

**WATER POLLUTION ABATEMENT PLAN**

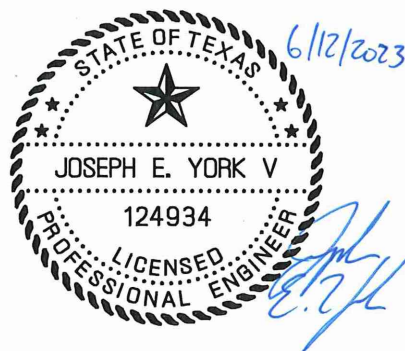
**FOR**

**NEW BRAUNFELS EXECUTIVE STORAGE**

**Regulated Entity ID: RNXXXXXXXXXX**

**Additional ID No: XXXXXXXXX**

**Prepared for  
New Braunfels Executive Storage, LLC**



**JUNE 2023  
QE Job No. 17942-0002-00**

# **EDWARDS AQUIFER APPLICATION COVER PAGE SECTION**

# 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> New Braunfels Executive Storage					<b>2. Regulated Entity No.:</b>				
<b>3. Customer Name:</b> Jorden Mahler					<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)	<input type="radio"/> Residential	<input checked="" type="radio"/> Non-residential				<b>8. Site (acres):</b>		9.00	
<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 River-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.

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

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

Joseph E. York, P.E.

Print Name of Customer/Authorized Agent

6/12/2023

Signature of Customer/Authorized Agent

Date

**\*\*FOR TCEQ INTERNAL USE ONLY\*\***

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

# **GENERAL INFORMATION SECTION**

# 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.***

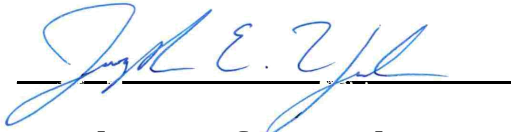
## Signature

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: Joseph E. York, P.E.

Date: 6/12/2023

Signature of Customer/Agent:



## Project Information

1. Regulated Entity Name: New Braunfels Executive Storage
2. County: Comal
3. Stream Basin: Dry Comal Creek
4. Groundwater Conservation District (If applicable): Comal Trinity GCD, Edwards Aquifer Authority
5. Edwards Aquifer Zone:  
☒ Recharge Zone  
☐ Transition Zone
6. Plan Type:  
☒ WPAP  
☐ SCS  
☐ Modification  
☐ AST

☐ UST

☐ Exception Request

7. Customer (Applicant):

Contact Person: Jorden Mahler

Entity: New Braunfels Executive Storage

Mailing Address: 575 Orchard Way

City, State: New Braunfels, TX

Zip: 78132

Telephone: (281)384-8632

FAX: \_\_\_\_\_

Email Address: jordenmahler@gmail.com

8. Agent/Representative (If any):

Contact Person: Joseph E. York, P.E.

Entity: Quiddity Engineering, LLC

Mailing Address: 4350 Lockhill Selma Rd, Suite 100

City, State: San Antonio, TX

Zip: 78249

Telephone: (210) 546-0084

FAX: \_\_\_\_\_

Email Address: jyork@quiddity.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.

The site is located on SH 46 between the house numbers 4715 and 4575, approximately 5,540' northwest of FM 2722 and 400' southeast of Resource Drive.

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: 06/02/2023

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

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

15. Existing project site conditions are noted below:

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

### ***Prohibited Activities***

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

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

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

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

### ***Administrative Information***

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

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

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

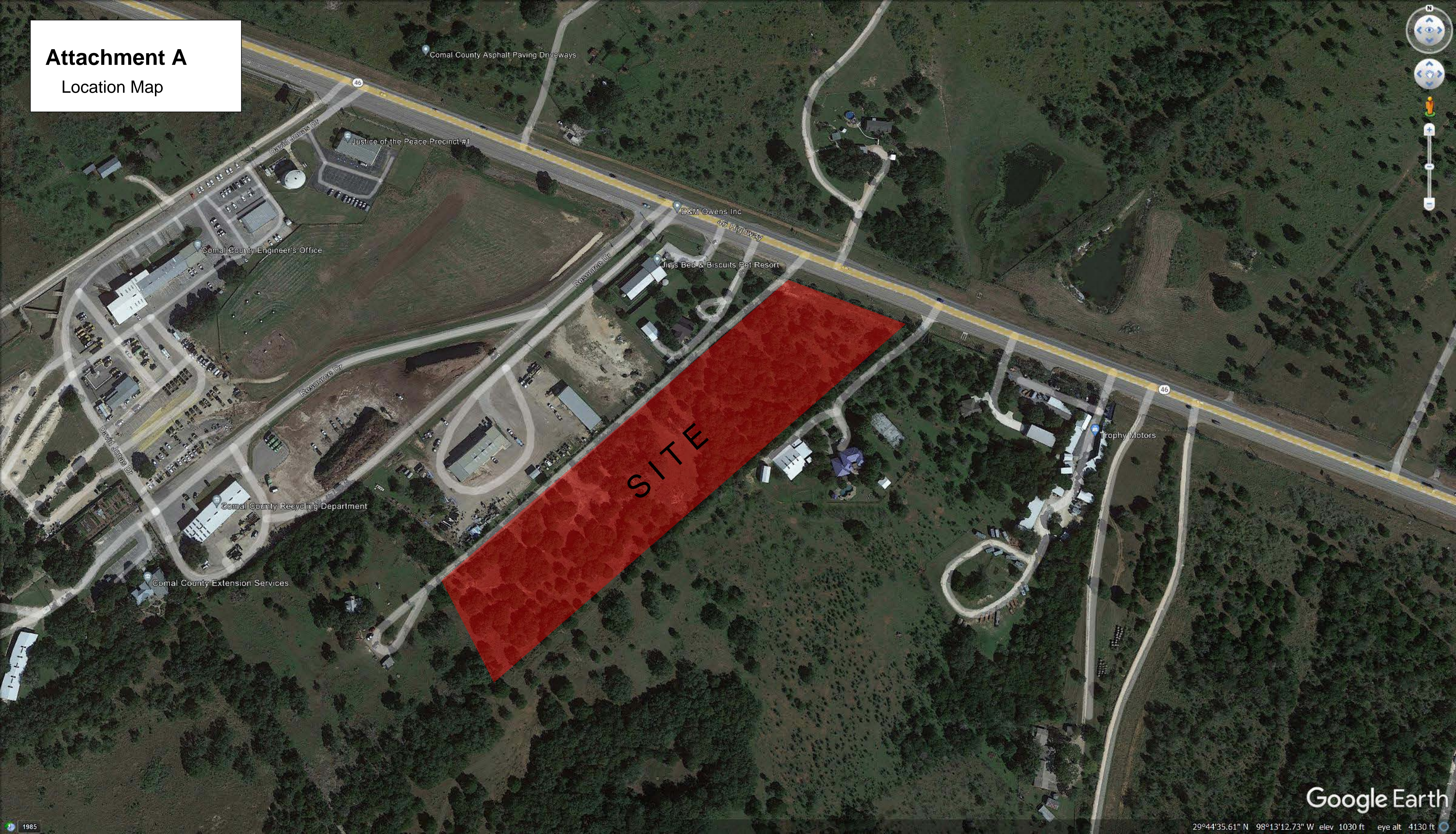
- ☐ TCEQ cashier
- ☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- ☒ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

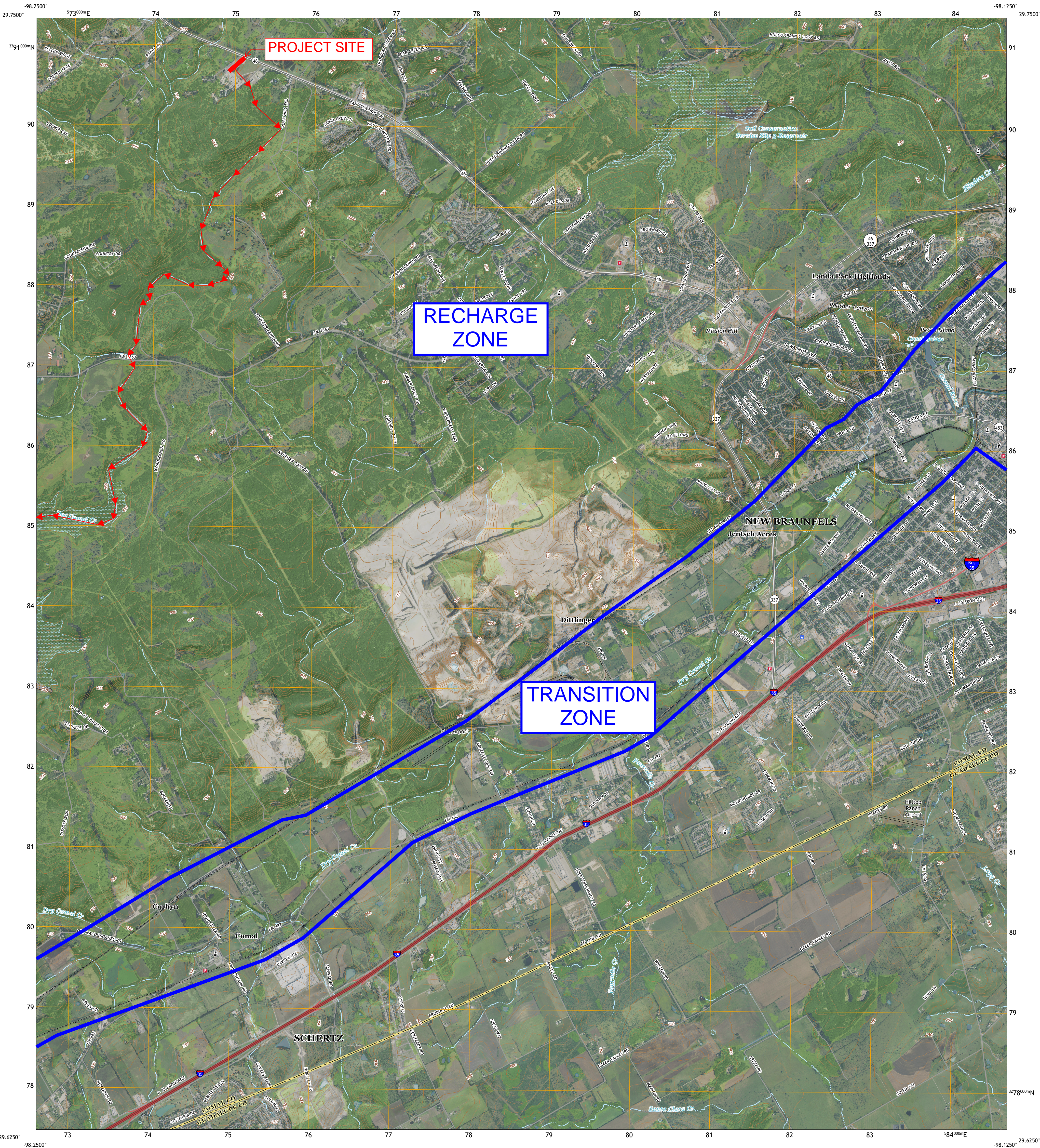
20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies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

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

# Attachment A

## Location Map

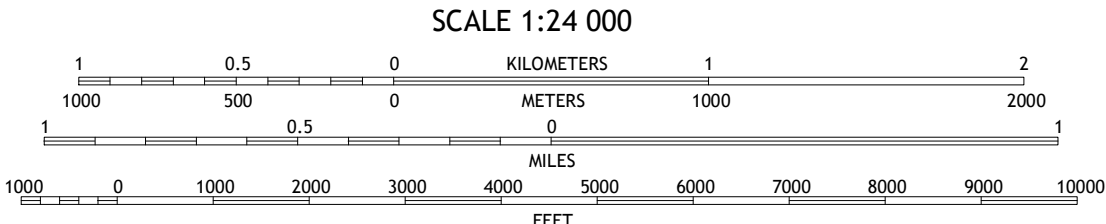
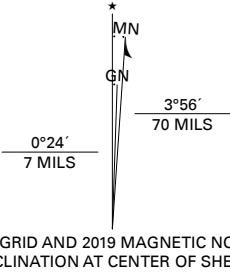




Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 14R.  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, September 2016 - November 2016  
Roads.....U.S. Census Bureau, 2015  
Names.....GNIS, 1979 - 2018  
Hydrography.....National Hydrography Dataset, 2000 - 2018  
Contours.....National Elevation Dataset, 2003 - 2004  
Boundaries.....Multiple sources; see metadata file 2016 - 2017  
Wetlands.....FWS National Wetlands Inventory 1983



1	2	3
4	5	6
7	8	9

ADJOINING QUADRANGLES

1 Smith Valley  
2 Sattler  
3 Hunter  
4 Bat Cave  
5 New Braunfels East  
6 Schertz  
7 Marion  
8 McQueeney

ROAD CLASSIFICATION	
Expressway	Local Connector
Secondary Hwy	Local Road
Ramp	4WD
Interstate Route	US Route
	State Route



## **Attachment C**

### **PROJECT DESCRIPTION**

The New Braunfels Executive Storage facility is a 9.00-acre commercial lot, located at 4655 SH 46, Comal County, TX in the City of New Braunfels ETJ. The site currently consists of cleared but undeveloped land and is within the Edwards Aquifer Recharge Zone. No portion of this site is located within the floodplain according to FEMA FIRM Panel #48091C0430F, dated September 2, 2009.

The proposed use of the site will be a storage facility with both temperature-controlled and ambient storage units, open parking spaces, enclosed boat and RV storage, and covered boat and RV storage. The impervious cover of the site will be 7.75 acres, or 86.11%. The total impervious area that will be treated for TSS removal is 6.71 acres.

The detention pond constructed onsite will also be utilized for storm runoff treatment via a batch detention system. Stormwater will be directed to the permanent BMP via a combination of sheet flow and a series of concrete channels throughout the site as shown in the Proposed Drainage Area Map (Appendix A). The batch detention system is designed to treat a total of 6.71 acres of impervious cover while the remaining will flow east to the existing roadside ditch.

# **GEOLOGICAL ASSESSMENT SECTION**

# 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.

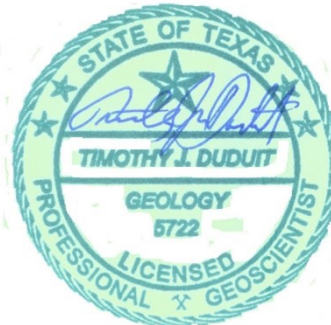
Print Name of Geologist: Timothy Jay Duduit

Telephone: 2108876676

Date:

Representing: Timothy Jay Duduit, #5722 (number)

Signature of Geologist:



G or TBPE registration

**Regulated Entity Name:** New Braunfels Executive Storage, LLC

## Project Information

1. Date(s) Geologic Assessment was performed: January 16, 2023

2. Type of Project:

☒ WPAP  
☐ SCS

☐ AST  
☐ UST

3. Location of Project:

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

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

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

Soil Name	Group*	Thickness(feet)
Rumple-Comfort rubbly association, 1-8% slopes	D	0-1

Soil Name	Group*	Thickness(feet)

*\* Soil Group Definitions (Abbreviated)*

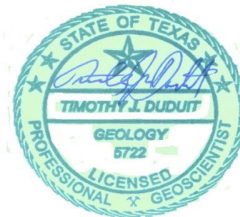
- A. Soils having a high infiltration rate when thoroughly wetted.
- B. Soils having a moderate infiltration rate when thoroughly wetted.
- C. Soils having a slow infiltration rate when thoroughly wetted.
- D. Soils having a very slow infiltration rate when thoroughly wetted.

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" = 50'  
Site Geologic Map Scale: 1" = 50'  
Site Soils Map Scale (if more than 1 soil type): 1" = \_\_\_\_\_'
9. Method of collecting positional data:
☒ Global Positioning System (GPS) technology.  
☐ Other method(s). Please describe method of data collection: \_\_\_\_\_

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.
12. ☐ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.
- ☒ Geologic or manmade features were not discovered on the project site during the field investigation.
13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.
- ☐ There are 0 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
- ☐ The wells are not in use and have been properly abandoned.
- ☐ The wells are not in use and will be properly abandoned.
- ☐ The wells are in use and comply with 16 TAC Chapter 76.
- ☒ There are no wells or test holes of any kind known to exist on the project site.

### ***Administrative Information***

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



**ATTACHMENT B  
SITE SPECIFIC  
STRATIGRAPHIC COLUMN**

System	Group	Formation	Function	Member or Informal Unit	Function	Thickness Feet	Lithology	Hydrostratigraphy
Cretaceous	Edwards	Person	AQ	Leached and collapsed members	AQ	60 - 90	Limestone and dolomite. Recrystallized limestone occurs predominantly in the freshwater zone of the Edwards Aquifer. Dolomite occurs in the saline zone.	Tidal land supratidal deposits, conforming porous beds of collapsed breccias and burrowed biomicrites. Zones of honeycombed porosity are laterally extensive.
				Regional dense bed	CB	20 - 30	Dense argillaceous limestone.	Deep water limestone. Negligible permeability and porosity. Laterally extensive bed that is a barrier to vertical flow in the Edwards Aquifer.
Cretaceous	Edwards	Kainer (Edwards Aquifer)	AQ	Grainstone	AQ	50 - 60	Limestone, hard, millolid grainstone with associated beds of marly mudstones and wackestones.	Shallow water, lagoonal sediment deposited in a moderately high energy environment. A cavernous honeycombed layer commonly occurs near the middle of the subdivision. Interparticle porosity is locally significant.
				Dolomitic (includes Kirschberg evaporite)	AQ	150 - 200	Limestone, calcified dolomite, and dolomite. Leached, evaporitic rocks with breccias toward top. Dolomite occurs principally in the saline zone of the aquifer.	Supratidal deposits towards top. Mostly tidal to subtidal deposits below. Very porous and permeable zones formed by boxwork porosity in breccias or by burrowed zones.
				Basal Nodular Bed	CB	40 - 70	Limestone, hard, dense clayey; nodular, mottled, stylolitic.	Subtidal deposits. Negligible porosity and permeability.
	Trinity	Glen Rose	CB	Upper part of Glen Rose	CB	300 - 400	Limestone, dolomite, shale and marl. Alternating beds of carbonates and marls. Evaporites and dolomites toward top; variable bedding.	Supratidal and shoreline deposits towards top. Tidal to subtidal deposits below. Unit has little vertical permeability but has moderate lateral permeability.
				Lower part of Glen Rose	AQ	200 - 250	Massive limestone with few thin beds of marl.	Marine deposits - caprinid reef zones and porous and permeable honeycomb porosity near the base.

AQ - Aquifer

CB - Confining Bed

(Modified from U.S. Geological Survey Open-File Report 83-537, R. W. Maclay and T. A. Small, 1984)

## **ATTACHMENT C**

### **Site Specific Geology and Soil Characteristics**

**New Braunfels Executive Storage, LLC, 4671 Highway 46, New Braunfels, Texas**

#### **Area Geologic Setting**

The site is located in the Balcones fault zone, which separates the Edwards Plateau from the Gulf Coastal Plain physiographic province. The Balcones fault zone is a series of steep angle, normal faults that generally strike northeast-southwest. Active movement in the Balcones fault zone ceased during the Miocene Epoch. The intense, close spaced faulting along the Balcones fault zone combined with the various rock types of the upper Cretaceous section exposed in central Texas makes rapid changes in rock and soil type the norm rather than the exception.

The depositional environment and lithology of the Edwards Group limestones changes from Kinney County in southwest Texas to Hays County east of San Antonio. The site is located in the San Marcos Arch depositional province.

The entire Edwards Formation is approximately 350 feet thick in the area. The rocks that comprise the Edwards Group include hard, dense calcium carbonate limestone and some magnesium carbonate limestone called dolomite. These limestones are made up of the shells of invertebrate animals that inhabited the shallow seas of the lower Cretaceous period. These shells range from large, reef forming clams to microscopic foraminifers that secrete shells of the mineral calcite or aragonite, which is composed of calcium carbonate. Aragonite shells are more soluble in water, especially the slightly acid, normal rainwater that contains a weak carbonic acid. The wide ranges of specific minerals making up the shells that compose the limestone are soluble in water in differing amounts. The preferential dissolution of fossil shells gives rise to many of the geologic features observed in rocks of the Edwards Group limestone.

The intense faulting and fracturing of the limestone rocks in the Balcones fault zone and the varying ability of minerals to be dissolved by groundwater lead to the formation of the geologic features that are mapped within the Edwards Aquifer Recharge Zone. The combination of faulting, fracturing, rock dissolution, mineral deposition, erosion, and geologic time produce the caves, closed depressions, fractured rock outcrops, fault zones, solution cavities, and vugular rock features which are mapped during a Geologic Assessment. The characteristics and physical settings of these geologic features are described to assign a relative infiltration rate and potential recharge ranking to assist in managing the resource of the Edwards Aquifer.

#### **Site Geology**

The project site is located in the outcrop of the Edwards Group, according to the Texas Geology Web Map Viewer. The project site is also shown to be underlain by the outcrop of the Person Formation, as shown on the National Geologic Map Database map (<https://ngmdb.usgs.gov/mapview/?center=-98.221,29.743&zoom=15>) attached to this report (Geologic Location Map). Several outcrops near the site showed it to be underlain by the light gray Cretaceous-age Person Formation.

Geologic mapping of the project site confirmed the basic stratigraphy and aerial photographs and geologic mapping confirmed that no faults occurred on the project site.

The soils at the site include the *Rumple-Comfort rubbly association*, 1-8% slopes according to the USDA Web soil survey (<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>). The thickness of the soils is estimated from outcrops in the area of the site.

### **Site Structural Geology**

The project site appears to be unaffected by faulting, as no evidence of offset was noted over the site during the field mapping or aerial photograph review.

### **Geologic Features**

The site has been clear-cut with mulched tree debris covering most of the area. The soil cover on the site appears to be thin but contiguous and no geologic features were noted on the site. Due the type D soil cover, no outcrops of the Person Formation were observed at the project site. No geologic features were observed on the project site. Photos of the site as it appeared during the assessment are attached to this section.

In general, there appears to be little potential for fluid movement from the surface of the project site to the Edwards Aquifer due to the lack of karstic features, the lack of rock outcrops at the site, and the presence of Group D clay soil across the project site. Pictures of the site are presented below.

Aerial view of the site from the Highway 46 perspective.



Aerial view of site looking towards Highway 46 from the back of the site.





# **APPLICATION FORM SECTION**

# 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.*

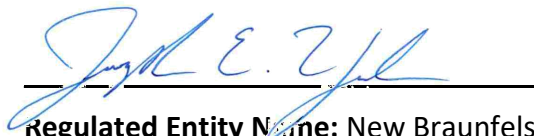
## Signature

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: Joseph E. York, P.E.

Date: 6/12/2023

Signature of Customer/Agent:



Regulated Entity Name: New Braunfels Executive Storage

## 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): 9.00

3. Estimated projected population: N/A

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

**Table 1 - Impervious Cover Table**

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	117,690	$\div 43,560 =$	2.70
Parking	199,407	$\div 43,560 =$	4.58
Other paved surfaces	20,665	$\div 43,560 =$	0.47
Total Impervious Cover	337,762	$\div 43,560 =$	7.75

**Total Impervious Cover 7.75  $\div$  Total Acreage 9.00 X 100 = 86.11% 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.

$L \times W =$  \_\_\_\_\_  $\text{Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} =$  \_\_\_\_\_ acres.

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

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

$L \times W =$  \_\_\_\_\_  $\text{Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} =$  \_\_\_\_\_ acres.

Pavement area \_\_\_\_\_ acres  $\div$  R.O.W. area \_\_\_\_\_ acres  $\times 100 =$  \_\_\_\_\_ % 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:

_____ % Domestic	_____ Gallons/day
_____ % Industrial	_____ Gallons/day
_____ % Commingled	_____ Gallons/day
TOTAL gallons/day <u>N/A</u>	

15. Wastewater will be disposed of by:

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

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

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

☐ Sewage Collection System (Sewer Lines):

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

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

☐ The SCS was previously submitted on \_\_\_\_\_.

☐ The SCS was submitted with this application.

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

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

☐ Existing.

☐ Proposed.

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

## **Site Plan Requirements**

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

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

Site Plan Scale: 1" = 60'.

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 FIRM Panel #48091C0430F, dated September 2, 2009

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

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

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

☐ There are \_\_\_\_\_ (#) 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 SURFACE WATER QUALITY**

Potential sources of contamination could be from the following:

#### **Construction Phase**

1. Fluids may be dropped from the use of construction equipment.
2. Fluids may be dropped from vehicles entering the site during construction.
3. Fluids may be dropped or spilled by construction workers constructing on site.
4. Mud or dirt may be tracked onto streets from construction areas.
5. Fine particles may be washed from non-stabilized surfaces.
6. Debris from the site may leave the site by person, vehicle, or construction equipment.
7. Miscellaneous litter may be left on site from construction workers on site.

#### **Post Construction**

1. Fluids from vehicles or maintenance equipment that utilizes the site.
2. Landscape chemicals to maintain landscape features.
3. Litter that comes from the general public within the site or in the surrounding areas.

## **Attachment B**

### **VOLUME AND CHARACTER OF STORMWATER**

#### **Existing Conditions**

The subject tract currently has no storm sewer infrastructure in place along with no temporary or permanent BMPs. The existing conditions of the 9.00-acre tract consists of cleared, but undeveloped land and is located within the Edwards Aquifer Recharge Zone. The average slope of the site is approximately 1.80%. The existing flow for the site for a 100-year storm event is 52.83 cubic feet per second, with a high point in the center of the site, with 36.67 cubic feet per second going to the southwest and 16.16 cubic feet per second flowing to an existing roadside ditch to the east. Refer to the Existing Drainage Area Map at the end of this report as a part of the construction plans in Appendix B.

#### **Proposed Conditions**

Stormwater will sheet flow across the site to a batch detention pond with a 1-foot by 206-foot spreader berm to evenly discharge runoff. The proposed conditions consist of the construction of a storage facility that includes temperature-controlled and ambient storage units, open parking spaces, enclosed boat and RV storage, as well as covered boat and RV storage. The proposed slopes will range from 0.50% to 5.00% across the site, with slopes less than 1% being channelized to direct flow. The flow for the proposed site for a 100-year storm event will be 81.51 cubic feet per second, and it will be split similarly to that of the existing with 66.51 cubic feet per second directed to the detention pond located in the southwest corner and 15.00 cubic feet per second flowing into the roadside ditch to the east. A batch detention system is being utilized within the site's detention pond and is designed to capture and treat stormwater runoff. Refer to the Proposed Drainage Area Map at the end of this report as Appendix A.



## **Attachment C**

### **SUITABILITY LETTER FROM AUTHORIZED AGENT**

The plans are currently in review at Comal County. The Suitability Letter will be included once approval is received.

## **Attachment D**

### **EXCEPTION TO THE REQUIRED GEOLOGIC ASSESSMENT**

The Geologic Assessment is included in this report.

# **TEMPORARY STORMWATER SECTION**

# 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.***

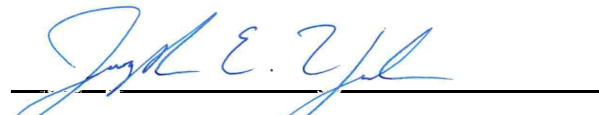
## Signature

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: Joseph E. York, P.E.

Date: 6/12/2023

Signature of Customer/Agent:



Regulated Entity Name: New Braunfels Executive Storage

## 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:  
Gasoline/Diesel

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: Dry Comal Creek

### ***Temporary Best Management Practices (TBMPs)***

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

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

- ☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
  - ☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
  - ☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
  - ☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
8. ☒ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
- ☐ **Attachment E - Request to Temporarily Seal a Feature.** A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
- ☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.
9. ☒ **Attachment F - Structural Practices.** A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.
10. ☒ **Attachment G - Drainage Area Map.** A drainage area map supporting the following requirements is attached:
- ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
  - ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
  - ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
  - ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

- ☒ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
11. ☐ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
- ☒ N/A
12. ☒ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

## ***Soil Stabilization Practices***

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

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

- 18. ☒ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

### ***Administrative Information***

- 20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
- 21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

## Attachment A

### SPILL RESPONSE ACTIONS

From TCEQ Section 30 TAC 327.5.

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1. The responsible person shall immediately abate and contain the spill or discharge and cooperate fully with the executive director and the local incident command system. The responsible person shall also begin reasonable response actions which may include, but are not limited to, the following actions:
  - arrival of the responsible person or response personnel hired by the responsible person at the site of the discharge or spill;
  - initiating efforts to stop the discharge or spill;
  - minimizing the impact to the public health and the environment;
  - neutralizing the effects of the incident;
  - removing the discharged or spilled substances; and
  - managing the wastes.
2. Upon request of the local government responders or the executive director, the responsible person shall provide a verbal or written description, or both, of the planned response actions and all actions taken before the local governmental responders or the executive director arrive. When the agency on-scene coordinator requests this information, it is subject to possible additional response action requirements by the executive director. The information will serve as a basis for the executive director to determine the need for:
  - further response actions by the responsible person;
  - initiating state funded actions for which the responsible person may be held liable to the maximum extent allowed by law; and
  - subsequent reports on the response actions.
3. Except for discharges or spills occurring during the normal course of transportation about which carriers are required to file a written report with the U.S. Department of Transportation under 49 CFR §171.16, the responsible person shall submit written information, such as a letter, describing the details of the discharge or spill and supporting the adequacy of the response action, to the appropriate TNRCC regional manager within 30 working days of the discovery of the reportable discharge or spill. The regional manager has the discretion to extend the deadline. The documentation shall contain one of the following items:
  - A statement that the discharge or spill response action has been completed and a description of how the response action was conducted. The statement shall include the initial report information required by §327.3(c) of this title (relating to Notification Requirements). The executive director may request additional information. Appropriate response actions at any time following the discharge or spill include use of the Texas Risk Reduction Program rules in Chapter 350 of this title (relating to Texas Risk Reduction Program).
  - A request for an extension of time to complete the response action, along with the reasons for the request. The request shall also include a projected work schedule outlining the time required to complete the response action. The executive director may grant an extension up to six months from the date the spill or discharge was reported. Unless otherwise notified by the

appropriate regional manager or the Emergency Response Team, the responsible person shall proceed according to the terms of the projected work schedule.

- A statement that the discharge or spill response action has not been completed nor is it expected to be completed within the maximum allowable six month extension. The statement shall explain why completion of the response action is not feasible and include a projected work schedule outlining the remaining tasks to complete the response action. This information will also serve as notification that the response actions to the discharge or spill will be conducted under the Texas Risk Reduction Program rules in Chapter 350 of this title (relating to Texas Risk Reduction Program)

#### Numbers for Spill Response:

*State of Texas 24-Hour Spill-Reporting Hotline and the State Emergency Response Commission*

*Phone: 1-800-832-8224*

*Texas Commission on Environmental Quality (San Antonio Regional Office),*

*Hours: Monday-Friday, 8:00 a.m.–5:00 p.m.*

*Address: 14250 Judson Rd, San Antonio TX 78233-4480,*

*Main Line: 210-490-3096*

*Local Emergency Response Teams*

*911*

## **Attachment B**

### **POTENTIAL SOURCES OF CONTAMINATION**

1. Fluids may be dropped from the use of construction equipment.
2. Fluids may be dropped from vehicles entering the site during construction.
3. Fluids may be dropped or spilled by construction workers constructing on site.
4. Mud or dirt may be tracked onto streets from construction areas.
5. Fine Particles may be washed from non-stabilized surfaces.
6. Debris from the site may leave the site by person, vehicle, or construction equipment.
7. Miscellaneous litter may be left on site from construction workers on site.

## Attachment C

### SEQUENCE OF MAJOR ACTIVITIES

Major Activities	Area Disturbed	Permanent Stabilization
1. Installation of Temporary Best Management Practices <ul style="list-style-type: none"> <li>• Silt Fence</li> <li>• Construction Entrance</li> <li>• Tree Protection</li> <li>• Concrete Washout</li> </ul>	9.00 acres	Sod
2. Earthwork: site grading, excavation, etc.	9.00 acres	Sod/Pavement
3. Installation of site utilities	0.02 acres	Sod/Pavement
4. Building Structure	2.70 acres	Concrete
5. Cleanup of site and removal of Temporary Best Management Practices	9.00 acres	Sod

## **Attachment D**

### **TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES**

1. Some upgradient stormwater will flow into disturbed areas; however, this flow will be treated along with the onsite flows prior to being released from the site.
2. All onsite stormwater flowing will be cleaned by silt fencing, rock berm, or buffer strips as appropriate prior to off-site release.
3. All "possibly sensitive" or "sensitive" features will either be sealed or protected with a perimeter barrier prior to any construction (but after Erosion and Sedimentation clearing).
4. All runoff flows will be maintained to all "possibly sensitive" or "sensitive" features except any features which have been sealed. Runoff flows will be treated prior to entering or flowing across a feature (see 2 above).
5. There were no sensitive features identified in the Geologic Assessment.

## **Attachment E**

### **REQUEST TO TEMPORARILY SEAL A FEATURE**

There are no features that need to be sealed.

## **Attachment F**

### **STRUCTURAL PRACTICES**

1. A stabilized construction entrance with washout pit will be constructed at all locations where vehicular traffic enters and leaves the site. This will reduce sediments which leave the site and are tracked or fall onto adjacent roadways.
2. Silt fencing and silt fencing with rock berm will be installed adjacent to any drainage way which receives sheet flow from upgradient-disturbed areas and along the side slope perimeter of disturbed areas.

## **Attachment G**

### **DRAINAGE AREA MAP**

The Proposed Drainage Area Map is provided at the end of this report as Appendix A.

**Attachment H****TEMPORARY SEDIMENT POND PLANS AND CALCULATIONS**

The Proposed Drainage Area Map, provided as Appendix A, illustrates the amount of disturbed ground per drainage area is less than 10 acres. Therefore, the typical erosion and sedimentation controls will be sufficient to prevent the migration of loose or disturbed soil.

## Attachment I

### INSPECTION AND MAINTENANCE FOR BMPS

#### 1. Inspection

- a. A qualified inspector (representing the discharger) shall inspect the following items once per calendar week and within 24 hours after the end of a 1/2-inch or greater rainfall:
  - i. disturbed areas of the construction site that have not been finally stabilized
  - ii. areas used for storage of materials that are exposed to precipitation
  - iii. structural and stabilization control measures
  - iv. construction entrance/exits
- b. The E & S inspector shall have authority to require immediate action on the part of the Contractor to correct any nonconforming items found during inspections or to require revisions to the E & S controls if appropriate. If revisions are needed, they shall be implemented within 7 calendar days after the date of inspection.
- c. The E & S inspector will provide written reports covering all items/areas inspected and outlining corrective measures if any.

#### 2. Maintenance

- a. All erosion and sedimentation (E & S) measures/controls shall be maintained in good working order by the Contractor. Written maintenance reports shall be prepared covering all inspections and maintenance affecting E & S controls. If repair(s) are necessary, they shall be initiated within 24 hours after report.
- b. The construction entrance shall be maintained in a condition which will prevent/minimize tracking or flowing of sediments onto public roadways. Sediments spilled, dropped, washed or tracked onto public roadway must be removed.
- c. Temporary and permanent seeding and planting shall be maintained to insure the following:
  - bare spots are filled in
  - wash-outs are filled in
  - healthy growth is promoted
- d. For silt fences and rock berms, when silt reaches a depth equal to 1/3 the height of the barrier, the silt shall be removed and mixed with other soil materials to be placed within the embankment areas of the project site. After construction is complete, the silt shall be disposed of off-site.
- e. Silt fences shall be maintained to insure the following:
  - torn fabric is replaced
  - loose fabric is properly resecured
  - loose post supports are plumbed and strengthened
  - fabric bottom is buried as anchor

- f. Rock berms shall be maintained/cleaned by lifting, dropping and reshaping stones as required.
- g. Diversion dykes, swales or berms shall be maintained to insure the following:
  - positive drainage to an outlet
  - any breaks promptly repaired
- h. Truck washout pit shall be maintained/cleaned when silt reaches a depth of six (6) inches. Silt shall be removed and disposed of at an approved site.

## Attachment J

### SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

1. Interim stabilization will be performed any time a denuded area remains disturbed for over 14 days without restart within 21 days.
2. Permanent stabilization will be done after construction is complete.
3. Contractor shall sod or seed all disturbed pervious areas once finished grade is met.
4. Seeding rates should be as shown in Table 1-4 or as recommended by the county agricultural extension agent.
5. The seed should be applied uniformly with a cyclone seeder, drill, cultipacker seeder or hydroseeder (slurry includes seed, fertilizer and binder)
6. Slopes that are steeper than 3:1 should be covered with appropriate soil stabilization matting as described in the following section to prevent loss of soil and seed.

Table 1-4 Temporary Seeding for Bexar, Comal, Kinney, Medina and Uvalde Counties (Northcutt, 1993)

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

# **PERMANENT STORMWATER SECTION**

# 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.***

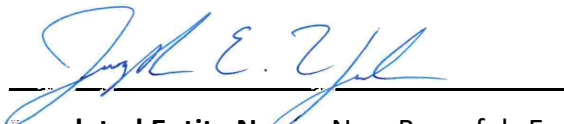
## Signature

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: Joseph E. York, P.E.

Date: 6/12/2023

Signature of Customer/Agent



Regulated Entity Name: New Braunfels Executive Storage

## Permanent Best Management Practices (BMPs)

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

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

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

☐ N/A

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

☐ N/A

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

☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.

☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.

☒ The site will not be used for low density single-family residential development.

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

☐ **Attachment A - 20% or Less Impervious Cover Waiver.** The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.

☒ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

☐ The site will not be used for multi-family residential developments, schools, or small business sites.

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

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

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

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

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

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

## **Attachment A**

### **20% OR LESS IMPERVIOUS COVER DECLARATION**

Not applicable to the site.

## **Attachment B**

### **BMPS FOR UPGRADIENT STORMWATER**

Upgradient runoff will be accepted by the site and will be routed to the batch detention system proposed for the site.

## Attachment C

### BMPS FOR ON-SITE STORMWATER

Onsite stormwater will be distributed through the site via two paths, one to the detention pond to be treated by the batch detention system and the remainder via sheet flow to the existing roadside ditch along SH 46. The batch detention system will filter the stormwater discharge before it is routed to a 1-foot spreader berm at the southeast end of the site, located south of the detention pond. The sheet flow will be directed to the existing roadside ditch. Table 1 shows a summary of the permanent BMP coverage on the site.

*Table 1: BMP Coverage*

Drainage Area	Permanent BMP	Area (acre)	Impervious Cover (acre)	Area to be Controlled by Permanent BMP (acre)	Area Not Covered by Permanent BMP (acre)
O-I	Batch Detention System	3.04	1.36	3.04	-
I	Batch Detention System	0.76	0.67	0.76	-
II	Batch Detention System	3.49	3.23	3.49	-
III	Batch Detention System	2.75	2.38	2.75	-
IV	None	0.44	0.35	-	0.44
V	None	1.07	0.70	-	1.07
Pond	Batch Detention System	0.50	0.42	0.50	-
<b>Total</b>		10.67	7.72	9.16	1.51

## **Attachment D**

### **BMPS FOR SURFACE STREAMS**

The site does not directly outflow into a surface stream. All treated runoff from the batch detention system will be directed to a 1-foot spreader berm and discharged at a rate less than or equal to existing conditions.

## **Attachment E**

### **REQUEST TO SEAL FEATURES**

Not applicable to this project.

**Attachment F****CONSTRUCTION PLANS**

Construction plans are attached as Appendix B. Table 2 shows the sheet list for the plans.

*Table 2: Sheet List*

<b>SHEET INDEX</b>	
<b>SHEET NUMBER</b>	<b>SHEET TITLE</b>
1	COVER SHEET
2	CONSTRUCTION NOTES
3	EXISTING CONDITIONS PLAN
4	S.W.P.P.P.
5	S.W.P.P.P. DETAILS
6	SITE PLAN OVERALL
7	SITE PLAN A
8	SITE PLAN B
9	GRADING PLAN OVERALL
10	GRADING PLAN A
11	GRADING PLAN B
12	DETENTION POND
13	PAVING PLAN
14	UTILITY PLAN
15	EXISTING DRAINAGE AREA MAP
16	PROPOSED DRAINAGE AREA MAP
17	DETENTION POND DETAILS
18	SITE DETAILS
19	WATER & WASTEWATER DETAILS

## **Attachment G**

### **INSPECTION, MAINTENANCE, REPAIR, AND RETROFIT PLAN**

The permanent BMP proposed for this site is a batch detention system. Refer to the Owner's Manual at the end of this report as Appendix C for inspection and maintenance guidelines.

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

An amended copy of this document will be provided to the TCEQ within thirty days of any changes in the following information.

Responsible Party for Maintenance: New Braunfels Executive Storage, LLC  
Address: 575 Orchard Way  
New Braunfels, TX 78132

Owner Contact: Jorden Mahler  
Phone: (281) 384-8632

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

## **Attachment H**

### **PILOT-SCALE FIELD TESTING PLAN**

The permanent BMP was designed using the TCEQ Technical Guidance Manual (TGM). Pilot-Scale Field Testing Plan is not required.

## **Attachment I**

### **MEASURE FOR MINIMIZING SURFACE STREAM CONTAMINATION**

Temporary BMPs are to be placed before the start of construction to prevent pollution from leaving the site. These temporary BMPs are a stabilized construction entrance, concrete washout, and silt fence. The proposed permanent BMP is a batch detention system within the site detention pond. Runoff from the impervious cover will be treated and directed to a level spreader that will discharge flow to conditions less than existing. All disturbed areas will be re-vegetated as soon as practical.

**TSS Removal Calculations 04-20-2009**Project Name: **New Braunfels Exective Storage**Date Prepared: **6/12/2023****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:  $L_M = 27.2(A_N \times P)$

where:  $L_{M \text{ TOTAL PROJECT}}$  = 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 = **10.04** acresPredevelopment impervious area within the limits of the plan = **1.05** acresTotal post-development impervious area within the limits of the plan = **7.34** acresTotal post-development impervious cover fraction = **0.73** $P =$  **33** inches $L_{M \text{ TOTAL PROJECT}} =$  **5646** lbs.

\* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = **1****2. Drainage Basin Parameters (This information should be provided for each basin):**Drainage Basin/Outfall Area No. = **1**Total drainage basin/outfall area = **10.04** acresPredevelopment impervious area within drainage basin/outfall area = **1.05** acresPost-development impervious area within drainage basin/outfall area = **6.28** acresPost-development impervious fraction within drainage basin/outfall area = **0.63** $L_{M \text{ THIS BASIN}} =$  **4694** 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:  $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where:  $A_C$  = Total On-Site drainage area in the BMP catchment area  
 $A_i$  = Impervious area proposed in the BMP catchment area  
 $A_p$  = Pervious area remaining in the BMP catchment area  
 $L_R$  = TSS Load removed from this catchment area by the proposed BMP

 $A_C =$  **7.00** acres $A_i =$  **6.28** acres $A_p =$  **0.72** acres $L_R =$  **6537** lbs**5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area**Desired  $L_{M \text{ THIS BASIN}} =$  **4694** lbs. $F =$  **0.72****6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.**

Calculations from RG-348

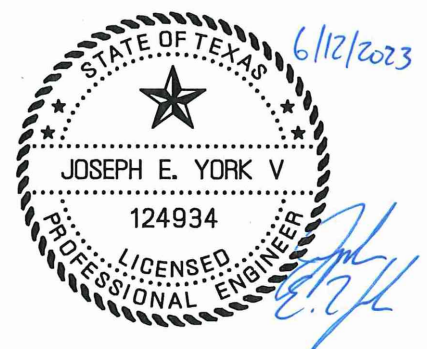
Pages 3-34 to 3-36

Rainfall Depth = **0.83** inchesPost Development Runoff Coefficient = **0.73**On-site Water Quality Volume = **15487** cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = **3.04** acresOff-site Impervious cover draining to BMP = **1.05** acresImpervious fraction of off-site area = **0.35**Off-site Runoff Coefficient = **0.28**Off-site Water Quality Volume = **2577** cubic feetStorage for Sediment = **3613**Total Capture Volume (required water quality volume(s) x 1.20) = **21677** cubic feet**8. Extended Detention Basin System**

Designed as Required in RG-348

Required Water Quality Volume for extended detention basin = **21677** cubic feet

# **AGENT AUTHORIZATION SECTION**

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

I \_\_\_\_\_ Jorden Mahler \_\_\_\_\_  
Print Name  
Owner \_\_\_\_\_  
Title - Owner/President/Other \_\_\_\_\_  
of \_\_\_\_\_ New Braunfels Executive Storage, LLC \_\_\_\_\_  
Corporation/Partnership/Entity Name  
have authorized \_\_\_\_\_ Joseph E. York \_\_\_\_\_  
Print Name of Agent/Engineer  
of \_\_\_\_\_ Quiddity Engineering \_\_\_\_\_  
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:

[Signature]  
Applicant's Signature

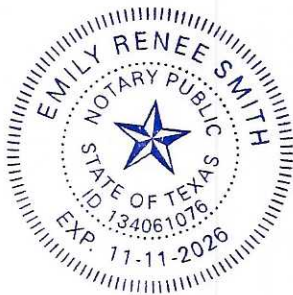
6/1/2023  
Date

THE STATE OF Texas §

County of Comal §

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

GIVEN under my hand and seal of office on this 1<sup>st</sup> day of June, 2023.



Emily R. Smith  
NOTARY PUBLIC

EMILY R. SMITH  
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 11 November 2026

# **APPLICATION FEE FORM SECTION**

# Application Fee Form

## Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: New Braunfels Executive Storage

Regulated Entity Location: 4655 SH 46, New Braunfels, TX 78132

Name of Customer: Jorden Mahler

Contact Person: Joseph E. York, P.E.

Phone: (210) 546-0084

Customer Reference Number (if issued):CN \_\_\_\_\_

Regulated Entity Reference Number (if issued):RN \_\_\_\_\_

### Austin Regional Office (3373)

☐ Hays

☐ Travis

☐ Williamson

### San Antonio Regional Office (3362)

☐ Bexar

☐ Medina

☐ Uvalde

☒ Comal

☐ Kinney

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

☐ Austin Regional Office

☒ San Antonio Regional Office

☐ Mailed to: TCEQ - Cashier

☐ Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

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

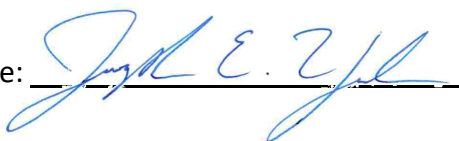
☒ Recharge Zone

☐ Contributing Zone

☐ Transition Zone

<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	9.00 Acres	\$ 5,000
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: \_\_\_\_\_



Date: 6/12/2023

# Application Fee Schedule

Texas Commission on Environmental Quality

Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

## ***Water Pollution Abatement Plans and Modifications***

### ***Contributing Zone Plans and Modifications***

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

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

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

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

### ***Exception Requests***

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

### ***Extension of Time Requests***

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

# **CORE DATA FORM SECTION**



TCEQ Use Only

# TCEQ Core Data Form

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

## SECTION I: General Information

<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 (if issued)</b>	<a href="#">Follow this link to search for CN or RN numbers in Central Registry**</a>	<b>3. Regulated Entity Reference Number (if issued)</b>
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 Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)		<input type="checkbox"/> Change in Regulated Entity Ownership	
<b>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).</b>			
<b>6. Customer Legal Name</b> (If an individual, print last name first: eg: Doe, John)		If new Customer, enter previous Customer below:	
New Braunfels Executive Storage, 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)
	32085408311	88-3350894	
<b>11. Type of Customer:</b>	<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input checked="" type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Other:	
<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 checked="" type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator			
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other:			
<b>15. Mailing Address:</b>	575 Orchard Way		
	City	New Braunfels	State TX ZIP 78132 ZIP + 4
<b>16. Country Mailing Information</b> (if outside USA)		<b>17. E-Mail Address</b> (if applicable)	
<b>18. Telephone Number</b>	<b>19. Extension or Code</b>	<b>20. Fax Number</b> (if applicable)	
( 281 ) 384-8632		( ) -	

## SECTION III: Regulated Entity Information

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

23. Street Address of the Regulated Entity: (No PO Boxes)	4655 STATE HWY 46 W NEW BRAUNFELS, TX 78132						
	City	New Braunfels	State	TX	ZIP	78132	ZIP + 4
24. County	Comal						

**Enter Physical Location Description if no street address is provided.**

25. Description to Physical Location:	APPROX 1.02 MILES NORTHWEST OF FM 2722 AND SH 46 INTERSECTION						
26. Nearest City	State				Nearest ZIP Code		
27. Latitude (N) In Decimal:	29.74394			28. Longitude (W) In Decimal:	98.21923		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		
29	44	38.17	98	13	09.24		
29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)		31. Primary NAICS Code (5 or 6 digits)		32. Secondary NAICS Code (5 or 6 digits)		
4225	4226						
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)							
34. Mailing Address:							
	City		State		ZIP		ZIP + 4
35. E-Mail Address:							
36. Telephone Number		37. Extension or Code			38. Fax Number (if applicable)		
( ) -					( ) -		

**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 checked="" type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

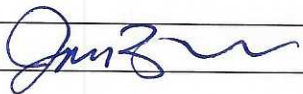
#### **SECTION IV: Preparer Information**

40. Name:	Joseph E. York, P.E.	41. Title:	Manager
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
( 210 ) 546-0084		( ) -	jyork@quiddity.com

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

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

Company:	New Braunfels Executive Storage, LLC	Job Title:	Owner
Name (In Print):	Jorden Mahler	Phone:	( 281 ) 384- 8632

Signature:		Date:	6/1/2023
------------	--	-------	----------



QUIDDITY

# **DRAINAGE MAP**

1  
2  
3

© 2023 QUIDDITY

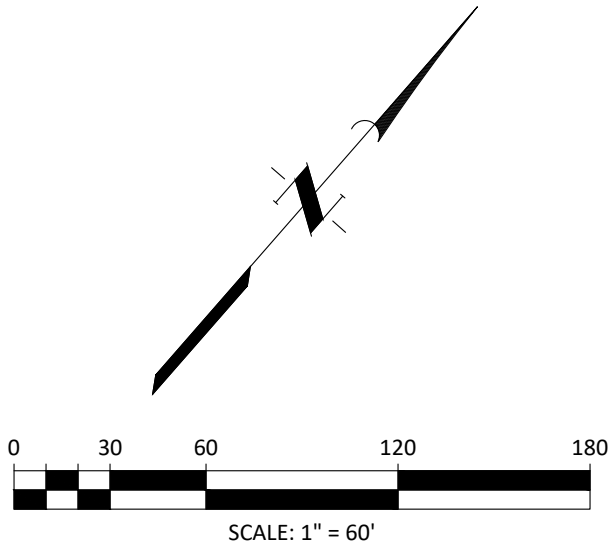
Tc (Post Development)

Note  
\*Minimum Time of Concentration is 10 min per City of New Braunfels Drainage and Erosion Control Design Manual

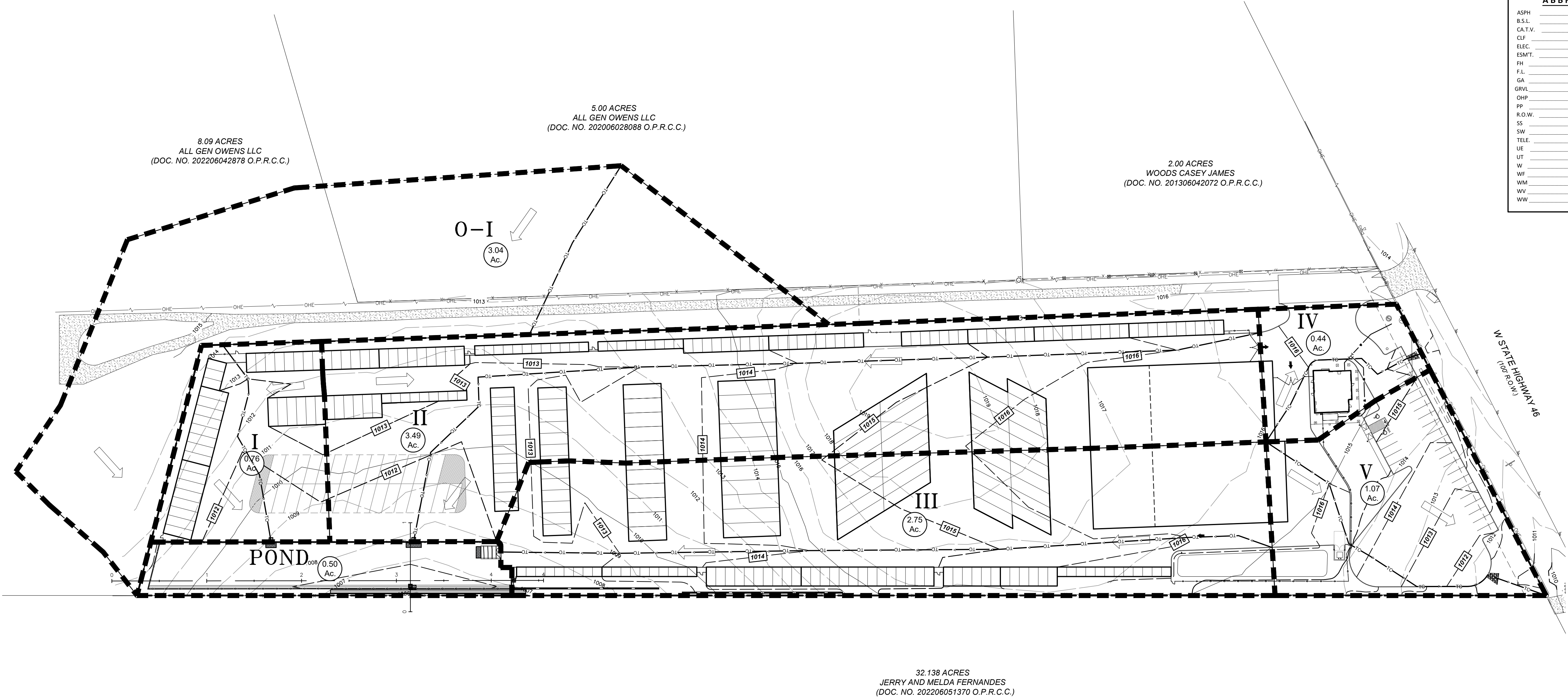
DA	Area (ac.)	Slope (ft/ft)	Ltotal (ft)	L1 (ft)	Ti (up to 100 ft)		L2 (ft)	Tch (L > 100 ft)		Tctotal
					n	Ti		K	Tch	
O-I	3.04	0.010	203	100	0.015	10.00	103	20.328	0.84	10.84
I	0.76	0.011	225	100	0.015	10.00	125	20.328	0.97	10.97
II	3.49	0.005	1023	100	0.015	10.00	923	20.328	10.82	20.82
III	2.75	0.006	815	100	0.015	10.00	715	20.328	7.49	17.49
IV	0.44	0.009	225	100	0.015	10.00	125	20.328	1.09	11.09
V	1.07	0.015	376	100	0.015	10.00	276	20.328	1.87	11.87
POND	0.50									

Flows (Post Development)

DA	Area (ac.)	Tc	C	I 2-yr, in/hr	I 10-yr, in/hr	I 25-yr, in/hr	I 100-yr, in/hr	Q2, CFS	Q10, CFS	Q25, CFS	Q100, CFS
O-I	3.04	10.84	0.68	4.91	7.25	8.76	11.25	10.21	15.06	18.20	23.37
I	0.76	10.97	0.91	4.89	7.22	8.72	11.19	3.38	4.99	6.03	7.74
II	3.49	20.82	0.91	3.75	5.48	6.60	8.37	11.92	17.42	20.96	26.59
III	2.75	17.49	0.91	4.03	5.90	7.10	9.02	10.09	14.76	17.78	22.58
IV	0.44	11.09	0.91	4.87	7.19	8.68	11.15	1.95	2.88	3.48	4.46
V	1.07	11.87	0.91	4.75	6.99	8.44	10.82	4.62	6.81	8.22	10.53



ABBREVIATIONS	
ASPH	ASPHALT
B.S.L.	BUILDING SETBACK LINE
CA.T.V.	CABLE TELEVISION
CLF	CHAIN LINK FENCE
ELEC.	ELECTRIC
ESMT.	EASEMENT
FH	FIRE HYDRANT
F.L.	FLOW LINE
GA	GUY WIRE
GRVL	GRAVEL DRIVE
OHP	OVERHEAD ELECTRIC
PP	POWER POLE
R.O.W.	RIGHT-OF-WAY
SS	SANITARY SEWER LINE
SW	SIDEWALK
TELE.	TELEPHONE
UE	UNDERGROUND ELECTRIC
UT	UNDERGROUND TELEPHONE
W	WATER LINE
WF	WIRE FENCE
WM	WATER METER
WV	WATER VALVE
WW	WASTEWATER LINE



EXISTING LEGEND		GRADING LEGEND	
	FIRE HYDRANT W/ GATE VALVE		SLOPE ARROW
	WATERLINE W/ GATE VALVE		FINISHED FLOOR ELEVATION
	WATERLINE W/ METER		FINISHED CONTOUR
	RECLAIMED WATERLINE		EXISTING CONTOUR
	SANITARY SEWER LINE W/ MANHOLE		HIGH POINT
	SANITARY SEWER LINE W/ CLEANOUT		FINISHED SPOT ELEVATION
	STORM SEWER W/ MANHOLE		EXISTING SPOT ELEVATION
	STORM SEWER W/ CURB INLET		EARTH SWALE
	OVERHEAD ELEC W/POWER POLE		EXTREME EVENT ARROW
	GAS LINE		LIMITS OF CONSTRUCTION
	GROUND CONTOUR		INVERTED CROWN
			RETAINING WALL
			TOP OF WALL ELEV. BOTTOM OF WALL ELEV.

**NOTICE**

CALL AT LEAST 2 WORKING DAYS (48 HOURS) BEFORE YOU DIG:

TEXAS811 (DIG TESS) (1-800-344-8377)  
-OR-  
LONE STAR NOTIFICATION CENTER  
(1-800-569-0344)

**CAUTION: OVERHEAD ELECTRIC**

CONTRACTOR SHALL EXERCISE CAUTION DURING EXCAVATION, CONSTRUCTION, AND ALL ACTIVITIES ON SITE AND STAY AWAY FROM ALL OVERHEAD POWER. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS DEALING WITH CLEARANCES AND CONSTRUCTION ACTIVITIES.

App. \_\_\_\_\_

No. \_\_\_\_\_ Date \_\_\_\_\_

REVISIONS


**QUIDDITY**

Texas Board of Professional Engineers and Land Surveyors Reg. No. 123280  
4250 Lockhill Drive, Suite 100, San Antonio, Texas 78249-2344

SCALE: AS SHOWN	DESIGNED BY: KF
DATE: MAY 24, 2023	CHECKED BY: KF/JY
JOB NO.: 17942-0002-00	DRAWN BY: CAD

STATE OF TEXAS

JOSEPH E. YORK V

124934

LICENSED PROFESSIONAL ENGINEER

6/12/2023

NEW BRAUNFELS EXECUTIVE STORAGE

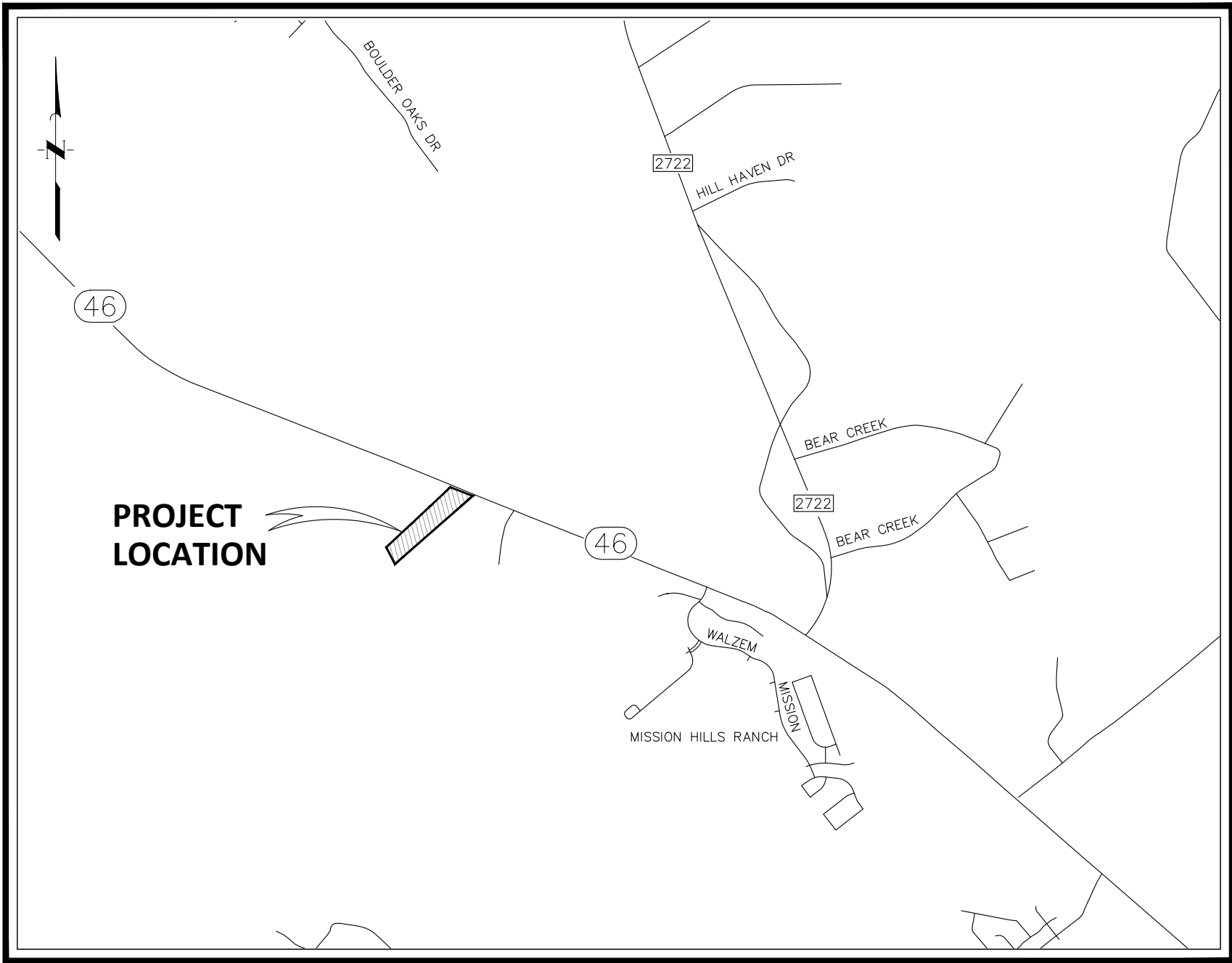
PROPOSED DRAINAGE AREA MAP

SHEET NO. **16**

OF 19

# **CONSTRUCTION PLANS**

CONSTRUCTION  
OF  
SITE, DRAINAGE, PAVEMENT,  
AND UTILITY FACILITIES  
FOR  
NEW BRAUNFELS EXECUTIVE STORAGE  
NEW BRAUNFELS E.T.J., COMAL COUNTY, TEXAS



SHEET INDEX	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	CONSTRUCTION NOTES
3	EXISTING CONDITIONS PLAN
4	S.W.P.P.
5	S.W.P.P. DETAILS
6	SITE PLAN OVERALL
7	SITE PLAN A
8	SITE PLAN B
9	GRADING PLAN OVERALL
10	GRADING PLAN A
11	GRADING PLAN B
12	DETENTION POND
13	PAVING PLAN
14	UTILITY PLAN
15	EXISTING DRAINAGE AREA MAP
16	PROPOSED DRAINAGE AREA MAP
17	DETENTION POND DETAILS
18	SITE DETAILS
19	WATER & WASTEWATER DETAILS

VICINITY MAP

SCALE 1" = 2,000'

JUNE 12, 2023

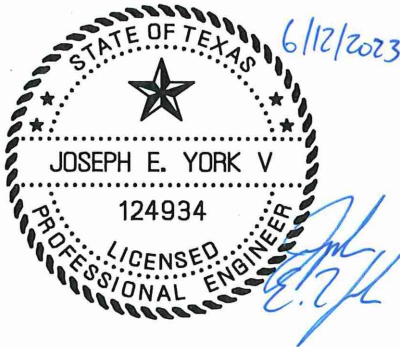
PREPARED BY



QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
4350 Lockhill-Selma Road, Suite 100 • San Antonio, Texas 78249 • 210.494.5511

JOB NUMBER 17942-0002-00



OWNER

NEW BRAUNFELS EXECUTIVE STORAGE, LLC  
575 ORCHARD WAY  
NEW BRAUNFELS, TEXAS 78132  
CONTACT: JORDEN MAHLER

ARCHITECT

OPEN STUDIO ARCHITECTURE PLLC  
1285 INDUSTRIAL STREET  
SUITE 106  
NEW BRAUNFELS, TEXAS 78130  
TEL (830) 627-3290

CIVIL ENGINEER

QUIDDITY ENGINEERING, LLC  
4350 LOCKHILL-SELMA ROAD  
SUITE 100  
SAN ANTONIO, TEXAS 78249  
TEL (210) 494-5511  
FAX (210) 494-5519  
CONTACT: JOSEPH E. YORK V, PE

No.	Date	REVISIONS	App.

**T.B.M. #100** 5/8" IRON ROD WITH PLASTIC CAP STAMPED  
"QUIDDITY CONTROL"  
POINT 100 IS 120.4' ~ N17° 15' 05" E FROM THE  
NORTHEAST PROPERTY CORNER

NORTHING = 13,818,963.910  
EASTING = 2,216,484.960  
ELEVATION = 1009.20 (NAVD '88 DATUM)  
BASED ON GLOBAL POSITIONING SYSTEM (GPS)

**T.B.M. #101** 5/8" IRON ROD WITH PLASTIC CAP STAMPED  
"QUIDDITY CONTROL"  
POINT 101 IS 150.9' ~ N53° 47' 29" E FROM THE  
NORTHWEST PROPERTY CORNER.

NORTHING = 13,819,0081.610  
EASTING = 2,216,208.860  
ELEVATION = 1013.95 (NAVD '88 DATUM)  
BASED ON GLOBAL POSITIONING SYSTEM (GPS)

THIS PROJECT IS WITHIN THE  
EDWARDS AQUIFER RECHARGE ZONE

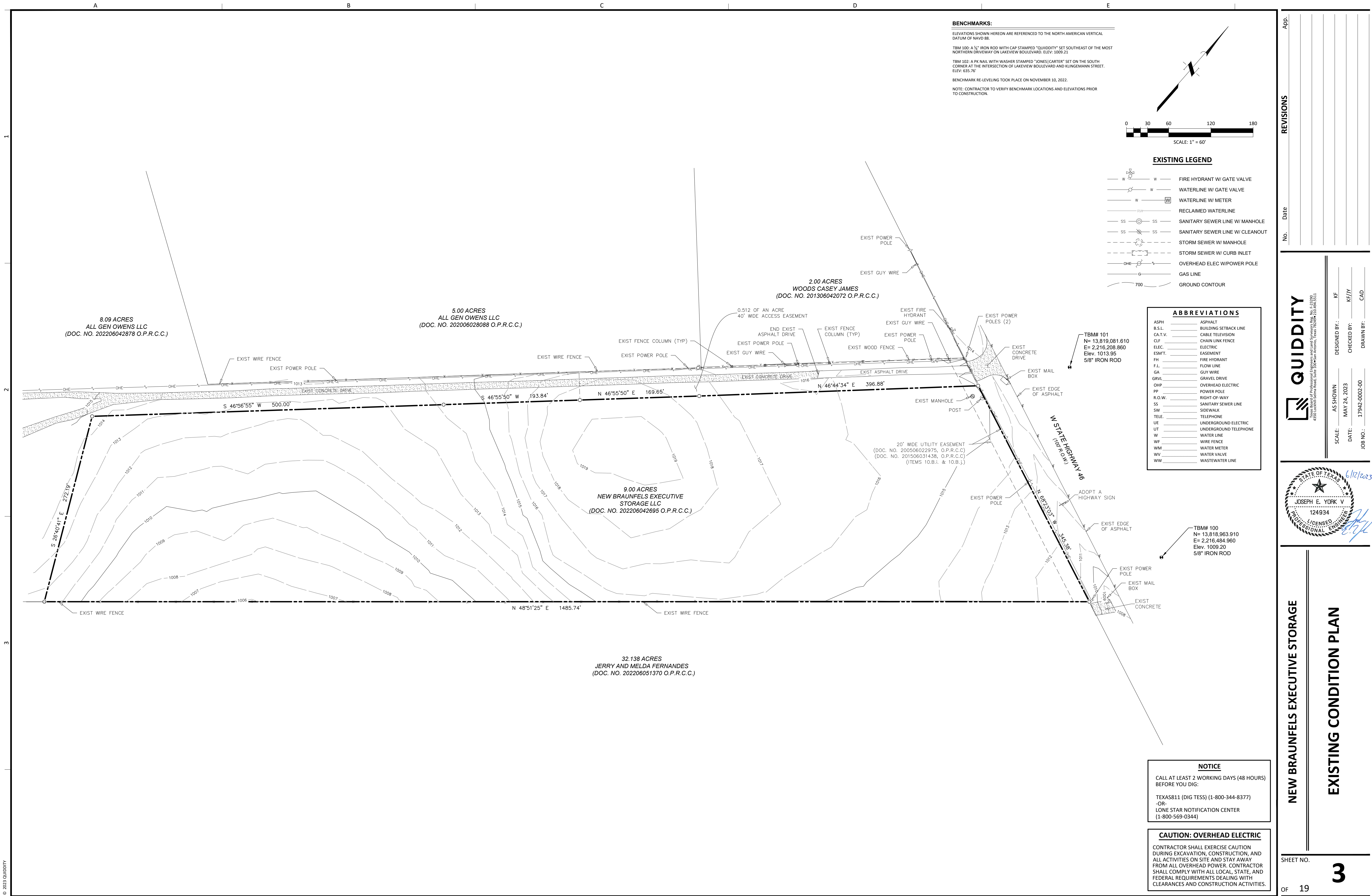
SHEET NO.  
OF 19

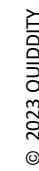


QUIDDITY  
SAN ANTONIO, TEXAS  
JOB NUMBER 17942-0002-00

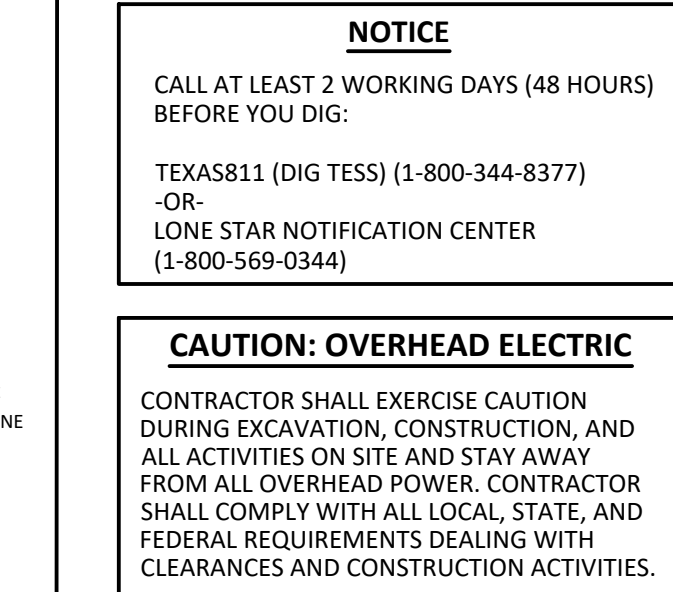
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K:\17942\17942-0002-00 new braunfels executive storage phase i\2 design phase\CAD\Plans\Site\17942-0002-00 SWPPP.dwg ar1: June 12, 2023



- ## LEGEND

- ## ABBREVIATIONS

ASPH	ASPHALT
B.S.L	BUILDING SETBACK LINE
CA.T.V.	CABLE TELEVISION
CLF	CHAIN LINK FENCE
ELEC	ELECTRIC
ESMT.	ESTIMATE
FL	FIRE HYDRANT
F.L.	FLOW LINE
GA	GUY WIRE
GRVL	GRAVEL DRIVE
OHP	OVERHEAD ELECTRIC
PP	POWER POLE
R.O.W.	RIGHT-OF-WAY
SS	SANITARY SEWER LINE
SW	SIDEWALK
TELE.	TELEPHONE
UE	UNDERGROUND ELECTRIC
UT	UNDERGROUND TELEPHONE
W	WATER LINE
WF	WIRE FENCE
WM	WATER METER
WV	WATER VALVE
WW	WASTEWATER LINE

## NOTICE

CALL AT LEAST 2 WORKING DAYS (48 HOURS  
BEFORE YOU DIG:  
  
TEXAS811 (DIG TESS) (1-800-344-8377)  
-OR-  
LONE STAR NOTIFICATION CENTER  
(1-800-569-0344)

**CAUTION: OVERHEAD ELECTRIC**

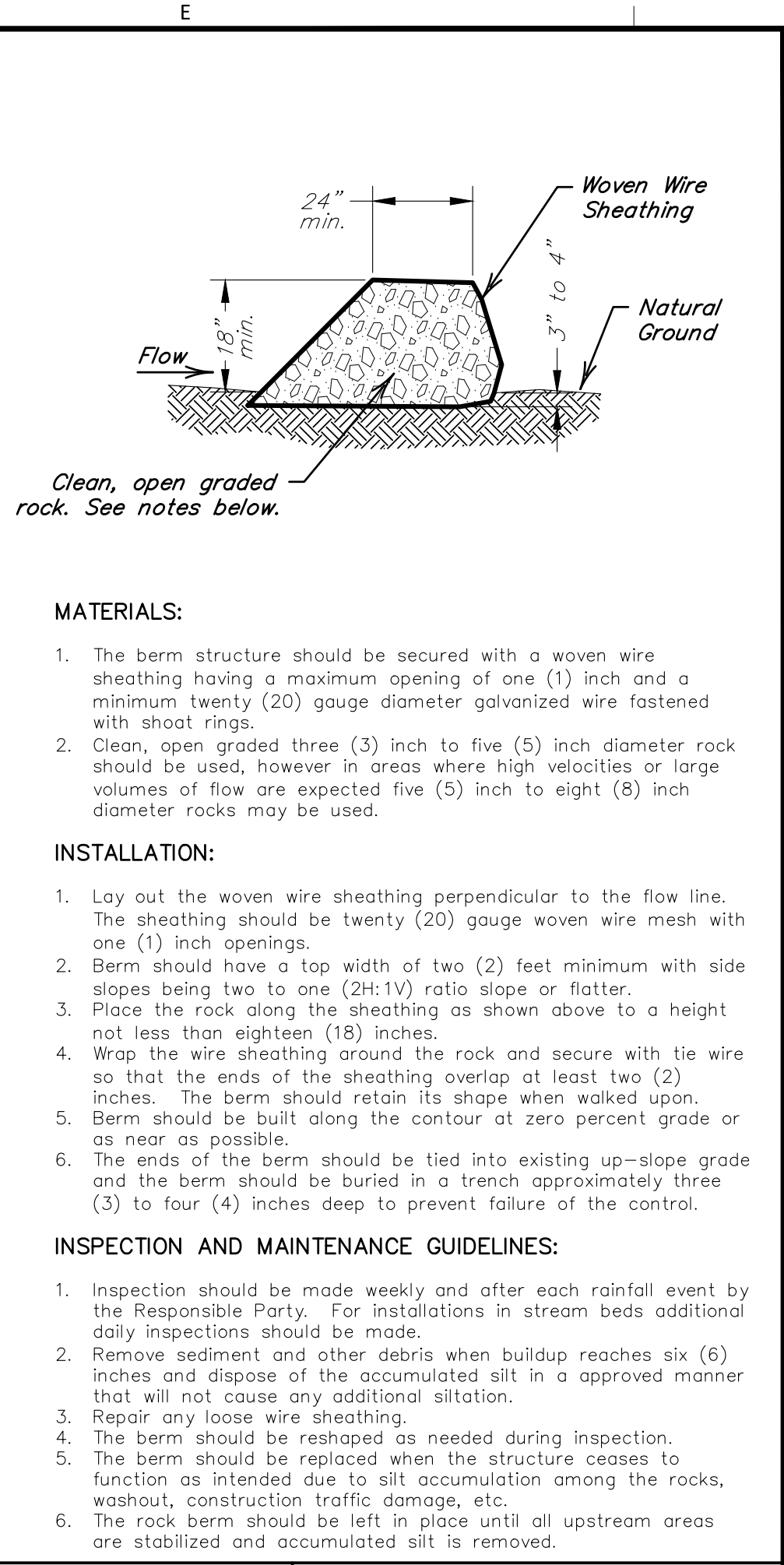
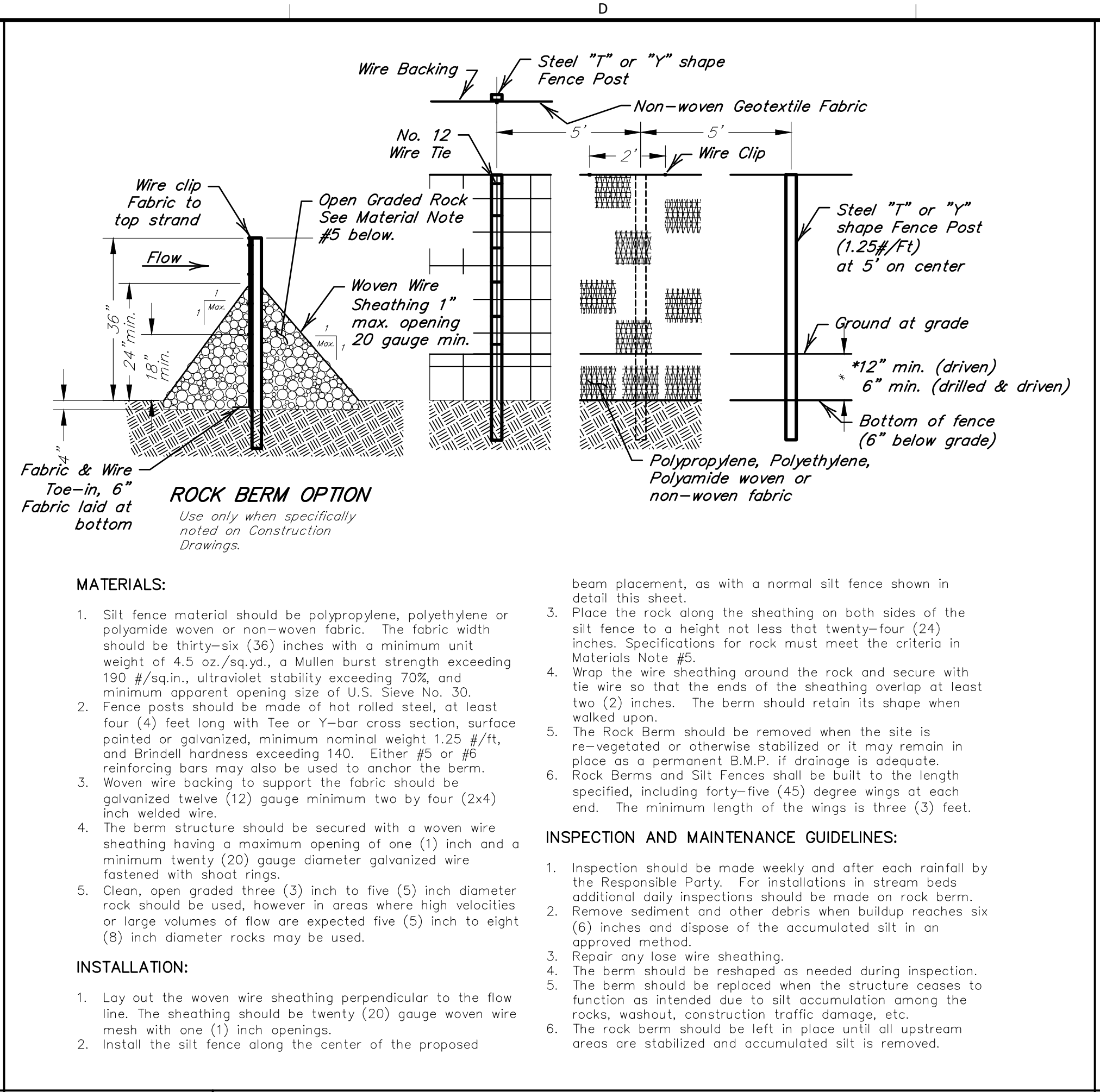
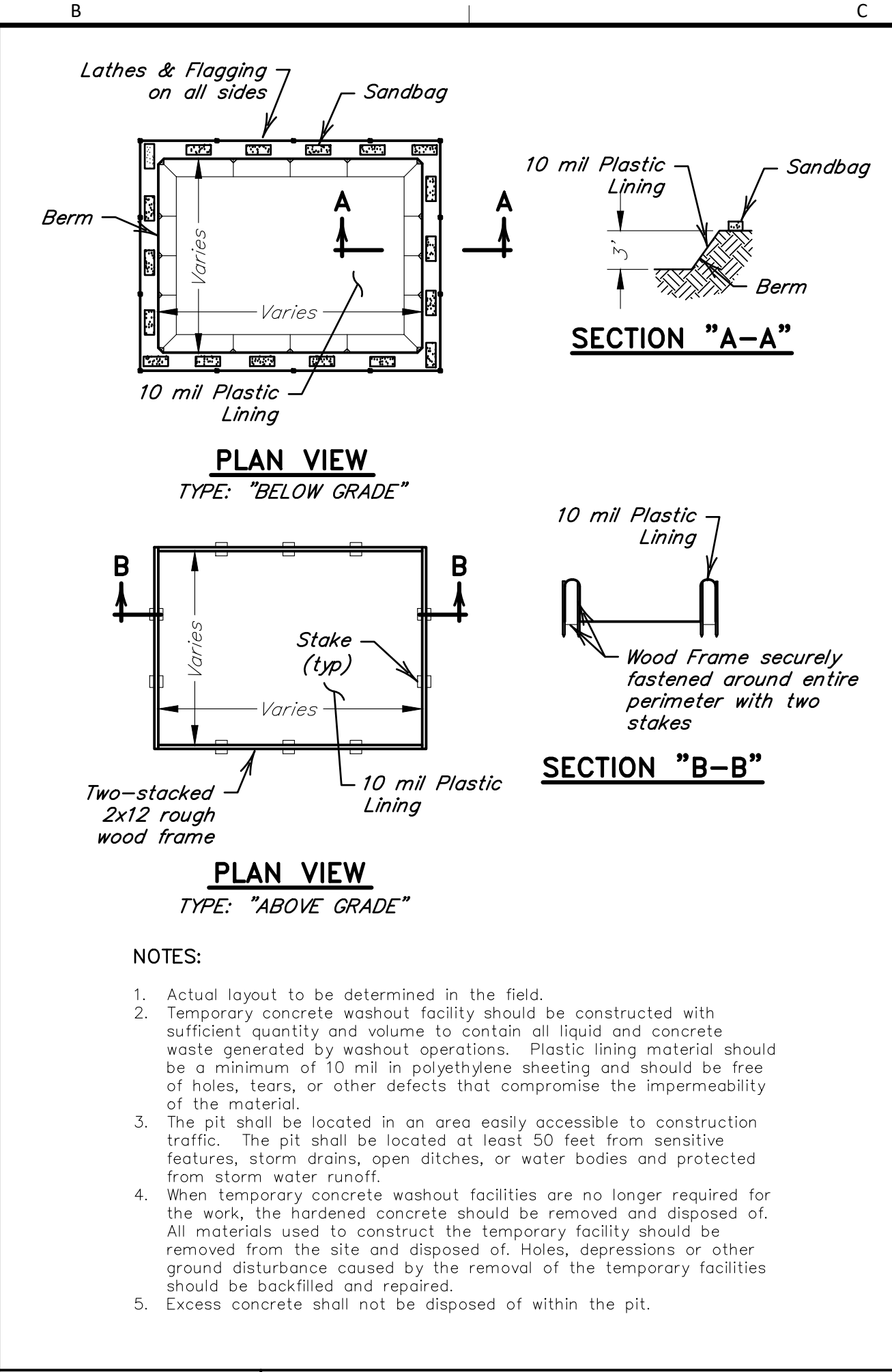
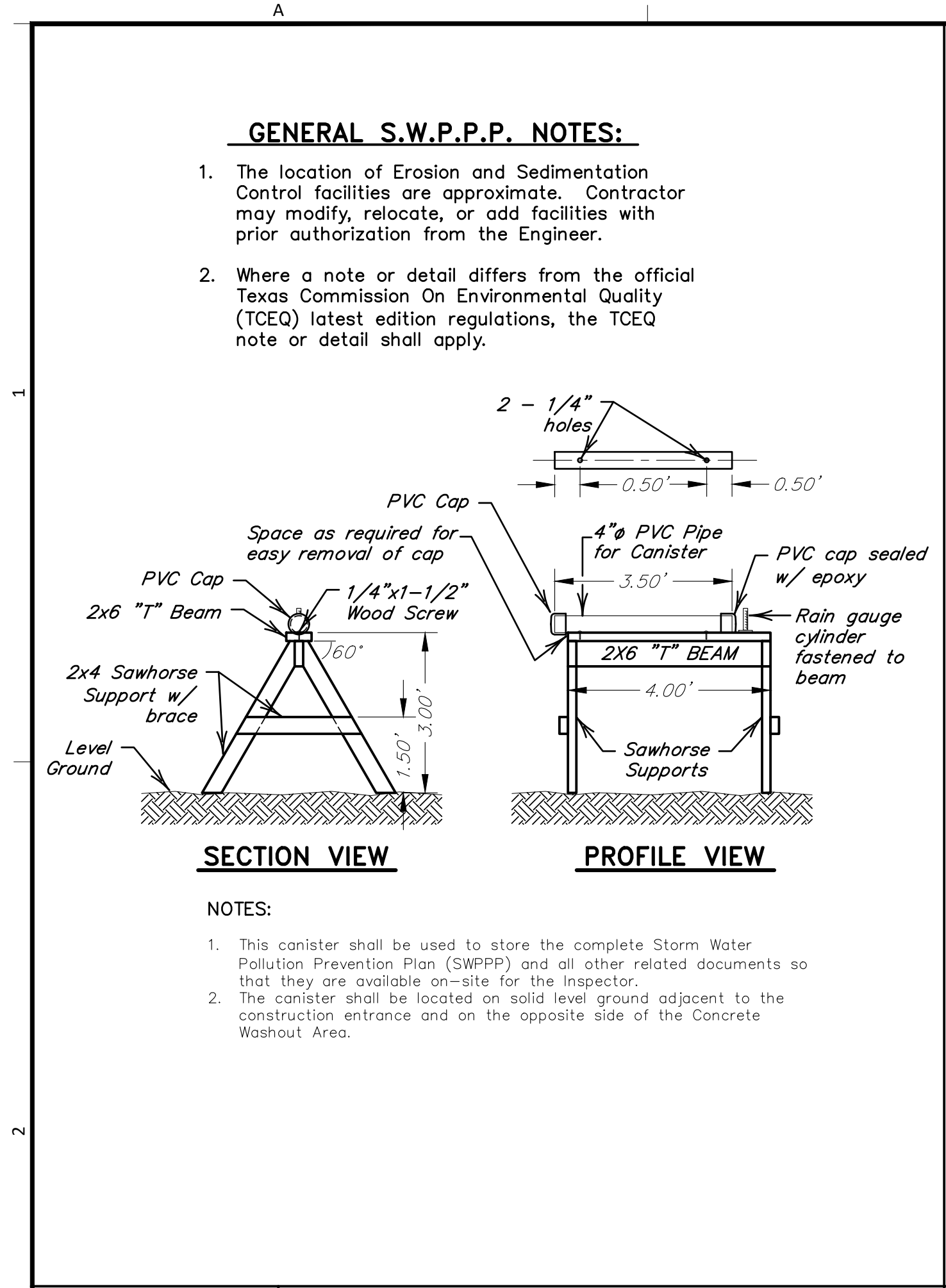
CONTRACTOR SHALL EXERCISE CAUTION DURING EXCAVATION, CONSTRUCTION, AND ALL ACTIVITIES ON SITE AND STAY AWAY FROM ALL OVERHEAD POWER. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS DEALING WITH CLEARANCES AND CONSTRUCTION ACTIVITIES.

## NEW BRAUNFELS EXECUTIVE STORAGE

**S.W.P.P.P.**

SHEET NO

OF 19

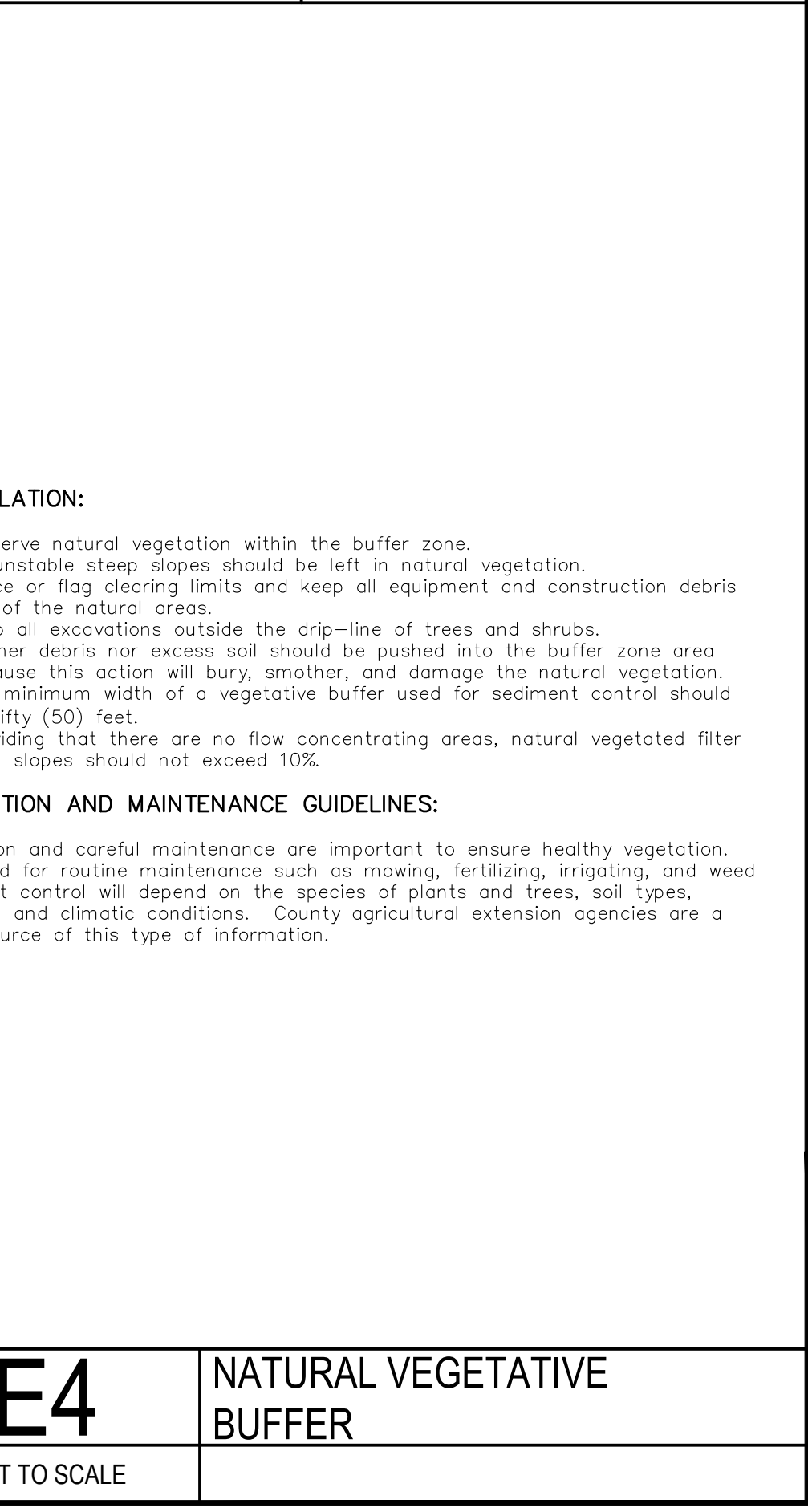
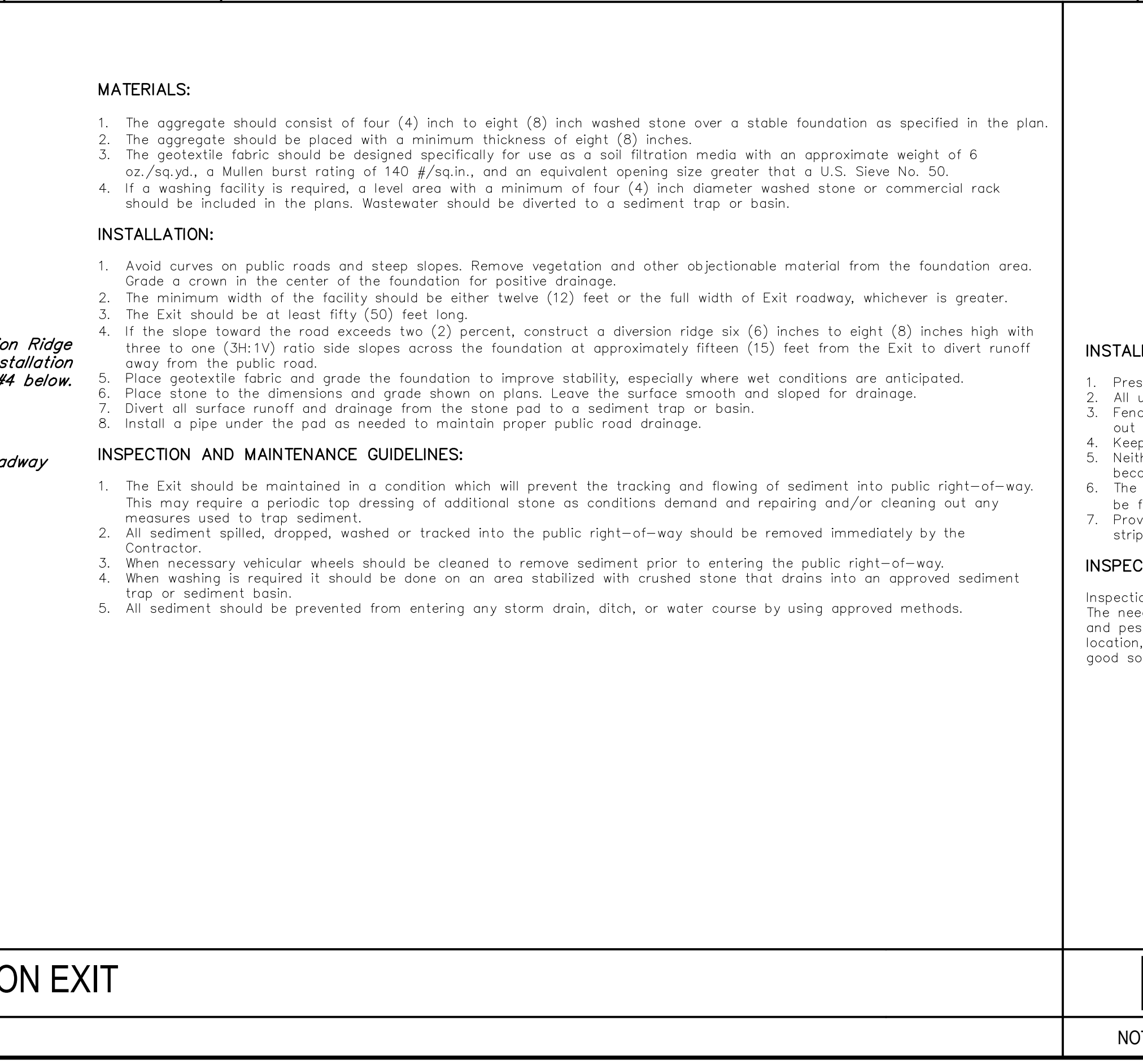
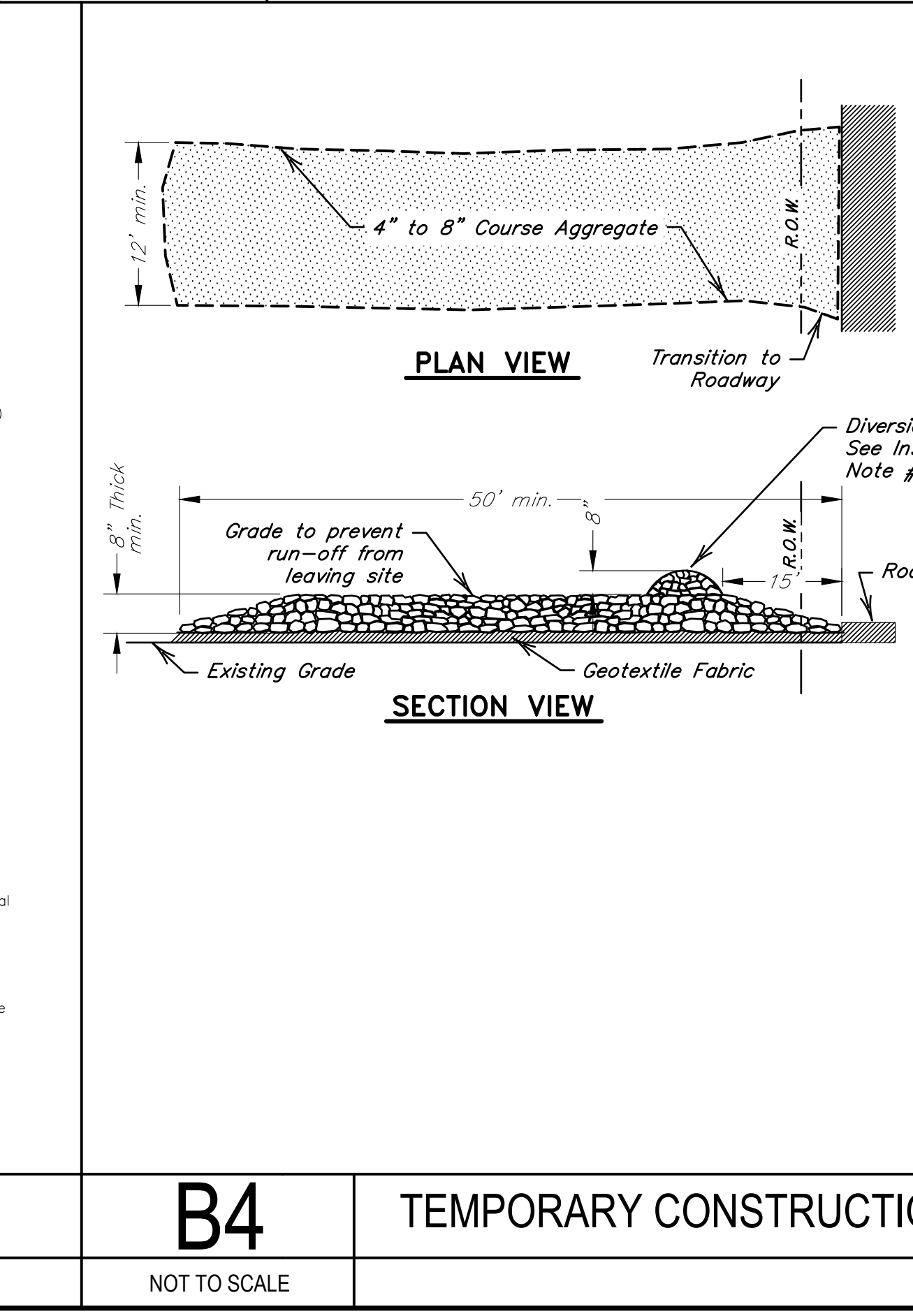
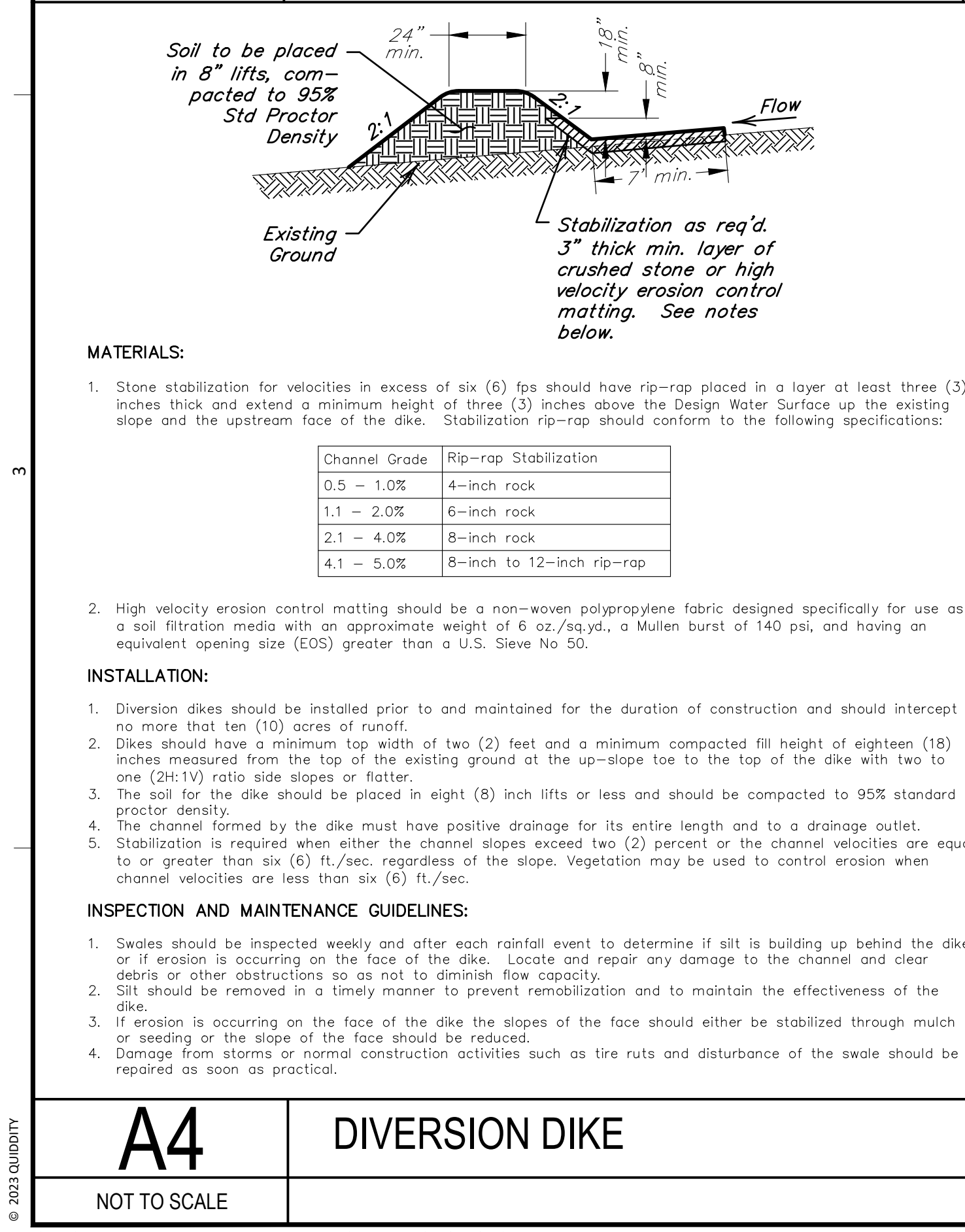


<b>A2</b>	<b>S.W.P.P.P. DOCUMENT CONTAINER</b>
NOT TO SCALE	

<b>B2</b>	<b>CONCRETE WASHOUT AREA</b>
NOT TO SCALE	

<b>C2</b>	<b>SILT FENCE WITH ROCK BERM OPTION</b>
NOT TO SCALE	

<b>E2</b>	<b>ROCK BERM</b>
NOT TO SCALE	



App.

No.

Date

REVISIONS

DESIGNED BY: KF

CHECKED BY: KF/JY

DRAWN BY: CAD

SCALE: AS SHOWN

DATE: MAY 24, 2023

JOB NO.: 17942-0002-00

QUIDDITY

State Board of Professional Engineers and Land Surveyors Reg. No. 162390  
4350 Lucille Drive, Suite 100, San Antonio, Texas 78244-2310

JOSEPH E. YORK V  
124934  
LICENSED PROFESSIONAL ENGINEER

6/12/2023

NEW BRAUNFELS EXECUTIVE STORAGE

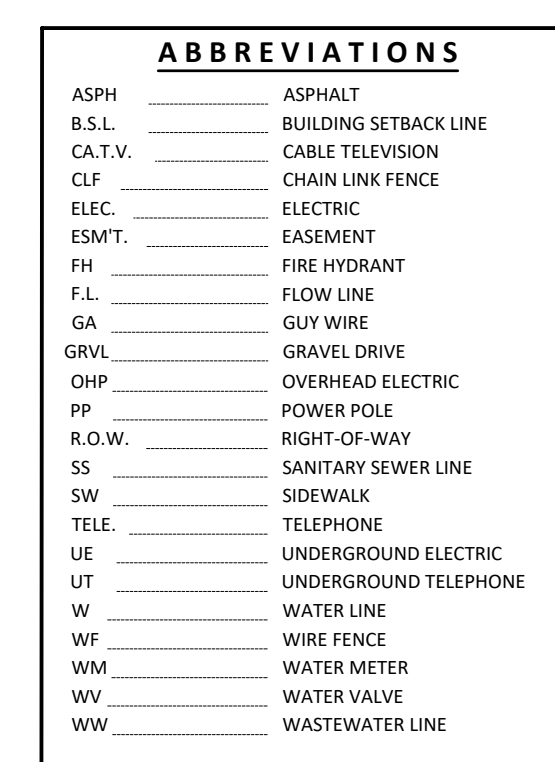
S.W.P.P.P. DETAILS

SHEET NO.

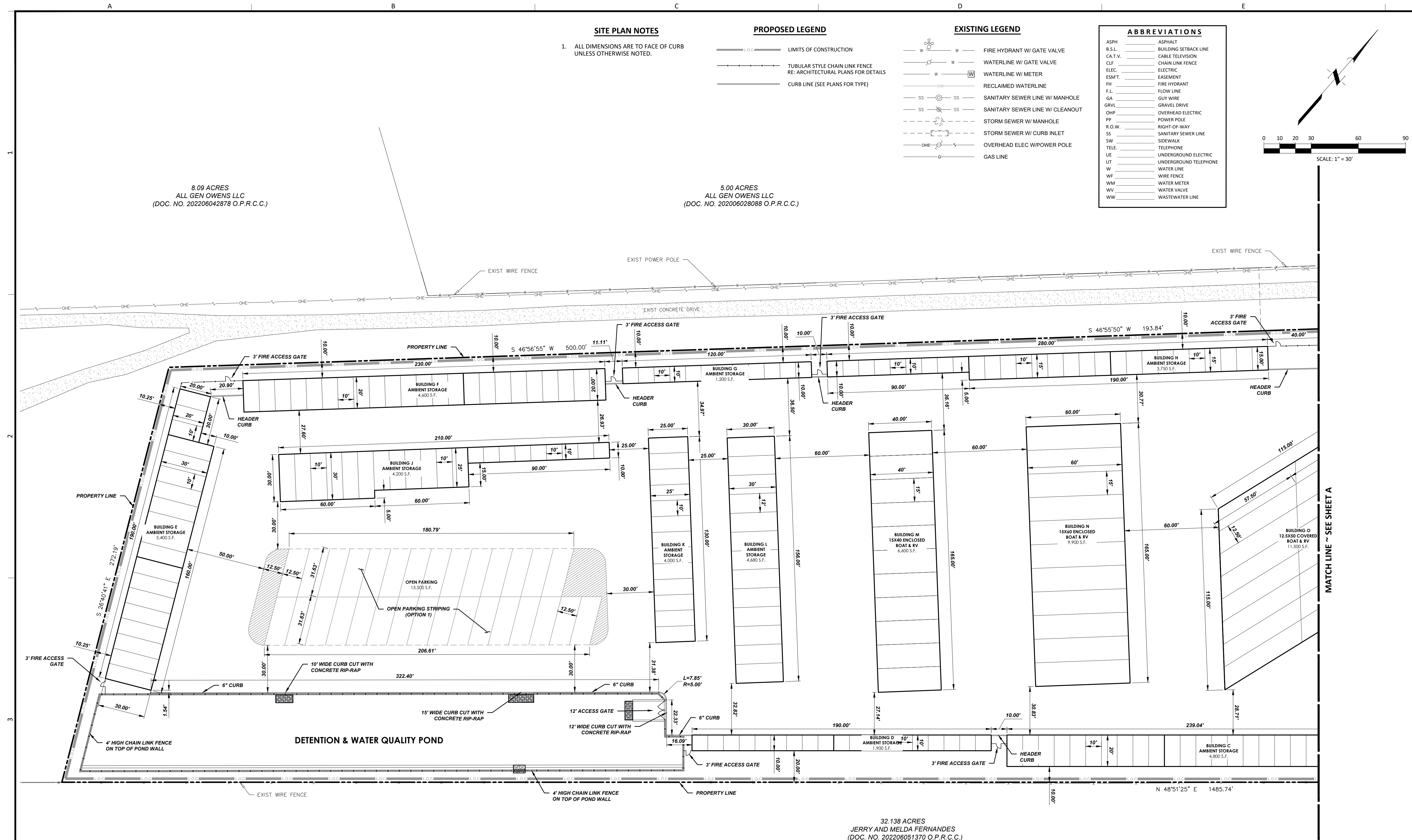
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OF 19





CONTRACTOR SHALL EXERCISE CAUTION DURING EXCAVATION, CONSTRUCTION, AND ALL ACTIVITIES ON SITE AND STAY AWAY FROM ALL OVERHEAD POWER. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS DEALING WITH CLEARANCES AND CONSTRUCTION ACTIVITIES.



**NOTICE**


CALL AT LEAST 2 WORKING DAYS (48 HOURS)  
BEFORE YOU DIG:

TEXAS811 (DIG TESS) (1-800-344-8377)  
-OR-  
LONE STAR NOTIFICATION CENTER  
(1-800-569-0344)

**CAUTION: OVERHEAD ELECTRIC**

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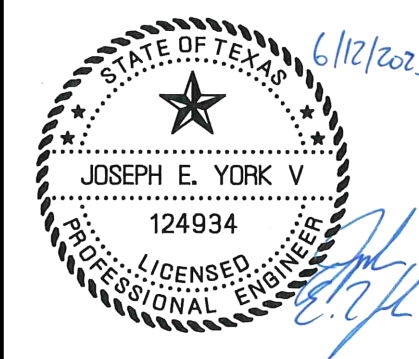
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# QUIDDITY

Team Lead of Professional Engineers and Land Surveyors Reg. No. FZ 2980  
4050 Central Drive Road, Suite 100 San Antonio, Texas 78249-1146-0311

SCALE:	AS SHOWN	DESIGNED BY:	KF
DATE:	MAY 24, 2023	CHECKED BY:	KF/JY
JOB NO.:	17942-0002-00	DRAWN BY:	CAD



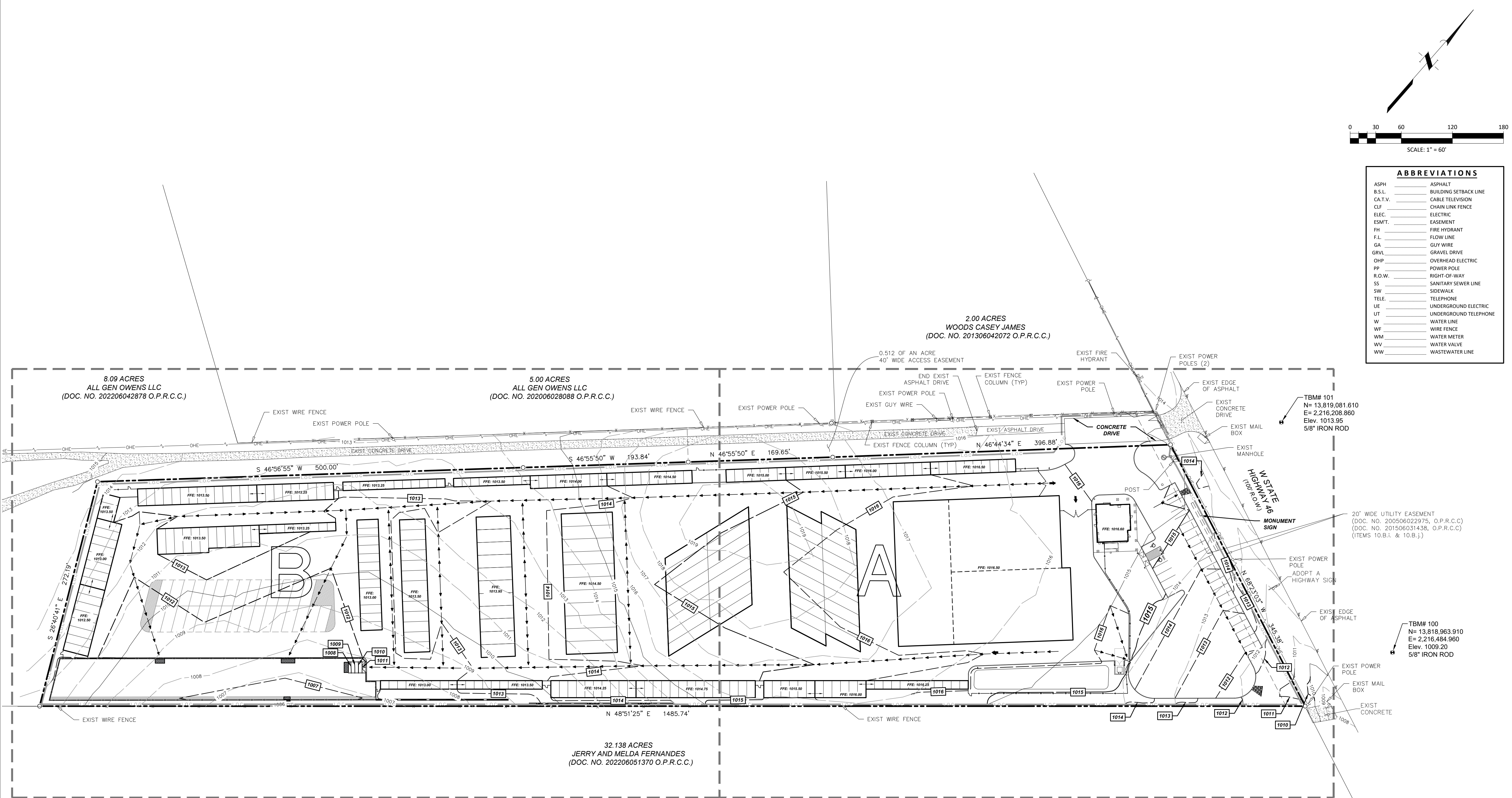
## NEW BRAUNFELS EXECUTIVE STORAGE

## SITE PLAN B

SHEET NO.

OF 19

8



ABBREVIATIONS	
ASPH	ASPHALT
B.S.L.	BUILDING SETBACK LINE
CA.T.V.	CABLE TELEVISION
CLF	CHAIN LINK FENCE
ELEC.	ELECTRIC
ESMT.	EASEMENT
FH	FIRE HYDRANT
F.L.	FLOW LINE
GA	GUY WIRE
GRV	GRAVEL DRIVE
OHP	OVERHEAD ELECTRIC
PP	POWER POLE
R.O.W.	RIGHT-OF-WAY
SS	SANITARY SEWER LINE
SW	SIDEWALK
TELE.	TELEPHONE
UE	UNDERGROUND ELECTRIC
UT	UNDERGROUND TELEPHONE
W	WATER LINE
WF	WIRE FENCE
WM	WATER METER
WV	WATER VALVE
WW	WASTEWATER LINE

EXISTING LEGEND	
	FIRE HYDRANT W/ GATE VALVE
	WATERLINE W/ GATE VALVE
	WATERLINE W/ METER
	RECLAIMED WATERLINE
	SANITARY SEWER LINE W/ MANHOLE
	SANITARY SEWER LINE W/ CLEANOUT
	STORM SEWER W/ MANHOLE
	STORM SEWER W/ CURB INLET
	OVERHEAD ELEC W/ POWER POLE
	GAS LINE
	GROUND CONTOUR

GRADING LEGEND	
	FINISHED FLOOR GRADE BREAK
	FINISHED FLOOR ELEVATION
	FINISHED CONTOUR
	EXISTING CONTOUR
	HIGH POINT
	FINISHED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EARTH SWALE
	EXTREME EVENT ARROW
	LIMITS OF CONSTRUCTION
	INVERTED CROWN
	RETAINING WALL
	TOP OF WALL ELEV.
	BOTTOM OF WALL ELEV.

**NOTICE**

CALL AT LEAST 2 WORKING DAYS (48 HOURS) BEFORE YOU DIG:

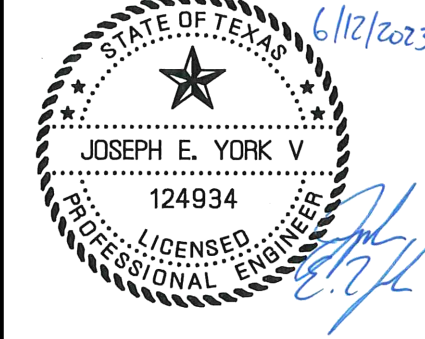
TEXAS811 (DIG TESS) (1-800-344-8377)  
-OR-  
LONE STAR NOTIFICATION CENTER  
(1-800-569-0344)

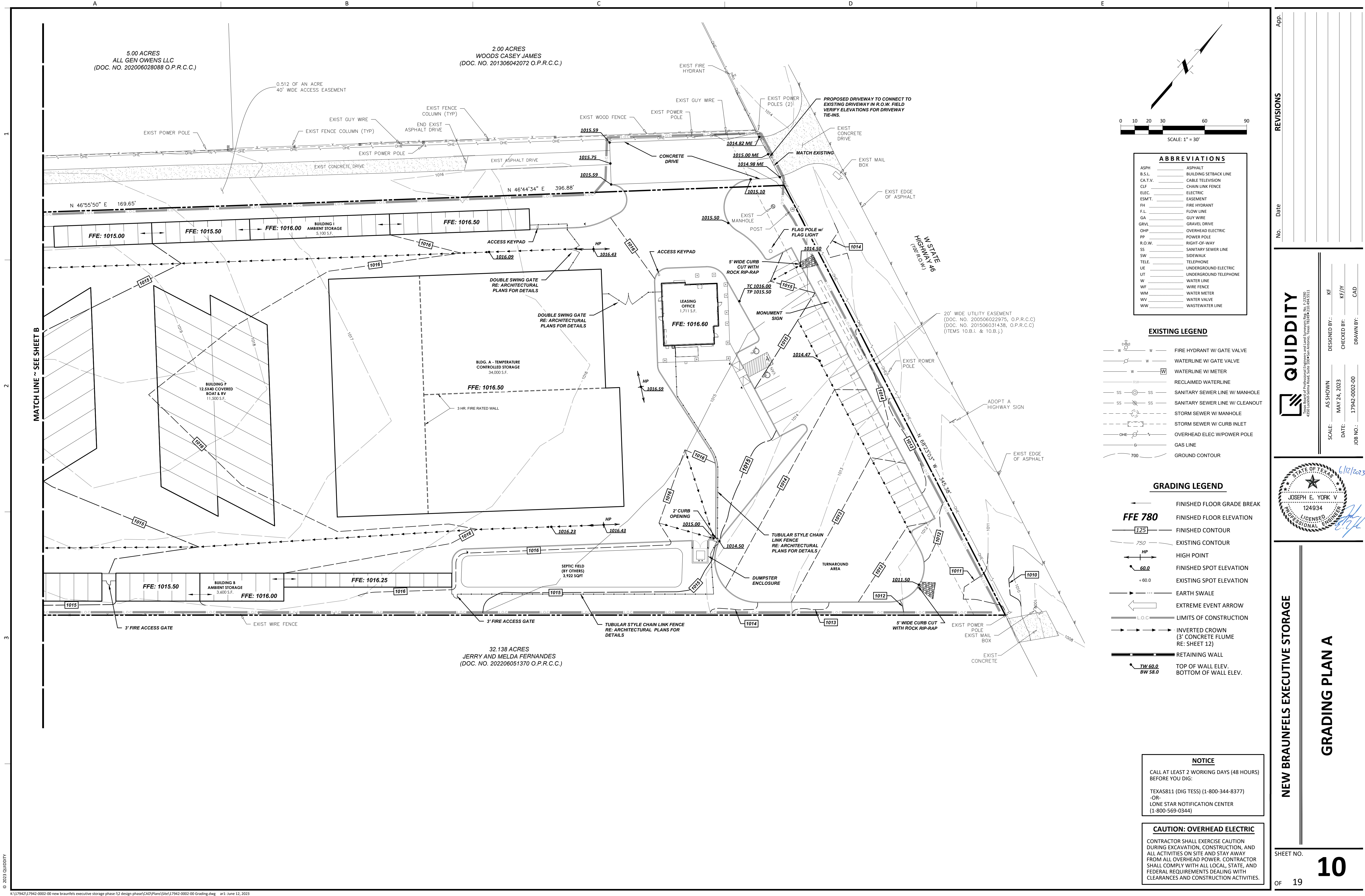
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REVISIONS	
No.	Date

<b>QUIDDITY</b>	
Texas Board of Professional Engineers and Land Surveyors Reg. No. 123280 4350 Lullwater Lane, Suite 100, Dallas, Texas 75244-2310	
SCALE: AS SHOWN	DESIGNED BY: KF
DATE: MAY 24, 2023	CHECKED BY: KF/JY
JOB NO.: 17942-0002-00	DRAWN BY: CAD





ABBREVIATIONS	
ASPH	ASPHALT
B.S.L.	BUILDING SETBACK LINE
CA.T.V.	CABLE TELEVISION
CLF	CHAIN LINK FENCE
ELEC.	ELECTRIC
ESMT.	EASEMENT
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GA	GUY WIRE
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WF	WIRE FENCE
WM	WATER METER
WV	WATER VALVE
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EXISTING LEGEND	
	FIRE HYDRANT W/ GATE VALVE
	WATERLINE W/ GATE VALVE
	WATERLINE W/ METER
	RECLAIMED WATERLINE
	SANITARY SEWER LINE W/ MANHOLE
	SANITARY SEWER LINE W/ CLEANOUT
	STORM SEWER W/ MANHOLE
	STORM SEWER W/ CURB INLET
	OVERHEAD ELEC W/POWER POLE
	GAS LINE
	GROUND CONTOUR

GRADING LEGEND	
	FINISHED FLOOR GRADE BREAK
	FINISHED FLOOR ELEVATION
	FINISHED CONTOUR
	EXISTING CONTOUR
	HIGH POINT
	FINISHED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EARTH SWALE
	EXTREME EVENT ARROW
	LIMITS OF CONSTRUCTION
	INVERTED CROWN
	RETAINING WALL
	TOP OF WALL ELEV.
	BOTTOM OF WALL ELEV.

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REVISIONS	
App.	
No.	Date

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. 123890  
4350 Luchins Lane, Suite 100, San Antonio, Texas 78249-2304-9511

DESIGNED BY: KF  
CHECKED BY: KF/JY  
DRAWN BY: CAD

SCALE: AS SHOWN  
DATE: MAY 24, 2023  
JOB NO.: 17942-0002-00

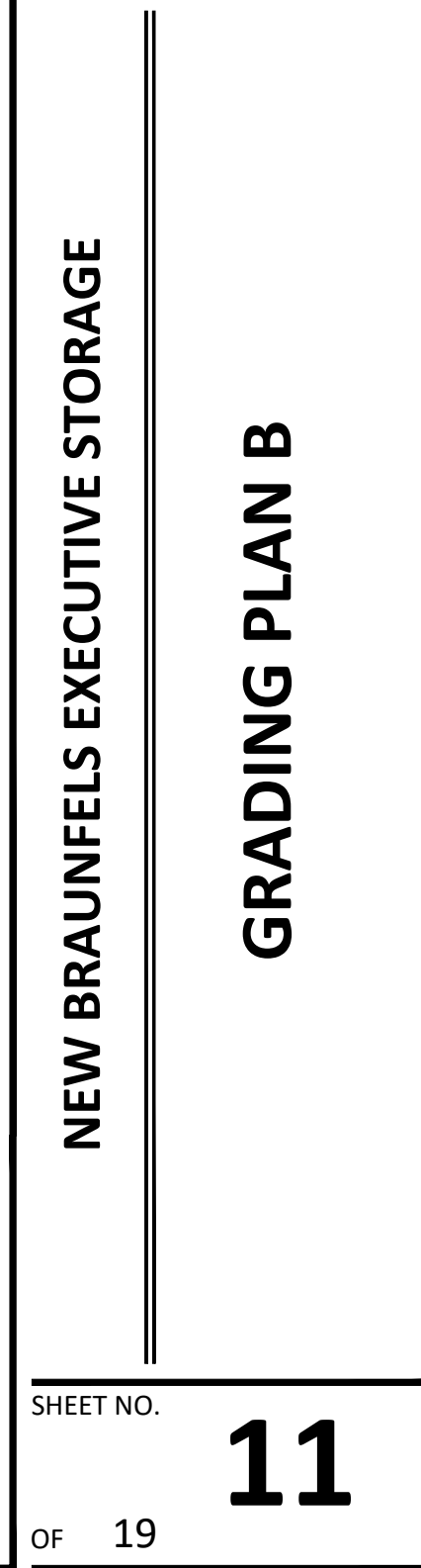
6/12/2023

**NEW BRAUNFELS EXECUTIVE STORAGE**

**GRADING PLAN A**

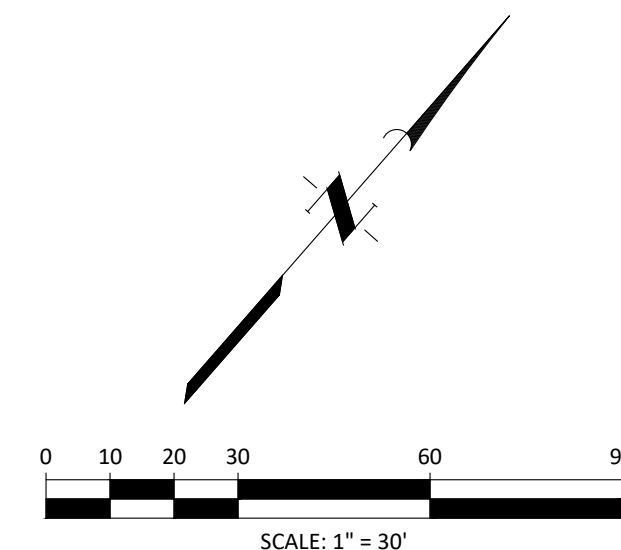
SHEET NO. **10**

OF 19



## ABBREVIATIONS

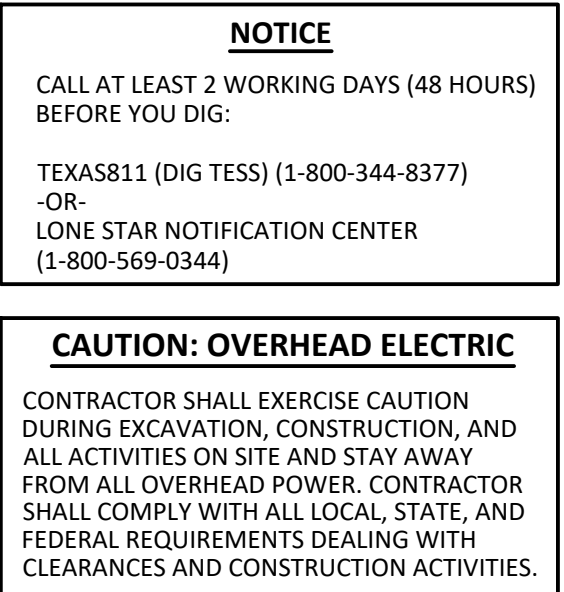
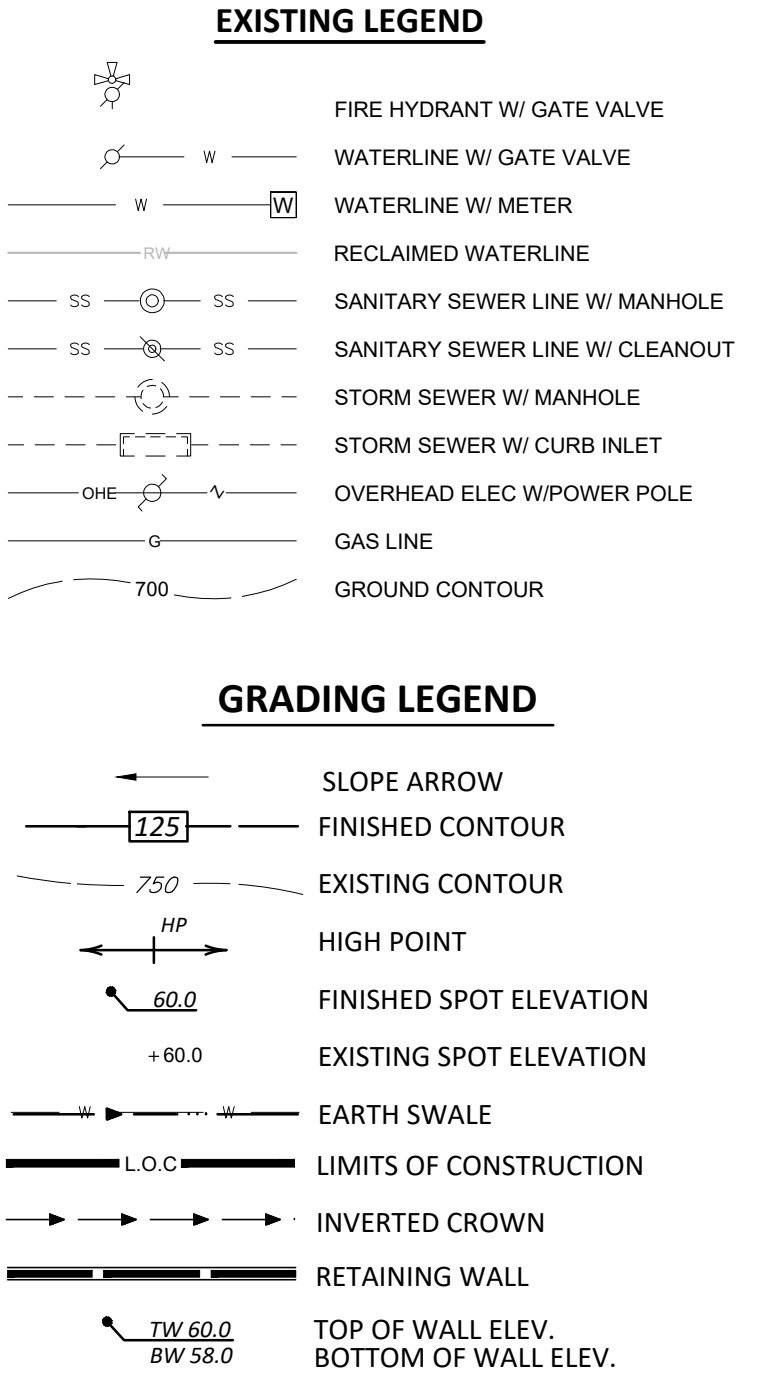
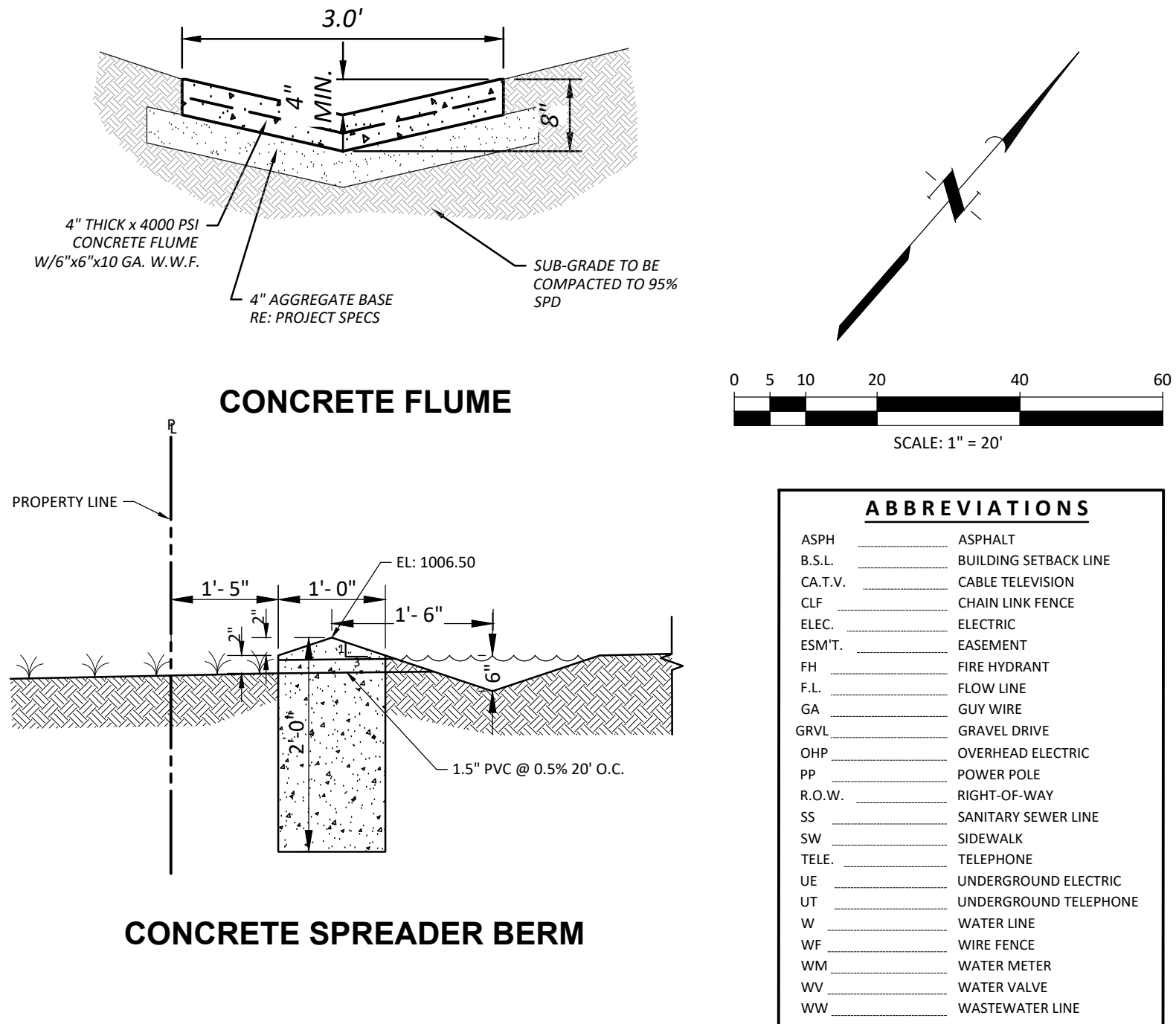
ASPH	ASPHALT
B.S.L.	BUILDING SETBACK LINE
CAT.V.	CABLE TELEVISION
CL	CHAIN LINK FENCE
ELEC.	ELECTRIC
ESMT.	EASEMENT
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UT	UNDERGROUND TELEPHONE
W	WATER LINE
WF	WIRE FENCE
WM	WATER METER
WW	WATER VALVE
WW	WASTEWATER LINE



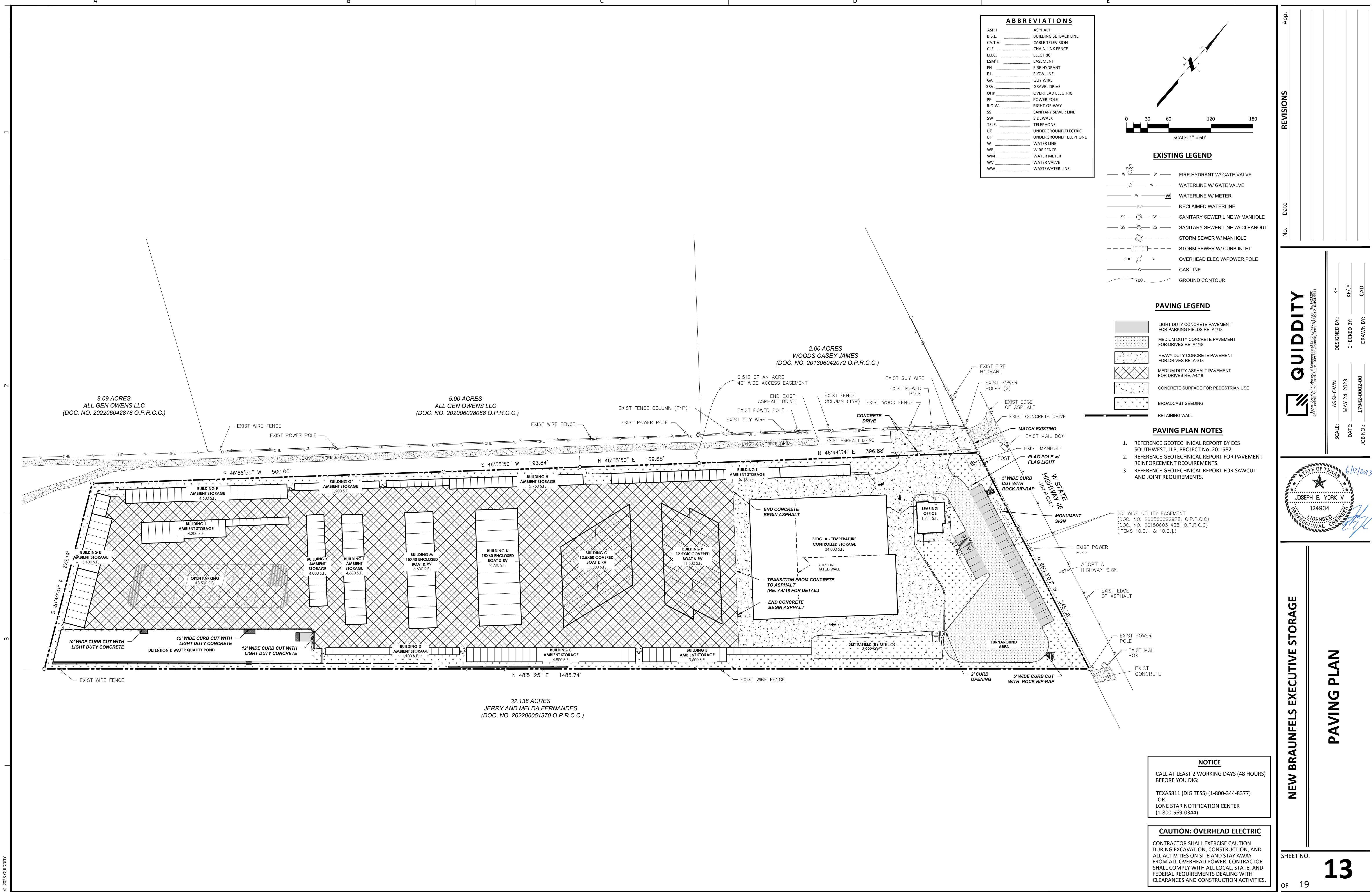
**MATCH LINE ~ SEE SHEET A**

**CAUTION: OVERHEAD ELECTRIC**

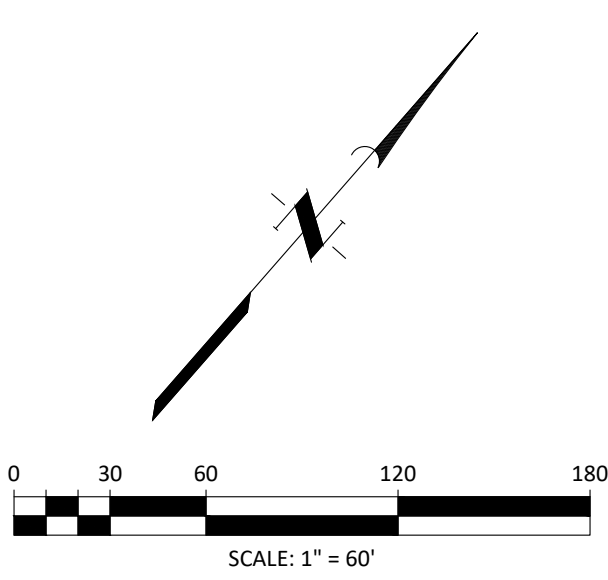
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CA.T.V.	CABLE TELEVISION
CLF	CHAIN LINK FENCE
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EXISTING LEGEND	
	FIRE HYDRANT W/ GATE VALVE
	WATERLINE W/ GATE VALVE
	WATERLINE W/ METER
	RECLAIMED WATERLINE
	SANITARY SEWER LINE W/ MANHOLE
	SANITARY SEWER LINE W/ CLEANOUT
	STORM SEWER W/ MANHOLE
	STORM SEWER W/ CURB INLET
	OVERHEAD ELEC W/ POWER POLE
	GAS LINE
	GROUND CONTOUR

PAVING LEGEND	
	LIGHT DUTY CONCRETE PAVEMENT FOR PARKING FIELDS RE: A4/18
	MEDIUM DUTY CONCRETE PAVEMENT FOR DRIVES RE: A4/18
	HEAVY DUTY CONCRETE PAVEMENT FOR DRIVES RE: A4/18
	MEDIUM DUTY ASPHALT PAVEMENT FOR DRIVES RE: A4/18
	CONCRETE SURFACE FOR PEDESTRIAN USE
	BROADCAST SEEDING
	RETAINING WALL

- PAVING PLAN NOTES**
- REFERENCE GEOTECHNICAL REPORT BY ECS SOUTHWEST, LLP, PROJECT No. 20.1582.
  - REFERENCE GEOTECHNICAL REPORT FOR PAVEMENT REINFORCEMENT REQUIREMENTS.
  - REFERENCE GEOTECHNICAL REPORT FOR SAWCUT AND JOINT REQUIREMENTS.

20' WIDE UTILITY EASEMENT  
(DOC. NO. 200506022975, O.P.R.C.C.)  
(DOC. NO. 201506031438, O.P.R.C.C.)  
(ITEMS 10.B.1. & 10.B.3.)

**NOTICE**

CALL AT LEAST 2 WORKING DAYS (48 HOURS) BEFORE YOU DIG:

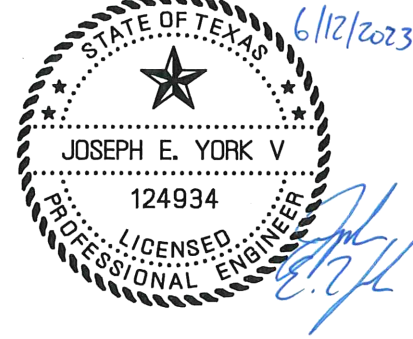
TEXAS811 (DIG TESS) (1-800-344-8377)  
-OR-  
LONE STAR NOTIFICATION CENTER  
(1-800-569-0344)

**CAUTION: OVERHEAD ELECTRIC**

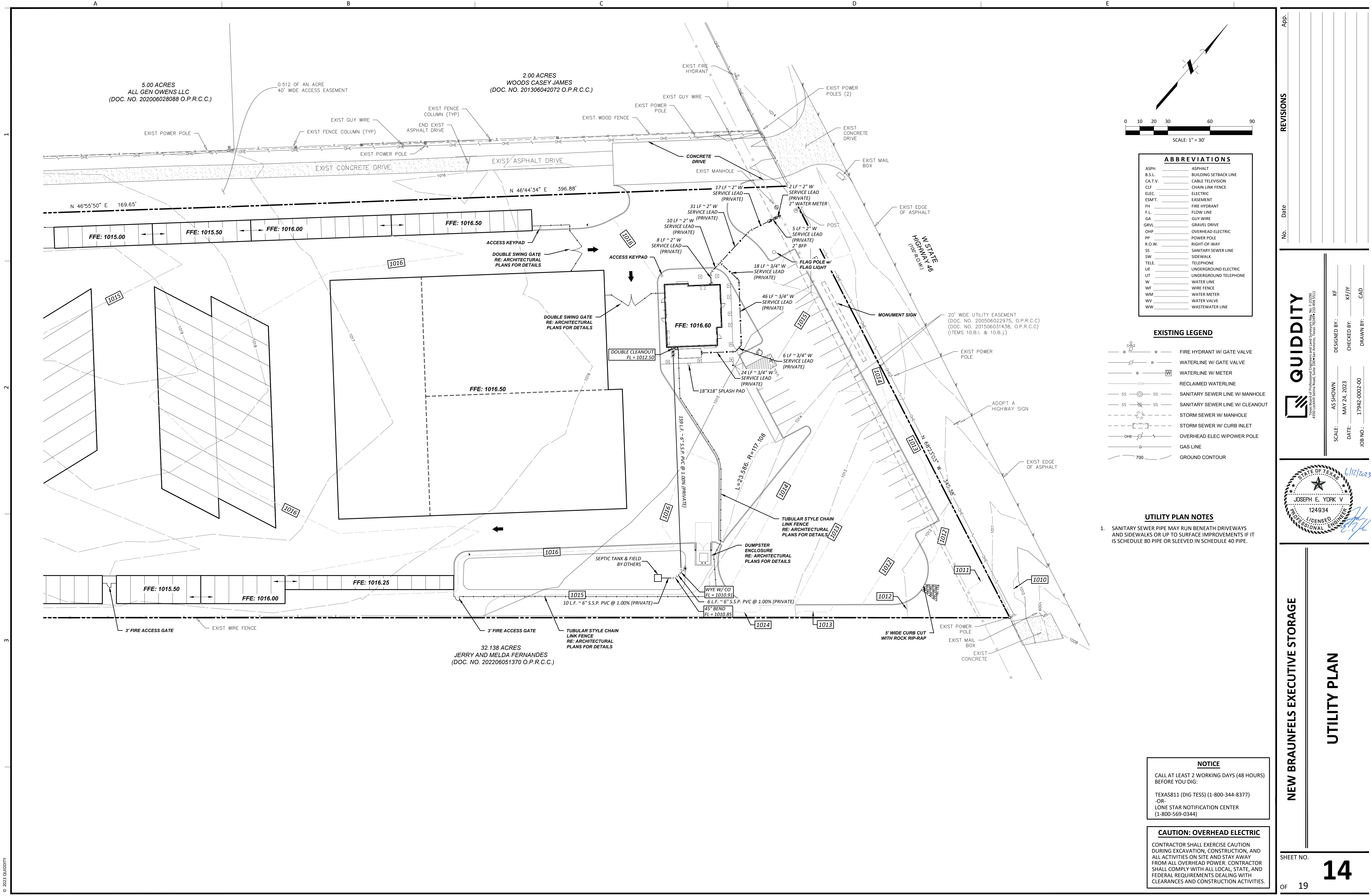
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REVISIONS	
No.	Date

<b>QUIDDITY</b> <small>Texas Board of Professional Engineers and Land Surveyors Reg. No. 123390 4350 Lucille Drive, Suite 100, Dallas, Texas 75244-2310</small>	
SCALE: AS SHOWN	DESIGNED BY: KF
DATE: MAY 24, 2023	CHECKED BY: KF/JY
JOB NO.: 17942-0002-00	DRAWN BY: CAD



NEW BRAUNFELS EXECUTIVE STORAGE	
PAVING PLAN	
SHEET NO. 13	
OF 19	



ABBREVIATIONS	
ASPH	ASPHALT
B.S.L.	BUILDING SETBACK LINE
CA.T.V.	CABLE TELEVISION
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WW	WASTEWATER LINE

EXISTING LEGEND	
	W FIRE HYDRANT W/ GATE VALVE
	W WATERLINE W/ GATE VALVE
	W WATERLINE W/ METER
	RW RECLAIMED WATERLINE
	SS SANITARY SEWER LINE W/ MANHOLE
	SS SANITARY SEWER LINE W/ CLEANOUT
	SS STORM SEWER W/ MANHOLE
	SS STORM SEWER W/ CURB INLET
	OHE OVERHEAD ELEC W/ POWER POLE
	G GAS LINE
	700 GROUND CONTOUR

UTILITY PLAN NOTES

- SANITARY SEWER PIPE MAY RUN BENEATH DRIVEWAYS AND SIDEWALKS OR UP TO SURFACE IMPROVEMENTS IF IT IS SCHEDULE 80 PIPE OR SLEEVED IN SCHEDULE 40 PIPE.

NOTICE

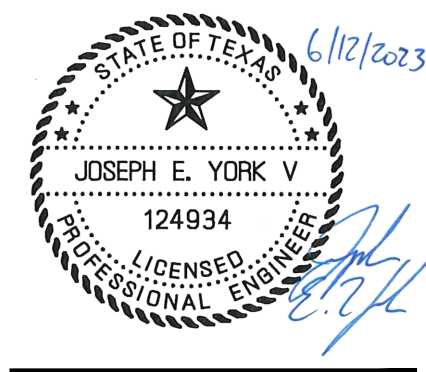
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SCALE:	AS SHOWN
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JOB NO.:	17942-0002-00



NEW BRAUNFELS EXECUTIVE STORAGE

UTILITY PLAN

SHEET NO.

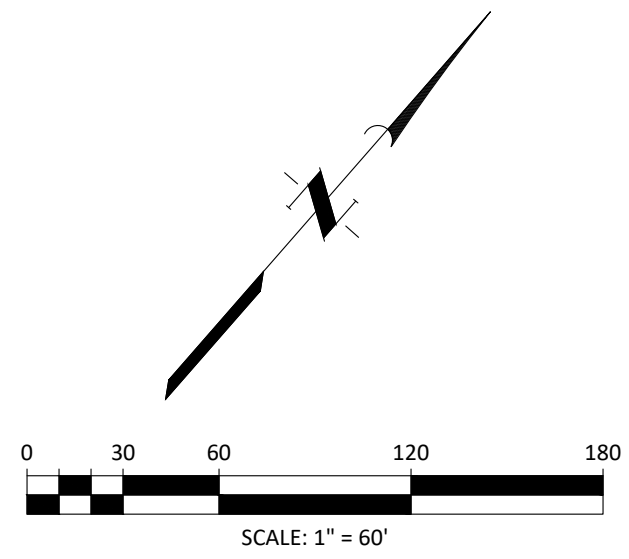
14

OF 19

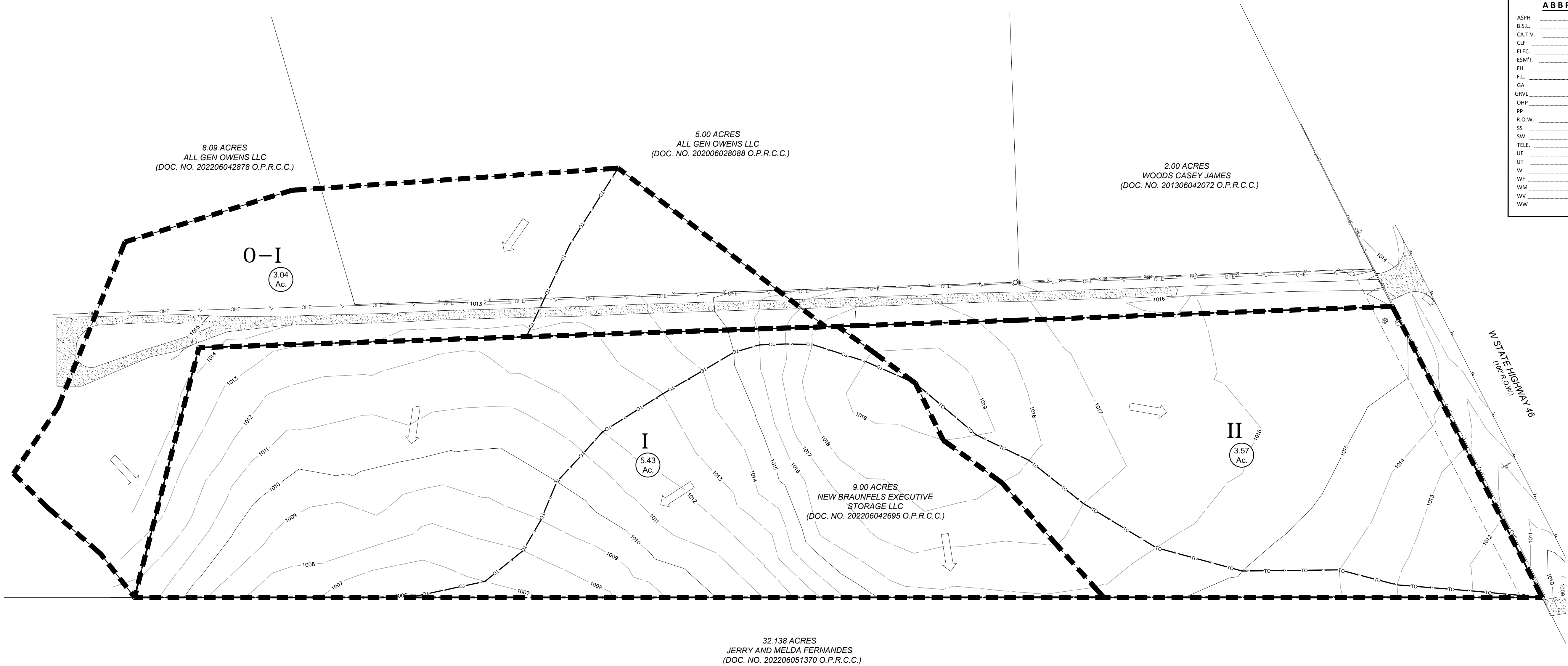
DA	Area (ac.)	Slope (ft/ft)	L <sub>total</sub> (ft)	T <sub>r</sub> (up to 100 ft)			T <sub>ch</sub> (L > 100 ft)			T <sub>c</sub> total
				L <sub>1</sub> (ft)	n	T <sub>r</sub>	L <sub>2</sub> (ft)	K	T <sub>ch</sub>	
O-I	3.04	0.010	203	100	0.015	10.00	103	20.328	0.84	10.84
I	5.43	0.021	653	100	0.15	10.00	553	16.135	3.90	13.90
II	3.57	0.012	722	100	0.15	11.59	622	16.135	5.76	17.35

\*Minimum Time of Concentration is 10 min per City of New Braunfels Drainage and Erosion Control Design Manual

DA	Area (ac.)	Tc	C	I 2-yr, in/hr	I 10-yr, in/hr	I 25-yr, in/hr	I 100-yr, in/hr	Q2, CFS	Q10, CFS	Q25, CFS	Q100, CFS
O-I	3.04	10.84	0.68	4.91	7.25	8.76	11.25	10.21	15.06	18.20	23.37
I	5.43	13.90	0.50	4.42	6.49	7.82	9.97	12.00	17.61	21.23	27.07
II	3.57	17.35	0.50	4.04	5.92	7.12	9.05	7.22	10.56	12.72	16.16



ASPH	ASPHALT
B.S.L.	BUILDING SETBACK LINE
CA.T.V.	CABLE TELEVISION
_____	CHAIN LINK FENCE
ELEC	ELECTRIC
ESMT	EASEMENT
FI	FIRE HYDRANT
F.L.	FLOW LINE
GA	GU
GRVL	GRAVEL DRIVE
_____	OVERHEAD ELECTRIC
HP	POWER POLE
R.O.W.	RIGHT-OF-WAY
S.S.	SANITARY SEWER LINE
SW	SIDEWALK
_____	TELEPHONE
UT	UNDERGROUND ELECTRIC
_____	UNDERGROUND TELEPHONE
_____	WATER LINE
_____	WIRE FENCE
WM	WATER METER
WV	WATER VALVE
_____	WASTEWATER LINE



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	WATERLINE W/ GATE VALVE
	WATERLINE W/ METER
	RECLAIMED WATERLINE
	SANITARY SEWER LINE W/ MANHOLE
	SANITARY SEWER LINE W/ CLEANOUT
	STORM SEWER W/ MANHOLE
	STORM SEWER W/ CURB INLET
	OVERHEAD ELEC W/POWER POLE
	GAS LINE
	GROUND CONTOUR

	SLOPE ARROW
<b>FFE 780</b>	FINISHED FLOOR ELEVATION
	FINISHED CONTOUR
	EXISTING CONTOUR
	HIGH POINT
	FINISHED SPOT ELEVATION
	EXISTING SPOT ELEVATION
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	EXTREME EVENT ARROW
	LIMITS OF CONSTRUCTION
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	TOP OF WALL ELEV.
	BOTTOM OF WALL ELEV.

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## REVISIONS

No.	Date
-----	------



**Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290**  
4350 Lockhill-Selma Road, Suite 100 • San Antonio, Texas 78249 • 210.494.5511

AS SHOWN \_\_\_\_\_ DESIGNED BY: \_\_\_\_\_ KF

17942-0002-00

## NEW BRAUNFELS EXECUTIVE STORAGE

## EXISTING DRAINAGE AREA MAP

SHEET NO.

OF 19

15

1  
2  
3

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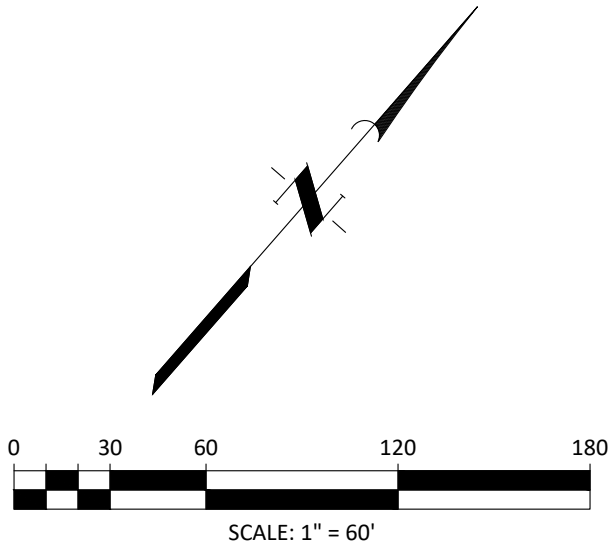
Tc (Post Development)

Note  
\*Minimum Time of Concentration is 10 min per City of New Braunfels Drainage and Erosion Control Design Manual

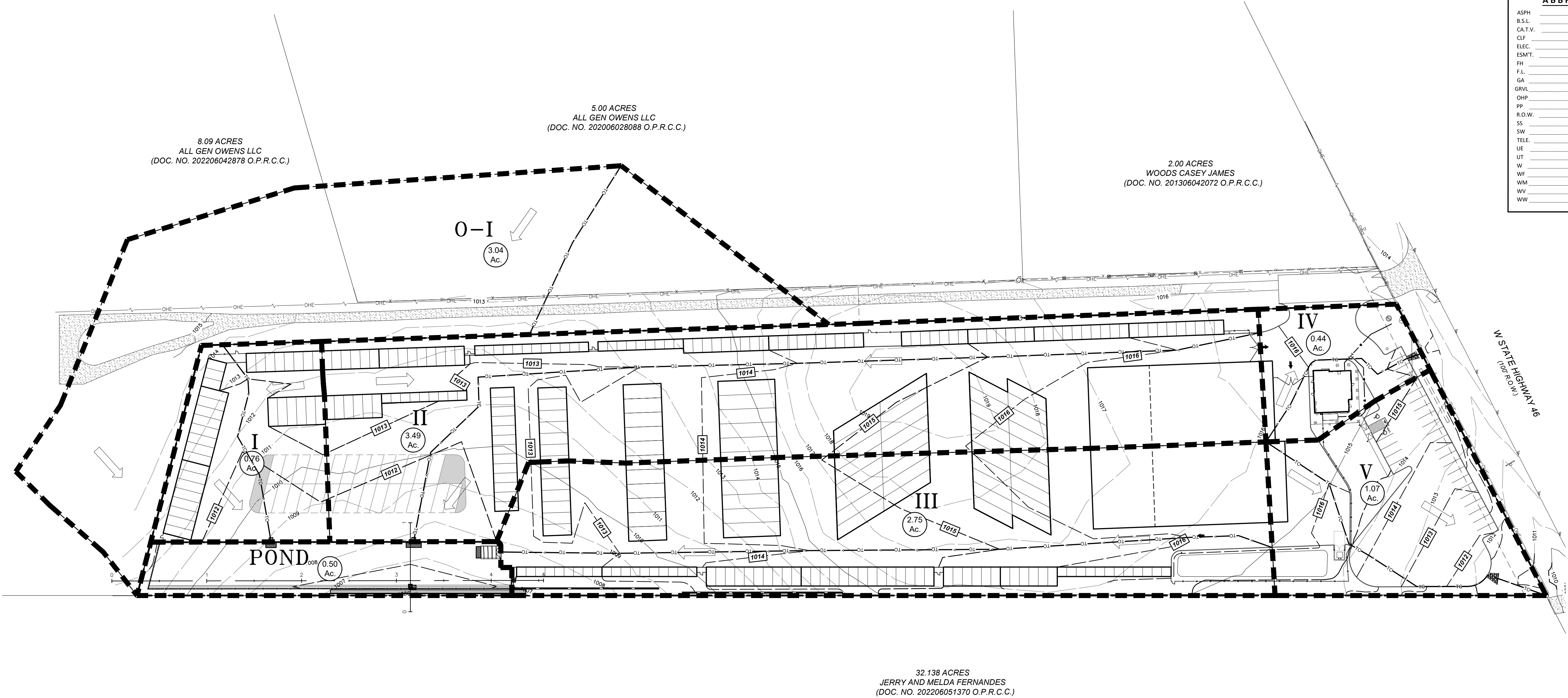
DA	Area (ac.)	Slope (ft/ft)	Ltotal (ft)	L1 (ft)	Ti (up to 100 ft)		Tch (L > 100 ft)			Tctotal
					n	Ti	L2 (ft)	K	Tch	
O-I	3.04	0.010	203	100	0.015	10.00	103	20.328	0.84	10.84
I	0.76	0.011	225	100	0.015	10.00	125	20.328	0.97	10.97
II	3.49	0.005	1023	100	0.015	10.00	923	20.328	10.82	20.82
III	2.75	0.006	815	100	0.015	10.00	715	20.328	7.49	17.49
IV	0.44	0.009	225	100	0.015	10.00	125	20.328	1.09	11.09
V	1.07	0.015	376	100	0.015	10.00	276	20.328	1.87	11.87
POND	0.50									

Flows (Post Development)

DA	Area (ac.)	Tc	C	I 2-yr, in/hr	I 10-yr, in/hr	I 25-yr, in/hr	I 100-yr, in/hr	Q2, CFS	Q10, CFS	Q25, CFS	Q100, CFS
O-I	3.04	10.84	0.68	4.91	7.25	8.76	11.25	10.21	15.06	18.20	23.37
I	0.76	10.97	0.91	4.89	7.22	8.72	11.19	3.38	4.99	6.03	7.74
II	3.49	20.82	0.91	3.75	5.48	6.60	8.37	11.92	17.42	20.96	26.59
III	2.75	17.49	0.91	4.03	5.90	7.10	9.02	10.09	14.76	17.78	22.58
IV	0.44	11.09	0.91	4.87	7.19	8.68	11.15	1.95	2.88	3.48	4.46
V	1.07	11.87	0.91	4.75	6.99	8.44	10.82	4.62	6.81	8.22	10.53



ABBREVIATIONS	
ASPH	ASPHALT
B.S.L.	BUILDING SETBACK LINE
CA.T.V.	CABLE TELEVISION
CLF	CHAIN LINK FENCE
ELEC.	ELECTRIC
ESMT.	EASEMENT
FH	FIRE HYDRANT
F.L.	FLOW LINE
GA	GUY WIRE
GRVL	GRAVEL DRIVE
OHP	OVERHEAD ELECTRIC
PP	POWER POLE
R.O.W.	RIGHT-OF-WAY
SS	SANITARY SEWER LINE
SW	SIDEWALK
TELE.	TELEPHONE
UE	UNDERGROUND ELECTRIC
UT	UNDERGROUND TELEPHONE
W	WATER LINE
WF	WIRE FENCE
WM	WATER METER
WV	WATER VALVE
WW	WASTEWATER LINE



EXISTING LEGEND	
	FIRE HYDRANT W/ GATE VALVE
	WATERLINE W/ GATE VALVE
	WATERLINE W/ METER
	RECLAIMED WATERLINE
	SANITARY SEWER LINE W/ MANHOLE
	SANITARY SEWER LINE W/ CLEANOUT
	STORM SEWER W/ MANHOLE
	STORM SEWER W/ CURB INLET
	OVERHEAD ELEC W/POWER POLE
	GAS LINE
	GROUND CONTOUR
GRADING LEGEND	
	SLOPE ARROW
	FINISHED FLOOR ELEVATION
	FINISHED CONTOUR
	EXISTING CONTOUR
	HIGH POINT
	FINISHED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EARTH SWALE
	EXTREME EVENT ARROW
	LIMITS OF CONSTRUCTION
	INVERTED CROWN
	RETAINING WALL
	TOP OF WALL ELEV. BOTTOM OF WALL ELEV.

**NOTICE**

CALL AT LEAST 2 WORKING DAYS (48 HOURS) BEFORE YOU DIG:

TEXAS811 (DIG TESS) (1-800-344-8377)  
-OR-  
LONE STAR NOTIFICATION CENTER  
(1-800-569-0344)

**CAUTION: OVERHEAD ELECTRIC**

CONTRACTOR SHALL EXERCISE CAUTION DURING EXCAVATION, CONSTRUCTION, AND ALL ACTIVITIES ON SITE AND STAY AWAY FROM ALL OVERHEAD POWER. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS DEALING WITH CLEARANCES AND CONSTRUCTION ACTIVITIES.

App.	No.	Date
REVISIONS		

**QUIDDITY**

Texas Board of Professional Engineers and Land Surveyors Reg. No. 123280  
4250 Lockhill-Dallas Road, Suite 100 • San Antonio, Texas 78244 • 210.544.9511

SCALE: AS SHOWN  
DATE: MAY 24, 2023  
JOB NO.: 17942-0002-00

DESIGNED BY: KF  
CHECKED BY: KF/JY  
DRAWN BY: CAD

STATE OF TEXAS

JOSEPH E. YORK V

124934

LICENSED PROFESSIONAL ENGINEER

6/12/2023

NEW BRAUNFELS EXECUTIVE STORAGE

PROPOSED DRAINAGE AREA MAP

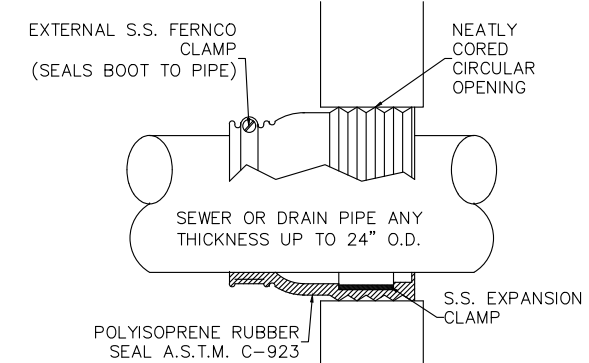
SHEET NO.

16

OF 19

**NOTE:**  
SAME DETAIL APPLIES FOR  
HORIZONTAL BRACING. SUPPORT  
PIPE SHALL BE DUCTILE IRON  
CLASS 250.

2 WET SWITCH DETAIL  
SCALE: NOT TO SCALE



**3 MANHOLE CONNECTION DETAIL**  
SCALE: NOT TO SCALE

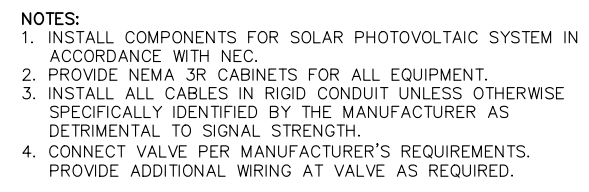


## BATCH DETENTION OUTLET STRUCTURE

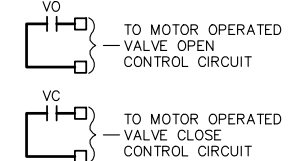
SCALE: 1 INCH = 50 FEET



SCALE: N.T.S.



LEGEND



## POND LEVEL CONTROL ELEMENTAR DIAGRAM

SCALE: N.T.S.

NOT TO SCALE

NOT TO SCALE

### POND LEVEL CONTROL ELEMENTAR DIAGRAM

SCALE: 1" = 50'

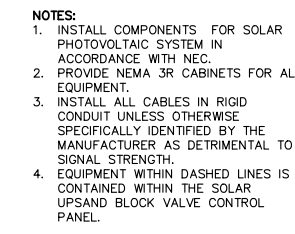
## BATCH DETENTION OUTLET STRUCTURE



SCALE: N.T.S.



SCALE: N.T.S.



## POND CONTROL LOGIC DIAGRAMS

SCALE: N.T.S.

NOT TO SCALE

RISER PIPE

NOT TO SCALE

## POND CONTROL LOGIC DIAGRAMS





# **PERMANENT BMP MAINTENANCE PLAN**

## MAINTENANCE PLAN FOR BATCH DETENTION SYSTEMS

Project: New Braunfels Executive Storage  
Address: 4655 State Highway 46  
City, State, Zip: New Braunfels ETJ, Texas 78132

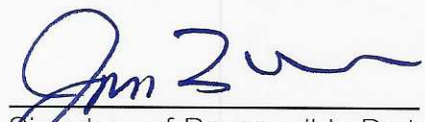
Batch detention basins may have somewhat higher maintenance requirements than an extended detention basin since they are active stormwater controls. The maintenance activities are identical to those of extended detention basins with the addition of maintenance and inspections of the automatic controller and the valve at the outlet.

- *Site Conditions Prior to Utilizing the BMP.* Construction within the watershed should be complete prior to exposing the filter to stormwater runoff and all exposed areas should be stabilized to minimize sediment loads. Runoff from any unstabilized construction areas should be treated via a separate sediment system that bypasses the filter media.
- *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.
- *Record keeping.* The Applicant shall maintain records of inspections for the previous five (5) years. The records shall indicate who made the inspections and on what date. In addition, the records shall indicate what the inspector found and what measures were taken to correct the situation.

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's entity** having ownership or control of the property (such as without limitation, an owner's association, new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity assumes such obligation in writing or ownership is transferred.

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

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

\_\_\_\_\_  
6/12/2023

Date