

**WATER POLLUTION ABATEMENT PLAN**  
**FOR**  
**FM 1863 OFFICE WAREHOUSE**

PREPARED FOR  
Texas Commission on Environmental Quality  
Region 13 – San Antonio  
14250 Judson Road  
San Antonio, Texas 78233  
210-490-3096 (office)  
210-545-4329 (fax)

PREPARED BY



F-13351

Shane Klar, P.E.  
2021 SH 46W, Ste. 105  
New Braunfels, TX 78132

Prepared  
April 29, 2024



04/29/2024

<b>TCEQ Application Cover Page</b>	<b>Page 4</b>
<b>General Information Form</b>	<b>Page 8</b>
<b>A. Attachment A - Location Map</b>	<b>Page 12</b>
<b>B. Attachment B - USGS East &amp; West Map</b>	<b>Page 13</b>
<b>C. Attachment C – Project Description</b>	<b>Page 14</b>
<b>Geologic Assessment</b>	<b>Page 15</b>
<b>A. Attachment A - Geologic Assessment Table</b>	<b>Page 29</b>
<b>B. Attachment B – Stratigraphic Column</b>	<b>Page 27</b>
<b>C. Attachment C – Site Geology</b>	<b>Page 23</b>
<b>D. Attachment D – Site Geologic Map(s)</b>	<b>Page 24-26</b>
<b>Water Pollution Abatement Plan Application Form</b>	<b>Page 37</b>
<b>A. Attachment A – Factors Affecting Surface Water Quality</b>	<b>Page 42</b>
<b>B. Attachment B – Volume and Character of Stormwater</b>	<b>Page 42</b>
<b>C. Attachment C – OSSF Suitability Letter</b>	<b>Page 43</b>
<b>D. Exception to the Required Geologic Assessment</b>	<b>N/A</b>
<b>E. Site Plan</b>	<b>Page 44</b>
<b>Temporary Stormwater Section</b>	<b>Page 45</b>
<b>A. Attachment A – Spill Response Actions</b>	<b>Page 50</b>
<b>B. Attachment B – Potential Sources of Contamination</b>	<b>Page 53</b>
<b>C. Attachment C – Sequence of Major Construction</b>	<b>Page 53</b>
<b>D. Attachment D – Temporary BMP and Measures</b>	<b>Page 53</b>
<b>E. Attachment E – Request to Temporarily Seal a Feature</b>	<b>N/A</b>
<b>F. Attachment F – Structural Practices</b>	<b>Page 54</b>
<b>G. Attachment G – Drainage Area Map</b>	<b>Page 60-61</b>
<b>H. Attachment H – Temporary Sediment Pond Plan &amp; Calculation</b>	<b>N/A</b>
<b>I. Attachment I – Inspection and Maintenance for BMPs</b>	<b>Page 54</b>
<b>J. Attachment J – Schedule of Interim &amp; Permanent         Soil Stabilization Practices</b>	<b>Page 58</b>
<b>Permanent Stormwater Section</b>	<b>Page 62</b>
<b>A. Attachment A – 20% or Less Impervious Cover Waiver</b>	<b>N/A</b>
<b>B. Attachment B – BMPs for Upgradient Stormwater</b>	<b>Page 66</b>
<b>C. Attachment C – BMPs for On-Site Stormwater</b>	<b>Page 66</b>
<b>D. Attachment D – BMPs for Surface Streams</b>	<b>Page 66</b>
<b>E. Attachment E – Request to Seal Feature</b>	<b>N/A</b>
<b>F. Attachment F – Construction Plans</b>	<b>Page 71-74</b>
<b>G. Attachment G – Inspection, Maintenance,         Repair &amp; Retrofit Plan</b>	<b>Page 69</b>
<b>H. Attachment H – Pilot-Scale Field Testing Plan</b>	<b>N/A</b>



<b>I. Attachment I - Measures for Minimizing Surface Stream Contamination</b>	<b>Page 70</b>
<b>TSS Removal Calculations/BMP Design</b>	<b>Page 74</b>
<b>Agent Authorization Form</b>	<b>Page 75</b>
<b>Application Fee Form</b>	<b>Page 77</b>
<b>Core Data Form</b>	<b>Page 79</b>

# Texas Commission on Environmental Quality

## Edwards Aquifer Application Cover Page

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### Our Review of Your Application

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

### Administrative Review

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

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

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

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

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

### Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

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

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

**Mid-Review Modifications**

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

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

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

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

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

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

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

<b>1. Regulated Entity Name:</b> FM 1863 Office Warehouse					<b>2. Regulated Entity No.:</b>				
<b>3. Customer Name:</b> 1863 Properties LLC					<b>4. Customer No.:</b>				
<b>5. Project Type:</b> (Please circle/check one)	<input checked="" type="radio"/> New	Modification			Extension		Exception		
<b>6. Plan Type:</b> (Please circle/check one)	<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
<b>7. Land Use:</b> (Please circle/check one)	Residential		<input checked="" type="radio"/> Non-residential			<b>8. Site (acres):</b>		6.35	
<b>9. Application Fee:</b>	\$5,000		<b>10. Permanent BMP(s):</b>			Batch Detention			
<b>11. SCS (Linear Ft.):</b>	N/A		<b>12. AST/UST (No. Tanks):</b>			N/A			
<b>13. County:</b>	Comal		<b>14. Watershed:</b>			Comal/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](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.

<b>Austin Region</b>			
<b>County:</b>	<b>Hays</b>	<b>Travis</b>	<b>Williamson</b>
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

<b>San Antonio Region</b>					
<b>County:</b>	<b>Bexar</b>	<b>Comal</b>	<b>Kinney</b>	<b>Medina</b>	<b>Uvalde</b>
Original (1 req.)	—	✓	—	—	—
Region (1 req.)	—	✓	—	—	—
County(ies)	—	✓	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Trinity-Glen Rose	<input 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.

Shane Klar, PE

Print Name of Customer/Authorized Agent



4/29/2024

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: Shane Klar, PE

Date: 4/29/2024

Signature of Customer/Agent:

  
\_\_\_\_\_

## Project Information

1. Regulated Entity Name: FM 1863 Office Warehouse
2. County: Comal
3. Stream Basin: Comal/Guadalupe River
4. Groundwater Conservation District (If applicable): Comal Trinity GCD, EAA
5. Edwards Aquifer Zone:  
 Recharge Zone  
 Transition Zone
6. Plan Type:  
 WPAP  
 SCS  
 Modification  
 AST  
 UST  
 Exception Request



7. Customer (Applicant):

Contact Person: Randy Bade  
Entity: 1863 PROPERTIES, LLC  
Mailing Address: 614 Didgeridoo Trail  
City, State: New Braunfels, TX Zip: 78132  
Telephone: 830-629-2443 FAX: \_\_\_\_\_  
Email Address: Randy@southtexsteel.com

8. Agent/Representative (If any):

Contact Person: Sam Knotts, PE  
Entity: INK Civil  
Mailing Address: 2021 SH 46W, Ste. 105  
City, State: New Braunfels, TX Zip: 78132  
Telephone: 830-358-7127 FAX: \_\_\_\_\_  
Email Address: plats@ink-civil.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.

1028 Bulls Eye Lane, New Braunfels, TX 78132

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: 5/15/2024

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:

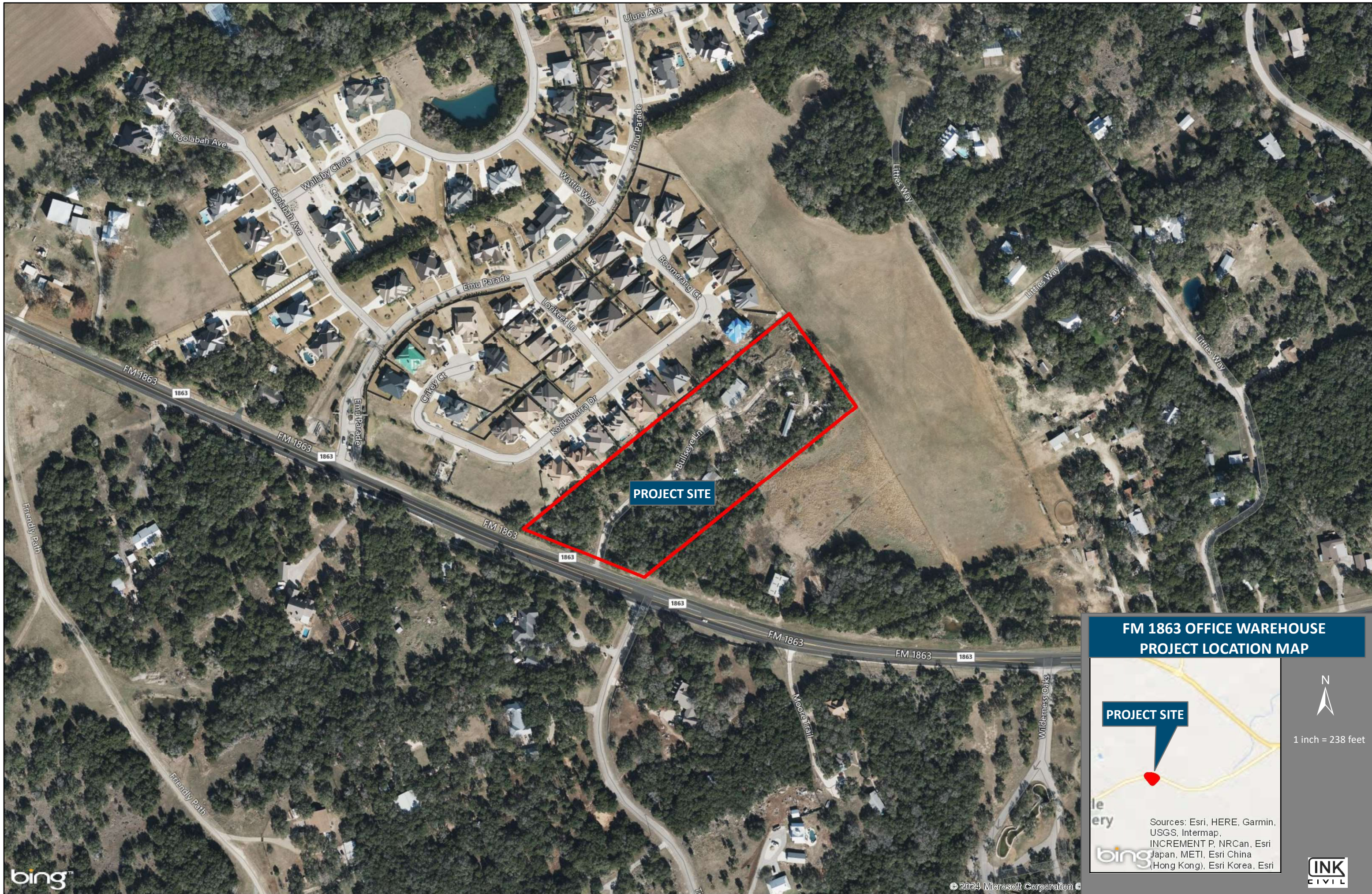
- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

- (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.



PROJECT SITE

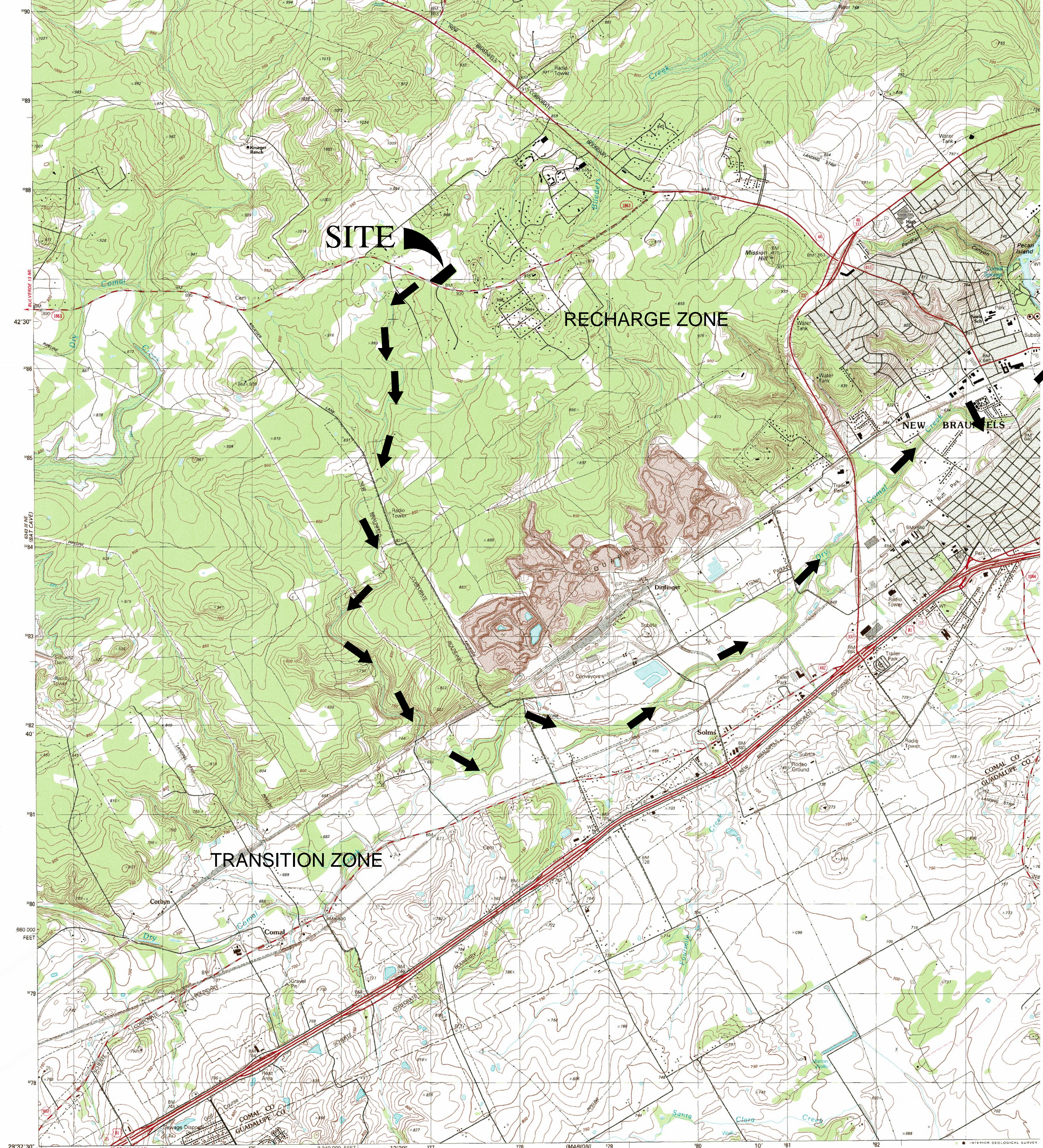
FM 1863 OFFICE WAREHOUSE  
PROJECT LOCATION MAP



1 inch = 238 feet

Sources: Esri, HERE, Garmin,  
USGS, Intermap,  
INCREMENT P, NRCAN, Esri  
Japan, METI, Esri China  
(Hong Kong), Esri Korea, Esri





Produced by the United States Geological Survey  
 Revised in cooperation with the Texas Water Development Board  
 Control by USGS, NOS/NOAA, and USCE  
 Compiled by the Army Map Service by photogrammetric methods  
 from aerial photographs taken 1956. Field checked 1958  
 Revised from aerial photographs taken 1986. Field checked 1987  
 Map edited 1988

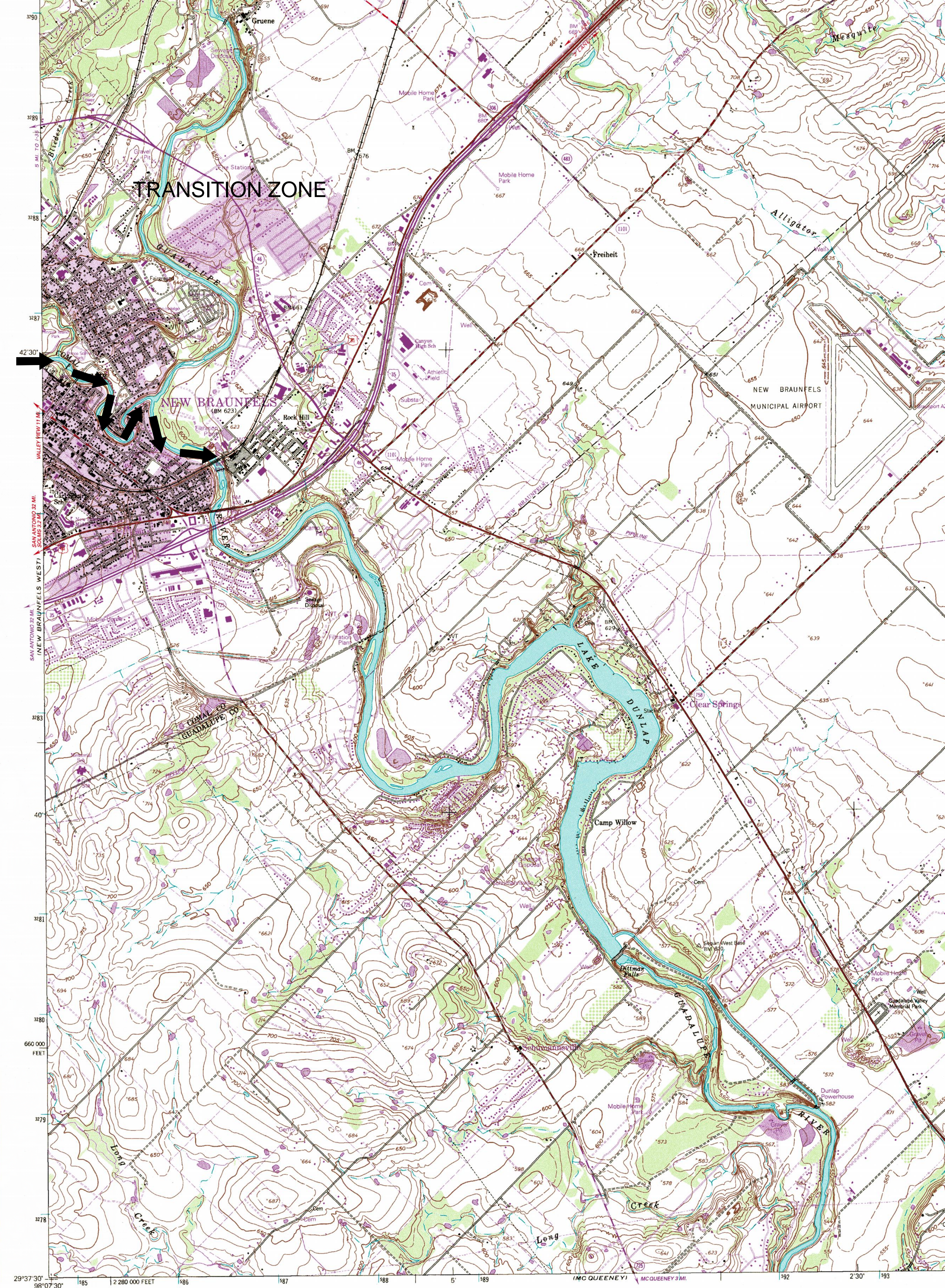
Projection and 10,000-foot grid ticks: Texas coordinate  
 system, south central zone (Lambert conformal conic)  
 1000-meter Universal Transverse Mercator grid, zone 14  
 1927 North American Datum  
 To place on the predicted North American Datum 1983  
 move the projection lines 20 meters south and  
 28 meters east as shown by dashed corner ticks  
 Fine red dashed lines indicate selected fence and field lines  
 generally visible on aerial photographs. This information is unchecked

UTM GRID AND 1983 MAGNETIC NORTH  
 DECLINATION AT CENTER OF MAP  
 DIAGRAM IS APPROPRIATE

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
 FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092  
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

2998-413

DMA 6343 1



Produced by the United States Geological Survey in  
 cooperation with the Defense Mapping Agency  
 Control by USGS and NOS/NOAA and USCE  
 Compiled from aerial photographs taken 1956. Revisions in purple  
 and woodland compiled from aerial photographs taken 1986 and  
 other sources and has been field checked. Map edited 1984  
 Conflicts may exist between some updated features and previously  
 mapped contours

North American Datum of 1927 (NAD 27). Projection and  
 10,000-foot ticks: Texas Coordinate System, south central zone  
 (Lambert Conformal Conic)  
 Blue 1000-meter Universal Transverse Mercator ticks, zone 14  
 North American Datum of 1983 (NAD 83) is shown by dashed  
 corner ticks. The values of the shift between NAD 27 and NAD 83  
 for 7.5-minute intersections are obtainable from National Geodetic  
 Survey NADCON software

UTM GRID AND 1984 MAGNETIC NORTH  
 DECLINATION AT CENTER OF SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
 FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092  
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

NEW BRAUN  
 2909

**ATTACHMENT “C”**  
**Project Description**

The FM 1863 Office Warehouse project resides on a 6.35-acre tract located within Comal County, and New Braunfels ETJ. Site access is at the existing address 1028 FM 1863, New Braunfels, TX 78132 approximately 2.17 miles from the SH-46 and FM 1863 intersection. The previous use of this property included an indoor gun range and residential homes. The site will require demolition of the previous structures including a septic tank and two water wells. According to the Flood Insurance Rate Map No. 48091C0430F effective date 9/02/2009, the site is outside of the flood plain. The entire site drains to the Comal/Guadalupe River.

The development will consist of 8 – 10,000 square foot warehouses, and associated parking. Site utilities will consist of extending an 8” water main maintained by NBU, and onsite septic systems. Site work will also include excavation for a batch detention pond, which will function as the BMP and runoff mitigation for the increase in impervious cover. The site will be disturbed with a total of 4.30-acres of impervious cover (67.7% of the site).

A small portion of onsite impervious cover around the driveway will runoff untreated. The BMP is sized to account for overtreatment of the captured runoff to achieve the required TSS removal.



3 Burwood Lane  
San Antonio, TX 78216  
phone: (210) 342-9377

intertek.com/building  
psiusa.com

April 4, 2024

Ink Civil  
2021 SH 46W, Suite 105  
New Braunfels, TX 78132

Attn: Mr. Shane Klar, Principal  
Email: [ShaneKlar@ink-civil.com](mailto:ShaneKlar@ink-civil.com)

RE: Geologic Assessment Services  
FM 1863 Office Warehouse Tract  
1028 FM 1863  
New Braunfels, Comal County, Texas 78132  
PSI Project No. 0435-6032

Dear Mr. Klar:

Professional Service Industries, Inc. (PSI) has completed a geologic recharge assessment for the above referenced project in compliance with the Texas Commission on Environmental Quality (TCEQ) requirements for regulated developments located on the Edwards Aquifer Recharge Zone (EARZ). The purpose of this report is to describe surficial geologic units and identify the locations and extent of significant recharge features present in the development area.

#### **AUTHORIZATION**

Authorization to perform this assessment was given via an e-mail authorization on September 5, 2023.

#### **PROJECT DESCRIPTION**

PSI understands the subject property consists of an approximate 6.667-acre tract of land on the north side of F.M. 1863 at the intersection with Bull's Eye Lane in New Braunfels, TX. The site is located on the Edwards Aquifer Recharge Zone (EARZ), and therefore subject to special rules promulgated by the Texas Commission on Environmental Quality (TCEQ) designed to protect environmentally sensitive areas. The site is partially developed with a residential structure and a storage structure, and undeveloped in the southern portion. Vegetation consists of live oak and ashe-juniper trees, huisache, mountain laurel, prickly pear, and grasses.

#### **REGIONAL GEOLOGY**

##### **Physiography**

From northwest to southeast, the three physiographic provinces in Comal County are: the Edwards Plateau, the Blackland Prairie, and the West Gulf Coastal Plain. The Edwards Plateau terrain is rugged and hilly, with elevations ranging from 1,100 feet to 1,900 feet above sea level. This area is underlain by beds of limestone that dip gently to the southeast. South of the Edwards Plateau is the Balcones Fault Zone, which is also the northernmost limit of the Blackland Prairie. The Balcones Fault Zone extends northeast-southwest across Comal County and is composed of fault blocks of limestone, chalk, shale, and marl. The undulating, hilly topography of the Blackland Prairie ranges in elevation from about 700 feet to 1,100 feet above sea level. The faults are predominantly normal, down-to-the Gulf Coast, with near vertical throws. The West Gulf Coastal Plain lies southeast of the Blackland Prairie and is composed of relatively flat-lying beds of marl, clay, and sandy clay. According to topographic maps, elevations at the subject site range from approximately 920 feet above sea level in the northern portion of the property, to about 910 feet MSL in the southern

corner.

### **Stratigraphy and Structure**

Rocks at the site are members of the Lower Cretaceous Georgetown Formation. The Georgetown Formation is composed of reddish-brown and gray to light tan, marly limestone with a biomicritic texture, commonly contains the brachiopod *Kingena wacoensis*. The Georgetown is considered an upper confining unit, for the underlying Edwards Aquifer with low porosity and permeability, with limited karst or cavern development.

According to "The Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Comal County Texas" written by the USGS, the Georgetown Formation ranges between 10 and 30 feet thick and is considered an upper confining unit for the underlying Edwards Aquifer, a federally designated sole source aquifer for the region.

### **SITE INVESTIGATION**

The site investigation was performed by systematically traversing the subject tract, and mapping fractured or vuggy rock outcrops, closed depressions, sinkholes, caves, or indications of fault/fracture zones. The purpose of the site investigation was to delineate features with recharge potential that may warrant special protection or consideration. The results of the site investigation are included in the attached TCEQ report format. Features S-1 and S-2 are water wells inside enclosures, and Feature S-3 is a small solution cavity on the southern portion of the tract.

### **SUMMARY**

Two water wells (Features S-1 and S-2) appeared to be functional and located in enclosures and were therefore not considered to be a sensitive features. A small solution cavity (Feature S-3) is located on the southern portion of the tract but does not rate sensitive, due to a lack of interconnectedness and limited catchment area. It is possible that clearing/construction activities will reveal the presence of features currently hidden by thick vegetation and/or soil cover. If caves, sinkholes, or solution cavities are encountered during future clearing/construction activities, please contact our office for additional assistance. We appreciate this opportunity to be of service to you. If you have any questions, please do not hesitate to contact our office.

Respectfully submitted,  
**PROFESSIONAL SERVICE INDUSTRIES, INC.**



John Langan, P.G.  
Environmental Department Manager





## **WARRANTY**

The field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for a general geological recharge assessment of this site. PSI warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted geologic methods, only for the site described in this report. These methods have been developed to provide the client with information regarding apparent indications of existing or potential conditions relating to the subject site and are necessarily limited to the conditions observed at the time of the site visit and research. This report is also limited to the information available at the time it was prepared. In the event additional information is provided to PSI following the report, it will be forwarded to the client in the form received for evaluation by the client. There is a possibility that conditions may exist which could not be identified within the scope of the assessment, or which were not apparent during the site visit. PSI believes that the information obtained from others during the review of public information is reliable; however, PSI cannot warrant or guarantee that the information provided by others is complete or accurate.

This report has been prepared for the exclusive use of Ink Civil for the site discussed herein. Reproductions of this report cannot be made without the expressed approval of Ink Civil. The general terms and conditions under which this assessment was prepared apply solely to Ink Civil. No other warranties are implied or expressed.



# 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: John Langan

Telephone: 210/342-9377

Date: 04/04/24

Fax: 210/342-9401

Representing: PSI TBPG No. 50128 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: 1863 Commercial Warehouse Tract

## Project Information

1. Date(s) Geologic Assessment was performed: 09/08/23

2. Type of Project:

WPAP

AST

SCS

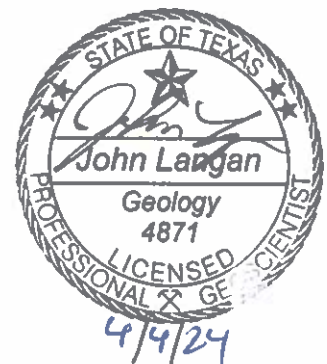
UST

3. Location of Project:

Recharge Zone

Transition Zone

Contributing Zone within the Transition Zone



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

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

Soil Name	Group*	Thickness(feet)
Comfort-RockComfort ass'n 1-8% slopes	B	1-3
Purvis clay 1- 5% slopes	B	2-3
Krum clay 1- 3% slopes	B	2-3

Soil Name	Group*	Thickness(feet)

\* 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" = 40'  
 Site Geologic Map Scale: 1" = 40'  
 Site Soils Map Scale (if more than 1 soil type): 1" = 164'
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 2 (#) 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.

**STRATIGRAPHIC COLUMN**

**FM 1863 Office Warehouse Tract  
1028 F.M. 1863  
New Braunfels, Texas**

FORMATION	THICKNESS	LITHOLOGIC DESCRIPTION
Del Rio Clay	40-50	Calcareous and gypsiferous, with pyrite common, with a blocky structure that weathers to light gray or yellowish gray. The characteristic marine megafossil, <i>Ilmatogyra arietina</i> (formerly <i>exogyra arietina</i> ) is widespread throughout the formation.
Georgetown Formation	10-30	Light tan limestone identified by proximity to Del Rio clay and diagnostic marker fossil: <i>waconella wacoensis</i> brachiopod; low porosity and permeability development.
Person Formation	180-220'	Limestones and dolomites, extensive porosity development in "honeycomb sections, interbedded with massive, recrystallized limestones with more limited permeabilities (especially Regional Dense Member separating the Person and Kainer Formations.
Kainer Formation	260-310'	Hard, miliolid limestones, overlying calcified dolomites and dolomite. Leached evaporitic "Kirschberg" zone of very porous and permeable collapse breccia formed by the dissolution of gypsum. Overlies the basal nodular (Walnut) bed.



## SOILS NARRATIVE

According to the Soil Survey of Comal County, published by the United States Department of Agriculture, Soil Conservation Service, in cooperation with the Texas Agricultural Extension Service, reissued in 1984, the soils beneath the subject property have been classified as the soils beneath the subject property have been classified primarily as Comfort-Rock outcrop complex, undulating (CrD), 93.9%. Purvis clay, 1-5% slopes make up 3.9% of the tract and Krum clay 1-3% slopes makes up 2.2% of the tract.

Comfort extremely stony clay makes up between 49 and 95% of the Comfort-Rock outcrop series, and indurated rock outcrop and soil less than 4 inches deep make up 5 to 36% of the complex. Typically, the surface layer is dark brown extremely stony soil about 6 inches thick. Cobbles, stones, and “float” rock comprise about 45% of the surface. The subsoil extends to about 13 inches and overlies the fractured limestone parent material. Comfort soil is well-drained, with slow to medium surface runoff, slow permeability, and very low water capacity.



## SITE GEOLOGIC NARRATIVE

### Physiography

From northwest to southeast, the three physiographic provinces in Comal County are: the Edwards Plateau, the Blackland Prairie, and the West Gulf Coastal Plain. The Edwards Plateau terrain is rugged and hilly, with elevations ranging from 1,100 feet to 1,900 feet above sea level. This area is underlain by beds of limestone that dip gently to the southeast. South of the Edwards Plateau is the Balcones Fault Zone, which is also the northernmost limit of the Blackland Prairie. The Balcones Fault Zone extends northeast-southwest across Comal County and is composed of fault blocks of limestone, chalk, shale, and marl. The undulating, hilly topography of the Blackland Prairie ranges in elevation from about 700 feet to 1,100 feet above sea level. The faults are predominantly normal, down-to-the Gulf Coast, with near vertical throws. The West Gulf Coastal Plain lies southeast of the Blackland Prairie and is composed of relatively flat-lying beds of marl, clay, and sandy clay. According to topographic maps, elevations at the subject site range from approximately 920 feet above sea level in the northern portion of the property, to about 910 feet MSL in the southern corner.

### Stratigraphy and Structure

Rocks at the site are members of the Lower Cretaceous Georgetown Formation. The Georgetown Formation is composed of reddish-brown and gray to light tan, marly limestone with a biomicritic texture, commonly contains the brachiopod *Kingena wacoensis*. The Georgetown is considered an upper confining unit, for the underlying Edwards Aquifer with low porosity and permeability, with limited karst or cavern development.

According to “The Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Comal County Texas” written by the USGS, the Georgetown Formation ranges between 10 and 30 feet thick and is considered an upper confining unit for the underlying Edwards Aquifer, a federally designated sole source aquifer for the region.

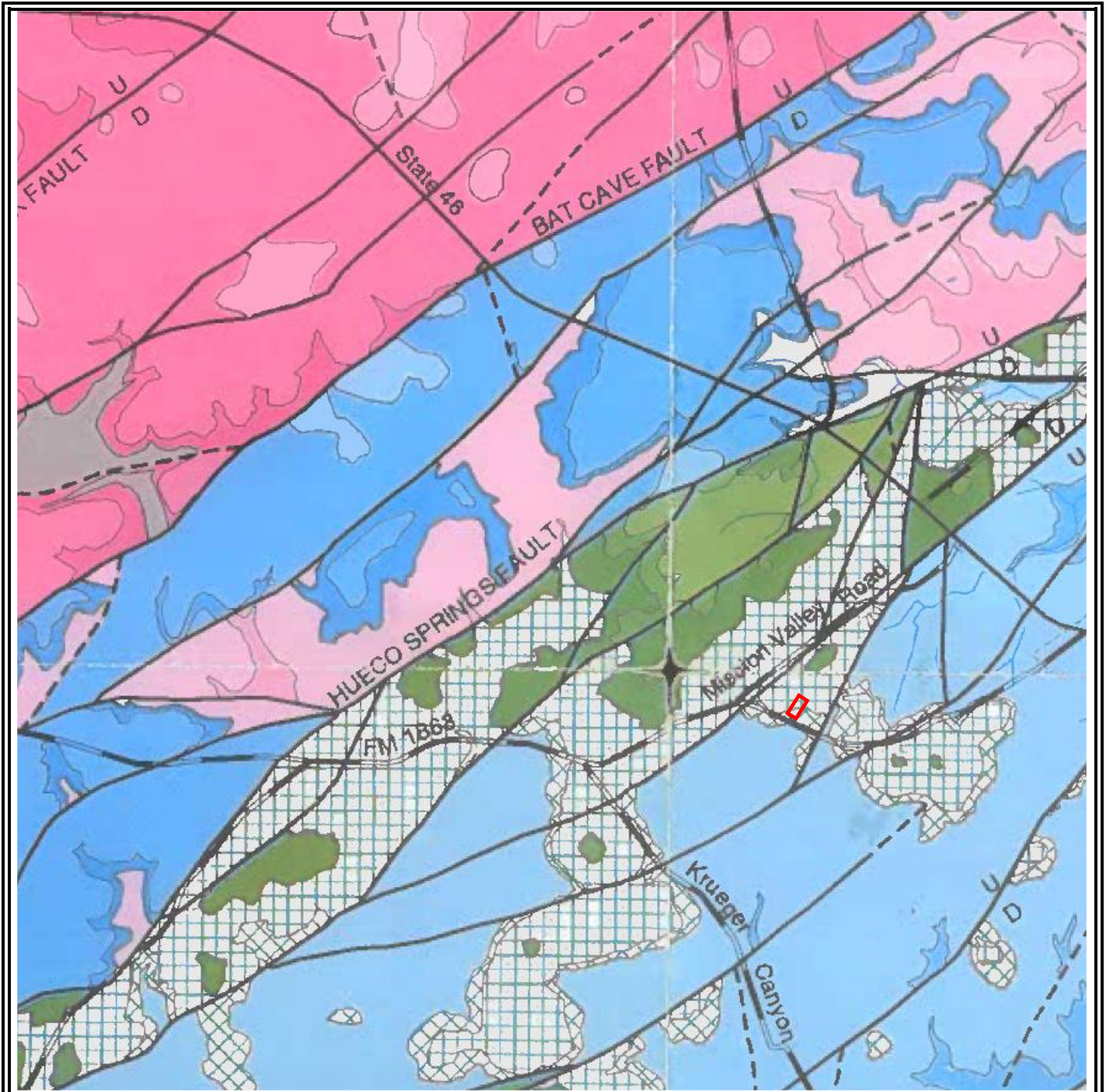
### **SITE INVESTIGATION**

The site investigation was performed by systematically traversing the subject tract, and mapping fractured or vuggy rock outcrops, closed depressions, sinkholes, caves, or indications of fault/fracture zones. The purpose of the site investigation was to delineate features with recharge potential that may warrant special protection or consideration. The results of the site investigation are included in the attached TCEQ report format. Features S-1 and S-2 are water wells inside enclosures, and Feature S-3 is a small solution cavity on the southern portion of the tract.

### **SUMMARY**

Two water wells (Features S-1 and S-2) appeared to be functional and located in enclosures and were therefore not considered to be sensitive features. A small solution cavity (Feature S-3) is located on the southern portion of the tract but does not rate sensitive, due to a lack of interconnectedness and limited catchment area. It is possible that clearing/construction activities will reveal the presence of features currently hidden by thick vegetation and/or soil cover. If caves, sinkholes, or solution cavities are encountered during future clearing/construction activities, please contact our office for additional assistance. We appreciate this opportunity to be of service to you. If you have any questions, please do not hesitate to contact our office.





PSI, Inc.  
3 Burwood Lane  
San Antonio, Texas 78216

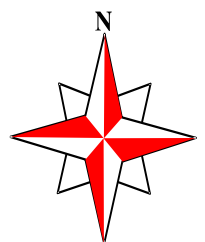
**PROJECT NAME:**  
FM 1863 Office Warehouse  
Tract  
1028 FM 1863  
New Braunfels, Texas  
PROJECT NO.:435-6032



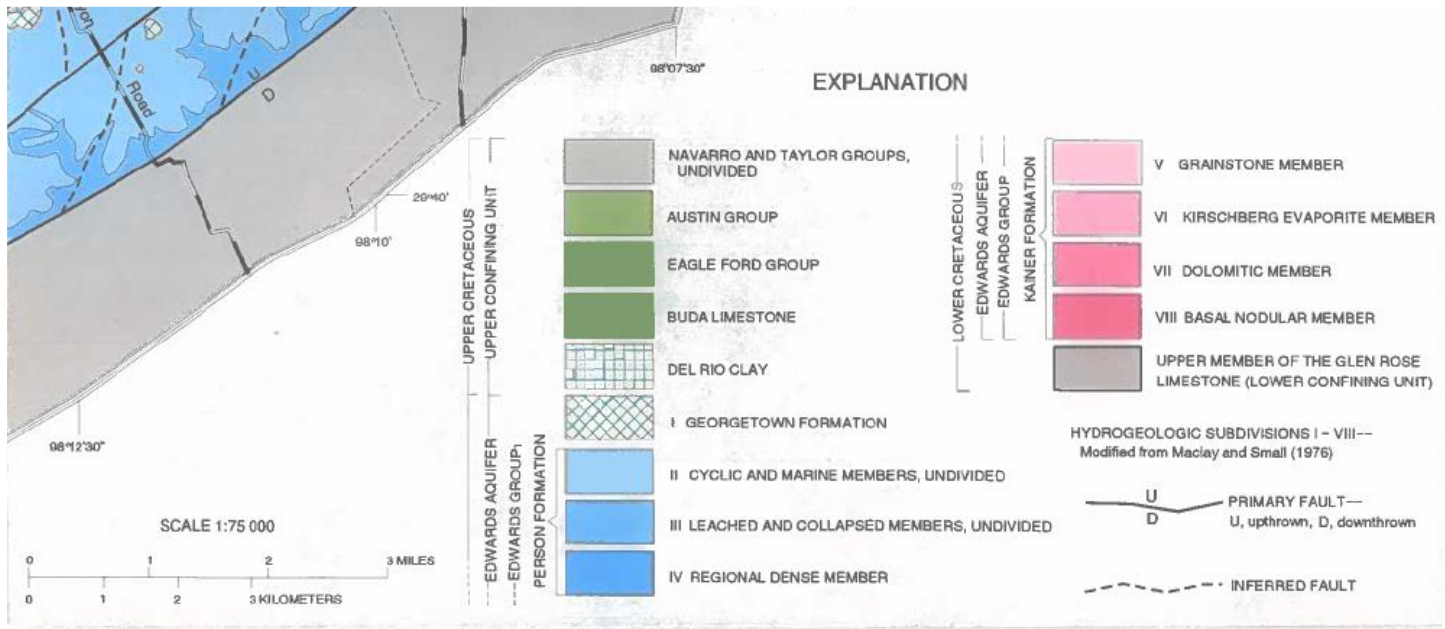
**Geologic Map**

From USGS "Geologic Map of the Edwards Aquifer Recharge Zone, South-Central Texas"

(Blome, Faith, Pedraza, et al, 2005)



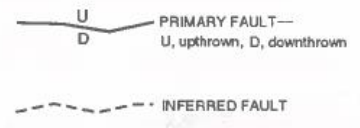




**EXPLANATION**

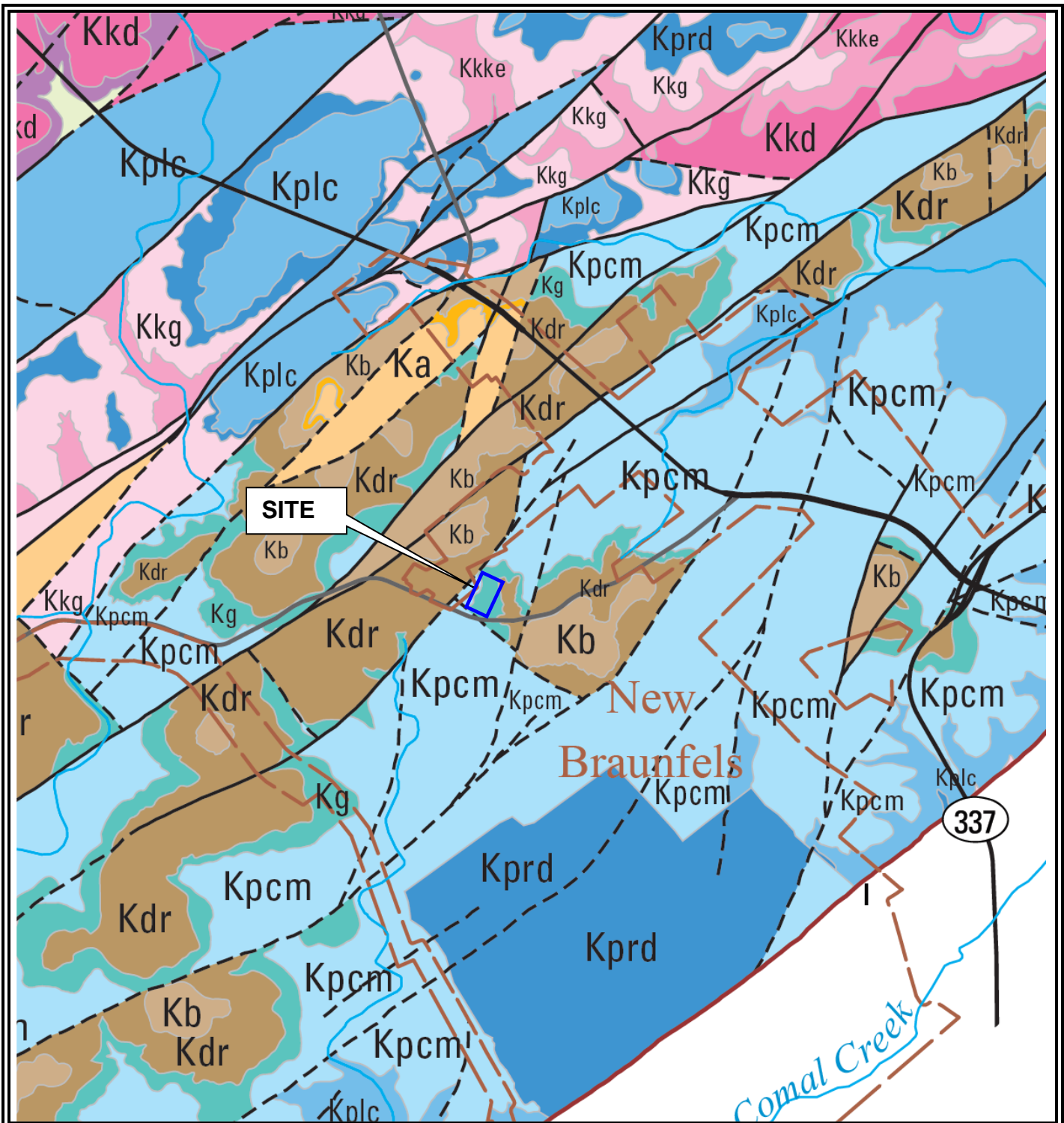
- |  |   |  |  |
|--|---|--|--|
| <p>UPPER CRETACEOUS</p> <p>UPPER CONFINING UNIT</p> <p>EDWARDS GROUP</p> <p>PERSON FORMATION</p> | <ul style="list-style-type: none"> <li>NAVARRO AND TAYLOR GROUPS, UNDIVIDED</li> <li>AUSTIN GROUP</li> <li>EAGLE FORD GROUP</li> <li>BUDA LIMESTONE</li> <li>DEL RIO CLAY</li> <li>I GEORGETOWN FORMATION</li> <li>II CYCLIC AND MARINE MEMBERS, UNDIVIDED</li> <li>III LEACHED AND COLLAPSED MEMBERS, UNDIVIDED</li> <li>IV REGIONAL DENSE MEMBER</li> </ul> | <p>LOWER CRETACEOUS</p> <p>EDWARDS GROUP</p> <p>KAINER FORMATION</p> | <ul style="list-style-type: none"> <li>V GRAINSTONE MEMBER</li> <li>VI KIRSCHBERG EVAPORITE MEMBER</li> <li>VII DOLOMITIC MEMBER</li> <li>VIII BASAL NODULAR MEMBER</li> <li>UPPER MEMBER OF THE GLEN ROSE LIMESTONE (LOWER CONFINING UNIT)</li> </ul> |
|--|---|--|--|

HYDROGEOLOGIC SUBDIVISIONS I - VIII--  
Modified from MacIay and Small (1976)



SCALE 1:75 000





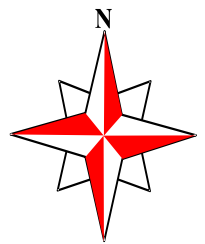
PSI, Inc.  
3 Burwood Lane  
San Antonio, Texas 78216

**PROJECT NAME:**  
FM 1863 Commercial Warehouse  
Tract  
1028 FM 1863  
New Braunfels, Texas  
PROJECT NO.:435-6032



**Geologic Map**

From USGS "Geologic Framework and Hydrostratigraphy of the Edwards & Trinity Aquifers Within Northern Bexar & Comal Counties, Scientific Investigations Map 3366 Texas" (Clark, Golab and Morris, 2016)





**EXPLANATION OF HYDROSTRATIGRAPHIC UNITS**

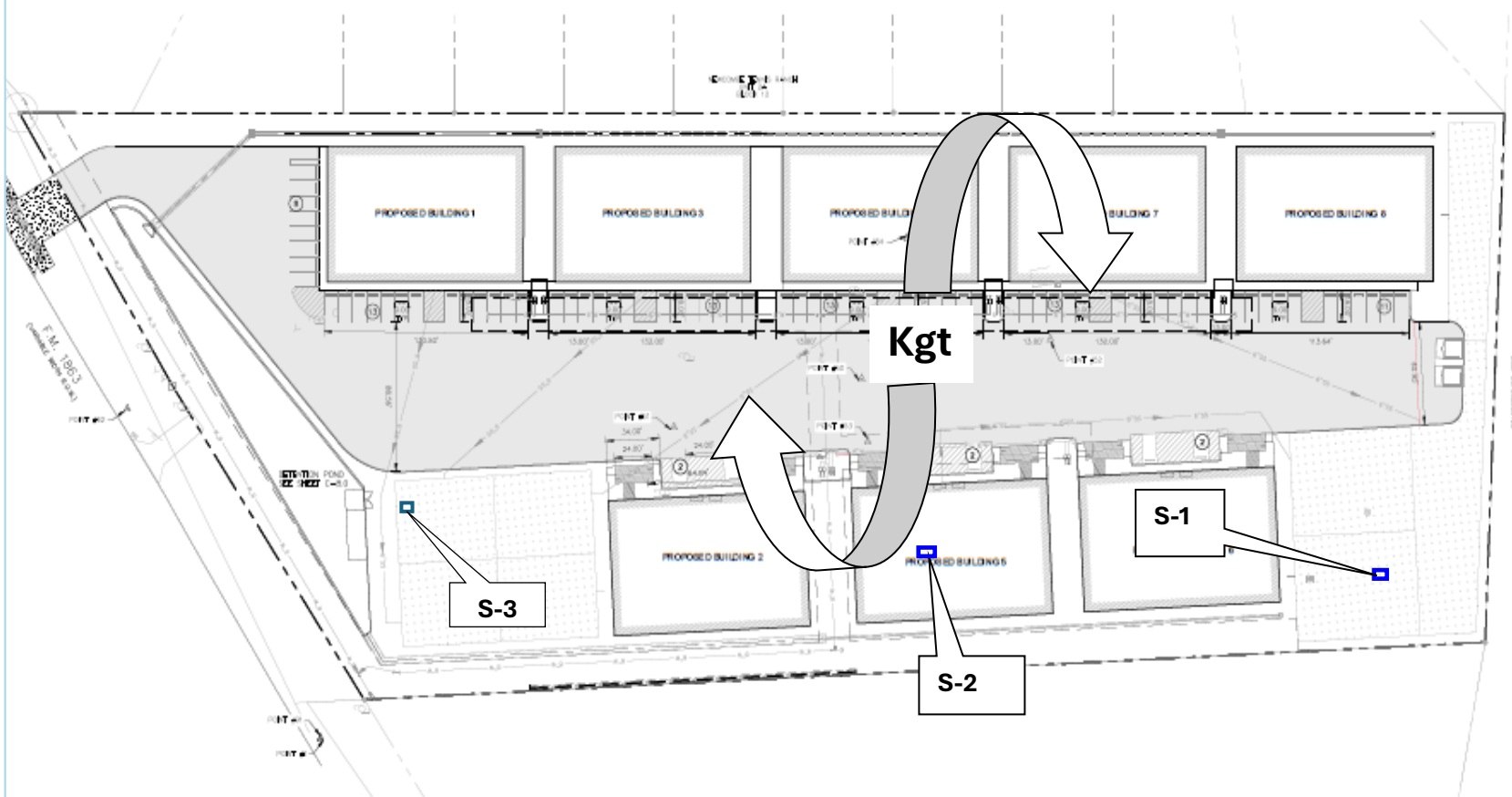
Group or Formation	Formal and informal member		Hydrologic unit or Informal hydrostratigraphic unit
Taylor Group (Pecan Gap)		Kpg	Upper Confining Unit (UCU)
Austin Group		Ka	
Eagle Ford Group		Kef	
Buda Limestone		Kb	
Del Rio Clay		Kdr	
Georgetown Formation		Kg	I
Person Formation	Cyclic and marine, undivided	Kpcm	II
	Leached and collapsed	Kpic	III
	Regional dense member	Kprd	IV
Kainer Formation	Grainstone	Kkg	V
	Kirschberg evaporite	Kkke	VI
	Dolomitic	Kkd	VII
	Basal nodular	Kkbn	VIII
Glen Rose	Upper Glen Rose Limestone	Kgrc	Cavernous
		Kgrcb	Camp Bullis
		Kgrue	Upper evaporite
		Kgruf	Fossiliferous Upper
		Kgrlf	Lower
		Kgrle	Lower evaporite

ALL DIMENSIONS  
 IN FEET UNLESS  
 OTHERWISE NOTED  
 ALL DISTANCES  
 BETWEEN POINTS  
 SHOWN ON THIS  
 PLAN SHALL BE  
 AS SHOWN UNLESS  
 OTHERWISE NOTED  
 ALL CONTROL  
 POINTS SHALL BE  
 IDENTIFIED BY  
 A NUMBERED  
 CIRCLE OR LETTER  
 IN THE FIELD



**LEGEND**

--- BOUNDARY LINE  
 --- CENTER OF ROAD  
 --- PROPERTY LINE



THIS DOCUMENT IS THE PROPERTY OF  
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 BE USED ONLY FOR THE PROJECT AND  
 DATE SPECIFIC TO THIS PROJECT.  
 ANY OTHER USE OR REPRODUCTION  
 WITHOUT THE WRITTEN CONSENT OF  
 THE ENGINEER IS PROHIBITED.

**SOUTH TEX STEEL COMPANY**  
 1070 HIGHWAY 46 SOUTH  
 NEW BRAUNFELS, TX, 78130  
**FM 1863 OFFICE WAREHOUSE**

**intertek**  
**psi**  
 PSI, INC.  
 Three Burwood Lane  
 San Antonio, Texas 78216

**PROJECT NAME:**  
 FM 1863 Commercial Warehouse Tract  
 1028 FM 1863  
 New Braunfels, Comal County, Texas  
 PROJECT NO.:0435-6032

**Geologic Feature Map**  
 Key  
 Kgt- Lower Cretaceous Georgetown Formation  
 S-1 Feature Location



GEOLOGIC ASSESSMENT TABLE					PROJECT NAME: 1863 Commercial Warehouse Tract														
LOCATION			FEATURE CHARACTERISTICS										EVALUATION		PHYSICAL SETTING				
1A	1B*	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10	11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DIP (%)	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)	TOPOGRAPHY
						X	Y	Z								<40	≥40		
S-1	29-42-48.3	98-12-6	MB	30	Kgt	0.8	0.8	>100						3	33	X		X	hillside
S-2	29-42-46.4	98-12-8.6	MB	30	Kgt	0.8	0.8	>100						3	33	X		X	hillside
S-3	29-42-44.7	98-12-11.6	SC	20	Kgt	3	2	1						15	35	X		X	hillside

\* DATUM: \_\_\_\_\_

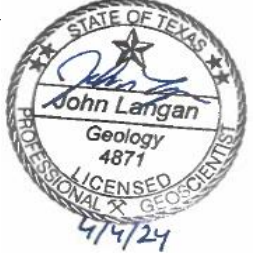
2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

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

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

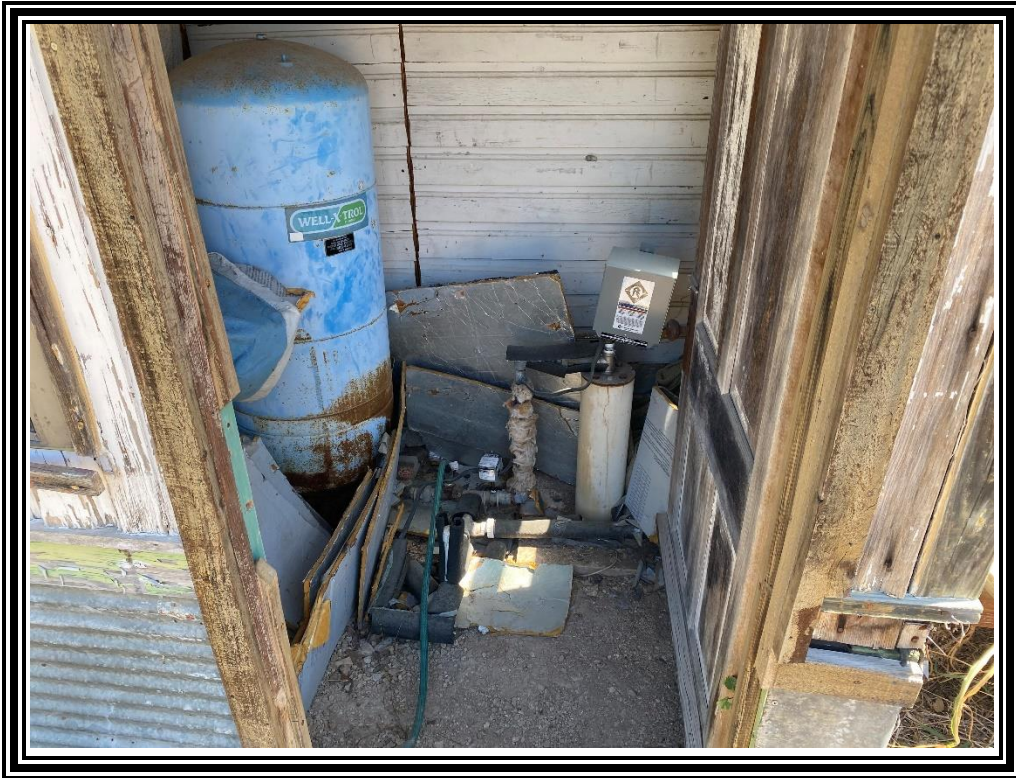
I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field. My signature certifies that I am qualified as a geologist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

\_\_\_\_\_  
*John Langan*



Date 04/04/24

Sheet 1 of 1



1. View of water well feature S-1, located in the northern portion of the site at 29-42-48.3; -98-12-5.96 at the FM 1863 Office Warehouse Tract, 1028 FM 1863 in New Braunfels, Texas.



2. View of water well feature S-2, located in the central portion of the site at 29-42-46.4; -98-12-8.6.



3. View of solution cavity feature S-3, located at 29-42-44.7; -98-12-11.6 in the southeast portion of the tract.



4. View northwest along the northern property line from the northeast corner of the site.





5. View southwest along the western property line from the north corner.

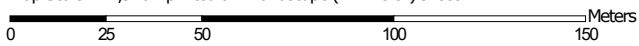


6. View northeast of the site interior from the southwest corner of the tract.

Soil Map—Comal and Hays Counties, Texas



Map Scale: 1:1,970 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Comal and Hays Counties, Texas

Survey Area Data: Version 20, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 17, 2020—Jan 15, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CrD	Comfort-Rock outcrop complex, 1 to 8 percent slopes	6.4	93.9%
KrB	Krum clay, 1 to 3 percent slopes	0.1	2.2%
PuC	Purves clay, 1 to 5 percent slopes	0.3	3.9%
<b>Totals for Area of Interest</b>		<b>6.8</b>	<b>100.0%</b>

# 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: Shane Klar, PE

Date: 4/29/2024

Signature of Customer/Agent:

  
\_\_\_\_\_

Regulated Entity Name: FM 1863 Office Warehouse

## Regulated Entity Information

1. The type of project is:

- Residential: Number of Lots: \_\_\_\_\_
- Residential: Number of Living Unit Equivalents: \_\_\_\_\_
- Commercial
- Industrial
- Other: \_\_\_\_\_

2. Total site acreage (size of property): 6.35

3. Estimated projected population: 0

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

**Table 1 - Impervious Cover Table**

<b>Impervious Cover of Proposed Project</b>	<b>Sq. Ft.</b>	<b>Sq. Ft./Acre</b>	<b>Acres</b>
Structures/Rooftops	80,000	÷ 43,560 =	1.83
Parking	107,593	÷ 43,560 =	2.47
Other paved surfaces	0	÷ 43,560 =	0
<b>Total Impervious Cover</b>	<b>187,593</b>	<b>÷ 43,560 =</b>	<b>4.30</b>

**Total Impervious Cover** 4.30 ÷ **Total Acreage** 6.35 X 100 = 67.7 % 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 = \_\_\_\_\_ Ft<sup>2</sup> ÷ 43,560 Ft<sup>2</sup>/Acre = \_\_\_\_\_ acres.

10. Length of pavement area: \_\_\_\_\_ feet.

Width of pavement area: \_\_\_\_\_ feet.

L x W = \_\_\_\_\_ Ft<sup>2</sup> ÷ 43,560 Ft<sup>2</sup>/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>        </u> Gallons/day
<u>        </u> % Industrial	<u>        </u> Gallons/day
<u>        </u> % Commingled	<u>        </u> Gallons/day
TOTAL gallons/day <u>26,666</u> GPD	

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" = 40 '.

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): FEMA Firmette 48091C0430F effective 9/2/2009

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 2 (#) 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.

**ATTACHMENT “A”**  
**Factors Affecting Water Quality**

The development may introduce pollution from the asphalt streets and drives, automobile waste, household cleaning chemicals, or improperly disposed of waste or litter. To mitigate the increase in TSS load generated by the development, a batch detention basin has been designed to remove the necessary TSS load per TCEQ Technical Guidance on BMPs RG-348.

**ATTACHMENT “B”**  
**Volume and Character of Stormwater**

The development of this site will result in a minimal increase in stormwater run-off. The batch detention basin will function to reduce stormwater runoff back to predevelopment conditions. All site runoff subsequently drains to the Dry Comal Creek and subsequently the Comal/Guadalupe River.

**ATTACHMENT “C”**  
**Suitability Letter from Authorized Agent**

The existing septic tanks on-site will be decommissioned and replaced with a new septic systems. Permitting will be done according to all local and state rules.

**ATTACHMENT “D”**  
**Exception to the Required Geologic Assessment**

No exception will be requested.



# COMAL COUNTY

## ENGINEER'S OFFICE

April 12, 2024

Chad Friesenhahn, E.I.T.

INK Civil

via e-mail: chadfriesenhahn@ink-civil.com

Re: FM 1863 Office Warehouse WPAP On-Site Sewage Facility Suitability Letter, within  
Comal County, Texas

Dear Mr. Friesenhahn:

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 January 24, 2025:

- The Geologic Assessment, prepared by Professional Service Industries, Inc.
- The Water Pollution Abatement Plan prepared by INK Civil

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.

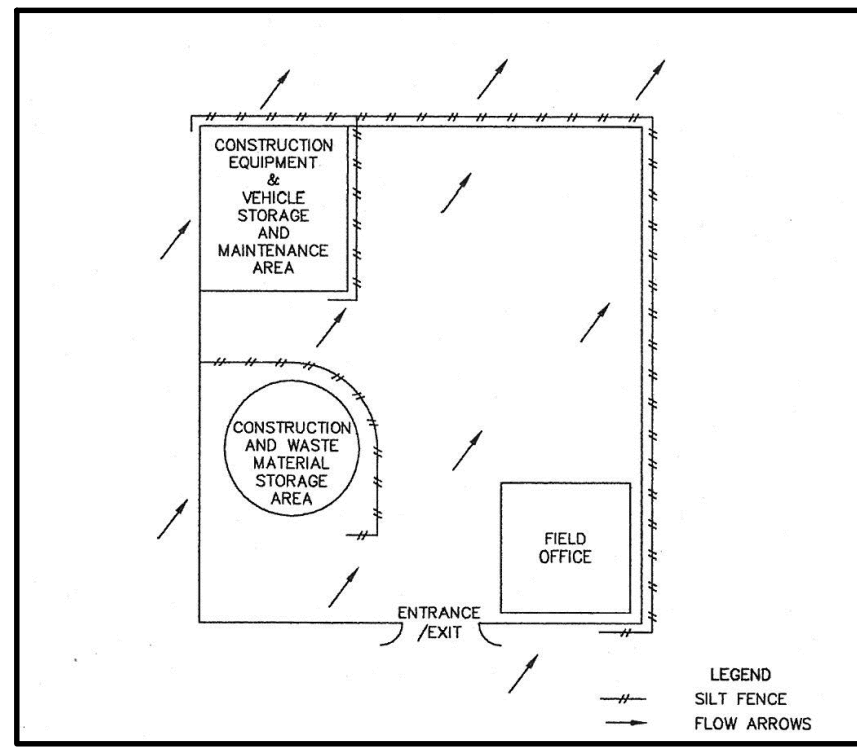
If you have any questions or need additional information, please do not hesitate to contact our office.

Sincerely,

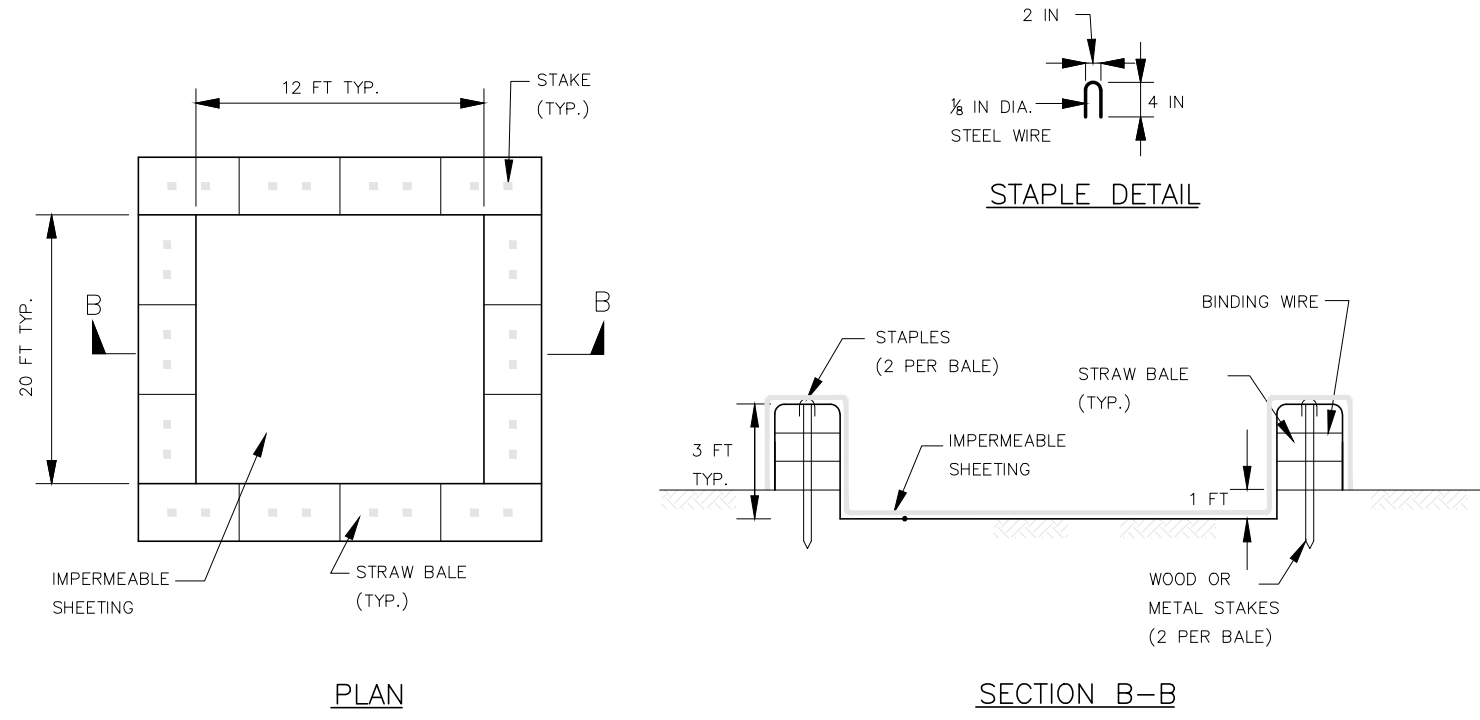
Robert Boyd, P.E.

Comal County Engineer

cc: Scott Haag, Comal County Commissioner Precinct No. 2



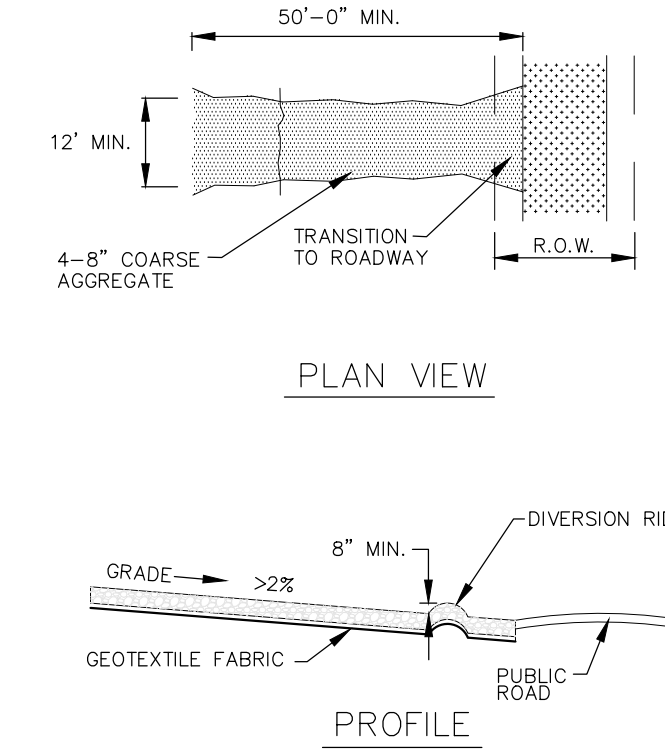
TYPICAL CONSTRUCTION STAGING AREA



TYPICAL CONCRETE TRUCK WASHOUT PIT

GRAVEL FILTER BAGS

MATERIALS:  
INLET GRAVEL FILTER BAGS TO BE 3/4" GRAVEL CONTAINED IN PERVIOUS BURLAP BAGS OR SYNTHETIC NET BAGS (1/8" MESH) APPROX. 24" LONG, 12" WIDE AND 6" HIGH.



STABILIZED CONSTRUCTION ENTRANCE / EXIT

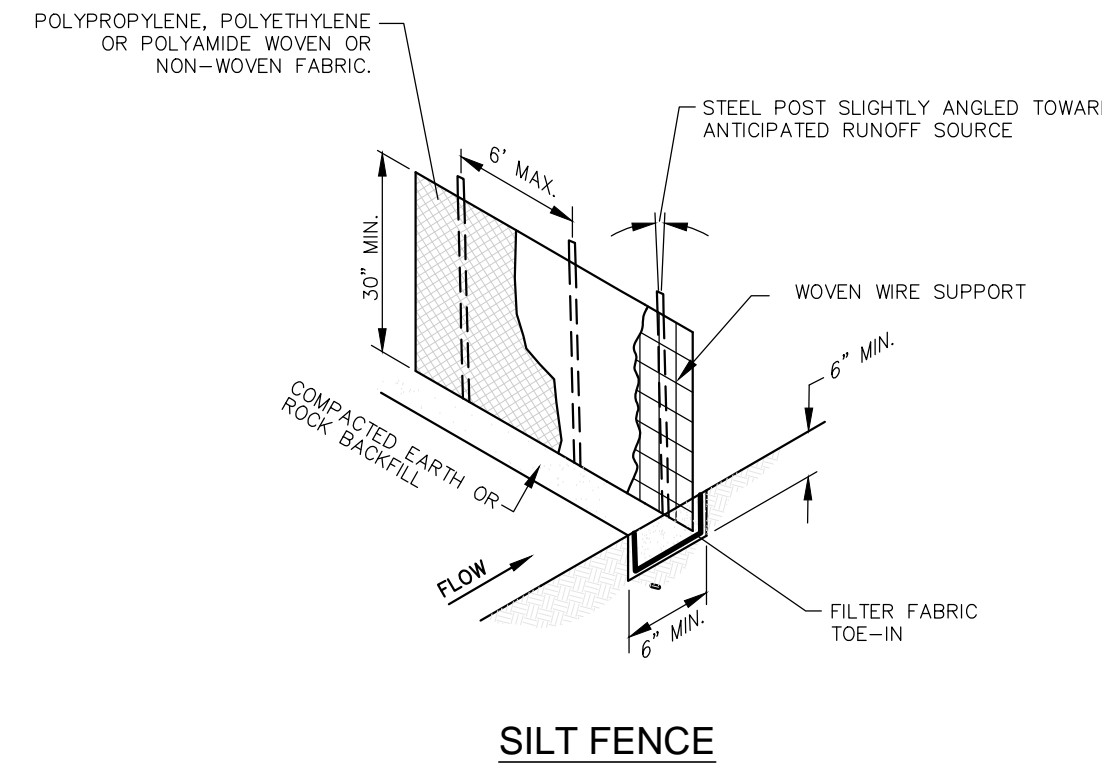
MATERIALS:  
(1) THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.  
(2) THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.  
(3) THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD2, A MULLEN BURST RATING OF 140 LB/IN2, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.  
(4) IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4 INCH DIAMETER WASHED STONE OR COMMERCIAL RACK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION:  
(1) AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.  
(2) THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.  
(3) THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.  
(4) IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6 TO 8 INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.  
(5) PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.  
(6) PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.  
(7) DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.  
(8) INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES:  
(1) THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR LOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.  
(2) ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.  
(3) WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.  
(4) WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.  
(5) ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

SEQUENCE OF CONSTRUCTION:

- OBTAIN CITY APPROVED SITE PREPARATION PLANS, AND TPDES PERMIT (NOT A COPY OF THE TPDES APPLICATION TO TCEQ), IF APPLICABLE.
- INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
- BEGIN DEMOLITION ACTIVITIES, IF APPLICABLE.
- BEGIN SITE CLEARING AND GRADING.
- RESTORE AND REVEGETATE ALL DISTURBED AREAS NOT UNDER IMPERMEABLE IMPROVEMENTS.
- COMPLETE ANY REMAINING "PUNCH LIST" ITEMS.
- CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROLS AFTER PERMANENT STABILIZATION IS AT LEAST 70% EVENLY ESTABLISHED. RYE IS NOT ACCEPTED. THE SITE WILL BE PERMANENTLY STABILIZED WHEN ALL IMPROVEMENTS ARE CONSTRUCTED PER THE DESIGN PLANS WHICH INCLUDES PAVEMENT, BUILDING, AND OTHER LANDSCAPE IMPROVEMENTS PER LANDSCAPE PLANS. ALL PERVIOUS SURFACES TO BE SOD OR OTHER PERVIOUS IMPROVEMENTS PER LANDSCAPE PLAN.

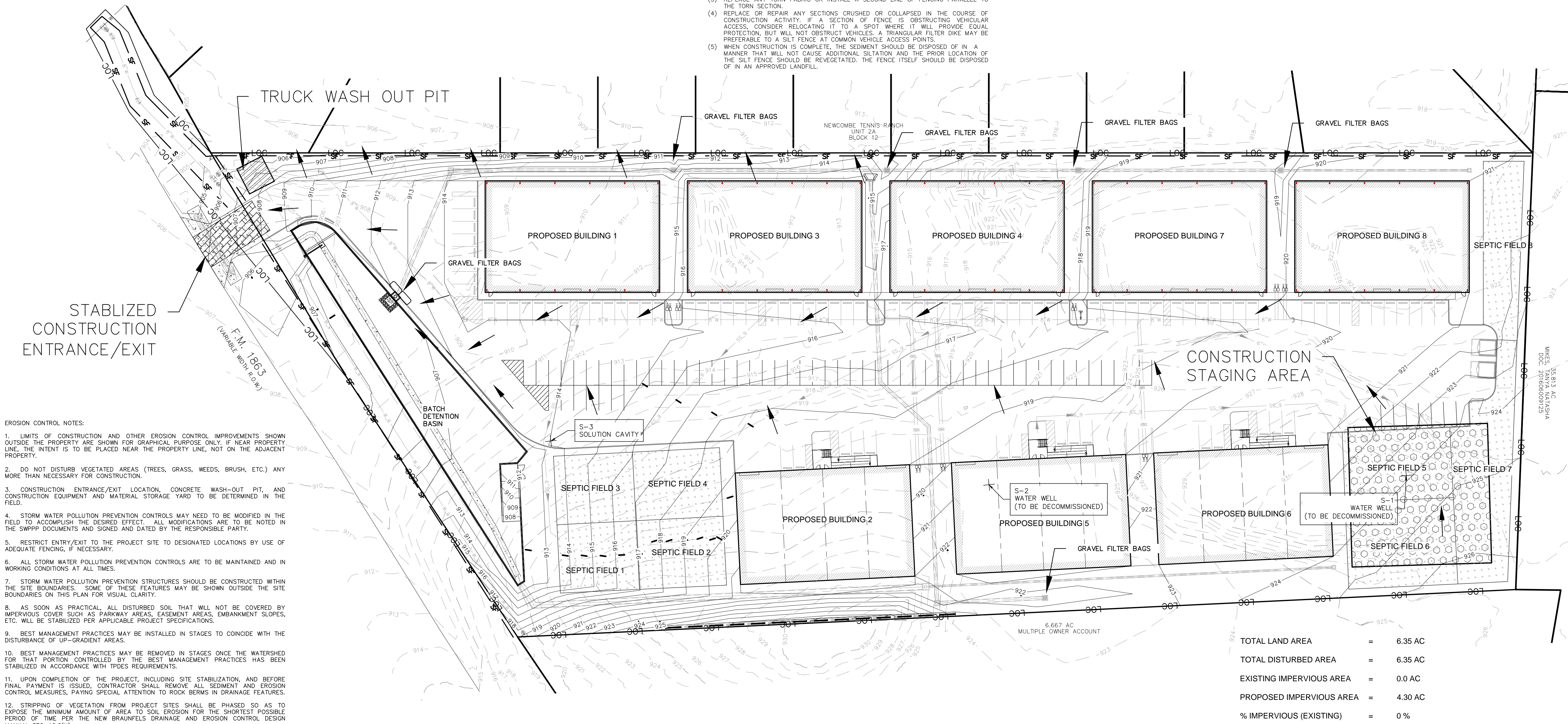


SILT FENCE

- MATERIALS:  
(1) SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.  
(2) FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR YBAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT2, AND BRINELL HARDNESS EXCEEDING 140.  
(3) WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

- INSTALLATION:  
(1) STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1- FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.  
(2) LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.  
(3) THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.  
(4) THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.  
(5) SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.  
(6) SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

- INSPECTION AND MAINTENANCE GUIDELINES:  
(1) INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL.  
(2) REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.  
(3) REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.  
(4) REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.  
(5) WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.



- EROSION CONTROL NOTES:  
1. LIMITS OF CONSTRUCTION AND OTHER EROSION CONTROL IMPROVEMENTS SHOWN OUTSIDE THE PROPERTY ARE SHOWN FOR GRAPHICAL PURPOSE ONLY. IF NEAR PROPERTY LINE, THE INTENT IS TO BE PLACED NEAR THE PROPERTY LINE, NOT ON THE ADJACENT PROPERTY.  
2. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.  
3. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.  
4. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED IN THE SWPPP DOCUMENTS AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.  
5. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.  
6. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.  
7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.  
8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.  
9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UP-SLOPE AREAS.  
10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.  
11. UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.  
12. STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 12.2(N).



**SOUTH TEX STEEL COMPANY**  
1070 HIGHWAY 46 SOUTH  
NEW BRAUNFELS, TX , 78130

**FM 1863 OFFICE WAREHOUSE**  
FM 1863  
NEW BRAUNFELS, TX , 78132

**EROSION CONTROL & WPAP SITE PLAN**

SHEET **C-5.0**

NO	DATE	ISSUES AND REVISIONS

**INK CIVIL**

2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351

TOTAL LAND AREA	=	6.35 AC
TOTAL DISTURBED AREA	=	6.35 AC
EXISTING IMPERVIOUS AREA	=	0.0 AC
PROPOSED IMPERVIOUS AREA	=	4.30 AC
% IMPERVIOUS (EXISTING)	=	0 %
% IMPERVIOUS (PROPOSED)	=	67.7 %

PERMIT SET

# 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: Shane Klar, PE

Date: 4/29/2024

Signature of Customer/Agent:



Regulated Entity Name: FM 1863 Office Warehouse

## 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: Comal/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.

**ATTACHMENT “A”**  
**Spill Response Actions**

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 spills 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, and 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 clean up 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 BMP's.

(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.

### ***Cleanup***

(1) Clean up leaks and spills immediately.

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

(3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management 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:
- (5) Contain the spread of the spill.
- (6) Recover spilled materials.
- (7) Clean the contaminated area and properly dispose of contaminated materials.

### ***Semi-Significant Spills***

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

Spills should be cleaned up immediately:

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

### ***Significant/Hazardous Spills***

For significant or hazardous spills that are in reportable quantities:

- (1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
- (2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
- (3) Notification should first be made by telephone and followed up with a written report.

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

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

More information on spill rules and appropriate responses is available on the TCEQ website at: [http://www.tnrcc.state.tx.us/enforcement/emergency\\_response.html](http://www.tnrcc.state.tx.us/enforcement/emergency_response.html)

### ***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 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.

## **ATTACHMENT “B”** **Potential Sources of Contamination**

Potential sources of contamination are construction equipment leaks, re-fueling spills, port-o-lets, and the total suspended solids (TSS) due to the construction activities on-site. There are no other anticipated potential sources of contamination.

## **ATTACHMENT “C”** **Sequence of Major Activities**

Stages of Construction:

1. Installation of temporary BMP's.
2. Minor site grading: This includes the removal of organic material and other debris within the proposed parking and building site. Approximate total disturbed area = 6.3 acres
3. Grading: Cutting and filling of the proposed site to prepare the site for parking and foundation construction. Approximate total disturbed area = 5 acres
4. Utility installation: All primary utility mains have already been installed and are available at the site. Sewer, water, gas, and electrical services will be installed at this time.
5. Finished grading: Final landscaping, parking and building infrastructure are installed. Approximate total disturbed area = 4.3 acres

## **ATTACHMENT “D”** **Temporary BMP's and Measures**

The following sequence will be followed for installing temporary BMP's:

1. Silt fence will be constructed on the downgradient side of proposed site.
2. A stabilized construction exit will be installed prior to any site work.

A. Silt Fence will be installed on the most downgradient side of the site and will reduce potential pollution from any stormwater that originates onsite or offsite. A stabilized construction exit will be constructed at the entrance of the site; this will reduce the amount of contaminants leaving the site.

B. Silt fence will be placed on the downgradient side of each proposed improvement to contain pollutants generated from onsite runoff. Disturbed areas will be seeded to replace destroyed vegetation. The existing vegetation located downgradient of each proposed improvement will work in conjunction with the silt fence and stabilized construction entrance to prevent pollution of water originating onsite and/or flowing offsite.

C. The proposed silt fences, and stabilized construction entrance constructed upgradient of the existing streams will prevent pollutants from entering them, as well as the aquifer. According to the Geologic Assessment, there are no sensitive features with the project boundary.

D. There were no sensitive features identified in the Geologic Assessment.

#### **ATTACHMENT “E”**

##### **Request to Temporarily Seal a Feature**

There will be no request to temporarily seal a geologic feature.

#### **ATTACHMENT “F”**

##### **Structural Practices**

Stabilized Construction Entrance/Exit, gravel filter bags, and silt fence will be used to protect disturbed soils and to prevent contamination from leaving the project site.

#### **ATTACHMENT “G”**

##### **Drainage Area Map**

See Drainage Area Map at the end of this section.

#### **ATTACHMENT “H”**

##### **Temporary Sediment Pond Plans and Calculations**

There will not be more than 10 acres of disturbed soil in one common drainage area that will occur at one time. Silt fence will be used for small drainage areas. No sediment ponds will be constructed due to the minimal amount of soil disturbance.

#### **ATTACHMENT “I”**

##### **Inspection and Maintenance for BMP’s**

Inspection and Maintenance Plan: The contractor is required to inspect the control and fences at weekly intervals and after any rainfall events to ensure that they are functioning properly. The contractor is required to document any changes on the Site Plan, documentation must include person performing task, task performed, and date. The contractor must also document if proper inspection measures have been taken while making changes. The person(s) responsible for maintenance controls and fences shall immediately make any necessary repairs to damaged areas.

Temporary Construction Entrance/Exit: The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor. When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it should be done on an area stabilized with crushed stone that drains into an

approved sediment trap or sediment basin. All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Silt Fence: Remove sediment when buildup reaches 6 inches. Replace any torn fabric or install a second line of fencing parallel to the torn section. Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points. When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

TCEQ staff will be allowed full access to the property during construction of the project for inspecting controls and fences and to verify that the accepted plan is being utilized in the field. TCEQ staff has the right to speak with the contractor to verify plan changes and modifications.

Documentation: All scheduled inspection and maintenance measures made to the temporary BMPs must be documented clearly on the WPAP Site Plan showing inspection/maintenance measures performed, date, and person responsible for inspection and maintenance. Any changes made to the location or type of controls shown on the accepted plans, due to onsite conditions, shall be documented on the site plan that is part of this Water Pollution Abatement Plan. No other changes shall be made unless approved by TCEQ and the Design Engineer. Documentation shall clearly show changes made, date, person responsible for the change, and the reason for the change.

**Owner's Information:**

Owner: 1863 Properties, LLC  
Contact: Randy Bade  
Address: 614 Didgeridoo Trail  
New Braunfels, TX 78132

**Design Engineer:**

Company: INK Civil  
Contact: Shane Klar, P.E.  
Phone: (830) 358-7127  
Address: 2021 SH 46W, Ste. 105  
New Braunfels, Texas 78132



**Person or Firm Responsible for Erosion/Sedimentation Control Maintenance:**

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Phone: \_\_\_\_\_

Address: \_\_\_\_\_

Signature of Responsible Party: \_\_\_\_\_

**This portion of the form shall be filled out and signed by the responsible party prior to construction.**

**ATTACHMENT “J”**  
**Schedule of Interim and Permanent Soil Stabilization Practices**

Areas which are disturbed by construction staging and storage areas will be hydro mulched with the appropriate seed mixture. Areas between the edge of pavement and property line will also be hydro mulched. There will be no fill slopes exceeding a 3:1 slope, and all fill slopes will be hydro mulched. Installation and acceptable mixtures of hydro mulch are as follows:

**Materials:**

Hydraulic Mulches: Wood fiber mulch can be applied alone or as a component of hydraulic matrices. Wood fiber applied alone is typically applied at the rate of 2,000 to 4,000 lb/acre. Wood fiber mulch is manufactured from wood or wood waste from lumber mills or from urban sources.

Hydraulic Matrices: Hydraulic matrices include a mixture of wood fiber and acrylic polymer or other tackifier as binder. Apply as a liquid slurry using a hydraulic application machine (i.e., hydro seeder) at the following minimum rates, or as specified by the manufacturer to achieve complete coverage of the target area: 2,000 to 4,000 lb/acre wood fiber mulch, and 5 to 10% (by weight) of tackifier (acrylic copolymer, guar, psyllium, etc.)

Bonded Fiber Matrix: Bonded fiber matrix (BFM) is a hydraulically applied system of fibers and adhesives that upon drying forms an erosion resistant blanket that promotes vegetation, and prevents soil erosion. BFMs are typically applied at rates from 3,000 lb/acre to 4,000 lb/acre based on the manufacturer’s recommendation. A biodegradable BFM is composed of materials that are 100% biodegradable. The binder in the BFM should also be biodegradable and should not dissolve or disperse upon re-wetting. Typically, biodegradable BFMs should not be applied immediately before, during or immediately after rainfall if the soil is saturated. Depending on the product, BFMs typically require 12 to 24 hours to dry and become effective.

Seed Mixtures:

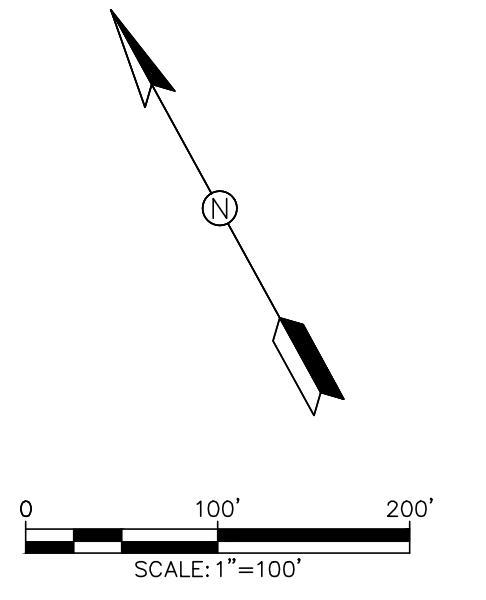
<b>Dates</b>	<b>Climate</b>	<b>Species</b>	<b>(lb/ac.)</b>
Sept. 1 to Nov. 30	Temporary Cool Season	Tall Fescue	4.0
		Oats	21.0
		Wheats	30.0
		<b>Total</b>	<b>55.0</b>
Sept. 1 to Nov. 30	Cool Season Legume	Hairy Vetch	8.0
May 1 to Aug. 31	Temporary Warm Season	Foxtail Millet	30.0

Fertilizer: Fertilizer should be applied at the rate of 40 pounds of nitrogen and 40 pounds of phosphorus per acre, which is equivalent to about 1.0 pounds of nitrogen and phosphorus per 1000 square feet.

**Installation:**

- (1) Prior to application, roughen embankment and fill areas by rolling with a crimping or punching type roller or by track walking. Track walking shall only be used where other methods are impractical.
- (2) To be effective, hydraulic matrices require 24 hours to dry before rainfall occurs.
- (3) Avoid mulch over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.

EXISTING CONDITIONS



LEGEND

- LIMITS OF DRAINAGE AREA
- TIME OF CONCENTRATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- FLOW ARROWS
- DRAINAGE BASIN LABEL  
BASIN AREA (AC)
- SUB-DRAINAGE AREA LABEL  
SUB-DRAINAGE AREA (AC)
- INLET LABEL
- ANALYSIS POINT LABEL



SOUTH TEX STEEL COMPANY  
1070 HIGHWAY 46 SOUTH  
NEW BRAUNFELS, TX , 78130

FM 1863 OFFICE WAREHOUSE  
FM 1863  
NEW BRAUNFELS, TX , 78132

EXISTING DRAINAGE  
AREA MAP

SHEET  
**EX**

NO	DATE	ISSUES AND REVISIONS



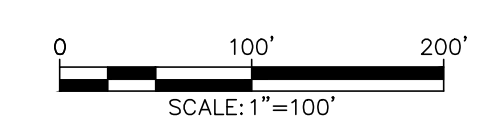
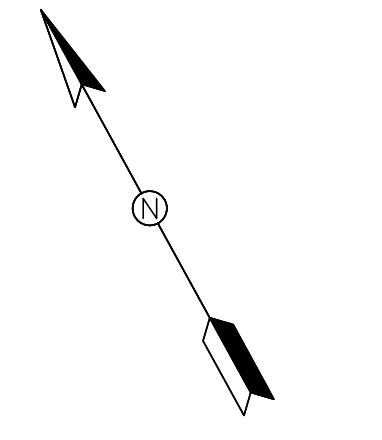
2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351

FM 1863 Office Warehouse - Existing Conditions - Hydrology SCS Calculations

Point	AREA ID	Area (ac)	CN	Tc (min)	Q5 (cfs)	Q25 (cfs)	Q100 (cfs)	Location
A	EX-A	37.78	79.53	14	106.15	206.76	321.56	Existing Offsite Pond
B	EX-B	14.07	81.39	15	41.60	79.18	121.80	Roadside Swale

Drawing Name: R:\Projects\STED001 FM 1863 Office Warehouse\Construction Drawings\3 - DRAINAGE AREA MAP.dwg User: chaffresmahon Apr 10, 2024 - 4:35pm

PERMIT SET



**LEGEND**

- LIMITS OF DRAINAGE AREA
- TC TIME OF CONCENTRATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- FLOW ARROWS
- A  
9.0 DRAINAGE BASIN LABEL  
BASIN AREA (AC)
- A1  
2.0 SUB-DRAINAGE AREA LABEL  
SUB-DRAINAGE AREA (AC)
- A1 INLET LABEL
- A1 ANALYSIS POINT LABEL



**SOUTH TEX STEEL COMPANY**  
1070 HIGHWAY 46 SOUTH  
NEW BRAUNFELS, TX , 78130

**FM 1863 OFFICE WAREHOUSE**  
FM 1863  
NEW BRAUNFELS, TX , 78132

**PROPOSED DRAINAGE  
AREA MAP**

SHEET **EX**

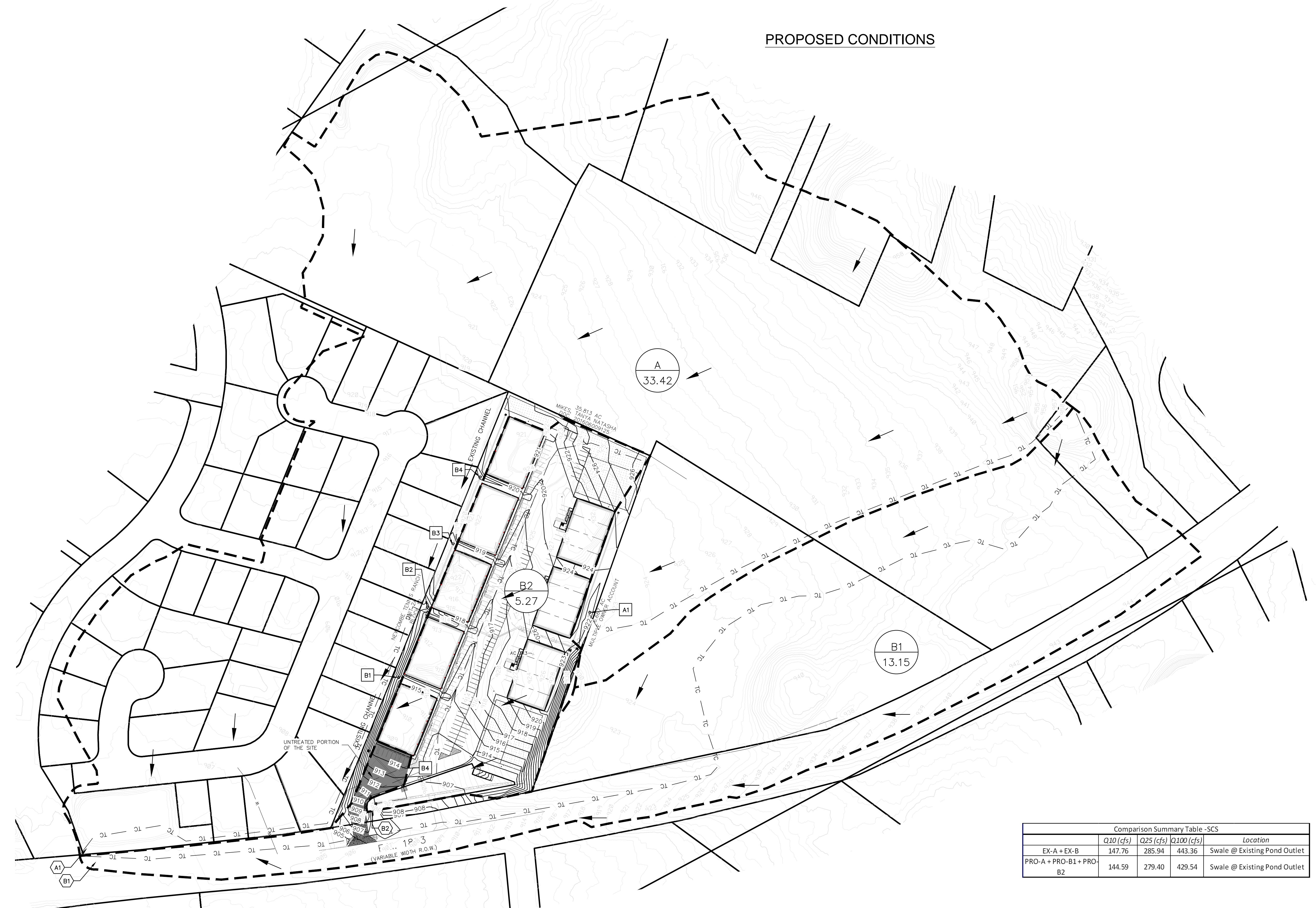
NO	DATE	ISSUES AND REVISIONS



2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351

PERMIT SET

**PROPOSED CONDITIONS**



Comparison Summary Table -SCS

	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)	Location
EX-A + EX-B	147.76	285.94	443.36	Swale @ Existing Pond Outlet
PRO-A + PRO-B1 + PRO-B2	144.59	279.40	429.54	Swale @ Existing Pond Outlet

FM 1863 Office Warehouse - Proposed Conditions - Hydrology SCS Calculations

Point	AREA ID	Area (ac)	CN	Tc (min)	Q2 (cfs)	Q25 (cfs)	Q100 (cfs)	Location
A	PRO-A	33.42	79.71	14	94.45	183.49	285.01	Existing Offsite Pond
B1	PRO-B1	13.15	82.10	15	39.73	74.87	114.63	(Undetained) Roadside Swale
B2	PRO-B2	5.27	93.87	10	22.67	37.96	55.21	Proposed Pond

Drawing Name: R:\Projects\ST18001 FM 1863 Office Warehouse\Construction Drawings\3 - DRAINAGE AREA MAP.dwg User: chaffersmahm Apr 10, 2024 - 4:49pm

# Permanent Stormwater Section

## Texas Commission on Environmental Quality

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

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

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

## Signature

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

Print Name of Customer/Agent: Shane Klar, PE

Date: 4/29/2024

Signature of Customer/Agent



---

Regulated Entity Name: FM 1863 Office Warehouse

## Permanent Best Management Practices (BMPs)

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

- Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.  
 N/A
- These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.  
 The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

- A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: \_\_\_\_\_
- N/A
3.  Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.
- N/A
4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.
- The site will be used for low density single-family residential development and has 20% or less impervious cover.
- The site will be used for low density single-family residential development but has more than 20% impervious cover.
- The site will not be used for low density single-family residential development.
5. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.
- Attachment A - 20% or Less Impervious Cover Waiver.** The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
- The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
- The site will not be used for multi-family residential developments, schools, or small business sites.
6.  **Attachment B - BMPs for Upgradient Stormwater.**

- A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
  - No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
  - Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.
7.  **Attachment C - BMPs for On-site Stormwater.**
- A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.
  - Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.
8.  **Attachment D - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.
- N/A
9.  The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.
- The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.
  - Attachment E - Request to Seal Features.** A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.
10.  **Attachment F - Construction Plans.** All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:
- Design calculations (TSS removal calculations)
  - TCEQ construction notes
  - All geologic features
  - All proposed structural BMP(s) plans and specifications
- N/A



11.  **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan.** A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:
- Prepared and certified by the engineer designing the permanent BMPs and measures
  - Signed by the owner or responsible party
  - Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
  - A discussion of record keeping procedures
- N/A
12.  **Attachment H - Pilot-Scale Field Testing Plan.** Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.
- N/A
13.  **Attachment I -Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.
- N/A

### ***Responsibility for Maintenance of Permanent BMP(s)***

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

14.  The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
- N/A
15.  A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.
- N/A

**ATTACHMENT “A”**  
**20% or Less Impervious Cover Waiver**

20% Impervious Cover Waiver does not apply.

**ATTACHMENT “B”**  
**BMP’s for Upgradient Stormwater**

The site receives approximately 7-acres of upgradient stormwater runoff. The runoff will be intercepted by a 4-way inlet at the property line and directed across the site the existing channel that received it in predevelopment conditions. The upgradient water will not be treated with a BMP as it will be diverted through the site with a storm drain system.

**ATTACHMENT “C”**  
**BMP’s for On-Site Stormwater**

On-site stormwater will be routed through the drive aisles to the batch detention pond. The roofs of each building will utilize gutters and downspouts tied into a storm drain system which will route the runoff to the batch detention pond for TSS removal.

**ATTACHMENT “D”**  
**BMP’s for Surface Streams**

No surface streams are near the site. All stormwater runoff drains to the Comal/Guadalupe River which is approximately 5 miles downstream.

**ATTACHMENT “E”**  
**Request to Seal Feature**

N/A

**ATTACHMENT “F”**  
**Construction Plans**

Please see Construction Plans at the end of this section.

## **ATTACHMENT "G"**

### **Inspection, Maintenance, Repair, and Retrofit Plan**

#### **MAINTENANCE GUIDELINES FOR BATCH DETENTION BASINS**

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 woody 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 voids, 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.

Attachment "G"

Maintenance Plan for Batch Detention Basin

BMP Location: The batch detention basin will be located inside the footprint of the detention pond along the southern property line.

Owner: 1863 Properties, LLC  
614 Didgeridoo Trail  
New Braunfels, TX 78132

Contact: Randy Bade  
Phone: (830)-629-2443

The batch detention basin maintenance and monitoring procedures will be implemented to ensure that the proposed BMP functions as designed.



Randy Bade  
Managing Member  
1863 Properties, LLC

3.25.24  
Date

I have reviewed the attached maintenance and monitoring procedures and to the best of my knowledge certify that, if they are followed as outlined, the BMP will function as designed.



Shane Klar, PE

**ATTACHMENT “H”**  
**Pilot-Scale Field Testing Plan**

N/A

**ATTACHMENT “I”**  
**Measures for Minimizing Surface Stream Contamination**

All surface streams will be protected from erosion by not allowing runoff to exceed existing velocities. All stormwater runoff will continue to flow using the natural flow patterns that existed prior to the development.

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

- WRITTEN CONSTRUCTION NOTIFICATION MUST BE GIVEN TO THE APPROPRIATE TCEQ REGIONAL OFFICE NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF THE REGULATED ACTIVITY. INFORMATION MUST INCLUDE THE DATE ON WHICH THE REGULATED ACTIVITY WILL COMMENCE, THE NAME OF THE APPROVED PLAN FOR THE REGULATED ACTIVITY, AND THE NAME OF THE PRIME CONTRACTOR AND THE NAME AND TELEPHONE NUMBER OF THE CONTACT PERSON.
- ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE 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.
- IF ANY SENSITIVE FEATURE 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. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
- NO TEMPORARY ABOVEGROUND HYDROCARBON AND HAZARDOUS SUBSTANCE STORAGE TANK SYSTEM IS INSTALLED WITHIN 150 FEET OF A DOMESTIC, INDUSTRIAL, IRRIGATION, OR PUBLIC WATER SUPPLY WELL, OR OTHER SENSITIVE FEATURE.
- PRIOR TO COMMENCEMENT OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. CONTROLS SPECIFIED IN THE TEMPORARY STORM WATER SECTION OF THE APPROVED EDWARDS AQUIFER PROTECTION PLAN ARE REQUIRED DURING CONSTRUCTION. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THE CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED.
- 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., FUGILITE SEDIMENT IN STREET BEING WASHED INTO SURFACE STREAMS OR SENSITIVE FEATURES BY THE NEXT RAIN).
- SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS NOT LATER THAN WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%. A PERMANENT STAKE MUST BE PROVIDED THAT CAN INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME.
- 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).
- 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.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARY OR PERMANENTLY CEASES IS PRECLUDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE. IN AREAS EXPERIENCING DROUGHTS WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SEASONAL ARID CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
- 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.
- 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:
  - 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;
  - 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;
  - ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

AUSTIN REGIONAL OFFICE SAN ANTONIO REGIONAL OFFICE  
2800 S. J. SUITE 100 14250 JUDSON ROAD  
AUSTIN, TEXAS 78704-5712 SAN ANTONIO, TEXAS 78233-4480  
PHONE (512) 339-2929 PHONE (210) 490-3096  
FAX (512) 339-3795 FAX (210) 545-4329

STANDARD ABBREVIATIONS

AC	ASBESTOS CONCRETE	HMAC	HOT MIX ASPHALTIC CONCRETE	PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
AH	AHEAD	HRS	HOURS	PL	PROPERTY LINE
ASPH	ASPHALT	R	RADIUS	RR	RAILROAD
B	BACK	ID.	INSIDE DIAMETER	RCR	REINFORCED CONCRETE PIPE
B-B	BACK TO BACK	IP	IRON PIN	REQ	REQUIRED
BC	BACK OF CURB	LF	LINEAR FEET	RT	RIGHT
BECK	BACK	LT	LEFT	ROW	RIGHT-OF-WAY
BLS	BUILDING SETBACK LINE	LP	LIGHT POLE	RWL	RECYCLE WATER LINE
CI	CAST IRON	MH	MANHOLE	SS	SANITARY SEWER
CE	CENTERLINE	MAX	MAXIMUM	SE	SOUTHEAST
CONC	CONCRETE	MJ	MECHANICAL JOINT	SW	SOUTHWEST
CONC	CONTROL PANEL	MIN	MINIMUM	STA	STANDARD
CS	CONCRETE STEEL CYLINDER PIPE	NE	NORTHEAST	STD	STANDARD
CS	CORROSION RESISTANT METAL PIPE	NW	NORTHWEST	SD	STORM SEWER/DRAINAGE
CPL	COUPLING	NTS	NOT TO SCALE	T/P	TOP OF PIPE
DWG	DRAWING	OC	ON CENTER	T/G	TOP OF GROUND
E	EACH WAY	OD	OUTER DIAMETER	TEL	TELEPHONE
ELEV / EL	ELEVATION	OHE	OVERHEAD ELECTRICAL	TBM	TEMPORARY BENCHMARK
EX / EXIST	EXISTING	OHT	OVERHEAD TELEPHONE	THR	THREADED
EW	EACH WAY	OHETC	OVERHEAD ELECTRICAL/TELEPHONE/CABLE	TYP	TYPICAL
ENR	EACH WAY EACH FACE	PVT	PAVEMENT	UG	UNDERGROUND
FB	FIBER OPTIC	PC	POINT OF CURVATURE	UNK	UNKNOWN
FL	FLOWLINE	PE	PLAIN END	VERT	VERTICAL
FND	FOUND	PI	POINT OF INTERSECTION	VPC	VERTICAL POINT OF CURVATURE
GA	GAUGE	PIC	POINT OF CURVATURE	VPI	VERTICAL POINT OF INTERSECTION
G	GALVANIZED IRON	PSI	POUNDS PER SQUARE INCH	WVF	WELDED WIRE FABRIC
GPS	GLOBAL POSITION STATION	PP	POWER POLE	TS	TEST STATION
GRND	GROUND	PVI	POINT OF VERTICAL INTERSECTION		
HQPE	HIGH DENSITY POLYETHYLENE PIPE				
HORZ	HORIZONTAL				

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6436
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	800-654-1333
Eric White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4866
Texas One Call	830-545-6005

**C.P.E. LOCATOR**  
CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ALL EXISTING UTILITIES AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROJECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

**TELEPHONE LOCATOR**  
THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROJECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

**TRENCH EXCAVATION SAFETY PROTECTION**  
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION AREA IN ORDER TO IMPLEMENT THE CONSTRUCTION AND/OR PROCEDURES CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL 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.

GENERAL NOTES

- THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY COMAL COUNTY STANDARD DETAILS.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ADDITION THESE PLANS, COMAL COUNTY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT COMAL COUNTY TO SCHEDULE A RECONSTRUCTION MEETING.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- A TxDOT TYPE II B-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS. IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FRONT THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TxDOT MATERIAL, EPOXY AND ADHESIVE SPECIFICATIONS.

GROUNDWATER

- IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEO-TECHNICAL ENGINEER, AND PROJECT ENGINEER TO IMMEDIATELY NOTIFY THE OFFICE OF THE COUNTY ENGINEER AND PROJECT ENGINEER IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION THE PROJECT ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. THE COUNTY ENGINEER SHALL RESPOND WITHIN TWO (2) BUSINESS DAYS TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE DISCOVERY OF GROUNDWATER, SHALL BE SUSPENDED UNTIL THE CITY ENGINEER GRANTS A WRITTEN APPROVAL OF THE GROUNDWATER MITIGATION PLAN.

RECORD DRAWINGS

- AS PER PLATING ORDINANCE SECTION 118-38M: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE COMPLETED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF RECORD DRAWING PLANS, AND A DIGITAL COPY OF ALL PLANS (PDF COPY) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE COMAL COUNTY, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

CONSTRUCTION NOTE

- ENGINEER OF RECORD IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL SUFFICIENT TO MITIGATE OFF SITE IMPACTS ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.

DRAINAGE NOTE

- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE THE IMPACT OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ADDING IMPERVIOUS COVER

FINISHED FLOOR ELEVATIONS

- THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE CURB SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.

SOILS TESTING

- PROCTORS SHALL BE SAMPLED FROM ON-SITE MATERIAL (ON-SITE IS DEFINED AS LIMITS OF CONSTRUCTION FOR THIS -PLAN SET) AND A COPY OF THE PROCTOR RESULTS SHALL BE DELIVERED TO THE COMAL COUNTY STREET INSPECTOR PRIOR TO ANY DESIGN TESTS.

ROADWAY

- ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FLEXIBLE BASE OR FILL/EMBANKMENT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. THE REQUIRED DENSITY FOR THE FILL/EMBANKMENT MATERIAL SHALL MEET THE REQUIREMENTS OF TxDOTS SPECIFICATION ITEM 132. THE REQUIRED DENSITY FOR THE FLEXIBLE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF TxDOTS SPECIFICATION ITEM 247. EACH LAYER OF MATERIAL MOVED OR SUBMITTED FOR TESTING SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE COMAL COUNTY STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT. UPON COMPLETION OF TESTING, THE GEOTECHNICAL ENGINEER WILL PROVIDE THE COMAL COUNTY STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE BASE, FILL/EMBANKMENT AND SUBGRADE, HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE COMAL COUNTY INSPECTOR.

UTILITY TRENCH COMPACTION

- ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE COMAL COUNTY STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE COMAL COUNTY STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE COMAL COUNTY INSPECTOR.

CURB CUT DUE TO CONSTRUCTION OF NEW RIGHT-OF-WAY CONSTRUCTION

- CURB CUTS SHALL BE THE FOLLOWING METHODS AND INDICATED ON THE PLANS IN DETAIL WHERE APPLICABLE:
  - SAW CUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.
  - SAW CUT EXISTING CURB TO THE TIE INTO EXISTING CONSTRUCTION.

CONSTRUCTION ESTABLISHMENT ENTRANCE

- SAW CUT CURB FOR CONSTRUCTION ENTRANCE.

STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3"65" ROCK TO BE PLACED A MINIMUM OF 25-FT FROM AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE COUNTY/ STATE RIGHT-OF-WAY. RIGHT-OF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.

SIGNING AND PAVEMENT MARKING PLAN NOTES

- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE COUNTY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.
- THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.
- THE CONTRACTOR SHALL NOTIFY THE COUNTY AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

SEEDING AND ESTABLISHMENT OF VEGETATION WITHIN EARTHEN CHANNELS, STORMWATER BASINS AND DISTURBED AREAS

- SEEDING FOR THE PURPOSE OF ESTABLISHING VEGETATION WITHIN CONSTRUCTED EARTHEN CHANNELS, BASINS AND DISTURBED AREAS SHALL BE CONDUCTED IN ACCORDANCE WITH ITEM 164 (SEEDING FOR EROSION CONTROL) OF TxDOT'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES MANUAL. ONLY SEED TYPES AND MIXES SPECIFIED FOR THE SAN ANTONIO DISTRICT (DISTRICT 15) IN TABLE 1 AND 2 UNDER ITEM 164 SHALL BE UTILIZED. DURING THE COOL SEASON (SEPT 1-NOV 30), GENERAL RYE AND SEED SPECIES SPECIFIED FOR THE SAN ANTONIO DISTRICT IN TABLE 3 MAY BE USED. FOR COOL SEASON SEEDING APPLICATIONS, COOL SEASON SEED MIXES SHALL BE USED IN CONJUNCTION WITH SEED MIXES FOR THE SAN ANTONIO DISTRICT AS SPECIFIED IN TABLE 1 AND 2 UNDER ITEM 164.
- IT MAY BE DEEMED NECESSARY TO INCORPORATE TOPSOIL AND SOIL AMENDMENTS (I.E. COMPOST/FERTILIZER) INTO EXISTING SOIL IN ORDER TO FACILITATE VEGETATION GROWTH. TOPSOIL, COMPOST AND FERTILIZER ADDITIONS SHALL BE CONDUCTED ACCORDING TO ITEMS 166, 161, AND 166 OF TxDOT'S STANDARD SPECIFICATIONS MANUAL, RESPECTIVELY.
- AREAS REQUIRING PERMANENT VEGETATION (EARTHEN CHANNELS, PONDS, ETC.) ARE REQUIRED TO MEET TxDOT SPECIFICATIONS FOR ITEM 160 TOPSOIL. TESTING PER TEX-128-E WILL BE REQUIRED AT THE CITY'S REQUEST.
- WATERING MAY ALSO BE NECESSARY TO FACILITATE AND EXPEDITE THE SPROUTING AND GROWTH OF VEGETATION. ITEM 168 OF TxDOT'S STANDARD SPECIFICATIONS MANUAL SHALL BE ADHERED TO FOR VEGETATIVE WATERING.
- IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACTY/ DEVELOPER SHALL PROVIDE A PLAN TO COMAL COUNTY DESCRIBING THE MEASURES THAT WILL BE TAKEN TO STABILIZE EARTHEN DRAINAGE INFRASTRUCTURE UNTIL A TIME WHEN FAVORABLE CONDITIONS BECOME MORE FAVORABLE.

NEW BRAUNFELS UTILITIES - GENERAL NOTES (REV 1-1-2024)

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL BE APPROVED BY NEW BRAUNFELS UTILITIES AND COMPLY WITH THE CURRENT NEW BRAUNFELS UTILITIES WATER SYSTEMS CONNECTION/CONSTRUCTION POLICY.
- CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBU WATER SYSTEMS ENGINEERING AT 830-608-8971 WITH AT LEAST THREE (3) WORKING DAYS (48 HOURS) NOTICE. WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED NOTICE TO PROCEED WITH NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
- THE DEVELOPER DEDICATES THE WATER / WASTEWATER MAINS UPON COMPLETION BY THE CONTRACTOR AND ACCEPTANCE BY THE NEW BRAUNFELS UTILITIES WATER SYSTEM. NBU WILL OWN AND MAINTAIN SAID WATER / WASTEWATER MAINS WHICH ARE LOCATED WITHIN PLATTED UTILITY EASEMENTS OR PUBLIC ROW OF PROPOSED DEVELOPMENTS. (AS APPLICABLE).
- CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS, OFFICERS, DIRECTORS, OR CONSULTANTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.
- CONTRACTOR TO CONTACT THE ENGINEER OF RECORD (EOR) FOR ANY FIELD CHANGES. ANY REVISIONS OR CHANGES TO THE APPROVED CONSTRUCTION PLANS WILL REQUIRE ADDITIONAL APPROVAL BY NBU IN WRITING.
- CONTRACTOR AND / OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING UNDERGROUND UTILITIES, LANDSCAPING AND STRUCTURES, AND EXISTING UTILITIES (NOT ADJUSTED ON PLANS). COST OF RESTORATIONS, IF ANY, SHALL BE THE CONTRACTOR'S ENTIRE EXPENSE.
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.
- CONTRACTOR SHALL ACQUIRE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES AND TAXES AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHIN FIRST TRENCH OR APPROVED FLOOD PLAIN DEVELOPMENT FERMAT.
- THE CONTRACTOR SHALL NOT APPROVE WATER POLLUTION ABATEMENT PLAN FROM THE TCEQ 31 TAC 31.4 AND 31 TAC 31.9.
- BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL, AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.
- CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.
- THE LOCATION OF UTILITIES, EITHER UNDERGROUND OR OVERHEAD, SHOWN WITHIN THE RIGHT OF WAY ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION OPERATIONS.
- OSHA REGULATIONS PROHIBIT OPERATIONS THAT WILL BRING PERSONS OR EQUIPMENT WITHIN 10 FEET OF AN ENERGIZED LINE. WHERE WORKMEN AND/OR EQUIPMENT HAVE TO WORK CLOSE TO AN ENERGIZED ELECTRICAL LINE, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL POWER COMPANY INVOLVED AND MAKE WHATEVER ADJUSTMENTS NECESSARY TO ENSURE THE SAFETY OF THOSE WORKMEN.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION. CONTRACTORS SHALL CALL THE ONE CALL SYSTEM FOR WATER/WASTEWATER LOCATION.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192 (B), GAS COMPANIES MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGERS. THE CONSTRUCTION METHODS SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC SO AS TO PERMIT THE CONTINUOUS MOVEMENT OF TRAFFIC IN ONE DIRECTION AT ALL TIMES. THE CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE WORK AREA ANY LOOSE MATERIAL RESULTING FROM CONTRACT OPERATIONS AT THE END OF EACH WORKDAY.
- PRIOR TO ORDERING MATERIALS TO BE USED IN CONSTRUCTION, CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FOUR (4) COPIES OF THE SOURCE, TYPE, GRADATION, MATERIAL SPECIFICATION DATA AND / OR SHOP DRAWINGS, AS APPLICABLE, TO SATISFY THE REQUIREMENTS OF THE FOLLOWING ITEMS AND ALL MATERIAL ITEMS REFERRED TO IN THESE LISTED ITEMS:
  - WATER MAINS AND SERVICES
  - SEWER MAINS AND SERVICES
- WATER TRENCH THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. WASTEWATER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO NBU CONNECTION AND CONSTRUCTION POLICY MANUAL.
- CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
- UTILITY TRENCH COMPACTION WITH STREET R.O.W.
  - ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER.
  - FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12")
  - EACH LAYER OF MATERIAL SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E.
  - THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR.
  - UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

NBU WATER NOTES (REV 1-1-2024)

- THE POINT OF DELIVERY FOR AN OWNED AND MAINTAINED WATER LINE IS TYPICALLY THE DOMESTIC OR IRRIGATION WATER METER, FIRE LINE UP TO THE CONTAINMENT BACKFLOW DEVICE, OR HYDRANT RING OR AS DETERMINED BY NBU.
- WATER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE NBU WATER CONNECTION POLICY.
- ALL WATER MAINS SHALL BE CONSTRUCTED OF AWWA C900 DR 14 PVC, AWWA C900 DR 18 PVC OR MINIMUM CL 250 DUCTILE IRON PIPE.
- ALL RESIDENTIAL WATER SERVICES SHALL BE SINGLE SERVICES CONSTRUCTED OF 1-INCH ASTM B88 TYPE K COPPER TUBING. 1-INCH AWWA C901 SDR 35 POLYETHYLENE TUBING MAY BE PERMITTED WITH SPECIAL APPROVAL FROM NBU ONLY.
- ALL 2-INCH SERVICE LINES SHALL BE CONSTRUCTED OF AWWA C901 SDR 35 POLYETHYLENE TUBING.
- WATER MAINS SHALL HAVE A MINIMUM OF 48 INCHES OF COVER TO FINISHED GRADE. CONCRETE ENCASEMENT WILL BE REQUIRED IF MINIMUM COVER CANNOT BE MET.
- PIPE BEDDING OF WATER LINES SHALL BE COMPLIANT WITH NBU SPECIFICATION NO. 120, "UTILITY TRENCHING AND BACKFILL".
- CONTRACTOR SHALL INSTALL LINE STOPPERS AT THEIR COST FOR AN OUTAGE DURING CONSTRUCTION IF SYSTEM VALVES ARE NOT AVAILABLE OR THE EXISTING VALVES DO NOT FUNCTION. LINE STOPPERS WILL REMOVE THE CONTROL WATER VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED. ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.
- TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED DURING CONSTRUCTION BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CONTROLS WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED. ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.
- TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER/ENGINEER.
- PLACEMENT OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL FIELD LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS. THE CONTRACTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE DISTURBANCE TO THE STRUCTURES HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN ENGINEER APPROVED DESIGNATED DISPOSAL AREA.
- ADDITIONAL CONTROLS MAY BE REQUIRED FOR PROJECTS OVER THE EDWARDS AQUIFER RECHARGE ZONE. REFERENCE 30 TAC 213 CHAPTER A.
- CONTRACTOR OR CONTRACTOR'S CONSULTANT SHALL HAVE A STORM WATER POLLUTION PREVENTION PLAN PREPARED AND ON-SITE AT ALL TIMES.
- METER BOXES OR VAULTS MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.

12. METER BOXES FOR 5/8-INCH AND 1-INCH METERS MUST BE DFW PLASTICS DFW38C14-A-FMIP.

13. METER BOXES FOR 1.5" METERS MUST BE DFW PLASTICS DFW65C-14-A-FMIP.

14. METER BOXES FOR 2" METERS MUST BE DFW PLASTICS DFW1730F-12-A-FMIP.

15. TRUST BLOCKS ARE NOT PERMITTED WITHOUT SPECIAL APPROVAL. JOINTS MUST BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBU. RESTRAINT LENGTH SHALL BE SUBMITTED TO NBU AT THE TIME OF PLAN SUBMITTAL.

16. CONTRACTOR SHALL INSTALL TRACER WIRE ON TOP OF NON-FERROUS WATER MAINS IN ACCORDANCE WITH NBU SPECIFICATIONS. TRACER WIRE SHOULD RUN FROM VALVE TO VALVE AND EXIT AT A TRACER WIRE ACCESS POINT. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE. EXCESS WIRE SHOULD BE COILED WITHIN THE TRACER WIRE ACCESS POINT RISER. PAGE 1 OF 2 APPENDIX/APPENDIX B APPROVED 12/09/03; REV 1/01/24 NBU WATER NOTES

17. CONTRACTOR SHALL COORDINATE WITH THE ASSIGNED WATER/WASTEWATER INSPECTOR FOR COMPLETION OF THE FIELD ACCEPTANCE CHECKLIST. ALL TESTING AND ACCEPTANCE SHALL CONFORM TO NBU SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO: A. BACTERIOLOGICAL TESTING B. HYDROSTATIC TESTING (PERFORMED VALVE TO VALVE)

18. THE NBU WATER SYSTEM SHALL BE PROTECTED FROM HAZARDS, WITH APPROPRIATE BACKFLOW PREVENTION ASSEMBLIES INSTALLED ON ALL IRRIGATION SYSTEMS, FIRE SUPPRESSION SYSTEMS AND MULTI-UNIT COMPLEXES ALONG WITH MULTI-LEVEL PROPERTIES ON THE DOMESTIC METER CONTAINMENT. NBU CAN ASSIST WITH THE DECISION ON APPROPRIATE BACKFLOW ASSEMBLIES ON A CASE-BY-CASE BASIS. CONTACT NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

Page 3-29 Equation 3.3:  $L_d = 27.2(A_n \times P)$

where:  
 $L_d$  TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load  
 $A_n$  = Net increase in impervious area for the project  
 $P$  = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project  
County = **Comal**  
Total project area included in plan = **6.35** acres  
Predevelopment impervious area within the limits of the plan = **4.30** acres  
Total post-development impervious area within the limits of the plan = **4.30** acres  
Total post-development impervious cover fraction = **0.68**  
 $P$  = **33** inches

$L_d$  TOTAL PROJECT = **3860** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **2**

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = **1**

Total drainage basin/outfall area = **5.27** acres  
Predevelopment impervious area within drainage basin/outfall area = **0.80** acres  
Post-development impervious area within drainage basin/outfall area = **4.05** acres  
Post-development impervious fraction within drainage basin/outfall area = **0.77**  
 $L_d$  BASIN = **3644** lbs.

3. Indicate the proposed BMP Code for this basin:

Proposed BMP = **Extended Detention**  
Removal efficiency = **91** percent

4. Calculate Maximum TSS Load Removed ( $L_r$ ) for this Drainage Basin by the selected BMP Type:

RG-348 Page 3-33 Equation 3.7:  $L_r = (BMP\ efficiency) \times P \times (A_c + A_n \times 0.54)$

where:  
 $A_c$  = Total On-Site drainage area in the BMP catchment area  
 $A_n$  = Impervious area proposed in the BMP catchment area  
 $A_n$  = Previous area remaining in the BMP catchment area  
 $L_r$  = TSS Load removed from this catchment area by the proposed BMP

$A_c$  = **5.27** acres  
 $A_n$  = **4.05** acres  
 $A_n$  = **1.21** acres  
 $L_r$  = **4238** lbs.

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area:

Desired  $L_d$  TSS LOAD = **3860** lbs.

$F$  = **0.91**

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area:

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = **1.80** inches

Post Development Runoff Coefficient = **0.58**

On-site Water Quality Volume = **20158** cubic feet

Calculations from RG-348

Pages 3-36 to 3-37

Off-site area draining to BMP = **0.50** acres

Off-site impervious cover draining to BMP = **0.00** acres

Impervious fraction of off-site area = **0**

Off-site Runoff Coefficient = **0.60**

Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **4028**

Total Capture Volume (required water quality volume(s) x 1.20) = **24166** cubic feet

AVAILABLE WATER QUALITY VOLUME = **27,489 CF**

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

Page 3-29 Equation 3.3:  $L_d = 27.2(A_n \times P)$

where:  
 $L_d$  TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load  
 $A_n$  = Net increase in impervious area for the project  
 $P$  = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project  
County = **Comal**  
Total project area included in plan = **6.35** acres  
Predevelopment impervious area within the limits of the plan = **4.30** acres  
Total post-development impervious area within the limits of the plan = **4.30** acres  
Total post-development impervious cover fraction = **0.68**  
 $P$  = **33** inches

$L_d$  TOTAL PROJECT = **3860** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **2**

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = **2**

Total drainage basin/outfall area = **13.15** acres  
Predevelopment impervious area within drainage basin/outfall area = **2.48** acres  
Post-development impervious area within drainage basin/outfall area = **2.72** acres  
Post-development impervious fraction within drainage basin/outfall area = **0.21**  
 $L_d$  BASIN = **215** lbs.

3. Indicate the proposed BMP Code for this basin:

Proposed BMP = **Uncaptured**  
Removal efficiency = **N/A** percent

Uncaptured TSS accounted for as over-treatment in Basin 1

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

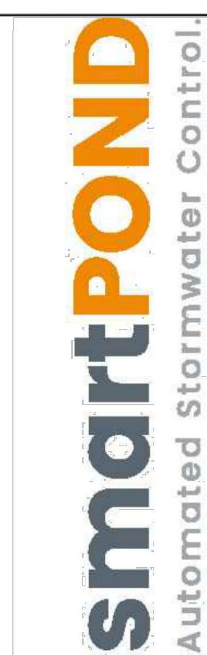
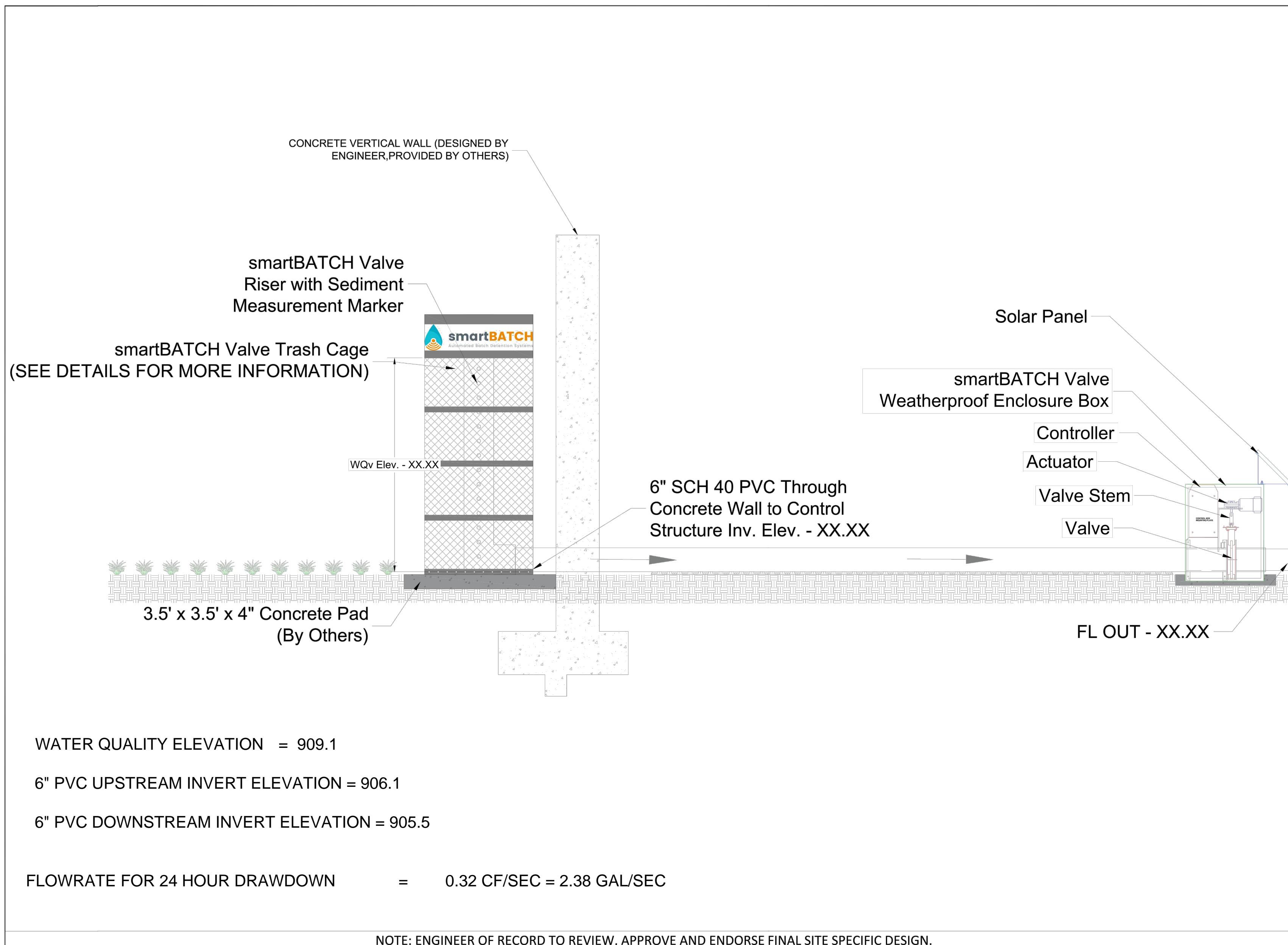
New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-383-1336
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

**C.P.E. LOCATOR**  
CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANIES DURING CONSTRUCTION.

**TELEPHONE LOCATOR**  
THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANIES DURING CONSTRUCTION.

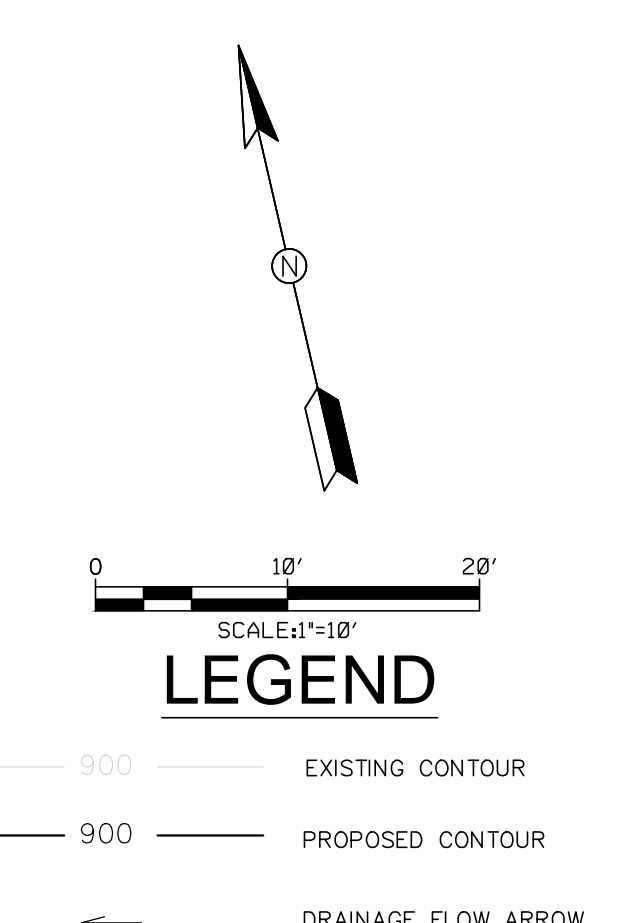
**TRENCH EXCAVATION SAFETY PROTECTION**  
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN 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.



smartBATCH Valve with VERTICAL WALL

REVISION NO. **0**  
DATE **5/29/2020**  
SHEET NO.



LEGEND  
900 EXISTING CONTOUR  
900 PROPOSED CONTOUR  
DRAINAGE FLOW ARROW



SOUTH TEX STEEL COMPANY  
1070 HIGHWAY 46 SOUTH  
NEW BRAUNFELS, TX, 78130

FM 1863 OFFICE WAREHOUSE  
FM 1863  
NEW BRAUNFELS, TX, 78132

WATER QUALITY BASIN & DETAILS

SHEET **C-9.2**

NO	DATE	ISSUES AND REVISIONS
△		

2021 W SH46, STE 105  
NEW BRAUNFELS, TX, 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351

PERMIT SET



DETECTION POND NOTES

EARTHFILL
1. SCOPE
THE WORK CONSISTS OF THE CONSTRUCTION OF EARTH EMBANKMENTS, OTHER EARTHFILLS, AND EARTH BACKFILLS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS.
EARTHFILL IS COMPOSED OF NATURAL EARTH MATERIALS THAT CAN BE PLACED AND COMPACTED BY CONSTRUCTION EQUIPMENT OPERATED IN A CONVENTIONAL MANNER.
EARTH BACKFILL IS COMPOSED OF NATURAL EARTH MATERIAL PLACED AND COMPACTED IN CONFINED SPACES OR ADJACENT TO STRUCTURES (INCLUDING PIPES) BY HAND TAMPING, MANUALLY DIRECTED POWER TAMPERS OR VIBRATING PLATES, OR THEIR EQUIVALENT.
2. MATERIAL
FILL MATERIALS SHALL CONTAIN NO FROZEN SOIL, SOIL, BRUSH, ROOTS, OR OTHER PERISHABLE MATERIAL. UNLESS OTHERWISE NOTED ON THE PLANS, ROCK PARTICLES LARGER THAN 6" SHALL BE REMOVED PRIOR TO COMPACTION OF THE FILL.
THE TYPES OF MATERIAL USED IN THE VARIOUS FILLS SHALL BE AS LISTED AND DESCRIBED IN THE SPECIFICATIONS AND DRAWINGS.
3. FOUNDATION PREPARATION
FOUNDATIONS FOR EARTHFILL SHALL BE STRIPPED TO REMOVE VEGETATION AND OTHER UNSUITABLE MATERIAL, OR SHALL BE EXCAVATED AS SPECIFIED.
EXCEPT AS OTHERWISE SPECIFIED, EARTH FOUNDATION SURFACES SHALL BE GRADED TO REMOVE SURFACE IRREGULARITIES AND SHALL BE SCARIFIED PARALLEL TO THE AXIS OF THE FILL OR OTHERWISE ACCEPTABLY SCORED AND LOOSENED TO A MINIMUM DEPTH OF 2 INCHES. THE MOISTURE CONTENT OF THE LOOSENED MATERIAL SHALL BE CONTROLLED AS SPECIFIED FOR THE EARTHFILL, AND THE SURFACE MATERIAL OF THE FOUNDATION SHALL BE COMPACTED AND BONDED WITH THE FIRST LAYER OF EARTHFILL AS SPECIFIED OR SUBSEQUENT LAYERS OF EARTHFILL.
EARTH ABUTMENT SURFACES SHALL BE FREE OF LOOSE, UNCOMPACTED EARTH IN EXCESS OF 2 INCHES IN DEPTH NORMAL TO THE SLOPE AND SHALL BE AT SUCH A MOISTURE CONTENT THAT THE EARTHFILL CAN BE COMPACTED AGAINST THEM TO PRODUCE A GOOD BOND BETWEEN THE FILL AND THE ABUTMENTS.
ROCK FOUNDATION AND ABUTMENT SURFACES SHALL BE CLEARED OF ALL LOOSE MATERIAL BY HAND OR OTHER EFFECTIVE MEANS AND SHALL BE FREE OF STANDING WATER WHEN FILL IS PLACED UPON THEM. OCCASIONAL ROCK OUTCROPS IN EARTH FOUNDATIONS FOR EARTHFILL, EXCEPT IN DAMS AND OTHER STRUCTURES DESIGNED TO RESTRAIN THE MOVEMENT OF WATER, SHALL NOT REQUIRE SPECIAL TREATMENT IF THEY DO NOT INTERFERE WITH COMPACTION OF THE FOUNDATION AND INITIAL LAYERS OF THE FILL OR THE BOND BETWEEN THE FOUNDATION AND THE FILL.
FOUNDATIONS AND ABUTMENT SURFACES SHALL BE NO STEEPER THAN ONE HORIZONTAL TO ONE VERTICAL UNLESS OTHERWISE SPECIFIED. TEST PITS OR OTHER CAVITIES SHALL BE FILLED WITH COMPACTED EARTHFILL CONFORMING TO THE SPECIFICATIONS FOR THE EARTHFILL TO BE PLACED UPON THE FOUNDATION.
4. PLACEMENT
EARTHFILL SHALL BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS. THE THICKNESS OF EACH LAYER BEFORE COMPACTION SHALL NOT EXCEED THE MAXIMUM THICKNESS SPECIFIED AS SHOWN ON THE DRAWINGS. MATERIALS PLACED BY DUMPING IN PILES OR WINDOWS SHALL BE SPREAD UNIFORMLY TO NOT MORE THAN THE SPECIFIED THICKNESS BEFORE BEING COMPACTED.
HAND COMPACTED EARTH BACKFILL SHALL BE PLACED IN LAYERS WHOSE THICKNESS BEFORE COMPACTION DOES NOT EXCEED THE MAXIMUM THICKNESS SPECIFIED FOR LAYERS OF EARTH BACKFILL COMPACTED BY MANUALLY DIRECTED POWER TAMPERS.
EARTH BACKFILL SHALL BE PLACED IN A MANNER THAT PREVENTS DAMAGE TO THE STRUCTURES AND ALLOWS THE STRUCTURES TO ASSUME THE LOADS FROM THE EARTH BACKFILL GRADUALLY AND UNIFORMLY. THE HEIGHT OF THE EARTH BACKFILL ADJACENT TO A STRUCTURE SHALL BE INCREASED AT APPROXIMATELY THE SAME RATE ON ALL SIDES OF THE STRUCTURE.

EARTHFILL AND EARTH BACKFILL IN DAMS, LEVEES, AND OTHER STRUCTURES DESIGNED TO RESTRAIN THE MOVEMENT OF WATER SHALL BE PLACED TO MEET THE FOLLOWING ADDITIONAL REQUIREMENTS:
(c) THE DISTRIBUTION OF MATERIALS THROUGHOUT EACH ZONE SHALL BE ESSENTIALLY UNIFORM, AND THE EARTHFILL SHALL BE FREE FROM LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFERING SUBSTANTIALLY IN TEXTURE, MOISTURE CONTENT, OR GRADATION FROM THE SURROUNDING MATERIAL. ZONE EARTHFILLS SHALL BE CONSTRUCTED CONCURRENTLY UNLESS OTHERWISE SPECIFIED.
(b) IF THE SURFACE OF ANY LAYER BECOMES TOO HARD AND SMOOTH FOR PROPER BOND WITH THE SUCCEEDING LAYER, IT SHALL BE SCARIFIED PARALLEL TO THE AXIS OF THE FILL TO A DEPTH OF NOT LESS THAN 2 INCHES BEFORE THE NEXT LAYER IS PLACED.
(c) THE TOP SURFACE OF EMBANKMENTS SHALL BE MAINTAINED APPROXIMATELY LEVEL DURING CONSTRUCTION WITH TWO EXCEPTIONS: A CROWN OR CROSS-SLOPE OF ABOUT 2 PERCENT SHALL BE MAINTAINED TO ENSURE EFFECTIVE DRAINAGE, OR AS OTHERWISE SPECIFIED FOR DRAINFILL OR SECTIONAL ZONES.
(d) DAM EMBANKMENTS SHALL BE CONSTRUCTED IN CONTINUOUS LAYERS FROM ABUTMENT TO ABUTMENT EXCEPT WHERE OPENINGS TO FACILITATE CONSTRUCTION OR TO ALLOW THE PASSAGE OF STREAM FLOW DURING CONSTRUCTION ARE SPECIFICALLY AUTHORIZED IN THE CONTRACT.
(e) EMBANKMENTS BUILT AT DIFFERENT LEVELS AS DESCRIBED UNDER (c) OR (d) ABOVE SHALL BE CONSTRUCTED SO THAT THE SLOPE OF THE BONDING SURFACES BETWEEN EMBANKMENT IN PLACE AND EMBANKMENT TO BE PLACED IS NOT STEEPER THAN 3 FEET HORIZONTAL TO 1 FOOT VERTICAL. THE BONDING SURFACE OF THE EMBANKMENT IN PLACE SHALL BE STRIPPED OF ALL MATERIAL NOT MEETING THE REQUIREMENTS OF THIS SPECIFICATION AND SHALL BE SCARIFIED, MOISTENED, AND RECOMPACTED WITH THE NEW EARTHFILL IS PLACED AGAINST IT. THIS ENSURES A GOOD BOND WITH THE NEW EARTHFILL AND OBTAINS THE SPECIFIED MOISTURE CONTENT AND DENSITY AT THE CONTACT OF THE INPLACE AND NEW EARTHFILLS.

(f) THE FILL MATERIAL SHALL BE FREE OF ORGANIC MATTER AND OTHER OBJECTIONABLE MATERIAL. PLACING AND SPREADING OF FILL SHALL BEGIN ON THE LOWEST PART OF THE WORKING AREA AND CONTINUE IN HORIZONTAL LAYERS OF APPROXIMATE UNIFORM THICKNESS, NOT EXCEEDING 9 INCHES BEFORE COMPACTION. WHERE THE BORROW YIELDS MATERIALS OF VARYING TEXTURE AND GRADATION, THE MORE IMPERVIOUS MATERIAL SHALL BE PLACED TOWARD THE WATERSIDE OF THE BERM. THE CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER THE AREA OF EACH LAYER IN A MANNER TO BREAK UP LARGE CLOUDS AND OBTAIN COMPACTION.

5. CONTROL OF MOISTURE CONTENT
DURING PLACEMENT AND COMPACTION OF EARTHFILL AND EARTH BACKFILL, THE MOISTURE CONTENT OF THE MATERIAL BEING PLACED SHALL BE MAINTAINED WITHIN THE SPECIFIED RANGE.

THE APPLICATION OF WATER TO THE EARTHFILL MATERIAL SHALL BE ACCOMPLISHED AT THE BORROW AREAS INsofar AS PRACTICABLE. WATER MAY BE APPLIED BY SPRINKLING THE MATERIAL AFTER PLACEMENT ON THE EARTHFILL, IF NECESSARY. UNIFORM MOISTURE DISTRIBUTION SHALL BE OBTAINED BY DISKING.

MATERIAL THAT IS TOO WET WHEN DEPOSITED ON THE EARTHFILL SHALL EITHER BE REMOVED OR BE DRIED TO THE SPECIFIED MOISTURE CONTENT PRIOR TO COMPACTION.

IF THE TOP SURFACE OF THE PRECEDING LAYER OF COMPACTED EARTHFILL OR A FOUNDATION OR ABUTMENT SURFACE IN THE ZONE OF CONTACT WITH THE EARTHFILL BECOMES TOO DRY TO PERMIT SUITABLE BOND, IT SHALL EITHER BE REMOVED OR SCARIFIED AND MOISTENED BY SPRINKLING TO AN ACCEPTABLE MOISTURE CONTENT BEFORE PLACEMENT OF THE NEXT LAYER OF EARTHFILL.

6. COMPACTION
EARTHFILL, EARTHFILL SHALL BE COMPACTED ACCORDING TO THE FOLLOWING REQUIREMENTS FOR THE CLASS OF COMPACTION SPECIFIED:

CLASS A COMPACTION - EACH LAYER OF EARTHFILL SHALL BE COMPACTED AS NECESSARY TO PROVIDE THE DENSITY OF THE EARTHFILL MATRIX NOT LESS THAN THE MINIMUM DENSITY SPECIFIED ON THE DRAWINGS. THE EARTHFILL MATRIX IS DEFINED AS THE PORTION OF THE EARTHFILL MATERIAL FINER THAN THE MAXIMUM PARTICLE SIZE USED IN THE COMPACTION TEST METHOD SPECIFIED.

COMPACTION OF ALL EARTHEN EMBANKMENTS SHALL HAVE A NON-PERMEABLE CORE, SHALL BE BASED ON A GEOTECHNICAL INVESTIGATION OF THE SITE, AND SHALL BE COMPACTED TO 90% STANDARD PROCTOR.

7. REWORKING OR REMOVAL AND REPLACEMENT OF DEFECTIVE EARTHFILL
EARTHFILL PLACED AT DENSITIES LOWER THAN THE SPECIFIED MINIMUM DENSITY OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED ACCEPTABLE RANGE OF MOISTURE CONTENT OR OTHERWISE NOT CONFORMING TO THE REQUIREMENTS OF THE SPECIFICATIONS SHALL BE REWORKED TO MEET THE REQUIREMENTS OR REMOVED AND REPLACED BY ACCEPTABLE EARTHFILL. THE REPLACEMENT EARTHFILL AND THE FOUNDATION, ABUTMENT, AND EARTHFILL SURFACES UPON WHICH IT IS PLACED SHALL CONFORM TO ALL REQUIREMENTS OF THIS SPECIFICATION FOR FOUNDATION PREPARATION, APPROVAL, PLACEMENT, MOISTURE CONTROL, AND COMPACTION.

8. TESTING
DURING THE COURSE OF THE WORK, THE CONTRACTOR WILL PERFORM QUALITY CONTROL TESTS REQUIRED TO IDENTIFY MATERIAL, DETERMINE COMPACTION CHARACTERISTICS, DETERMINE MOISTURE CONTENT, AND DETERMINE DENSITY OF EARTHFILL IN PLACE. TESTS PERFORMED WILL BE SUBMITTED TO THE ENGINEER OF RECORD TO VERIFY THAT THE EARTHFILLS CONFORM TO CONTRACT REQUIREMENTS OF THE SPECIFICATIONS.

DENSITIES OF EARTHFILL REQUIRING CLASS A COMPACTION WILL BE DETERMINED IN ACCORDANCE WITH ASTM D 698, D 1556, D 2167, D 2922, OR D 2937 EXCEPT THAT THE VOLUME AND MOIST WEIGHT OF INCLUDED ROCK PARTICLES LARGER THAN THOSE USED IN THE COMPACTION TEST METHOD SPECIFIED FOR THE TYPE OF FILL WILL BE DETERMINED AND DEDUCTED FROM THE VOLUME AND MOIST WEIGHT OF THE TOTAL SAMPLE BEFORE COMPUTATION OF DENSITY OR, IF USING THE NUCLEAR GAUGE, ADDED TO THE SPECIFIED DENSITY TO BRING IT TO THE MEASURE OF EQUIVALENT COMPOSITION FOR COMPARISON (SEE ASTM D 4718). THE DENSITY SO COMPUTED IS USED TO DETERMINE THE PERCENT COMPACTION OF THE EARTHFILL MATRIX. UNLESS OTHERWISE SPECIFIED, MOISTURE CONTENT IS DETERMINED BY ONE OF THE FOLLOWING METHODS: ASTM D 2216, D 3017, D 4643, D 4944, OR D 4959.

DETECTION POND NOTES
CONSTRUCTION SPECIFICATION - TOP SOIL

1. VEGETATION OF POND BOTTOM - THE WORK CONSISTS OF PLACEMENT OF TOP SOIL ON NEW EARTH EMBANKMENTS, OTHER EARTHFILLS, AND EARTH BACKFILLS REQUIRED BY THE DRAWINGS.

2. MATERIAL - THE TOPSOIL SHALL BE FERTILE SOIL, CONSISTING PRIMARILY OF CLAY AND CLAYEY MATERIALS, WITH A PLASTICITY INDEX GREATER THAN 15, AND SHALL BE FREE OF LARGE ORGANIC OR ROCK MATERIAL.

3. APPLICATION - TOPSOIL SHALL BE PLACED AT GRADES INDICATED ON THE PLANS AND ROLLED TO REDUCE EROSION. PERIODIC INSPECTION ARE REQUIRED AND ADDITIONAL TOPSOIL ADDED AS NEEDED UNTIL VEGETATION HAS ESTABLISHED.

CONSTRUCTION SPECIFICATION - VEGETATION

1. VEGETATION OF EMBANKMENT - THE WORK CONSISTS OF ESTABLISHING VEGETATION ON NEW EARTH EMBANKMENTS, OTHER EARTHFILLS, AND EARTH BACKFILLS REQUIRED BY THE DRAWINGS.

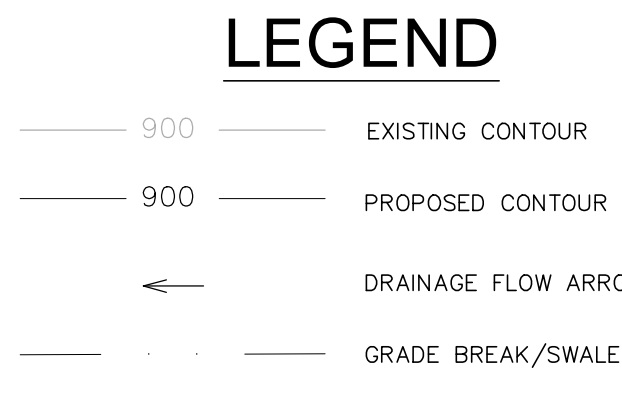
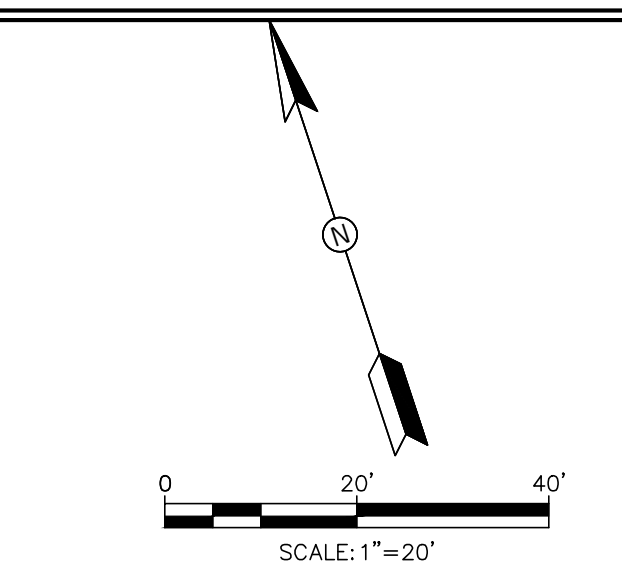
2. MATERIAL - VEGETATION SHALL CONSIST OF "NATIVE SUN TURF GRASS" AS SUPPLIED BY NATIVE AMERICAN SEED IN JUNCTION, TX, CONSISTING OF 34% BLUE GRAMA AND 66% BUFFALO GRASS, OR ENGINEER APPROVED EQUAL. SEED MIXTURE SHALL CONSIST OF A PURE LIVE SEED OF 90-95%.

3. APPLICATION - THE SEED MIXTURE SHALL BE INSTALLED PER DISTRIBUTORS RECOMMENDATIONS AT A RATE OF 1 LB PER 400 SQ FT. SEED MIXTURE SHALL BE WATERED AS REQUIRED UNTIL VEGETATION IS ESTABLISHED.

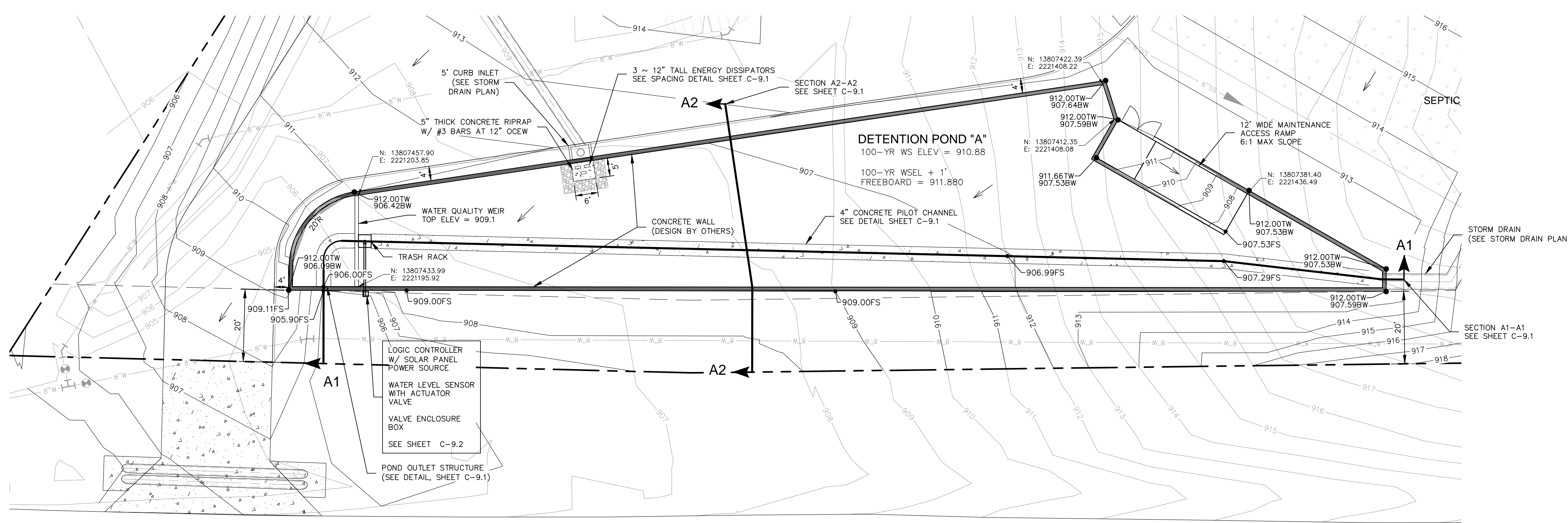
DRAINAGE INFRASTRUCTURE MAINTENANCE AND MONITORING GUIDELINES

- SEASONAL MOWING AND LAWN CARE - IF THE DETENTION POND IS MADE UP OF TURF GRASS, IT SHOULD BE MOWED AS NEEDED TO LIMIT VEGETATION HEIGHT TO 18 INCHES, USING A MULCHING MOWER (OR REMOVAL OF CLIPPINGS). IF NATIVE GRASSES ARE USED, THE POND MAY REQUIRE LESS FREQUENT MOWING, BUT A MINIMUM OF TWICE ANNUALLY. REGULAR MOWING SHOULD ALSO INCLUDE WEED CONTROL PRACTICES, HOWEVER HERBICIDE USE SHOULD BE KEPT TO A MINIMUM. HEALTHY GRASS CAN BE MAINTAINED WITHOUT USING FERTILIZERS BECAUSE RUNOFF USUALLY CONTAINS SUFFICIENT NUTRIENTS. IRRIGATION OF THE SITE CAN HELP ASSURE A DENSE AND HEALTHY VEGETATIVE COVER.
INSPECTION - INSPECT DETENTION POND AT LEAST TWICE ANNUALLY FOR EROSION OR DAMAGE TO VEGETATION. HOWEVER, ADDITIONAL INSPECTION AFTER PERIODS OF HEAVY RUNOFF IS MOST DESIRABLE. MORE FREQUENT INSPECTIONS OF THE GRASS COVER DURING THE FIRST FEW YEARS AFTER ESTABLISHMENT WILL HELP TO DETERMINE IF ANY PROBLEMS ARE DEVELOPING, AND TO PLAN FOR LONG-TERM RESTORATIVE MAINTENANCE NEEDS. BARE SPOTS AND AREAS OF EROSION IDENTIFIED DURING SEM-ANNUAL INSPECTIONS MUST BE REPLANTED AND RESTORED TO MEET SPECIFICATIONS.
DEBRIS AND LITTER REMOVAL - THE DETENTION POND SHOULD BE KEPT FREE OF OBSTRUCTIONS TO REDUCE FLOATABLES BEING FLUSHED DOWNSTREAM AND FOR AESTHETIC REASONS. THE NEED FOR THIS PRACTICE IS DETERMINED THROUGH PERIODIC INSPECTION, BUT SHOULD BE PERFORMED NO LESS THAN 2 TIMES PER YEAR.
SEDIMENT REMOVAL - SEDIMENT MAY ACCUMULATE WITHIN THE DETENTION POND, PREVENTING UNIFORM OVERLAND FLOW. SEE ATTACHED EXHIBIT FOR SEDIMENT MARKER LOCATION NEAR THE POND OUTFALL. SEDIMENT IS TO BE REMOVED WHEN THE ACCUMULATED OR AT LEAST EVERY 10 YEARS.

IMPERVIOUS CORE COMPACTION NOTE
COMPACTED CLAY CORE TO BE PLACED A MINIMUM OF 2' BELOW EXISTING GRADE ALONG THE ENTIRE LENGTH OF THE BERM. MATERIAL TO HAVE A PI OF 30 OR GREATER, MINIMUM COMPACTED DRY DENSITY OF 90% AND GROUND CONTENT NO MORE THAN 5% BY WEIGHT LARGER THAN NO.4 SEIVE.



Drawing Name: R:\Projects\1863\1863 Office Warehouse\Construction\Drawings\C-9.1 DETENTION POND CROSS-SECTIONS.dwg User: chadfraser@hobas Apr 10, 2024 - 8:37am



CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:
New Braunfels Utilities 830-629-8400
Spectrum Cable 830-625-3408
Centerpoint Gas 830-643-6434
Robert Sanders 830-643-6903
Damaged Line 888-876-5786
AT&T Telephone 830-303-1333
Erick White PM 210-283-1706
Scott McBrearty (Construction) 210-658-4886
Texas One Call 830-545-6005

C.P.E. LOCATOR
CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR
THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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SOUTH TEX STEEL COMPANY
1070 HIGHWAY 46 SOUTH
NEW BRAUNFELS, TX , 78130
FM 1863 OFFICE WAREHOUSE
FM 1863
NEW BRAUNFELS, TX , 78132

DETECTION POND PLAN & NOTES

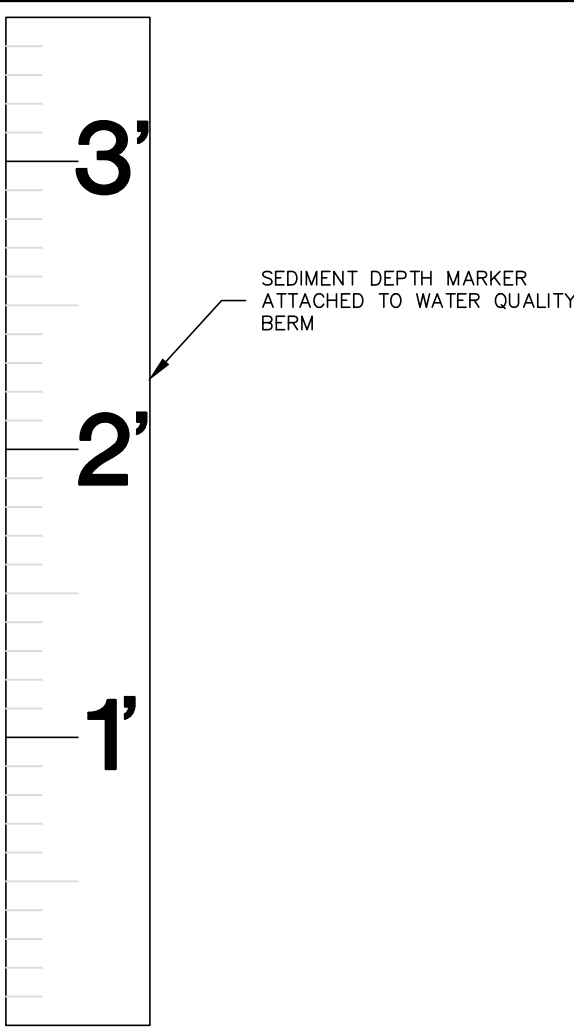
SHEET C-9.0

Table with 3 columns: NO, DATE, ISSUES AND REVISIONS

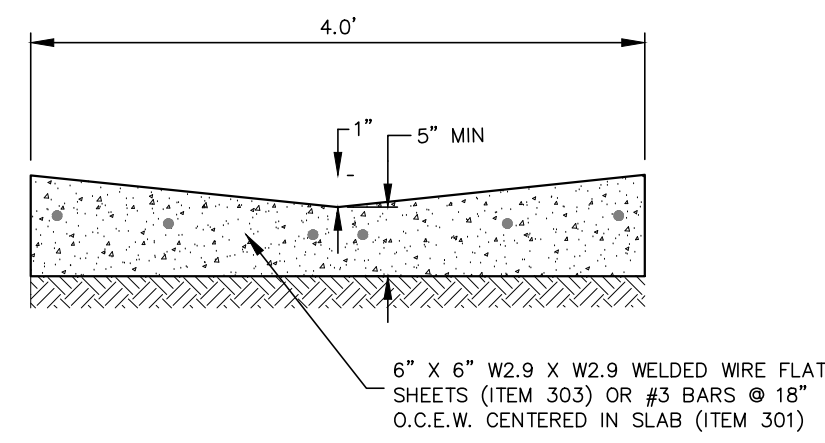


2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

PERMIT SET



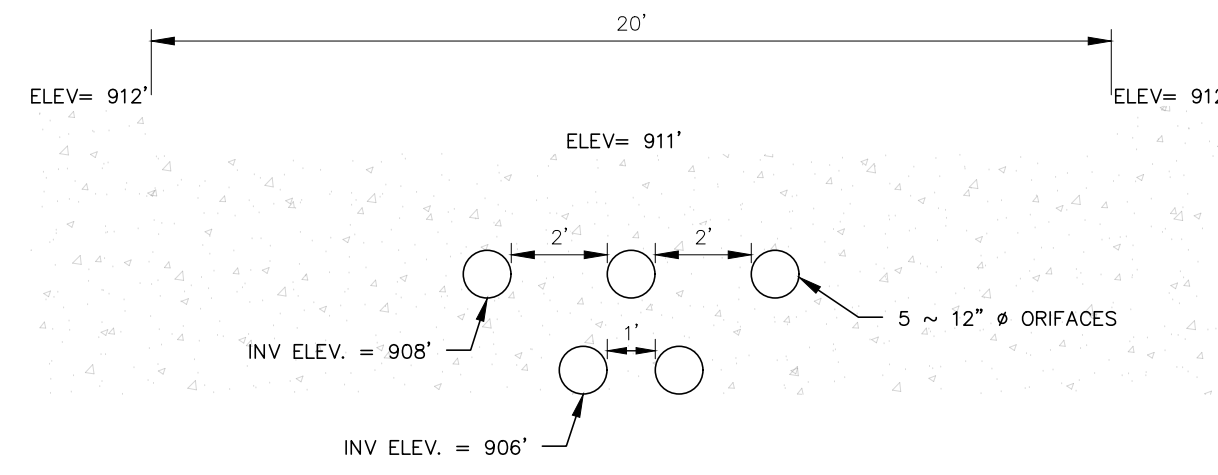
SEDIMENT DEPTH MARKER



PILOT CHANNEL DETAIL

NOT TO SCALE

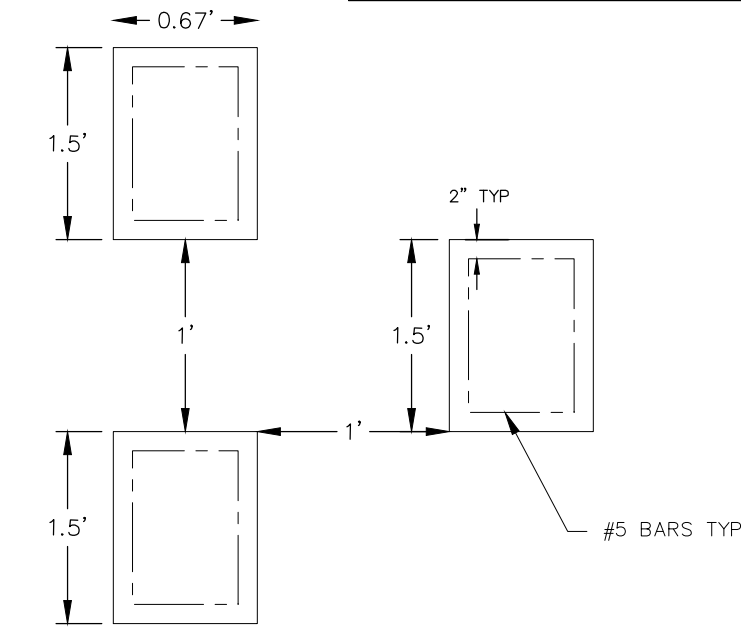
Overflow Weir A Calculations	Q (cfs)
Proposed (undetained) 25-yr Flow to Pond	37.96
Output of a 20' Emergency Weir	52.00



POND OUTLET STRUCTURE

NOT TO SCALE

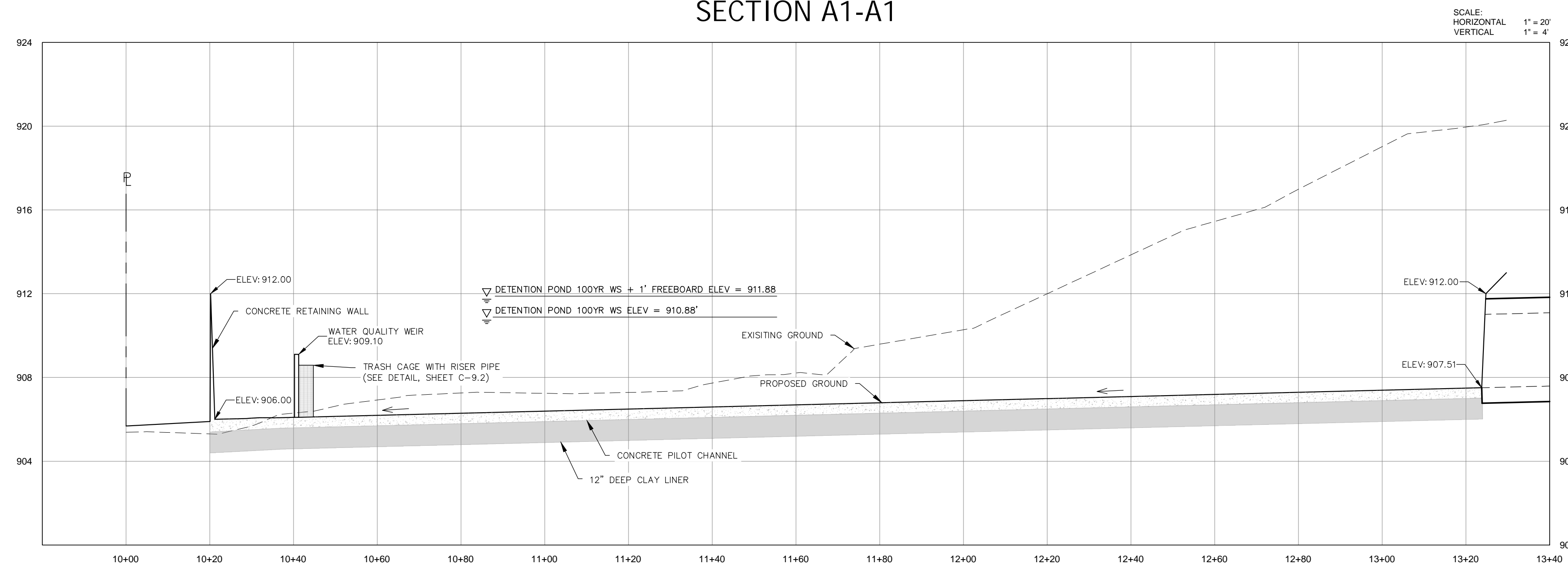
SEE SHEET C-9.0 - DETENTION POND PLAN & NOTES FOR SECTION MARKER LOCATIONS



ENERGY DISSIPATOR SPACING DETAIL

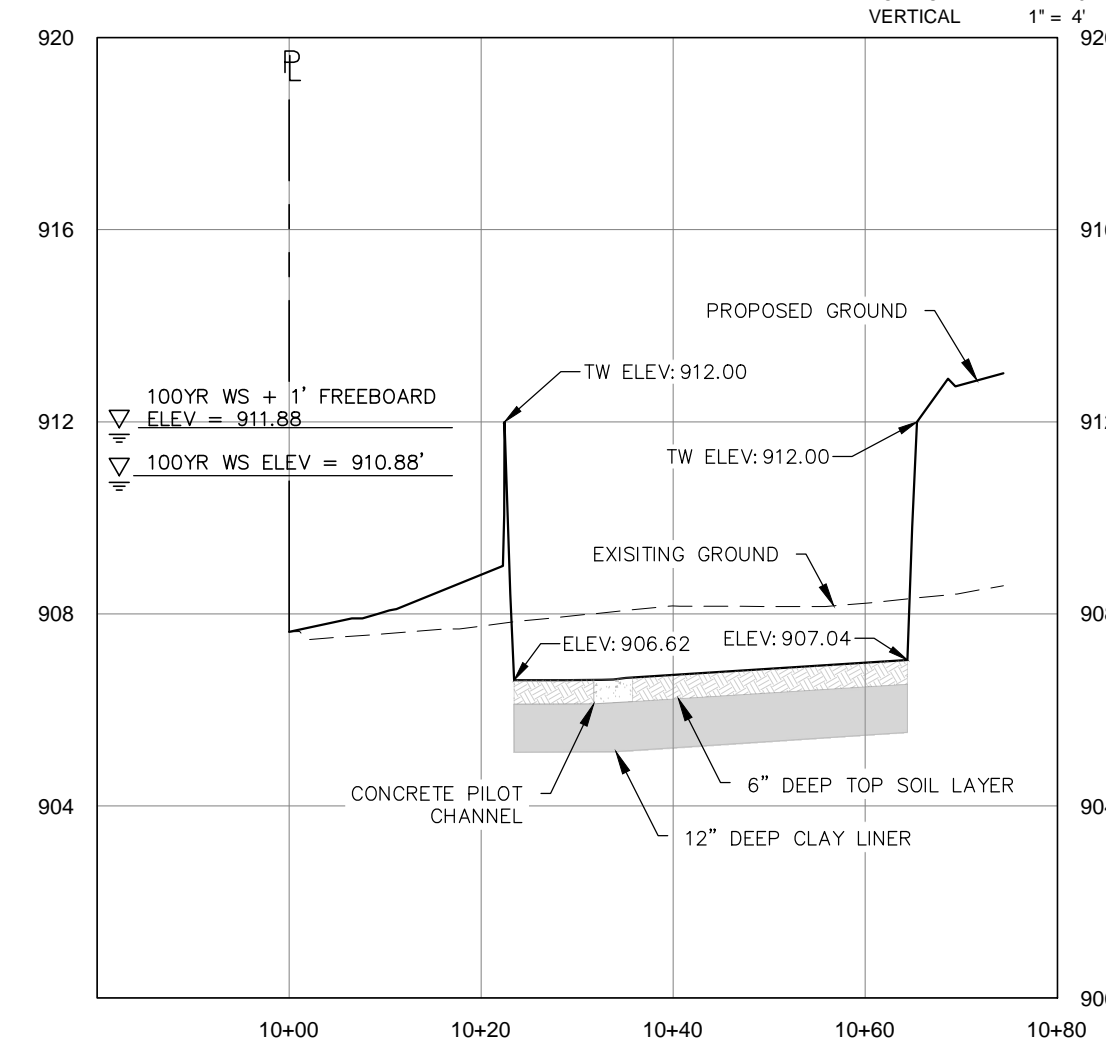
NOT TO SCALE

SECTION A1-A1



SCALE:  
HORIZONTAL 1" = 20'  
VERTICAL 1" = 4'

SECTION A2-A2



SCALE:  
HORIZONTAL 1" = 20'  
VERTICAL 1" = 4'



SOUTH TEX STEEL COMPANY  
1070 HIGHWAY 46 SOUTH  
NEW BRAUNFELS, TX , 78130

FM 1863 OFFICE WAREHOUSE  
FM 1863  
NEW BRAUNFELS, TX , 78132

DETENTION POND  
CROSS-SECTIONS

SHEET  
C-9.1

NO	DATE	ISSUES AND REVISIONS



2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351

PERMIT SET

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Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
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**Agent Authorization Form**  
For Required Signature  
Edwards Aquifer Protection Program  
Relating to 30 TAC Chapter 213  
Effective June 1, 1999

I \_\_\_\_\_ Randy Bade \_\_\_\_\_  
Print Name  
\_\_\_\_\_ Managing Partner \_\_\_\_\_  
Title - Owner/President/Other  
of \_\_\_\_\_ 1863 Properties, LLC \_\_\_\_\_  
Corporation/Partnership/Entity Name  
have authorized \_\_\_\_\_ Shane Klar, PE \_\_\_\_\_  
Print Name of Agent/Engineer  
of \_\_\_\_\_ INK Civil \_\_\_\_\_  
Print Name of Firm

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

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.
4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.
5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

[Handwritten Signature]  
Applicant's Signature

3.25.24  
Date

THE STATE OF Texas §

County of Comal §

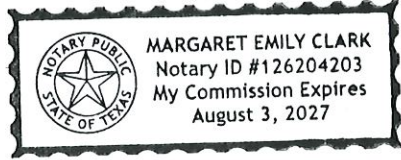
BEFORE ME, the undersigned authority, on this day personally appeared Randy Bode known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 25<sup>th</sup> day of March, 2024.

Margaret Clark  
NOTARY PUBLIC

Margaret Clark  
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: Aug 03, 2027



# Application Fee Form

## Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: 1863 Office Warehouse

Regulated Entity Location: 1028 Bulls Eye Lane, New Braunfels, TX 78132

Name of Customer: 1863 Properties, LLC

Contact Person: Randy Bade

Phone: 830-629-2443

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

12100 Park 35 Circle

Mail Code 214

Building A, 3rd Floor

P.O. Box 13088

Austin, TX 78753

Austin, TX 78711-3088

(512)239-0357

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

Recharge Zone

Contributing Zone

Transition Zone

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
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	6.35 Acres	\$ 5000
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: 4/29/2024

# 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*

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

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

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

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

### *Exception Requests*

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

### *Extension of Time Requests*

<i>Project</i>	<i>Fee</i>
Extension of Time Request	\$150



# TCEQ Core Data Form

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

## SECTION I: General Information

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

## SECTION II: Customer Information

<b>4. General Customer Information</b>		<b>5. Effective Date for Customer Information Updates</b> (mm/dd/yyyy)	
<input checked="" type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)			
<i>The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).</i>			
<b>6. Customer Legal Name</b> (If an individual, print last name first: eg: Doe, John)		<i>If new Customer, enter previous Customer below:</i>	
1863 PROPERTIES, LLC			
<b>7. TX SOS/CPA Filing Number</b>	<b>8. TX State Tax ID</b> (11 digits)	<b>9. Federal Tax ID</b> (9 digits)	<b>10. DUNS Number</b> (if applicable)
0805247169	32091795636		N/A
<b>11. Type of Customer:</b>	<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"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship	<input checked="" type="checkbox"/> Other: Limited Liability Company	
<b>12. Number of Employees</b>		<b>13. Independently Owned and Operated?</b>	
<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	
<b>14. Customer Role</b> (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following			
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Other: <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant			
<b>15. Mailing Address:</b>	614 DIDGERIDOO TRAIL		
City	NEW BRAUNFELS	State	TX
ZIP	78132	ZIP + 4	3916
<b>16. Country Mailing Information</b> (if outside USA)		<b>17. E-Mail Address</b> (if applicable)	
		Randy@southtexsteel.com	
<b>18. Telephone Number</b>	<b>19. Extension or Code</b>	<b>20. Fax Number</b> (if applicable)	

(830) 629 - 2443

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### SECTION III: Regulated Entity Information

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

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

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

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

FM 1863 OFFICE WAREHOUSE

**23. Street Address of the Regulated Entity:**

1028 FM 1863

(No PO Boxes)

City	NEW BRAUNFELS	State	TX	ZIP	78132	ZIP + 4	4673
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**24. County**

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

**25. Description to Physical Location:**

**26. Nearest City**

**State**

**Nearest ZIP Code**

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

**27. Latitude (N) In Decimal:**

29.712197

**28. Longitude (W) In Decimal:**

-98.203600

Degrees

Minutes

Seconds

Degrees

Minutes

Seconds

29

42

43.9

98

12

13.0

**29. Primary SIC Code**

**30. Secondary SIC Code**

**31. Primary NAICS Code**

**32. Secondary NAICS Code**

(4 digits)

(4 digits)

(5 or 6 digits)

(5 or 6 digits)

6552

1541

237210

236220

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

Warehouse Construction

**34. Mailing Address:**

614 DIDGERIDOO TRAIL

**Address:**

City	NEW BRAUNFELS	State	TX	ZIP	78132	ZIP + 4	3916
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**35. E-Mail Address:**

Randy@southtexsteel.com

**36. Telephone Number**

**37. Extension or Code**

**38. Fax Number** (if applicable)

(830) 629 - 2443

( ) -

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




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

### **SECTION IV: Preparer Information**

<b>40. Name:</b>	Chad Friesenhahn		<b>41. Title:</b>	Graduate Engineer
<b>42. Telephone Number</b>	<b>43. Ext./Code</b>	<b>44. Fax Number</b>	<b>45. E-Mail Address</b>	
(830) 358 - 7127		( ) -	chadfriesenhahn@ink-civil.com	

### **SECTION V: Authorized Signature**

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

<b>Company:</b>	INK Civil	<b>Job Title:</b>	Professional Engineer	
<b>Name (In Print):</b>	Shane Klar, PE	<b>Phone:</b>	(830) 358 - 7127	
<b>Signature:</b>			<b>Date:</b>	4/29/2024