (on the left in 1.5 mi)
- 6.0 mi
- ↙ 5. Turn left onto FM3009 N
- 2.4 mi

- 6. Turn right onto Schoenthal Rd N
_____ 5.0 mi
- 7. Turn right onto FM1863 E
_____ 2.6 mi
- ↶ 8. Turn left onto Mission Valley Rd
_____ 3 min (1.7 mi)

Follow Hueco Springs Loop Rd and River Rd

- _____ 17 min (8.9 mi)
- ↶ 9. Turn left onto TX-46 W
_____ 0.3 mi
- 10. Turn right onto Hueco Springs Loop Rd
_____ 3.3 mi
- ↶ 11. Turn left onto River Rd
_____ 5.3 mi
- 12. Turn right
⚠ Restricted usage road
ℹ Destination will be on the left
_____ 8 sec (102 ft)

8570 River Rd
New Braunfels TX 78132



Legend

-  Proposed Site
-  Edwards Aquifer

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Project No.:	479.002
Designed By:	JC
Drawn By:	FG
Checked By:	JC

USGS MAP - SATTLER QUAD

8570 RIVER ROAD
NEW BRAUNFELS, TEXAS



1 in = 2,000 ft



290 S. Castell Avenue, Ste. 100
 New Braunfels, TX 78130
 (830) 625-8555
 TBPE-FIRM F-10961
 TBPLS FIRM 10153600

EX1.0

GENERAL INFORMATION FORM
ATTACHMENT C
Project Description

The proposed 8570 River Road project is located 8570 River Road, in New Braunfels, Texas. The site is located within the City of New Braunfels Extraterritorial Jurisdiction (ETJ). The site is currently a 0.7380-acre residential site with 5,113 square feet (0.117 acres) of impervious cover created by a main residential home and asphalt driveway, these improvements were built in 1938 before TCEQ Edwards Aquifer Program. Additionally, there are currently 1,104 square feet (0.025 acres) of additional rooftop, 1,680 square feet (0.039 acres) of concrete, and 1,859 square feet (0.043 acres) of decking that have not previously been permitted. A Water Pollution Abatement Plan has not previously been recorded for this property. The proposed conditions increase the impervious cover by 400 square feet to 5,043 square feet (0.116 acres) or 15.7% at full development.

The proposed 8570 River Road project is a commercial cabin rental site with amenities located near the Guadalupe River. The proposed site improvements include the construction of two elevated tiny home structures that will cover 200 square feet each. The existing wood and metal sheds shown on the survey will be demolished. The tiny homes will be elevated on pier and beam approximately one foot above the ground. When completed there will be 1,504 square feet (0.035 acres) of rooftops. No offsite area flows to the site, the site is south of River Road which intercepts the flow. Therefore, these areas are not used in our water quality calculations. The flow onsite sheet flows towards the Guadalupe River. A 50 feet natural vegetative filter strip is the proposed Best Management Practice.

The construction will be completed in one phase with 8570 River Road being the permitted entity that will operate the proposed site.

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: Matt Anding

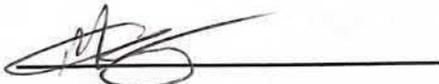
Telephone: 832-641-8143

Date: 09/16/2022

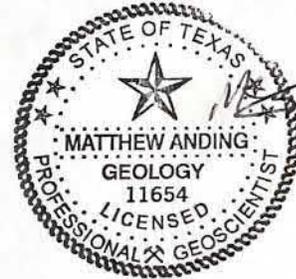
Fax: _____

Representing: Anding Environmental Consulting, LLC (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: TRC Capital Partners



Project Information

1. Date(s) Geologic Assessment was performed: September 10, 2022

2. Type of Project:

WPAP
 SCS

AST
 UST

3. Location of Project:

Recharge Zone
 Transition Zone
 Contributing Zone within the Transition Zone

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

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
BoB	B	5'

* Soil Group Definitions (Abbreviated)

- A. Soils having a high infiltration rate when thoroughly wetted.
- B. Soils having a moderate infiltration rate when thoroughly wetted.
- C. Soils having a slow infiltration rate when thoroughly wetted.
- D. Soils having a very slow infiltration rate when thoroughly wetted.

6. **Attachment B – Stratigraphic Column.** A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.
7. **Attachment C – Site Geology.** A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
8. **Attachment D – Site Geologic Map(s).** The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'
 Applicant's Site Plan Scale: 1" = 100'
 Site Geologic Map Scale: 1" = 100'
 Site Soils Map Scale (if more than 1 soil type): 1" = 100'
9. Method of collecting positional data:
 - Global Positioning System (GPS) technology.
 - Other method(s). Please describe method of data collection: _____
10. The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. Surface geologic units are shown and labeled on the Site Geologic Map.

12. Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.
- Geologic or manmade features were not discovered on the project site during the field investigation.
13. The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.
- There are 1 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
- The wells are not in use and have been properly abandoned.
- The wells are not in use and will be properly abandoned.
- The wells are in use and comply with 16 TAC Chapter 76.
- There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

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

GEOLOGIC ASSESSMENT

ATTACHMENT A - GEOLOGIC ASSESSMENT TABLE

**GEOLOGIC ASSESSMENT
ATTACHMENT B - STRATIGRAPHIC COLUMN**

SITE STRATIGRAPHY (Edwards Aquifer)

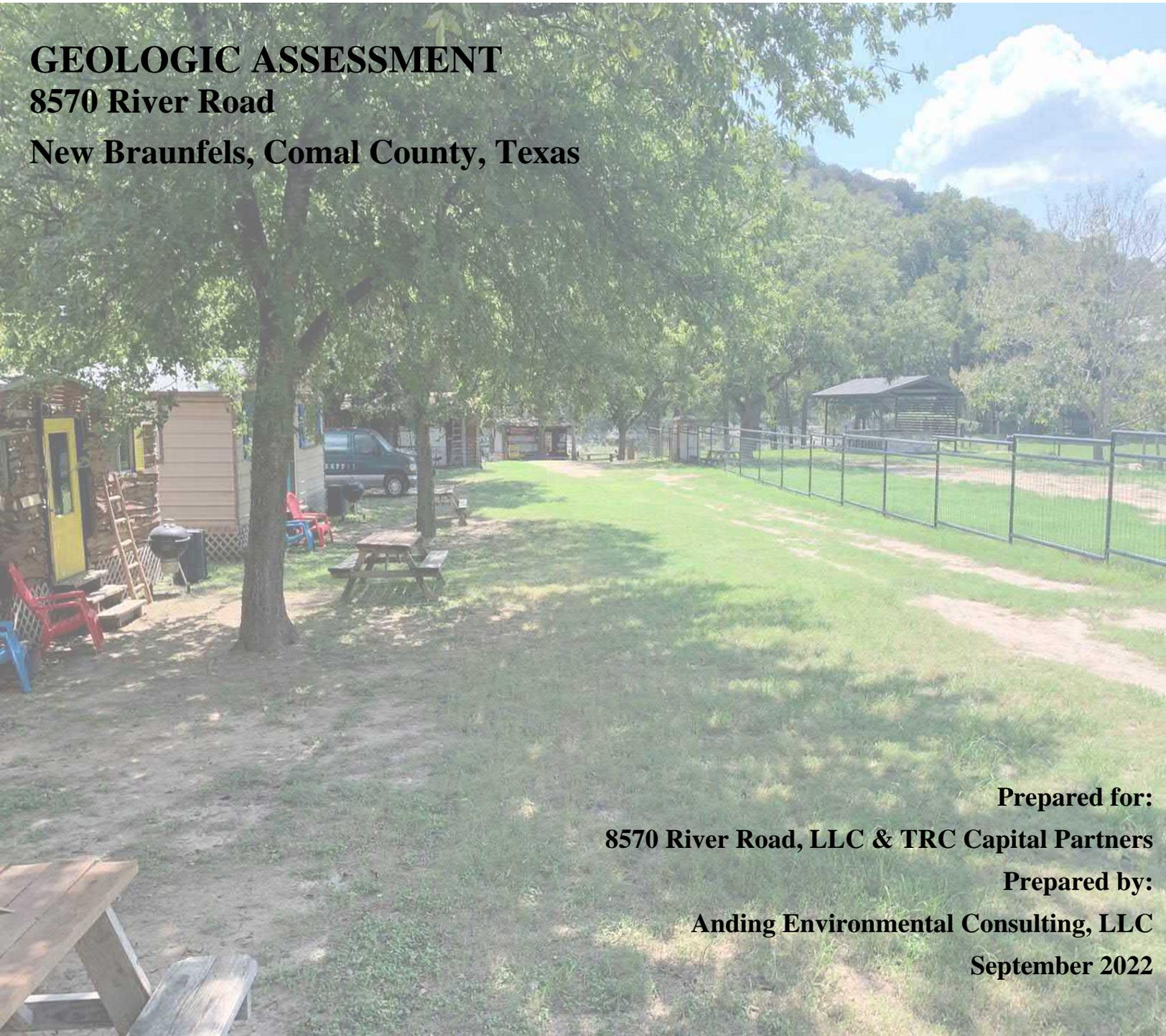
STRATIGRAPHIC COLUMN

Hydrogeologic subdivision	Group, formation, or member	Hydro-logic function	Thickness (feet)	Lithology	Field identification	Cavern development	Porosity/permeability type				
	Del Rio Clay	CU	50 – 60	Blue-green to yellow-brown clay	Fossiliferous; <i>Ilymatogyra arietina</i>	None	None/primary upper confining unit				
Lower Cretaceous	Edwards aquifer	Edwards Group	Person Formation	II	Cyclic and marine members, undivided (4)	AQ	0 – 70	Mudstone to packstone; <i>miliolid</i> grainstone; chert	Boxwork vugs; light tan, massive; some <i>Toucasia</i> , <i>Caprinid</i> , and <i>Chondrodonta</i>	Many caves; might be associated with earlier karst development	Laterally extensive; both fabric and not fabric/water-yielding; one of the most porous and permeable; essentially absent in Travis County
				III	Leached and collapsed members, undivided (4)	AQ	30 – 80	Crystalline limestone; mudstone to wackestone to <i>miliolid</i> grainstone; chert; collapsed breccia	Light-gray, bioturbated iron-stained beds separated by massive limestone beds; <i>Toucasia</i> , <i>Chondrodonta</i>	Extensive lateral development; large rooms	Majority not fabric/one of the most porous and permeable
				IV	Regional dense member (3)	CU	20 – 30	Light-tan, dense, argillaceous mudstone	Wispy iron-oxide stains; <i>Pleuromya knowltoni</i> , <i>Ceratostreon texanum</i>	None; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier
				V	Grainstone member (2)	AQ	45 – 60	Light-gray, <i>miliolid</i> grainstone; mudstone to wackestone; chert	White crossbedded grainstone; <i>Toucasia</i> , <i>Turritella</i> , and <i>Chondrodonta</i>	Few caves	Not fabric/recrystallization reduces permeability
		VI	Kirschberg evaporite member (1)	AQ	65 – 75	Light-gray, crystalline limestone; chalky mudstone; chert	Boxwork voids, with neospar and travertine frame; <i>Cladophyllia</i> and <i>Turritella</i>	Probably extensive cave development	Majority fabric/one of the most porous and permeable		
		VII	Dolomitic member (1)	AQ	110 – 150	Mudstone to grainstone; crystalline limestone; chert	Massively bedded, light gray, <i>Toucasia</i> abundant; <i>Dictyoconus walnutensis</i> , <i>Caprinid</i>	Caves related to structure or bedding planes	Mostly not fabric; some bedding-plane fabric/water-yielding; locally permeable		
		VIII	Basal nodular member	Karst AQ; not karst CU	45 – 60	Shaly, fossiliferous, nodular limestone; mudstone; <i>miliolid</i> grainstone	Massive, nodular and mottled; <i>Ceratostreon texanum</i> , <i>Dictyoconus walnutensis</i> , and <i>Texigryphaea</i>	Few caves	Fabric/low permeability		
		Lower confining unit	Upper member of the Glen Rose Limestone	CU; evaporite beds AQ	350 – 500	Yellowish-tan, thinly bedded limestone and marl	Stair-step topography; alternating limestone and marl	Some surface cave development	Some water production at evaporite beds/relatively impermeable		

GEOLOGIC ASSESSMENT
ATTACHMENT C - SITE GEOLOGY



GEOLOGIC ASSESSMENT
8570 River Road
New Braunfels, Comal County, Texas



Prepared for:
8570 River Road, LLC & TRC Capital Partners
Prepared by:
Anding Environmental Consulting, LLC
September 2022

Geologic Assessment

8570 River Road
New Braunfels, Comal County, Texas

Prepared for:

8570 River Road, LLC &
TRC Capital Partners
1001 McKinney St Suite 525
Houston, TX 77002

Prepared by:



Anding Environmental Consulting, LLC.
925 Lauren Street
New Braunfels, TX 78130

September 2022

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Table 3-1 Site Soils

Attachments

Attachment A Geologic Assessment Table
Attachment B Stratigraphic Column
Attachment C Site Geology and Geologic Assessment
Attachment D Site Geologic Maps
Attachment E Photo Log

Acronyms

BMP	Best Management Practices
EAPP	Edwards Aquifer Protection Plan
FEMA	Federal Emergency Management Administration
GPS	Global Positioning System
TCEQ	Texas Commission on Environmental Quality
USDA	United States Department of Agriculture
USGS	United States Geological Survey

1.0 INTRODUCTION AND PURPOSE

1.1 Introduction

This Geologic Assessment was prepared in general accordance with to 30 TAC §213.5(b)(3), effective September 01, 2003, Texas Commission on Environmental Quality (TCEQ) requirements for regulated developments within the Edwards Aquifer Recharge Zone, and the “Instructions to Geologists”, TCEQ-0585-Instructions (Rev. 10-1-04). Per TCEQ guidance, a proposed project on the Site for future development requires a Geologic Assessment to identify all potential pathways for contaminant movement to the Edwards Aquifer and provide sufficient geologic information so that the appropriate Best Management Practices (BMPs) can be proposed in the Edwards Aquifer Protection Plan (EAPP). This Geologic Assessment has been prepared by a Texas Board of Professional Geoscientists licensed geologist, Mr. Matt Anding, P.G.

1.2 Project Description

The Site is located at 8570 River Road, New Braunfels, TX 78132. The center of the Site is located at 29°47'58.44"N Latitude and 98° 8'52.13"W Longitude (WGS 84), and the Site is ~1.06 acres in size. The Site is currently developed with a residential home, multiple vacation rental cabins, and a river-front concession stand and bar. The property location is depicted on **Figure D-1**. A proposed project plans to modify existing vacation rental cabins.

2.0 METHODOLOGY

2.1 Research Information

The Geologic Assessment was performed by Matt Anding, P.G., with Anding Environmental Consulting, LLC (Anding Environmental) on September 10, 2022. Anding Environmental first conducted a desktop analysis of the geology of the area surrounding the Site. The research included, but was not limited to, the Geologic Atlas of Texas, Federal Emergency Management Agency (FEMA) maps, Edwards Aquifer Recharge Zone Maps, USGS 7.5 Minute Quadrangle Maps, Bureau of Economic Geology online digital data, historic aerials and topographic maps, and the United States Department of Agriculture (USDA) Soil Survey of Comal County, Texas.

2.2 Field Survey

After reviewing the available information, a field investigation was performed to identify any geologic or man-made potential recharge features. A transect spacing of approximately 25-50 feet, or less depending on Site vegetation, was used to inspect the Site. A 2021 aerial photograph, in conjunction with a handheld sub-meter Trimble GeoXH Global Positioning System (GPS), was used to navigate on the property and search for potential recharge features, as recommended in the “Instructions to Geologists”, TCEQ-0585-Instructions (Rev. 10-1-04). The Geologic Assessment Form, Stratigraphic Column, and the Geologic Assessment Table have been filled with the appropriate information for this Site and are included in this report. Special attention was given to the mapped faults, bedrock outcroppings, and other structural features mapped in the area.

2.3 Data Gaps

No data gaps were incurred during the desktop analysis or field reconnaissance.

2.4 Limitations of Assessment

No Geologic Assessment can wholly eliminate uncertainty regarding potential pathways for contaminant movement to the Edwards Aquifer in connection with a property. Performance of a Geologic Assessment in accordance with TCEQ-0585 instructions is intended to reduce, but cannot eliminate, uncertainty regarding the potential for surficial points of infiltration in connection with a property, and the TCEQ recognizes reasonable limits of time and cost.

Anding Environmental assumes no responsibility for the discovery of any surficial or subsurface points of infiltration, caves, solution cavities or enlarged fractures/faults, sinkholes, or any other karst features not observed during this Geologic Assessment. Anding Environmental does not have any responsibility with regard to the Client's compliance with or fulfillment of its obligation under any law, ordinance, or regulation prevailing at any of the observed locations.

3.0 NARRATIVE DESCRIPTION OF SITE GEOLOGY

3.1 Site Characterization

The Site is a long narrow parcel located along the Guadalupe River valley and is currently developed with a residential home, multiple vacation rental cabins, and a river-front concession stand and bar. The northern portion of the Site rests on the edge of a stream terrace, which then slopes down to another relatively gently sloping terrace, before sloping down the river at the southern portion of the property. The entirety of the Site is developed with either structures or maintained lawn and driveway/walkways.

The Site extends from River Road at the northern property boundary down to the Guadalupe River at the southern property boundary. The Site is bordered by residential/vacation rental properties to the east and west.

The Site is located within the Guadalupe River valley and is positioned along stream terrace topography. Site topography consists of a relatively flat terrace at the top by River Road, a middle bench terrace in the center of the Site, then an additional slope down to the river. The highest elevation is approximately 724 ft amsl at the northern Site corner. The lowest elevation is approximately 680 ft amsl at the southern Site boundary. Surface water tends to sheetflow to the southeast towards the Guadalupe River.

The Site vegetation consists of maintained lawns along with pecan trees and bald cypress trees along the river banks.

3.2 Site Geology

Per the TCEQ Edwards Aquifer Program GIS dataset, the entire Site is located within the Edwards Aquifer Recharge Zone. A map of the Site and Edwards Aquifer Zones is presented as **Figure D-3**.

The following resources were most utilized in mapping the Site geology:

- Digital Geologic Map Database for the State of Texas (USGS)
- 1982 Geologic Atlas of Texas, San Antonio Sheet (Bureau of Economic Geology)
- 1992 Geologic Map of Texas (Bureau of Economic Geology)
- 2007 Geology of the New Braunfels Area (Bureau of Economic Geology, Texas Water Development Board, and USGS)
- 1991 Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Comal County, Texas (USGS)
- 2016 Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Comal County, Texas (USGS)
- Geologic Map of the Edwards Aquifer Recharge Zone, South-Central Texas (USGS)

High resolution geologic mapping in the Site area was best found in the 2016 *Geologic Framework and Hydrostratigraphy of the Edwards and Trinity Aquifers within Northern Bexar and Comal Counties, Texas* (Clark et al). The Site is located within the Guadalupe River valley where the river has cut through the Edwards Formation into the Glen Rose Formation. The majority of the Site is

mapped as Terrace Deposits (Qt) from the Guadalupe River, and the northern portion of the Site is mapped as the Upper Glen Rose (Kgru).

Terrace Alluvium Deposits (Quaternary) – Surficial mapping efforts in the area display the Site area along the Guadalupe River as Terrace Alluvium/Fluviatile Terrace Deposits (Qt). These unconsolidated gravels, sands, silts, and clays are normally found around rivers and streams such as the Guadalupe river and associated drainages and are inundated regularly (2005 Blome et al).

Upper Glen Rose Formation (Kgru) (Lower Cretaceous) – The Upper Glen Rose Formation is a yellowish tan, thinly bedded limestone and marl, identifiable in the region by the star-step topography is creates capping limestone and marl features. Upper Glen Rose Formation in the area, likely Cavernous (Kgrc) and Camp Bullis (Kgrcb) units at the Site, consists of evaporates, wackestones, grainstones, and argillaceous limestones. This formation is the lower confining unit of the Edwards Aquifer, though the formation does have some permeability and water production. The Cavernous (Kgrc) member in the area is known to have karst features and caverns. (Small and Hanson, 1995; Collins, 2000, Clark et al 2016). Thickness 120-230 ft.

No Edwards limestone outcroppings were observed at the Site. Based on literature research and field reconnaissance, the Site has no known or inferred faults on the Site or immediate surrounding area. Anding Environmental observed no fault structures on the Site during the field reconnaissance. No evidence of fault structures were observed on historic aerial imagery. Mapped normal faults are located 0.5 miles to the north and 0.5 miles to the south of the Site.

A geologic map of the Site is presented as **Figure D-6. Attachment E, Photo Log**, displays photographs of typical outcroppings of the mapped geologic unit on Site.

3.3 Site Soils

The northern portion of the Site is covered with Eckrant-Rock (ErG) soils, and the southern portion of the Site is covered with Boerne fine sandy loams (BoB). **Table 3-1** displays soils mapped on the Site and **Figure D-5** illustrates the soils in relation to the Site.

Table 3-1 – Site Soils

BoB - Boerne fine sandy loam, 1% to 3 % slopes, rarely flooded

BoB - Boerne fine sandy loam – The entirety of the Site is mapped as Boerne fine sandy loams. These soils can be found on convex slopes along stream terraces near rivers and large creeks in the area. The surface layer is typically 17” of grayish brown fine sandy loams, and subsoil consists of 41” of pale brown sandy loams. The soil is well drained with slow surface runoff and moderately rapid permeability. BoB soils on the Site were observed to be very shallow. (USDA/NRCS, 2022).

3.4 Site Assessment

No rock outcroppings were observed on the southern stream terrace portion of the Site as the Site is covered in thick soils and stream terrace deposits. No Edwards limestone outcroppings were observed on the Site.

Anding Environmental observed no geologic features or potential recharge features during the Site reconnaissance.

MB-1 **Manmade Feature in Bedrock – Water Well**: A drinking water well exists in the
Not center of the Site, next to one of the vacation rentals. The wellhead is which would
Sensitive not allow surface water to flow into the well head. Therefore, this would not be
considered a potential sensitive feature.

MB-2 **Manmade Feature in Bedrock – Septic System**: A septic system exists in the
Not southern portion of the Site behind the bathhouse. The septic system is covered in
Sensitive thick soils with no voids or other mechanisms for rapid infiltration into the
subsurface. Therefore, this would not be considered a potential sensitive feature.

4.0 SUMMARY

Anding Environmental has conducted a Geologic Assessment for the referenced Site in accordance with 30 TAC §213.5(b)(3), TCEQ requirements for regulated developments within the Edwards Aquifer Recharge Zone, and the “Instructions to Geologists”, TCEQ-0585-Instructions (Rev. 10-1-04). Two (2) geologic or potentially sensitive features were observed on the Site.

No geologic features or potentially sensitive recharge features were observed on the Site. Therefore, it is Anding Environmental’s professional judgement that the Site has low potential for rapid surface water movement to the Edwards Aquifer via direct infiltration.

Please note that other karst features may exist on Site, either buried or obscured from view, which may have potential for openings to the subsurface. If any additional potentially karst features are discovered during future Site activities, please do not hesitate to contact Anding Environmental for support.

5.0 REFERENCES

Bureau of Economic Geology, 1992, Geologic Map of Texas: University of Texas at Austin, Virgil E. Barnes, project supervisor, Hartmann, B.M. and Scranton, D.F., cartography, scale 1: 500,000

Clark et. al., 2016, Geologic Framework and Hydrostratigraphy of the Edwards and Trinity Aquifers Within Northern Bexar and Comal Counties, Texas. U.S. Geological Survey.

Collins, E.W., 2000, Geologic map of the New Braunfels, Texas, 30 x 60 minute quadrangle—Geologic framework of an urban-growth corridor along the Edwards aquifer, south-central Texas: University of Texas, Bureau of Economic Geology Miscellaneous Map 39, 28 p., 1 sheet, scale 1: 100,000.

Comal County Appraisal District. Property Search. <http://www.comalad.org/>

Federal Emergency Management Agency. Floodplain Maps. <https://msc.fema.gov/portal>

Hanson, J.A., and Small, T.A., 1995, Geologic framework and hydrogeologic characteristics of the Edwards aquifer outcrop, Hays County, Texas: U.S. Geological Survey Water-Resources Investigations Report 95-4265, 10 p., 1 sheet, scale 1: 75,000.

Stein, W.G., and Ozuna, G.B., 1995, Geologic framework and hydrogeologic characteristics of the Edwards aquifer recharge zone, Bexar County, Texas: U.S. Geological Survey Water-Resources Investigations Report 95-4030, 8 p., 1 sheet, scale 1:75,000.

Stoeser, D.B., Shock, Nancy, Green, G.N., Dumonceaux, G. M., and Heran, W.D., in press, A Digital Geologic Map Database for the State of Texas: U.S. Geological Survey Data Series.

Texas Commission on Environmental Quality. Regulatory Databases. <http://www.tceq.state.tx.us/>

United States Department of Agriculture (USDA), 2022. NRCS Web Soil Survey. *Custom Soil Report for Comal County, Texas*. Accessed September 2022.

U.S. Geological Survey. Topographic Maps. <https://ngmdb.usgs.gov/maps/topoview/viewer>

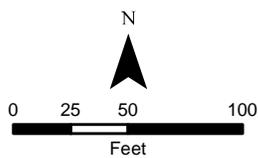
U.S. Geological Survey. Texas Geology. <http://mrdata.usgs.gov/sgmc/tx.html>

GEOLOGIC ASSESSMENT
ATTACHMENT D - SITE GEOLOGIC MAPS



Legend

 Site



*8570 River Road
New Braunfels, Comal County, Texas*

Site Location Map

*Geologic Assessment
8570 River Road, New Braunfels, TX*



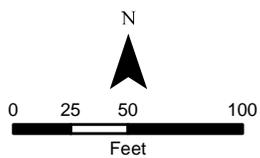
*925 Lauren St.
New Braunfels, TX 78130*

<i>TC NO.</i>	<i>DATE</i>	<i>DRAWN BY</i>	<i>MAP NO.</i>	<i>FIGURE</i>
22-014	9/13/2022	ANDING	001	D-1



Legend

 Site



*8570 River Road
New Braunfels, Comal County, Texas*

Site Aerial

*Geologic Assessment
8570 River Road, New Braunfels, TX*



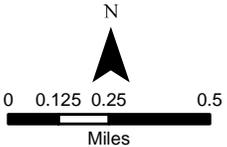
*925 Lauren St.
New Braunfels, TX 78130*

<i>TC NO.</i>	<i>DATE</i>	<i>DRAWN BY</i>	<i>MAP NO.</i>	<i>FIGURE</i>
22-014	9/13/2022	ANDING	002	D-2



Legend

-  Site
-  Edwards Aquifer Contributing Zone
-  Edwards Aquifer Contributing Zone within the Transition Zone
-  Edwards Aquifer Recharge Zone
-  Edwards Aquifer Transition Zone



*8570 River Road
New Braunfels, Comal County, Texas*

Edwards Aquifer Zone Map

*Geologic Assessment
8570 River Road, New Braunfels, TX*



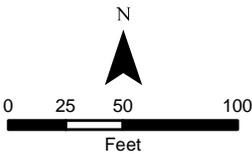
*925 Lauren St.
New Braunfels, TX 78130*

TC NO.	DATE	DRAWN BY	MAP NO.	FIGURE
22-014	9/13/2022	ANDING	003	D-3



Legend

- Elevation Contours 5' Intervals
- Site



*8570 River Road
New Braunfels, Comal County, Texas*

Site Topography

*Geologic Assessment
8570 River Road, New Braunfels, TX*



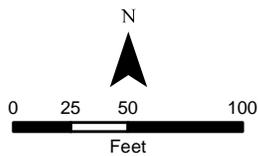
*925 Lauren St.
New Braunfels, TX 78130*

TC NO.	DATE	DRAWN BY	MAP NO.	FIGURE
22-014	9/13/2022	ANDING	004	D-4



Legend

- BoB - Boerne fine sandy loam, 1% to 3 % slopes, rarely flooded
- ErG - Eckrant-Rock outcrop association, 8% to 30 % slope
- Site



*8570 River Road
New Braunfels, Comal County, Texas*

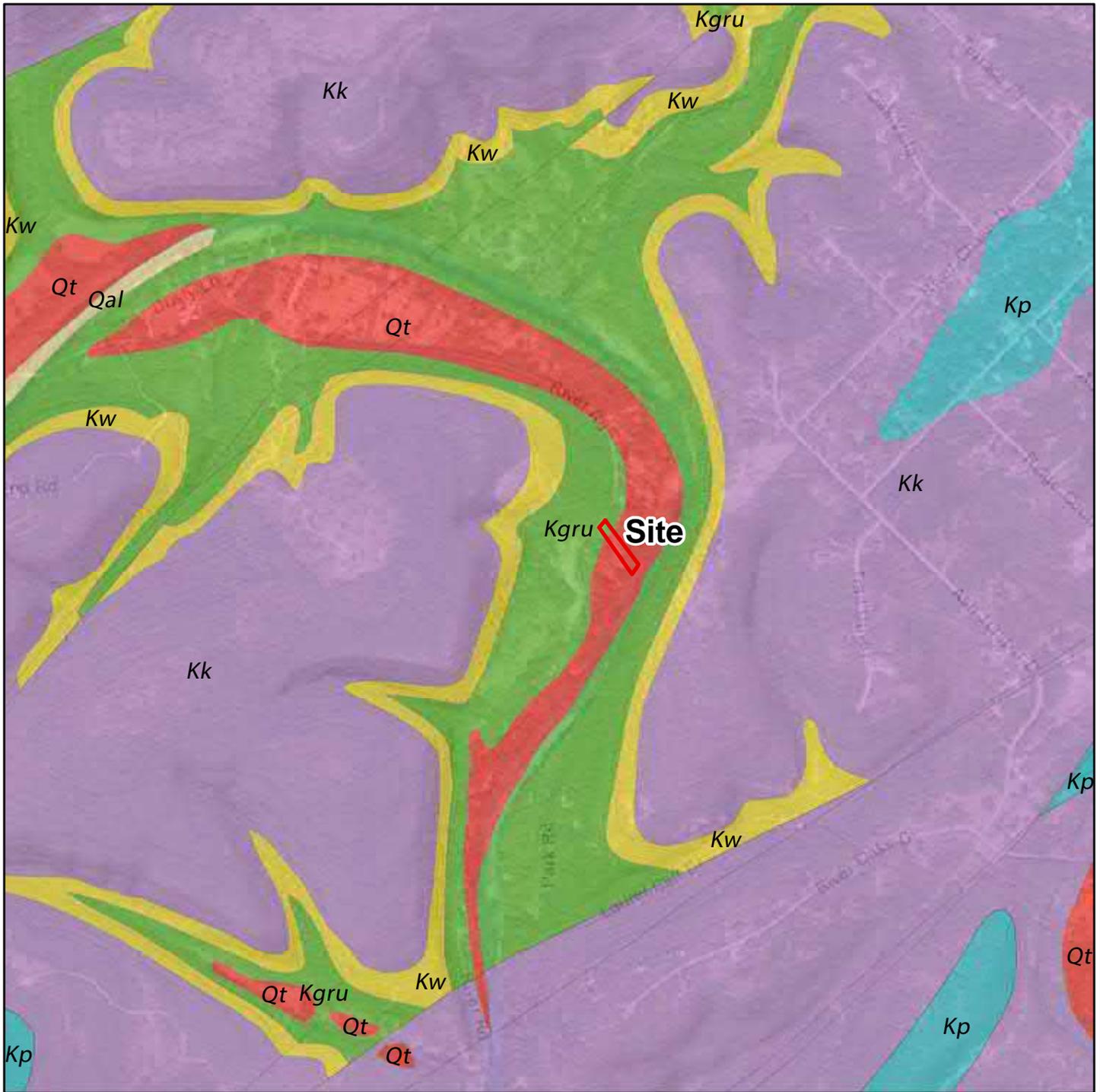
Site Soils

*Geologic Assessment
8570 River Road, New Braunfels, TX*



*925 Lauren St.
New Braunfels, TX 78130*

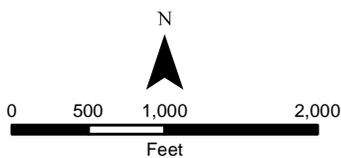
<i>TC NO.</i>	<i>DATE</i>	<i>DRAWN BY</i>	<i>MAP NO.</i>	<i>FIGURE</i>
22-014	9/13/2022	ANDING	005	D-5



Legend

Surface Geology

- Qal - Alluvium
- Qt - Terrace Deposits
- Kp (Kep) - Person
- Kk (Kek) - Kainer
- Kw - Walnut Formation
- Kgru - Glen Rose



8570 River Road
New Braunfels, Comal County, Texas

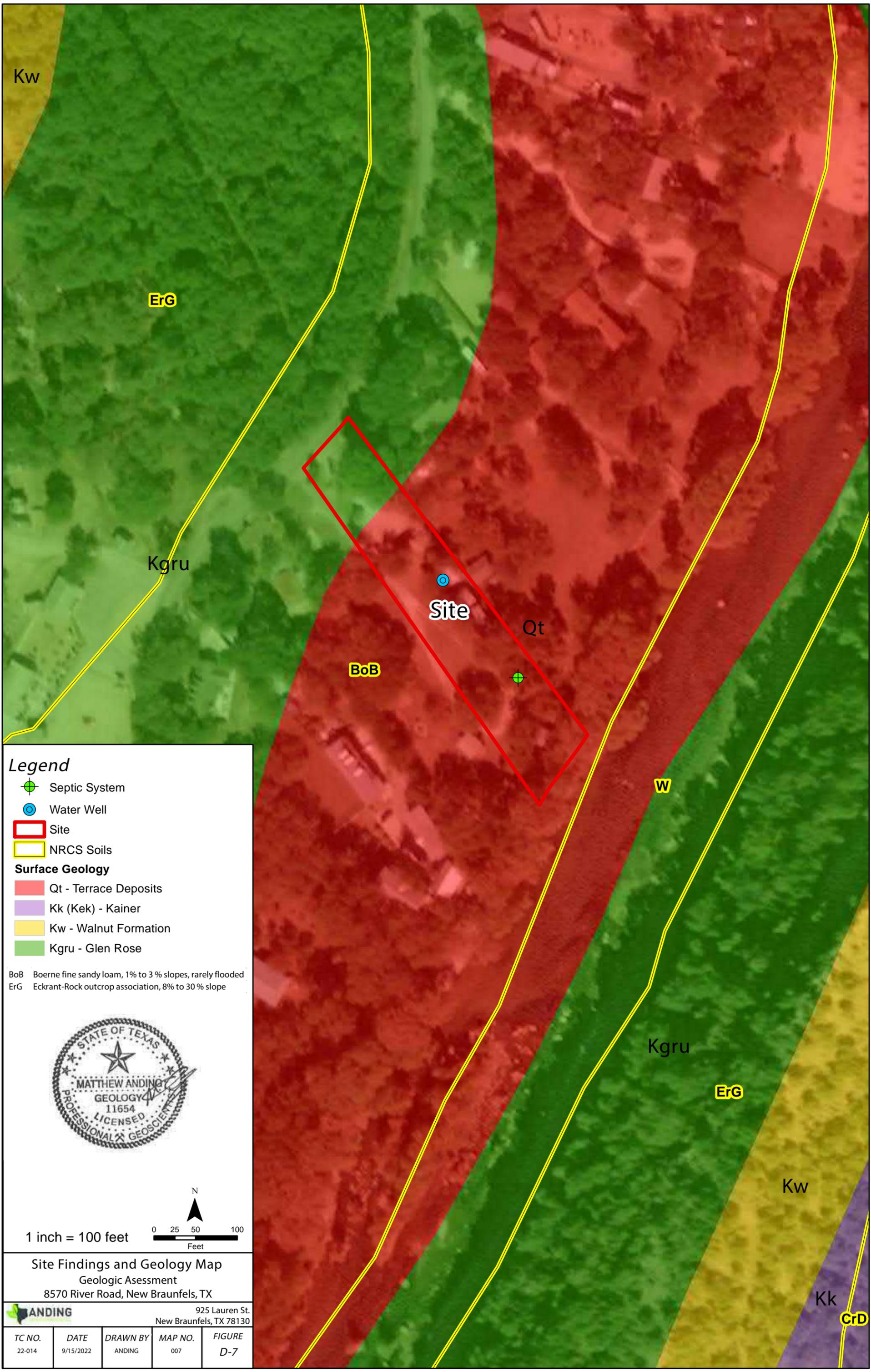
Regional Geology

Geologic Assessment
8570 River Road, New Braunfels, TX



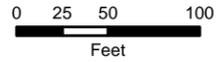
925 Lauren St.
New Braunfels, TX 78130

TC NO.	DATE	DRAWN BY	MAP NO.	FIGURE
22-014	9/13/2022	ANDING	006	D-6



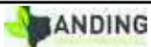
Legend

-  Septic System
 -  Water Well
 -  Site
 -  NRCS Soils
 - Surface Geology**
 -  Qt - Terrace Deposits
 -  Kk (Kek) - Kainer
 -  Kw - Walnut Formation
 -  Kgru - Glen Rose
- BoB Boerne fine sandy loam, 1% to 3 % slopes, rarely flooded
 ErG Eckrant-Rock outcrop association, 8% to 30 % slope



1 inch = 100 feet

Site Findings and Geology Map
 Geologic Assessment
 8570 River Road, New Braunfels, TX



925 Lauren St.
 New Braunfels, TX 78130

TC NO.	DATE	DRAWN BY	MAP NO.	FIGURE
22-014	9/15/2022	ANDING	007	D-7

**GEOLOGIC ASSESSMENT
ATTACHMENT E - PHOTO LOG**

Attachment E - Photo Log
Site Investigation Photos



**Site Entrance and Northern Site Boundary
Vacation House**



**Slope Down From Top of Site
Western Site Boundary**



**Center of Site
Vacation Rentals**



**Center of Site
Vacation Rentals**



Vacation Rentals



**Southern Portion of Site
Concession Stand and Bar Above River**



River Landing Area



Concession Stand and River Landing Area



Guadalupe River-Front Southern Site Boundary



Septic System

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

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

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

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

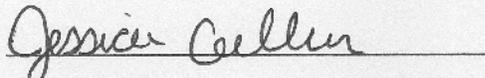
Signature

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

Print Name of Customer/Agent: Jessica Calhoun, P.E., CFM

Date: 02/24/2023

Signature of Customer/Agent:



Regulated Entity Name: 8570 River Road

Regulated Entity Information

1. The type of project is:

- Residential: Number of Lots: _____
- Residential: Number of Living Unit Equivalentents: _____
- Commercial
- Industrial
- Other: _____

2. Total site acreage (size of property): 0.7380

3. Estimated projected population: 0

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

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	1,504	÷ 43,560 =	0.035
Parking	1,680	÷ 43,560 =	0.039
Other paved surfaces	1,859	÷ 43,560 =	0.043
Total Impervious Cover	5,043	÷ 43,560 =	0.116

Total Impervious Cover 0.116 ÷ Total Acreage 0.738 X 100 = 15.7% Impervious Cover

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

For Road Projects Only

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

7. Type of project:

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

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

- Concrete
- Asphaltic concrete pavement
- Other: _____

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

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

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

10. Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

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

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

<u>100%</u> Domestic	<u>1,000</u> Gallons/day
<u> </u> % Industrial	<u> </u> Gallons/day
<u> </u> % Commingled	<u> </u> Gallons/day
TOTAL gallons/day <u>1,000</u>	

15. Wastewater will be disposed of by:

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

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

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

Sewage Collection System (Sewer Lines):

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

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

The SCS was previously submitted on .

The SCS was submitted with this application.

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

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

- Existing.
 Proposed.

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = 100'.

18. 100-year floodplain boundaries:

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

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

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FIRM 48091C0270F (effective September 2, 2009)

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

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

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

There are 1 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

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

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

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

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

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

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

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

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

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

Administrative Information

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

WATER POLLUTION ABATEMENT PLAN
ATTACHMENT A
Factors Affecting Water Quality

The proposed 8570 River Road site includes the construction of two elevated tiny homes covering 400 square feet (0.009 acres). In existing conditions, there are 1,104 square feet (0.025 acres) of rooftops, 1,680 square feet (0.039 acres) of roadway and parking area, and 1,859 square feet (0.043 acres) of decks. The factor affecting water quality is runoff sediment transport from the construction being performed. However, temporary BMP measures were taken to ensure water quality is not impaired by construction.

WATER POLLUTION ABATEMENT PLAN
ATTACHMENT B
Volume and Character of Stormwater

The River Road Cottages site covers 0.7380 acres. The Drainage Area Map (with the corresponding flow calculations) can be found in Exhibit A – 8570 River Road Drainage Map. There is no proposed grading onsite.

The site is currently a 0.7380-acre residential site with 5,113 square feet (0.117 acres) of impervious cover created by a main residential home and asphalt driveway, these improvements were built in 1938 before TCEQ Edwards Aquifer Program. Additionally, there are currently 1,104 square feet (0.025 acres) of additional rooftop, 1,680 square feet (0.039 acres) of concrete, and 1,859 square feet (0.043 acres) of decking that have not previously been permitted. A Water Pollution Abatement Plan has not previously been recorded for this property. The proposed conditions increase the impervious cover by 400 square feet to 5,043 square feet (0.116 acres) or 15.7% at full development. 8570 River Road, LLC is proposing a natural vegetative filter strip for the Permanent Stormwater BMP.

The existing runoff from the site was determined using the Rational Method. The existing runoff coefficient is a weighted average of impervious cover (concrete/asphalt), 0.25-0.53 based on the undeveloped range over multiple slopes. The proposed conditions runoff coefficient is also a weighted average of impervious cover (concrete/asphalt), 0.25-0.53 based on the undeveloped range over multiple slopes. These values were derived from the most current revision of the City of New Braunfels Drainage and Erosion Control Design Manual. Tables showing the drainage areas and resulting flows are on the Drainage Area Map referenced above.



COMAL COUNTY

ENGINEER'S OFFICE

February 24, 2023

Jessica Calhoun, P.E.
HMT Engineering & Surveying
via e-mail: Jessica.calhoun@hmtnb.com

Re: 8570 River Road WPAP On-Site Sewage Facility Suitability Letter, within Comal County,
Texas

Dear Ms. Calhoun:

In accordance with TAC §213.5(b)(4)(F)(ii), Comal County has found that the entire referenced site is suitable for the use of private sewage facilities and will meet the special requirements for on-site sewage facilities located on the Edwards Aquifer recharge zone as specified in TAC §285.40-42 based on the following information submitted to our office on February 23, 2023:

- The Geologic Assessment, prepared by Anding Environmental Consulting, LLC
- The Water Pollution Abatement Plan, prepared by HMT Engineering & Surveying

According to TAC §285.42(a), if any recharge feature is discovered during construction of an OSSF, all regulated activities near the feature shall be suspended immediately. The owner shall immediately notify the TCEQ San Antonio office of the discovery of the feature. All activities regulated under TAC §213 shall not proceed near the feature until Comal County, in conjunction with the TCEQ San Antonio office, has reviewed and approved a plan proposed to protect the feature, the structural integrity of the OSSF, and the water quality of the aquifer. The plan shall be sealed, signed, and dated by a professional engineer.

If you have any questions or need additional information, please do not hesitate to contact our office.

Sincerely,

Robert Boyd, P.E.
Comal County Assistant Engineer

cc: Donna Eccleston, Comal County Commissioner Precinct No. 1

Douglas R. Dowlearn
D.A.D. Services, Inc.
PO BOX 212, BULVERDE, TX 78163
(210)240-2101
txseptic@gmail.com

February 16th, 2023

Attn:
Comal County Engineers Office
Environmental Health Department
195 David Jonas Drive
New Braunfels, Texas 78132

RE: On-Site Sewage Facility (OSSF) Suitability Evaluation for 8570 River Rd

To Whom It May Concern:

I have completed a site evaluation of the above referenced proposed site to determine the suitability of the site for the use of an on-site sewage facility (OSSF).

The site consists of the following type of soil(see SOILS MAP for soil sample locations):

SOIL TYPE	SOIL TEXTURE
Boerne fine sandy loam(Bob)	0" - 8" fine sandy loam 8" - 60" loam 1% - 3% Slope

The proposed lot will be served by a well. Proper OSSF setbacks found in CH285.91 Table X. Minimum Required Separation Distances for On-Site Sewage Facilities shall be maintained from the well, along with any neighboring wells.

The proposed lot is well drained primarily with sheet flow, but with small areas of concentrated flow. Seasonal groundwater (seeps) may occur.

A portion of the lot does lie within both the 100 year floodplain, and the floodway - see 8570 RIVER ROAD SURVEY for locations. If a new OSSF system is installed in either the floodplain or floodway, special planning requirements shall be implemented to prevent damage to the OSSF in the event of a flood.

The Guadalupe River is directly behind this property. A 75' setback shall be maintained from the river's edge with soil absorption and drip irrigation drainfields. A 50' setback shall be maintained from the river's edge with the drainfield if an LPD system with

secondary treatment disinfection is utilized, if a drip system with secondary treatment and disinfection is utilized, or if surface application is utilized.

The OSSFs most likely to be used on the proposed lot are aerobic treatment with drip disposal, OSSFs with septic tanks utilizing conventional drain fields or low pressure pipe. Aerobic spray disposal may also be an option.

There is an existing OSSF system(permit #92071) on the property - see 8570 RIVER ROAD SURVEY for location. The system appears to be functioning properly. There is also an existing septic tank and existing drainfield with no county record on the property - see 8570 RIVER ROAD SURVEY for location. Upon investigation, it appears this existing system(with no county record) is no longer in use. Proper measures shall be taken to ensure that the tank has been abandoned in accordance to CH285.36(b)(1) & (2).

Final permitting will be by Comal County when the OSSF permits are applied for.

I have reviewed the proposed site and determined that there is sufficient area and suitability on site for at least one of the OSSFs listed in Texas Wastewater Code 285.90-285.91, Table IX.

If you have any questions or concerns with reference to this report, I may be contacted by phone at 210.240.2101 or by email at txseptic@gmail.com.

Respectfully,



Douglas R. Dowlearn, R.S.

2 Attachments:
8570 RIVER ROAD SURVEY
SOILS MAP



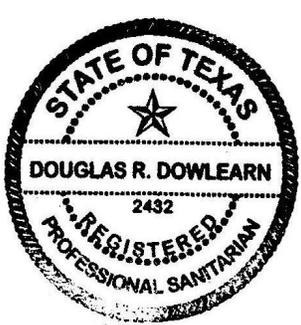
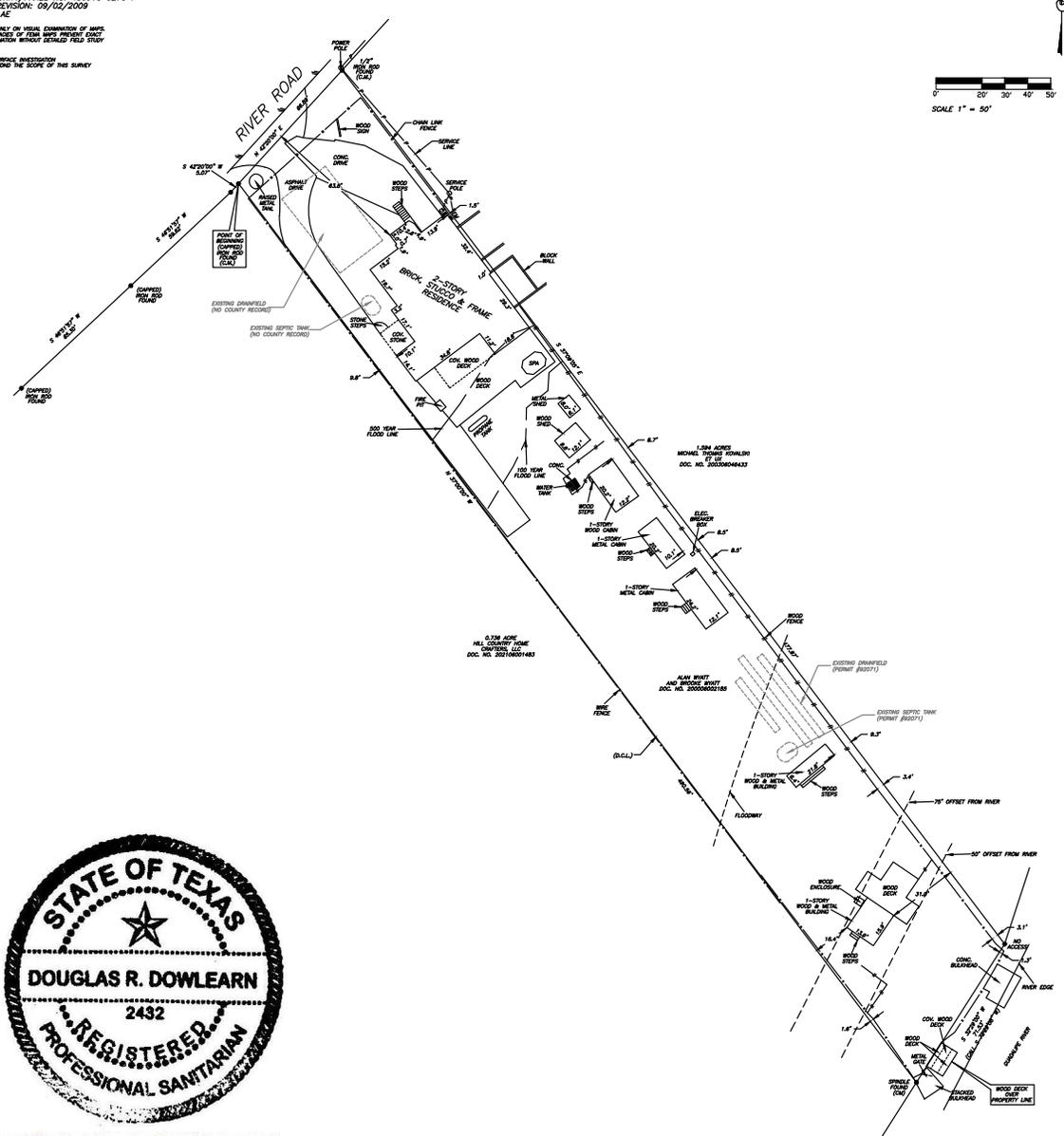
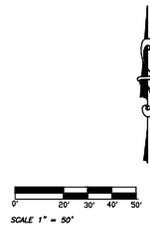
8570 RIVER ROAD SURVEY

OF NO. SCT-63-430029204282 CHICAGO TITLE
 ADDRESS: 8570 RIVER ROAD
 NEW BRAUNFELS, TEXAS 78132
 BORROWER: TRC CAPITAL PARTNERS

THIS PROPERTY IS AFFECTED BY THE
 100 YEAR FLOOD PLAIN AS ESTABLISHED
 BY THE U.S. DEPT. OF HOUSING & URBAN
 DEVELOPMENT.
 COMMUNITY/PANEL NO. 48091C 0270 F
 MAP REVISION: 09/02/2009
 ZONE: AE

BASED ONLY ON VISUAL EXAMINATION OF MAPS.
 DIMENSIONS OF FIRM FOUNDATION LAYOUT
 DETERMINATION WERE MADE BY FIELD STUDY

A SUBSURFACE INVESTIGATION
 WAS BEYOND THE SCOPE OF THIS SURVEY



Douglas R. Dowlearn

0.7380 ACRE
 SITUATED IN THE IGNACIO
 RODRIGUEZ SURVEY NO. 271
 ABSTRACT NO. 488 AND THE
 G. CARRASCO SURVEY
 NO. 272, ABSTRACT NO. 106
 COMAL COUNTY, TEXAS
 (SEE ATTACHED METES AND BOUNDS)

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE
 ON THE GROUND, THAT THIS PLAN CORRECTLY
 REPRESENTS THE FACTS FOUND AT THE
 TIME OF SURVEY AND THAT THERE ARE NO
 ENCUMBRANCES APPARENT ON THE GROUND,
 EXCEPT AS SHOWN HEREON. THIS SURVEY IS
 CERTIFIED FOR THIS TRANSACTION ONLY AND
 ABSTRACTS PROVIDED IN THE ABOVE
 REFERENCED TITLE COMMITMENT WAS RELIED
 UPON IN PREPARATION OF THIS SURVEY.

JAMES E. MOSELEY
 PROFESSIONAL LAND SURVEYOR
 NO. 5912
 DRAWING NO. SA0022-01545
 JUNE 28, 2022
 REVISED: JULY 20, 2022

D.C.L. = DIRECTIONAL CONTROL LINE
 RECORD BEARING DOC. NO. 2002002185 C.C.L.A. DRAWN BY: MM/RE

PRECISION SURVEYORS
 PROFESSIONAL LAND SURVEYS
 1-800-LANDSURVEY
 www.precisionland.com
 281-696-1506 FAX 281-696-1867
 900 THUNDERBOLT STREET SUITE 100 HOUSTON, TEXAS 77059
 210-629-8941 FAX 210-629-1555
 1777 NE LOOP #10 SUITE 400 SAN ANTONIO, TEXAS 78217
 FROM NO. 10067700

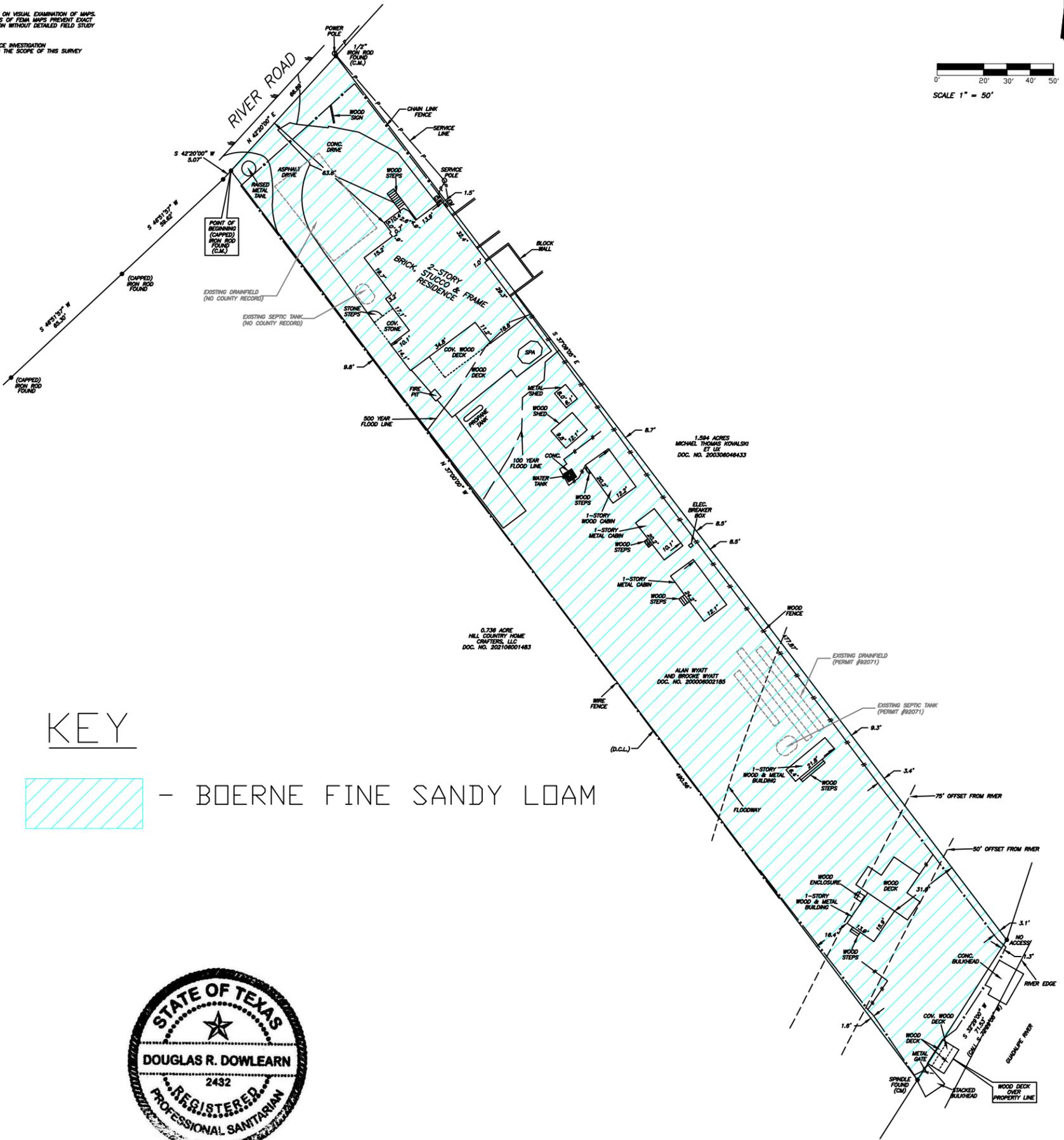
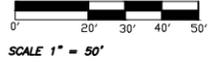
GF NO. SCT-63-4300292204282 CHICAGO TITLE
 ADDRESS: 8570 RIVER ROAD
 NEW BRAUNFELS, TEXAS 78132
 BORROWER: TRC CAPITAL PARTNERS

SOILS MAP

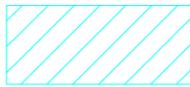
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KEY



- BOERNE FINE SANDY LOAM



Douglas R. Dowlearn

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 SITUATED IN THE IGNACIO
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JAMES E. MOSELEY
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 NO. 5912
 DRAWING NO. SA2022-01545
 JUNE 28, 2022
 REVISED: JULY 20, 2022

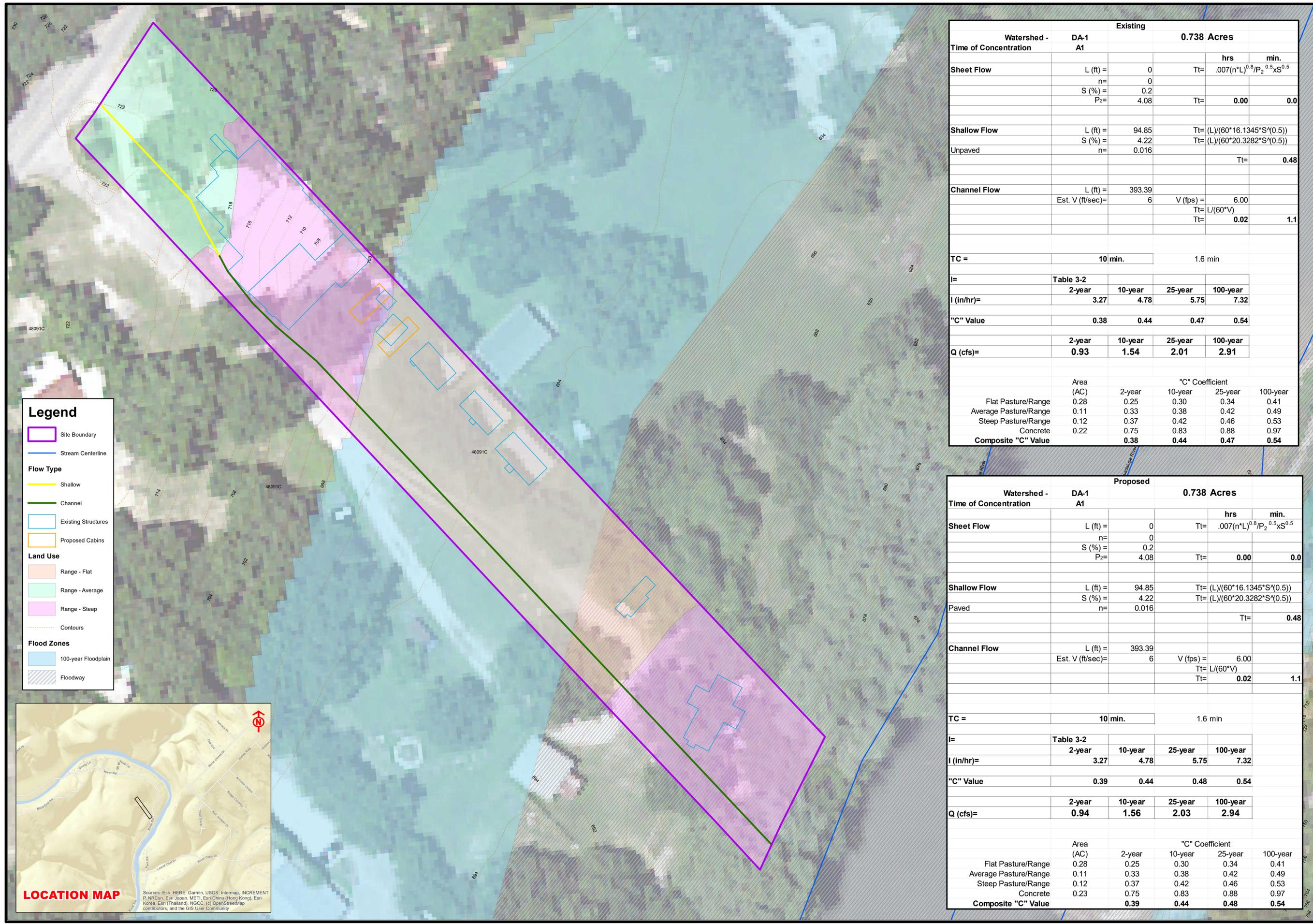
D.C.L. = DIRECTIONAL CONTROL LINE
 RECORD BEARING: DOC. NO. 20000602185 C.C.D.R.

DRAWN BY: MM/RE

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 PROFESSIONAL LAND SURVEYS

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 www.precisionlandsurveyors.com
 281-496-1586 FAX 281-496-1867
 800 THREADELLE STREET SUITE 150 HOUSTON, TEXAS 77079
 210-829-4941 FAX 210-829-1555
 1777 NE LOOP 410 SUITE 800 SMI AIRWAYS, TEXAS 78117
 FIRM NO. 10063700

Date: 3/1/2023 User Name: Jessica Calhoun Document Path: D:\Jessica Calhoun\Documents\Work\HMT\8570 River Road WPAP\GIS\Watersheds.mxd



Legend

- Site Boundary
- Stream Centerline
- Flow Type**
 - Shallow
 - Channel
- Existing Structures
- Proposed Cabins
- Land Use**
 - Range - Flat
 - Range - Average
 - Range - Steep
- Contours
- Flood Zones**
 - 100-year Floodplain
 - Floodway



Watershed -		Existing				
Time of Concentration		DA-1	0.738 Acres			
		A1	hrs		min.	
Sheet Flow	L (ft) =	0	Tt=		$.007(n*L)^{0.8}/P_2^{0.5}*S^{0.5}$	
	n=	0				
	S (%) =	0.2	Tt=		0.00	
	P ₂ =	4.08	0.0			
Shallow Flow	L (ft) =	94.85	Tt=		$(L)/(60*16.1345*S^{0.5})$	
	S (%) =	4.22	Tt=		$(L)/(60*20.3282*S^{0.5})$	
	n=	0.016	Tt=		0.48	
Channel Flow	L (ft) =	393.39	V (fps) =		6.00	
	Est. V (ft/sec)=	6	Tt=		$L/(60*V)$	
			Tt=		0.02	
TC =		10 min.	1.6 min			
I=		Table 3-2				
I (in/hr)=		2-year	10-year	25-year	100-year	
		3.27	4.78	5.75	7.32	
"C" Value		0.38	0.44	0.47	0.54	
Q (cfs)=		2-year	10-year	25-year	100-year	
		0.93	1.54	2.01	2.91	
		Area (AC)	"C" Coefficient			
			2-year	10-year	25-year	100-year
		Flat Pasture/Range	0.28	0.25	0.30	0.34
		Average Pasture/Range	0.11	0.33	0.38	0.42
		Steep Pasture/Range	0.12	0.37	0.42	0.46
		Concrete	0.22	0.75	0.83	0.88
		Composite "C" Value	0.38	0.44	0.47	0.54

Watershed -		Proposed				
Time of Concentration		DA-1	0.738 Acres			
		A1	hrs		min.	
Sheet Flow	L (ft) =	0	Tt=		$.007(n*L)^{0.8}/P_2^{0.5}*S^{0.5}$	
	n=	0				
	S (%) =	0.2	Tt=		0.00	
	P ₂ =	4.08	0.0			
Shallow Flow	L (ft) =	94.85	Tt=		$(L)/(60*16.1345*S^{0.5})$	
	S (%) =	4.22	Tt=		$(L)/(60*20.3282*S^{0.5})$	
	n=	0.016	Tt=		0.48	
Channel Flow	L (ft) =	393.39	V (fps) =		6.00	
	Est. V (ft/sec)=	6	Tt=		$L/(60*V)$	
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TC =		10 min.	1.6 min			
I=		Table 3-2				
I (in/hr)=		2-year	10-year	25-year	100-year	
		3.27	4.78	5.75	7.32	
"C" Value		0.39	0.44	0.48	0.54	
Q (cfs)=		2-year	10-year	25-year	100-year	
		0.94	1.56	2.03	2.94	
		Area (AC)	"C" Coefficient			
			2-year	10-year	25-year	100-year
		Flat Pasture/Range	0.28	0.25	0.30	0.34
		Average Pasture/Range	0.11	0.33	0.38	0.42
		Steep Pasture/Range	0.12	0.37	0.42	0.46
		Concrete	0.23	0.75	0.83	0.88
		Composite "C" Value	0.39	0.44	0.48	0.54

HMT
ENGINEERING & SURVEYING
TBPE Firm No. F-10961

1 inch = 20 feet

Drainage Area Map

PROPOSED DRAINAGE AREA
EXHIBIT
8570 River Road

BY	MARK	DATE	DESCRIPTION

Project No.: 479.002
Designed By: JC
Cartography By: JC
Checked By: JC

A

Drawing Name: C:\Users\wille\AppData\Local\Temp\MapData\Local\Temp\MapData_44052_479.002_EROS_CONTROL_PLAN.dwg User: wille Mar 02, 2023 - 9:09am

SEQUENCE OF CONSTRUCTION

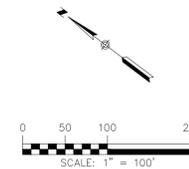
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2. INSTALL TEMPORARY EROSION CONTROLS PRIOR TO ANY CLEARING AND GRUBBING.
3. INSPECT EROSION CONTROLS AT WEEKLY INTERVALS, BEFORE AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THEY ARE FUNCTIONING PROPERLY.
4. BEGIN SITE CLEARING. (0.009 ACRES)
5. COMPLETE ALL CONSTRUCTION PER APPROVED PLANS AND STABILIZE ALL DISTURBED AREAS.
6. COMPLETE FINAL SITE INSPECTION.
7. COMPLETE ANY NECESSARY FINAL DRESS UP OF AREAS THAT WERE DISTURBED.
8. REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROLS AFTER SITE RE-VEGETATION HAS OCCURRED.

NO AREAS GREATER THAN 10 ACRES WILL BE DISTURBED AT ONE TIME.

NOTE:

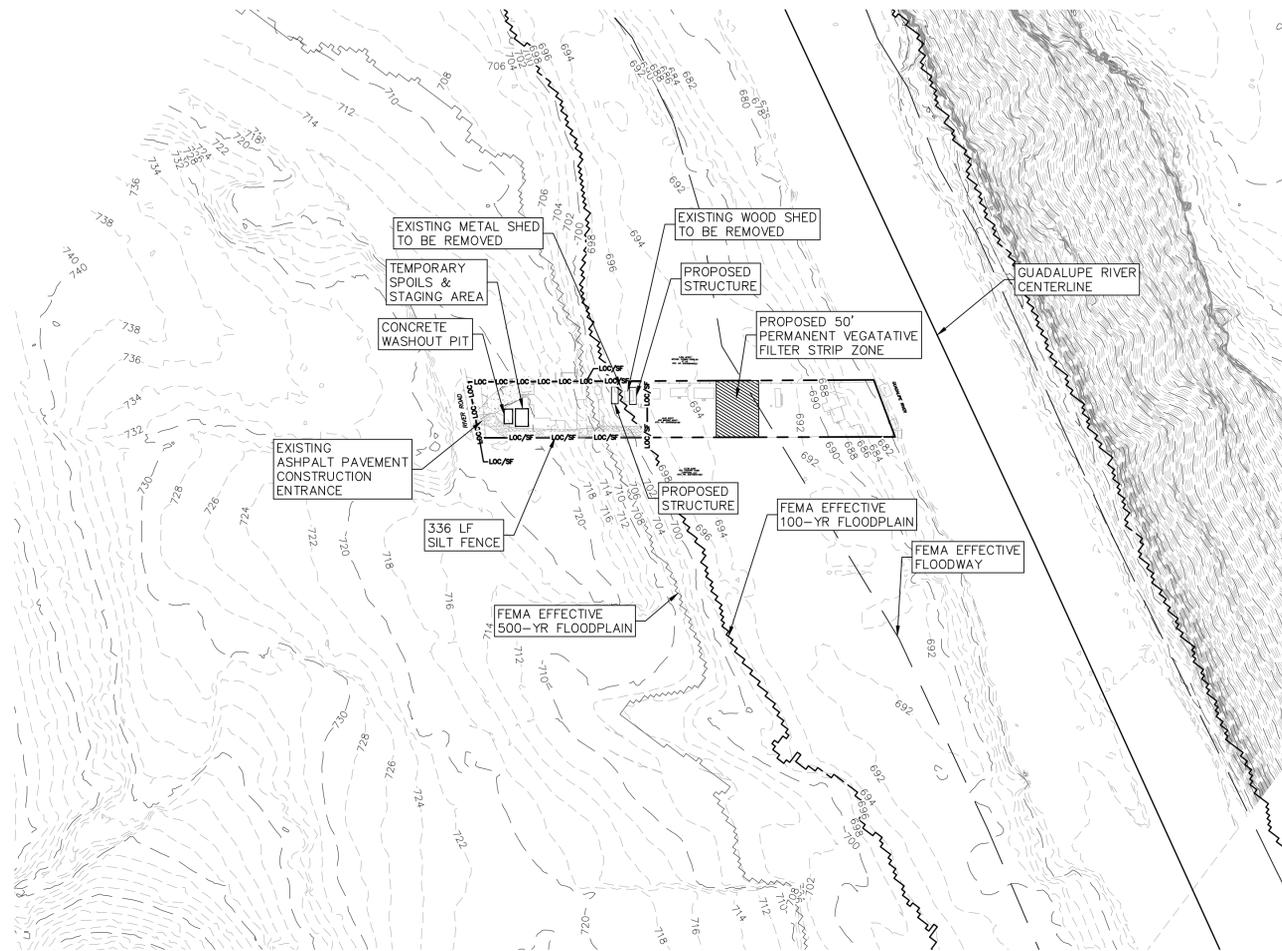
PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENT) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.

SILT FENCE AT PROPERTY LINE MAY BE SHOWN GRAPHICALLY OFFSET FROM PROPERTY LINE TO AVOID OVERLAP OF LINEWORK. CONTRACTOR SHALL NOT INSTALL EROSION CONTROL MEASURES BEYOND LIMITS OF CONSTRUCTION REGARDLESS OF GRAPHIC REPRESENTATION.



LEGEND

- 700 — EXISTING CONTOURS
- 700 — PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- DRAINAGE FLOW DIRECTION
- SF — SF — SILT FENCE
- LOC — LOC — LIMIT OF CONSTRUCTION
- [Brick pattern] STABILIZED CONSTRUCTION ENTRANCE
- FEMA EFFECTIVE 100-YR FLOODPLAIN
- FEMA EFFECTIVE 500-YR FLOODPLAIN
- FEMA EFFECTIVE FLOODWAY
- GUADALUPE RIVER CENTERLINE



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600



03/02/2023

EROSION CONTROL PLAN
8570 RIVER ROAD
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **MARCH 2023**
DRAWN BY: **WC**
DESIGNED BY: **JC**
REVIEWED BY: **JC**

HMT PROJECT NO.: **479.002**

SHEET
C1.0

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

Drawing Name: N:\Projects\479 - TRC Capital Portiers (Kelly Jenks)\002 - 8570 River Road\CD\479-002-EROS_CONTROL_PLAN.dwg User: wlc Feb 23, 2023 - 3:34pm

SEQUENCE OF CONSTRUCTION

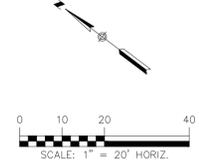
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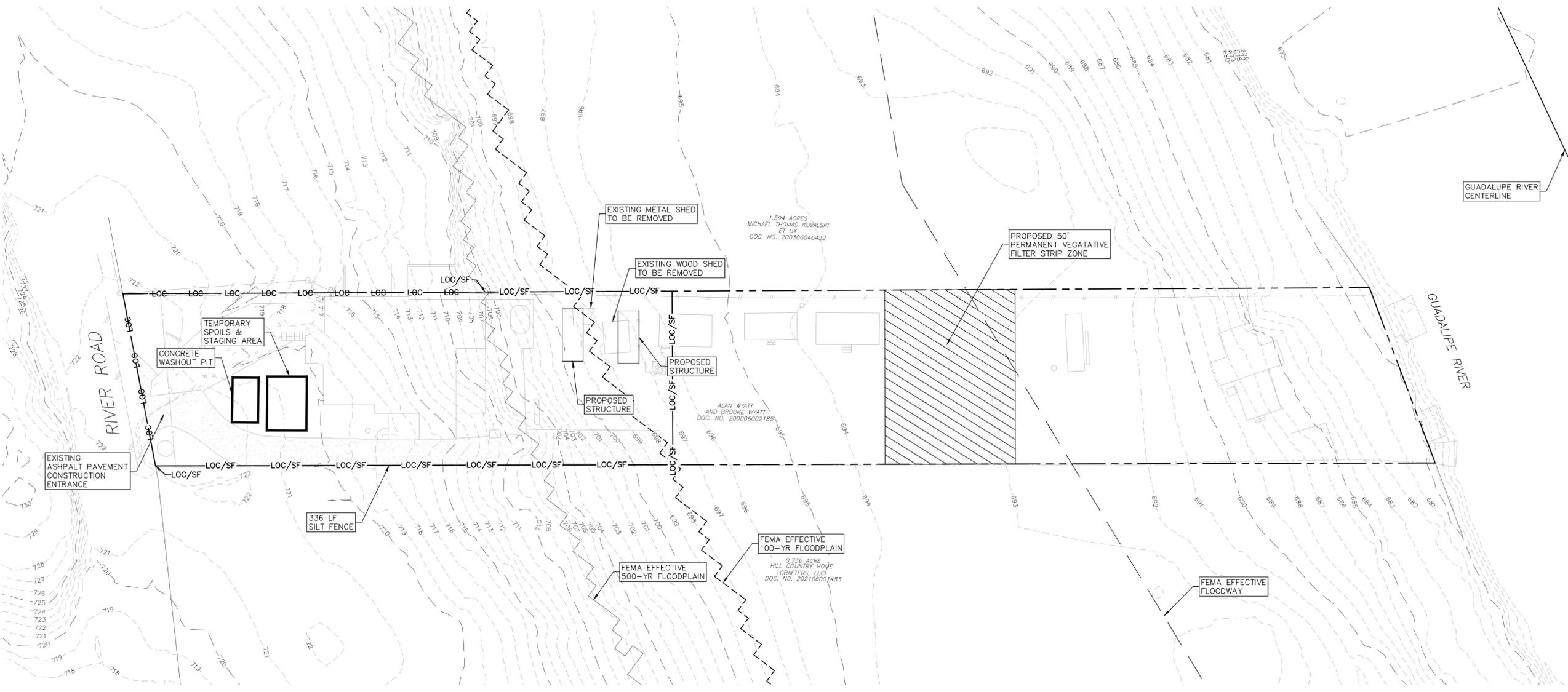
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- 700 — PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600



02/22/2023

EROSION CONTROL PLAN

8570 RIVER ROAD
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: FEBRUARY 2023
DRAWN BY: WC
DESIGNED BY: JC
REVIEWED BY: JC

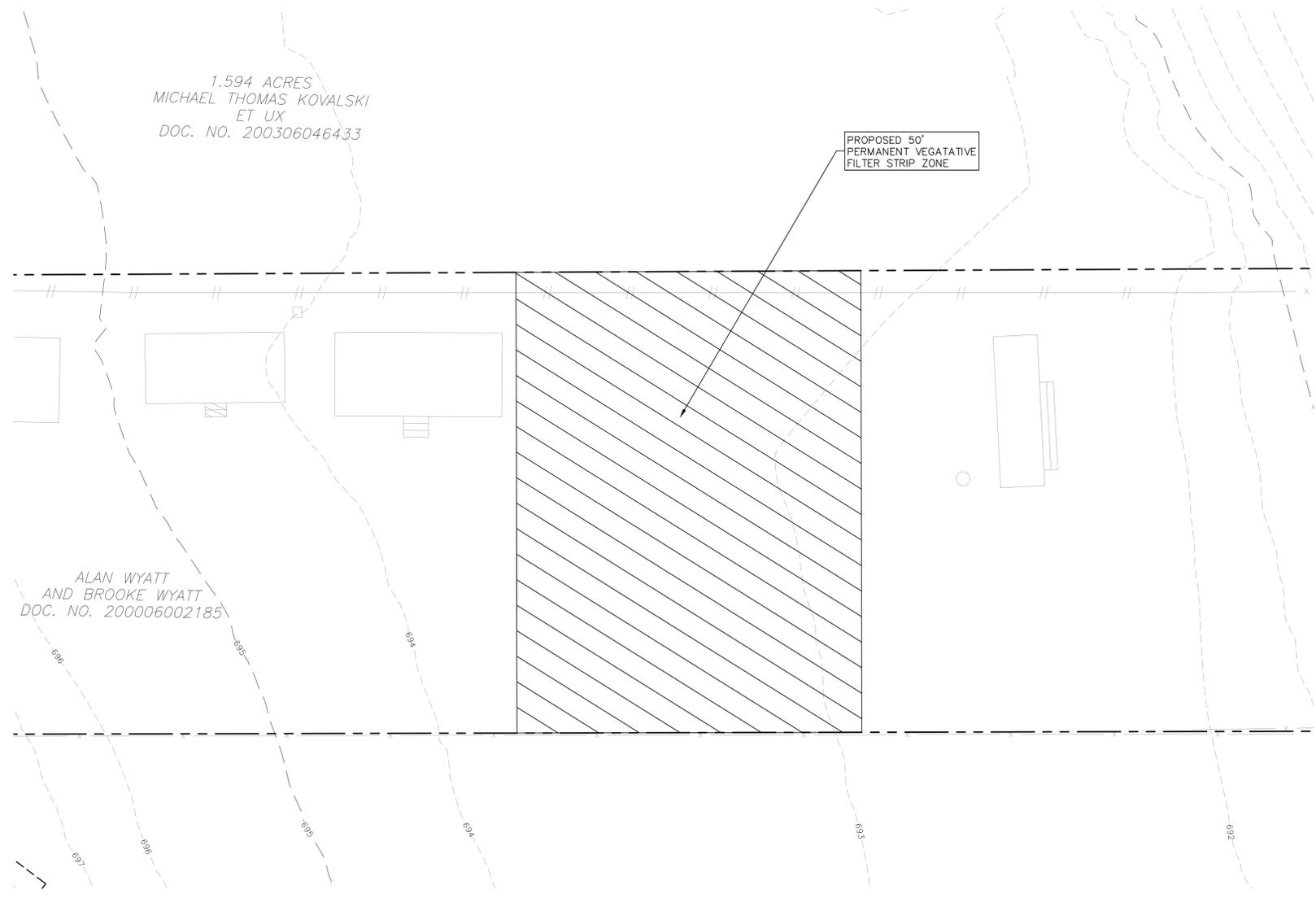
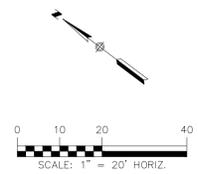
HMT PROJECT NO.: 479.002

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C1.0

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

Drawn Name: N:_Projects\479 - TRC Capital Partners (Kelly Jenks)\002 - 8570 River Road\CD\479\02_EROS_CONTROL_PLAN.dwg User: wlc Feb 23, 2023 - 3:34pm

SAFETY PRECAUTIONS - A SIGN SHALL BE POSTED IN A CLEAR VISIBLE PLACE ON THE FENCE NEAR THE ENTRY WITH THE FOLLOWING INFORMATION:
TCEQ REGIONAL OFFICE - 210-490-3096
PLUS POWER HQ - 832-585-1238



1.594 ACRES
MICHAEL THOMAS KOVALSKI
ET UX
DOC. NO. 200306046433

ALAN WYATT
AND BROOKE WYATT
DOC. NO. 200006002185

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
TSS REMOVAL CALCULATIONS
CALCULATIONS FROM RG-348

- 1. REQUIRED LOAD REDUCTION FROM THE TOTAL PROJECT.
PAGE 3-29 EQUATION 3.3: $L_w = 27.2 (A_n \times P)$
 L_w = REQUIRED TSS REMOVAL
 A_n = NET INCREASE IN IMPERVIOUS AREA FOR PROJECT
 P = AVERAGE ANNUAL PRECIPITATION, INCHES

SITE DATA: DETERMINE REQUIRED LOAD REMOVAL BASED ON THE ENTIRE PROJECT

TOTAL PROJECT AREA INCLUDED IN PLAN	=	0.74	ACRES
PREDEVELOPMENT IMPERVIOUS AREA WITHIN THE LIMITS OF THE PLAN	=	0.12	ACRES
TOTAL POST-DEVELOPMENT IMPERVIOUS AREA WITHIN THE LIMITS OF THE PLAN	=	0.23	ACRES
TOTAL POST-DEVELOPMENT IMPERVIOUS COVER FRACTION	=	0.31	
TOTAL L_w REQUIRED FOR THIS PLAN	=	104	lbs

- 2. DRAINAGE BASIN PARAMETERS (PROVIDED FOR EACH BASIN)
DRAINAGE BASIN/OUTFALL AREA NO. = 1
TOTAL DRAINAGE BASIN / OUTFALL AREA = 0.74 ACRES
PREDEVELOPMENT IMPERVIOUS AREA WITHIN DRAINAGE BASIN / OUTFALL AREA = 0.12 ACRES
POST-DEVELOPMENT IMPERVIOUS AREA WITHIN DRAINAGE BASIN / OUTFALL AREA = 0.23 ACRES
POST-DEVELOPMENT IMPERVIOUS FRACTION WITHIN DRAINAGE BASIN / OUTFALL AREA = 0.31
 L_w = 104 lbs

- 3. INDICATE THE PROPOSED BMP CODE FOR THIS BASIN
PROPOSED BMP = VEGETATED FILTER STRIPS
REMOVAL EFFICIENCY = 85 PERCENT

- 4. CALCULATE MAXIMUM TSS LOAD REMOVED (L_w) FOR THIS DRAINAGE BASIN BY THE SELECTED BMP TYPE.
RG 348 PAGE 3-33 EQUATION 3.7: $L_w = (BMP \text{ EFFICIENCY}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$
 A_i = TOTAL ON-SITE DRAINAGE AREA IN THE BMP CATCHMENT AREA
 A_i = IMPERVIOUS AREA PROPOSED IN THE BMP CATCHMENT
 A_p = PERVIOUS AREA REMAINING IN THE BMP CATCHMENT
 L_w = TSS LOAD REMOVED BY THE PROPOSED BMP
 A_i = 0.74 ACRES
 A_p = 0.12 ACRES
 L_w = 234 lbs

- 5. CALCULATE FRACTION OF ANNUAL RUNOFF TO TREAT THE DRAINAGE BASIN / OUTFALL AREA
DESIRED L_w THIS BASIN = 200 lbs
 F = 0.86

- 6. CALCULATE CAPTURE VOLUME REQUIRED BY THE BMP TYPE FOR THIS DRAINAGE BASIN / OUTFALL AREA.
RAINFALL DEPTH = 1.38 INCHES
POST-DEVELOPMENT RUNOFF COEFFICIENT = 0.27
ON-SITE WATER QUALITY VOLUME = 984 CUBIC FEET

MAINTENANCE NOTES:
BATCH DETENTION BASINS MAY HAVE SOMEWHAT HIGHER MAINTENANCE REQUIREMENTS THAN AN EXTENDED DETENTION BASIN SINCE THEY ARE ACTIVE STORMWATER CONTROLS. THE MAINTENANCE ACTIVITIES ARE IDENTICAL TO THOSE OF EXTENDED DETENTION BASINS WITH THE ADDITION OF MAINTENANCE AND INSPECTIONS OF THE AUTOMATIC CONTROLLER AND THE VALVE AT THE OUTLET.
INSPECTIONS: INSPECTIONS SHOULD TAKE PLACE A MINIMUM OF TWICE A YEAR. ONE INSPECTION SHOULD TAKE PLACE DURING WET WEATHER TO DETERMINE IF THE BASIN IS MEETING THE TARGET DETENTION TIME OF 12 HOURS AND A DRAWDOWN TIME OF NO MORE THAN 48 HOURS. THE REMAINING INSPECTIONS SHOULD OCCUR BETWEEN STORM EVENTS SO THAT MANUAL OPERATION OF THE VALVE AND CONTROLLER CAN BE VERIFIED. THE LEVEL SENSOR IN THE BASIN SHOULD BE INSPECTED AND ANY DEBRIS OR SEDIMENT IN THE AREA SHOULD BE REMOVED. THE OUTLET STRUCTURE AND THE TRASH SCREEN SHOULD BE INSPECTED FOR SIGNS OF CLOGGING. DEBRIS AND SEDIMENT SHOULD BE REMOVED FROM THE ORIFICE AND OUTLET(S) AS DESCRIBED IN PREVIOUS SECTIONS. DEBRIS OBSTRUCTING THE VALVE SHOULD BE REMOVED. DURING EACH INSPECTION, EROSION AREAS INSIDE AND DOWNSTREAM OF THIS BMP SHOULD BE IDENTIFIED AND REPAIRED/REVEGETATED IMMEDIATELY.
MOWING THE BASIN: BASIN SIDE SLOPES AND EMBANKMENT OF THE BASIN MUST BE MOWED TO PREVENT WOOLLY GROWTH AND CONTROL WEEDS. A MULCHING MOWER SHOULD BE USED OR THE GRASS CLIPPINGS SHOULD BE CAUGHT AND REMOVED. MOWING SHOULD TAKE PLACE AT LEAST TWICE A YEAR, OR MORE FREQUENTLY IF VEGETATION EXCEEDS 18 INCHES IN HEIGHT. MORE FREQUENT MOWING TO MAINTAIN AESTHETIC APPEAL MAY BE NECESSARY IN LANDSCAPED AREAS.
LITTER AND DEBRIS REMOVAL: LITTER AND DEBRIS REMOVAL SHOULD TAKE PLACE AT LEAST TWICE A YEAR, AS PART OF THE PERIODIC MOWING OPERATIONS AND INSPECTIONS. DEBRIS AND LITTER SHOULD BE REMOVED FROM THE SURFACE OF THE BASIN. PARTICULAR ATTENTION SHOULD BE PAID TO FLOATABLE DEBRIS AROUND THE OUTLET STRUCTURE. THE OUTLET SHOULD BE CHECKED FOR POSSIBLE CLOGGING OR OBSTRUCTIONS AND ANY DEBRIS REMOVED.
EROSION CONTROL: THE BASIN SIDE SLOPES AND EMBANKMENT ALL MAY PERIODICALLY SUFFER FROM SLUMPING AND EROSION. TO CORRECT THESE PROBLEMS, CORRECTIVE ACTION, SUCH AS REGRADING AND REVEGETATION, MAY BE NECESSARY. CORRECTION OF EROSION CONTROL SHOULD TAKE PLACE WHENEVER REQUIRED BASED ON THE PERIODIC INSPECTIONS.
NUISANCE CONTROL: STANDING WATER OR SOGGY CONDITIONS MAY OCCUR IN THE BASIN. SOME STANDING WATER MAY OCCUR AFTER A STORM EVENT SINCE THE VALVE MAY CLOSE WITH 2 TO 3 INCHES OF WATER IN THE BASIN. SOME FLOW INTO THE BASIN MAY ALSO OCCUR BETWEEN STORMS DUE TO SPRING FLOW AND RESIDENTIAL WATER USE THAT ENTERS THE STORM SEWER SYSTEM. TWICE A YEAR, THE FACILITY SHOULD BE EVALUATED IN TERMS OF NUISANCE CONTROL (INSECTS, WEEDS, ODORS, ALGAE, ETC.).
STRUCTURAL REPAIRS AND REPLACEMENT: WITH EACH INSPECTION, ANY DAMAGE TO STRUCTURAL ELEMENTS OF THE BASIN (PIPES, CONCRETE DRAINAGE STRUCTURES, RETAINING WALLS, ETC.) SHOULD BE IDENTIFIED AND REPAIRED IMMEDIATELY. AN EXAMPLE OF THIS TYPE OF REPAIR CAN INCLUDE PATCHING OF CRACKED CONCRETE, SEALING OF JOINTS, REMOVAL OF VEGETATION FROM CRACKS AND JOINTS. THE VARIOUS INLET/OUTLET STRUCTURES IN A BASIN WILL EVENTUALLY DETERIORATE AND MUST BE REPLACED.
SEDIMENT REMOVAL: A PROPERLY DESIGNED BATCH DETENTION BASIN WILL ACCUMULATE QUANTITIES OF SEDIMENT OVER TIME. THE ACCUMULATED SEDIMENT CAN DETRACT FROM THE APPEARANCE OF THE FACILITY AND REDUCE THE POLLUTANT REMOVAL PERFORMANCE OF THE FACILITY. THE SEDIMENT ALSO TENDS TO ACCUMULATE NEAR THE OUTLET STRUCTURE AND CAN INTERFERE WITH THE LEVEL SENSOR OPERATION. SEDIMENT SHALL BE REMOVED FROM THE BASIN AT LEAST EVERY 5 YEARS, WHEN SEDIMENT DEPTH EXCEEDS 6 INCHES, WHEN THE SEDIMENT INTERFERES WITH THE LEVEL SENSOR OR WHEN THE BASIN DOES NOT DRAIN WITHIN 48 HOURS. CARE SHOULD BE TAKEN NOT TO COMPROMISE THE BASIN LINING DURING MAINTENANCE.
LOGIC CONTROLLER: THE LOGIC CONTROLLER SHOULD BE INSPECTED AS PART OF THE TWICE YEARLY INVESTIGATIONS. VERIFY THAT THE EXTERNAL INDICATORS (ACTIVE, CYCLE IN PROGRESS) ARE OPERATING PROPERLY BY TURNING THE CONTROLLER OFF AND ON, AND BY INITIATING A CYCLE BY TRIGGERING THE LEVEL SENSOR IN THE BASIN. THE VALVE SHOULD BE MANUALLY OPENED AND CLOSED USING THE OPEN/CLOSE SWITCH TO VERIFY VALVE OPERATION AND TO ASSIST IN INSPECTING THE VALVE FOR DEBRIS. THE SOLAR PANEL SHOULD BE INSPECTED AND ANY DUST OR DEBRIS ON THE PANEL SHOULD BE CAREFULLY REMOVED. THE CONTROLLER AND ALL OTHER CIRCUITRY AND WIRING SHOULD BE INSPECTED FOR SIGNS OF CORROSION, DAMAGE FROM INSECTS, WATER LEAKS, OR OTHER DAMAGE. AT THE END OF THE INSPECTION, THE CONTROLLER SHOULD BE RESET.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
 - THE NAME OF THE APPROVED PROJECT;
 - THE ACTIVITY START DATE; AND
 - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.
3. IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
4. NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
5. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
6. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
7. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.
10. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
 - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
 - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
 - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
12. THE HOLDER OF ANY APPROVED EDWARDS AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
 - A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
 - B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
 - C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

AUSTIN REGIONAL OFFICE
12100 PARK 35 CIRCLE, BUILDING A
AUSTIN, TEXAS 78753-1808
PHONE (512) 339-2929
FAX (512) 339-3795

SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

GENERAL NOTES:
1. THE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST MEET ALL APPLICABLE CRITERIA OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY SET FORTH IN 30 TEXAS ADMINISTRATIVE CODE (TAC) 213.5(B) - WATER POLLUTION ABATEMENT PLAN FOR REGULATED ACTIVITIES UNDERTAKEN ON THE RECHARGE ZONE OF THE EDWARDS AQUIFER.
2. TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE REQUIRED DURING CONSTRUCTION. THE CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED. THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSPECTED PERIODICALLY FOR DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES AND FOLLOWING EVERY RAINFALL. DAMAGED OR OBSTRUCTED CONTROLS MUST BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN PROPER OPERATION.
3. IF ANY SENSITIVE FEATURE IS DISCOVERED DURING CONSTRUCTION, REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE OWNER MUST IMMEDIATELY NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY OF THE SENSITIVE FEATURE DISCOVERED. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.
4. ANY MODIFICATION TO THE APPROVED WATER POLLUTION ABATEMENT PLAN MUST BE SUBMITTED TO THE APPROPRIATE REGIONAL OFFICE FOR APPROVAL BY THE EXECUTIVE DIRECTOR OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY BEFORE CONSTRUCTION OF THE PROPOSED MODIFICATION MAY COMMENCE.
5. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600



02/22/2023

VEGETATIVE FILTER STRIP
PERMANENT STORMWATER BMP'S
8570 RIVER ROAD
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	DATE

DATE: FEBRUARY 2023
DRAWN BY: WRC
DESIGNED BY: JC
REVIEWED BY: JC
HMT PROJECT NO.: 479.002

SHEET
C1.2

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: Jessica Calhoun, P.E., CFM

Date: 02/24/2023

Signature of Customer/Agent:

Jessica Calhoun

Regulated Entity Name: River Road Cottages

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: Guadalupe 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.

TEMPORARY STORMWATER SECTION
ATTACHMENT A
Spill Response Actions

Contractor to notify all appropriate authorities if more than 25 gallons of hydrocarbons are spilled. The construction plans include the required notes regarding appropriate spill response actions as directed by TCEQ. There will be no temporary storage vessels of fuel or hydrocarbons to be stored on site.

If spills of any hydrocarbons occur, construction must contain spills by immediate action. Earthen materials must be kept readily available to provide a Dike. Sand should be used to help soak fuels. Property disposal of any materials used will be required.

Contractor must promote job site awareness to all employees involved. All employees must be made aware of the provisions in this report.

Spill Prevention and Control

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

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

Education

- (1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a “significant spill” is for each material they use, and what is the appropriate response for “significant” and “insignificant” spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4
- (2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- (3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- (4) Establish a continuing education program to indoctrinate new employees.
- (5) Have contractor’s superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

- (1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110, 117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- (2) Store hazardous materials and wastes in covered containers and protect from vandalism.
- (3) Place a stockpile of spill cleanup materials where it will be readily accessible.
- (4) Train employees in spill prevention and cleanup.
- (5) Designate responsible individuals to oversee and enforce control measures.
- (6) Spills should be covered and protected from stormwater runoff during rainfall to the extent that it doesn't compromise cleanup activities.
- (7) Do not bury or wash spills with water.
- (8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- (9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
- (10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- (11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- (12) Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function

Clean up

- (1) Clean up leaks and spills immediately.
- (2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

- (3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMP's in this section for specific information.

Minor Spills

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

Semi-Significant Spills

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

Spills should be cleaned up immediately:

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

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities (25 gallons):

- (1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact

the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

- (2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119 and 302, the contractor should notify the National Response Center at (800) 424-8802.
- (3) Notification should first be made by telephone and followed up with a written report.
- (4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
- (5) Other agencies which may need to be consulted include, but are not limited to, the City of Police Department, County Sheriff Office, Fire Departments, etc.

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

Vehicle and Equipment Maintenance

- (1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
- (2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
- (3) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- (4) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- (5) Place drip pans or absorbent materials under paving equipment when not in use.
- (6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- (7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- (8) Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.

- (9) Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are not sure it is not leaking.

Vehicle and Equipment Fueling

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

TEMPORARY STORMWATER SECTION
ATTACHMENT B
Potential Sources of Contamination

The proposed 8570 River Road site includes the construction of two elevated tiny homes covering 400 square feet (0.009 acres). The possible sources of contamination include sediment transport from runoff and fuel spills by the Contractor while refueling equipment. Other small quantities of solvent for construction may be present. Contractor shall keep all fuel transfers and any other contaminants used secure. Silt fences will aid in the removal of transported sediment from the runoff.

Please see Attachment "A" for response actions.

TEMPORARY STORMWATER SECTION
ATTACHMENT C
Sequence of Major Activities

Construction sequencing- The construction will be performed in one phase.

1. Call Pedernales Electric Cooperative (PEC) and TCEQ 48 hours prior to beginning any work. Call Dig TESS for utilities locations.
2. Install temporary erosion controls prior to any clearing and grubbing.
3. Inspect erosion controls at weekly intervals, before and after significant rainfall events to ensure they are functioning properly.
4. Begin site clearing. (0.009 acres)
5. Complete all construction per approved plans and stabilize all disturbed areas.
6. Complete final site inspection.
7. Complete any necessary final dress up of areas that were disturbed.
8. Remove and dispose of temporary erosion controls after site re-vegetation has occurred.

No areas greater than 10 acres will be disturbed at one time.

TEMPORARY STORMWATER SECTION
ATTACHMENT D
Temporary Best Management Practices and Measures

Temporary erosion controls are proposed for this project to include silt fence and a concrete wash out area. Please see C1.1 8750 River Road Erosion Control Plan for all temporary erosion control details.

Temporary sediment basins are not required because there are no drainage areas greater than 10 acres disturbed on site.

Approximately 336 linear feet of silt fence will be used during construction. This will be placed down gradient of all proposed construction.

From the TECQ RG 348 dated July 2005, silt fences provide protection. In addition, the contractor has been directed to minimize disturbance to a reasonable working space.

TEMPORARY STORMWATER SECTION
ATTACHMENT F
Structural Practices

During construction, silt fences will be used until construction is complete and vegetation and paving has been established. Additionally, the contractor will pile the spoils from excavation on the uphill side of the excavation, with a minimum of one foot between the excavation and the pile, in order to prevent storm water from entering the trenched area.

In addition, the contractor will be directed to minimize site disturbance and avoid having equipment in areas that are not necessary for the construction. Natural vegetation shall be left undisturbed and will help remove sediment if any bypass at silt fences or other structural measures occurs.

TEMPORARY STORMWATER SECTION
ATTACHMENT G
Drainage Area Map

The Drainage Area Map (with the corresponding flow calculations) can be found in Exhibit A 8570 River Road Drainage Map. The drainage area does not change between existing and proposed conditions.

TEMPORARY STORMWATER SECTION
ATTACHMENT I
Inspection and Maintenance of BMPs

The Contractor will be directed to inspect and maintain all temporary BMPs. The design engineer will also make regular visits to the project and will provide visual inspections as well. Any deficiency noted must be corrected immediately by the contractor.

Maintenance:

1. Inspect all silt fences and concrete wash out areas weekly and directly after any rainfalls greater than 1 inch.
2. Remove sediment when buildup reaches 6 inches on silt fence or install a second line of silt fence parallel.
3. Replace any torn fabric in the silt fence.
4. Replace or repair any sections crushed or collapsed in the course of construction.
5. See stormwater pollution plan details as shown in the construction plans for proper size and installation.
6. Contractor to maintain a daily log and note any deficiencies to temporary BMPs and corrective action taken. Rainfall events shall also be noted.

BMP Inspection Report
Attachment I

Operator: _____
 Job Name: _____
 Location: _____
 Inspector: _____
 Is this site over the Aquifer recharge or contributing zone _____

Date: _____
 Receiving Waters: _____
 Map Grid: _____
 Inspector Qualifications: _____
 If this site is in compliance with the SWPPP and Permit _____

Visual Inspection of the Site	Y	N	N/A	Comments
NOI Posted?				
Site Notice Posted?				
Was a copy of the NOI sent to the Reporting agency?				
SWPPP Plan in Box?				
Copy of WPAP in the box? (If applies)				
SWPPP Information updates				
Material list updated?				
Project Milestone current with intended dates?				
All current locations of BMP's Identified on plans?				
Areas under operators control clearly Identified on site map?				
Trash Containers and Restrooms noted?				
Stabilized areas updated or noted on plans?				
Site Conditions				
Entrance and exits free from off site tracking?				
Trash and Debris being contained on site?				
Material storage area effectively controlling pollutants?				
Wash out pit working order?				
Are all pollutants contained on site?				
Erosion Control devices in working order?				
Are all BMP's Adequate for this site at this times				
Hazardous Waste				
Is there materials being exposed to storm water runoff?				
Any signs of major leaks or spills?				
Any leaks or spills of reputable Quantity need to be reported?				

BMP Inspection Report
Attachment I

Job Name: _____ Date: _____

Location	What Failed and Amount	Reason	Modification to be made	Correction Date
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Location	What Failed and Amount	Reason	Modification to be made	Correction Date
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_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

I certify under the penalty of law that this document and all attachments were prepared under my direction or Supervision in accordance with a system designed to assure that qualified personnel properly gathered and Evaluated the information submitted. Based on my inquiry of the person or persons who manage the system? Or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for Submitting false information, including the possibility of fine and imprisonment for knowing violations.

Qualified BMP Inspector: _____

Permanent Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Jessica Calhoun, P.E., CFM

Date: 02/24/2023

Signature of Customer/Agent

Jessica Calhoun

Regulated Entity Name: 8570 River Road

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

PERMANENT STORMWATER SECTION
ATTACHMENT B
BMPs for Upgradient Stormwater

There are no permanent BMPs for upgradient stormwater for the 8570 River Road site because the offsite area consists of undeveloped woods that are intercepted away by River Road.

PERMANENT STORMWATER SECTION
ATTACHMENT C
BMPs for On-Site Stormwater

There is one proposed Permanent BMP for the on-site stormwater for the 8570 River Road site that will remove 85% of the incremental increase in the annual mass loading of total suspended solids (TSS) as per TCEQ standards. The BMP is a natural vegetative filter strip that will be maintained to TCEQ standards. The design plans and details can be found on Sheet C1.2 8570 River Road Storage Permanent Stormwater BMPs.

PERMANENT STORMWATER SECTION
ATTACHMENT D
BMPs for Surface Streams

The on-site flow will be treated using natural vegetative filter strips. The natural vegetative filter strips will reduce the velocity of the runoff therefore reducing the chance of erosion from the site and filter out runoff sediment meeting TCEQ standards.

PERMANENT STORMWATER SECTION
ATTACHMENT F
Construction Plans

A natural vegetative filter strip is the proposed Permanent BMPs for the on-site stormwater for the 8570 River Road site. The permanent BMP will be constructed to TCEQ standards and the natural vegetative filter strips can be found on sheets C1.2 of the 8570 River Road Construction Plans.

PERMANENT STORMWATER SECTION
ATTACHMENT G
Inspection, Maintenance, Repair and Retrofit Plan

The contractor will be directed to inspect and maintain all permanent BMPs during construction. After construction is complete the permanent BMPs will be turned over to 8570 River Road, LLC. Any deficiency noted must be corrected immediately by 8570 River Road, LLC. The maintenance guidelines were pulled from the TCEQ Document "Complying with the Edwards Aquifer Rules Technical Guidance on Best Management Practices" and its addendum sheet, the documents can be referenced for a more in-depth explanation of maintenance guidelines.

Maintenance and Inspection:

- (1) Specification of routine and non-routine maintenance activities to be performed;
 - a. Natural Vegetative Filter Strips
 - i. Pest Management – An Integrated Pest Management (IPM) Plan should be developed for vegetated areas. This plan should specify how problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.
 - ii. Seasonal Mowing- Should be mowed to limit the vegetation height to 18 inches, but a minimum of twice annually. When mowing is performed, a mulching mower should be used, or grass clippings should be caught and removed.
 - iii. Inspection - Inspect vegetative filter strips at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is most desirable.
 - iv. Debris and Litter Removal - The need for this practice is determined through periodic inspection, but should be performed no less than four times per year.
 - v. Sediment Removal - Sediment should be removed when it has accumulated to 3 inches at any spot, or cover vegetation. Excess sediment should be removed by hand or with flat-bottomed shovel.
 - vi. Grass Reseeding and Mulching - A healthy dense grass should be maintained in the channel and side slopes. Grass damaged during sediment removal should be promptly replaced using the same seed mix used during vegetation establishment.
- (2) A schedule for maintenance activities;
 - a. Inspection and maintenance will be held quarterly and after rainfall events of more than one inch
- (3) The natural vegetative filter strips can be accessed by foot or small equipment via the site;
- (4) The 8570 River Road, LLC will be in charge of the oversight and scheduling of inspections and maintenance. Kellie Jenks, Manager of General Partner, for 8570 River Road, LLC will establish the inspection and maintenance plans for the Organization; and

(5) Inspection records will be maintained at 8570 River Road, LLC offices.

Kellie Jenko
Party Responsible for Maintenance

2-23-23
Date

BMP Inspection Report
Attachment G

Operator: _____
 Job Name: _____
 Location: _____
 Inspector: _____
 Is this site over the Aquifer recharge or contributing zone _____

Date: _____
 Receiving Waters: _____
 Map Grid: _____
 Inspector Qualifications: _____
 If this site is in compliance with the SWPPP and Permit _____

Visual Inspection of the Site	Y	N	N/A	Comments
NOI Posted?				
Site Notice Posted?				
Was a copy of the NOI sent to the Reporting agency?				
SWPPP Plan in Box?				
Copy of WPAP in the box? (If applies)				
SWPPP Information updates				
Material list updated?				
Project Milestone current with intended dates?				
All current locations of BMP's Identified on plans?				
Areas under operators control clearly Identified on site map?				
Trash Containers and Restrooms noted?				
Stabilized areas updated or noted on plans?				
Site Conditions				
Entrance and exits free from off site tracking?				
Trash and Debris being contained on site?				
Material storage area effectively controlling pollutants?				
Wash out pit working order?				
Are all pollutants contained on site?				
Erosion Control devices in working order?				
Are all BMP's Adequate for this site at this times				
Hazardous Waste				
Is there materials being exposed to storm water runoff?				
Any signs of major leaks or spills?				
Any leaks or spills of reputable Quantity need to be reported?				

BMP Inspection Report
Attachment G

Job Name: _____ Date: _____

Location	What Failed and Amount	Reason	Modification to be made	Correction Date
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Location	What Failed and Amount	Reason	Modification to be made	Correction Date
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Location	What Failed and Amount	Reason	Modification to be made	Correction Date
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

I certify under the penalty of law that this document and all attachments were prepared under my direction or Supervision in accordance with a system designed to assure that qualified personnel properly gathered and Evaluated the information submitted. Based on my inquiry of the person or persons who manage the system? Or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for Submitting false information, including the possibility of fine and imprisonment for knowing violations.

Qualified BMP Inspector: _____

PERMANENT STORMWATER SECTION
ATTACHMENT I
Measures for Minimizing Surface Stream Contamination

The runoff from the site will travel over an undisturbed natural vegetative filter strip to provide natural filtration before entering the Guadalupe River. The vegetation will filter out runoff sediment from the proposed improvements and will reduce the velocity of the runoff therefore reducing the chance of erosion from the site. The storm water from the proposed site will enter into the surface stream system as sheet flow, thereby further reducing the likelihood of erosion.

SIGNATURE PAGE:

Kellie Jenks
Applicant's Signature

2-23-23
Date

THE STATE OF Texas §
County of Harris §

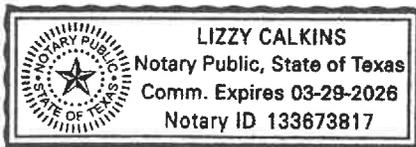
BEFORE ME, the undersigned authority, on this day personally appeared Kellie Jenks known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 23rd day of February, 2023.

Lizzy Calkins
NOTARY PUBLIC

Lizzy Calkins
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 03-29-2026



Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: 8570 River Road

Regulated Entity Location: 8570 River Road, New Braunfels, Texas 78132

Name of Customer: 8570 River Road, LLC

Contact Person: Kellie Jenks

Phone: 713-876-1372

Customer Reference Number (if issued):CN _____

Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

Hays

Travis

Williamson

San Antonio Regional Office (3362)

Bexar

Medina

Uvalde

Comal

Kinney

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

Austin Regional Office

San Antonio Regional Office

Mailed to: TCEQ - Cashier

Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

Site Location (Check All That Apply):

Recharge Zone

Contributing Zone

Transition Zone

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	0.738 Acres	\$ 3,000
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: _____

Date: 02/24/2023

Application Fee Schedule

Texas Commission on Environmental Quality
 Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)
 Water Pollution Abatement Plans and Modifications
 Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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



TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other	
2. Customer Reference Number (if issued)	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number (if issued)
CN		RN

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)		2/24/2023	
<input checked="" type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)				
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:	
8570 River Road				
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)	
804645403	32085408774	88-3136576		
11. Type of Customer:	<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited	
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship		<input checked="" type="checkbox"/> Other: Limited Liability Company	
12. Number of Employees		13. Independently Owned and Operated?		
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following				
<input checked="" type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other:				
15. Mailing Address:	1001 McKinney Street			
	Suite 525			
	City	Houston	State	TX
	ZIP	77002	ZIP + 4	6451
16. Country Mailing Information (if outside USA)			17. E-Mail Address (if applicable)	
n/a			kjenks@trccapitalpartners.com	
18. Telephone Number		19. Extension or Code		20. Fax Number (if applicable)
(713) 876-1372				() -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)	
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information	
The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).	
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)	
8570 River Road	

23. Street Address of the Regulated Entity: <i>(No PO Boxes)</i>	8570 River Road							
	City	New Braunfels	State	TX	ZIP	78132	ZIP + 4	3127
24. County	Comal							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:									
26. Nearest City	New Braunfels					State	TX	Nearest ZIP Code 78132	
27. Latitude (N) In Decimal:	29.799857			28. Longitude (W) In Decimal:	-98.1479653				
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds				
29	47	59.4846	98	8	52.6734				
29. Primary SIC Code (4 digits)	7011		30. Secondary SIC Code (4 digits)	7032		31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)		
						531190	531120		
33. What is the Primary Business of this entity? <i>(Do not repeat the SIC or NAICS description.)</i>									
Vacation Rental Cabins									
34. Mailing Address:	1001 McKinney Street								
	Suite 525								
	City	Houston	State	TX	ZIP	77002	ZIP + 4	6451	
35. E-Mail Address:	kjenks@trccapitalpartners.com								
36. Telephone Number	37. Extension or Code			38. Fax Number <i>(if applicable)</i>					
(713) 876-1372				() -					

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

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

SECTION IV: Preparer Information

40. Name:	Jessica Calhoun, P.E., CFM		41. Title:	Project Engineer
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
(210) 255-7873		(830) 625-8556	jessica.calhoun@hmtnb.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:	HMT Engineering & Surveying	Job Title:	Project Engineer
Name <i>(In Print)</i> :	Jessica Calhoun	Phone:	(210) 255- 7873

Signature:	Jessica Calhoun	Date:	2/24/23
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