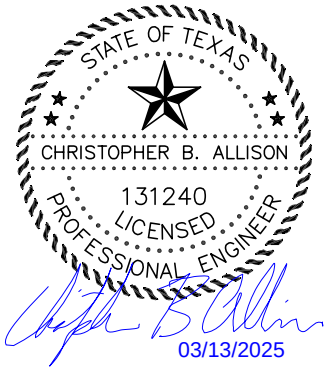
Water Pollution Abatement Plan

For

Hill Country Day School

144 River Chase Way
New Braunfels, TX 78132



Prepared By
Hill Country Civil, LLC
391 Landa St. Ste. 1204
New Braunfels, TX 78130
Christopher B. Allison, PE

Hill Country Civil
Engineers • Consultants

Hill Country Civil
Engineers • Consultants

Application Cover Page

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.

3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.

4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

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

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.

6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

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

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

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Hill Country Day School						**2. Regulated Entity No.:**			
3. Customer Name: Haleigh Almquist						**4. Customer No.:**			
5. Project Type: **(Please circle/check one)**	(New)		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	(WPAP)	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		(Non-residential)			**8. Site (acres):**			5.55
9. Application Fee:	5,000		**10. Permanent BMP(s):**			Batch Pond and Rainwater Harvesting			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			No Tanks			
13. County:	Comal		**14. Watershed:**			Isaac Creek Trib 4			

Application Distribution

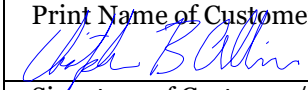
Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	___
Region (1 req.)	___	___	___
County(ies)	___	___	___
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	X	___	___	___
Region (1 req.)	___	X	___	___	___
County(ies)	___	X	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	X Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch Helotes ___Hill Country Village ___Hollywood Park ___San Antonio (SAWS) ___Shavano Park	___Bulverde ___Fair Oaks Ranch ___Garden Ridge X New Braunfels ___Schertz	NA	___San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Christopher B. Allison, P.E. Print Name of Customer/Authorized Agent
 03/13/2025 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):	

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General Information Form

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.

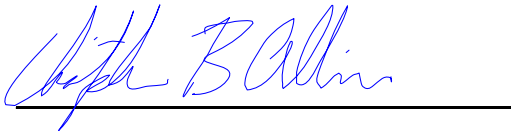
Signature

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: Christopher B. Allison, PE

Date: 03/13/2025

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Hill Country Day School
2. County: Comal
3. Stream Basin: Isaac Creek Tributary 4
4. Groundwater Conservation District (If applicable): Comal Trinity GCD
5. Edwards Aquifer Zone:

   [X] Recharge Zone
   [ ] Transition Zone

6. Plan Type:

   [X] WPAP
   [ ] SCS
   [ ] Modification
   [ ] AST
   [ ] UST
   [ ] Exception Request

7. Customer (Applicant):

Contact Person: Haleigh Almquist
Entity: Hill Country Day School
Mailing Address: 144 River Chase Way
City, State: New Braunfels, TX Zip: 78132
Telephone: (512) 415-5145 FAX: _____
Email Address: hello@hillcountrydayschool.com

8. Agent/Representative (If any):

Contact Person: Christopher B. Allison, PE
Entity: Hill Country Civil
Mailing Address: 391 Landa St. Ste. 1204
City, State: New Braunfels, TX Zip: 78130
Telephone: (817) 659-9078 FAX: _____
Email Address: blake@hillcountrycivil.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.

144 River Chase Way, New Braunfels, TX. 78132

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

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

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

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

☒ Survey staking will be completed by this date: 3/25/2025

14. [X] **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:

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

16. [X] 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. [X] 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:

- [X] 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. [X] 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)
- [X] San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. [X] 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. [X] 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.

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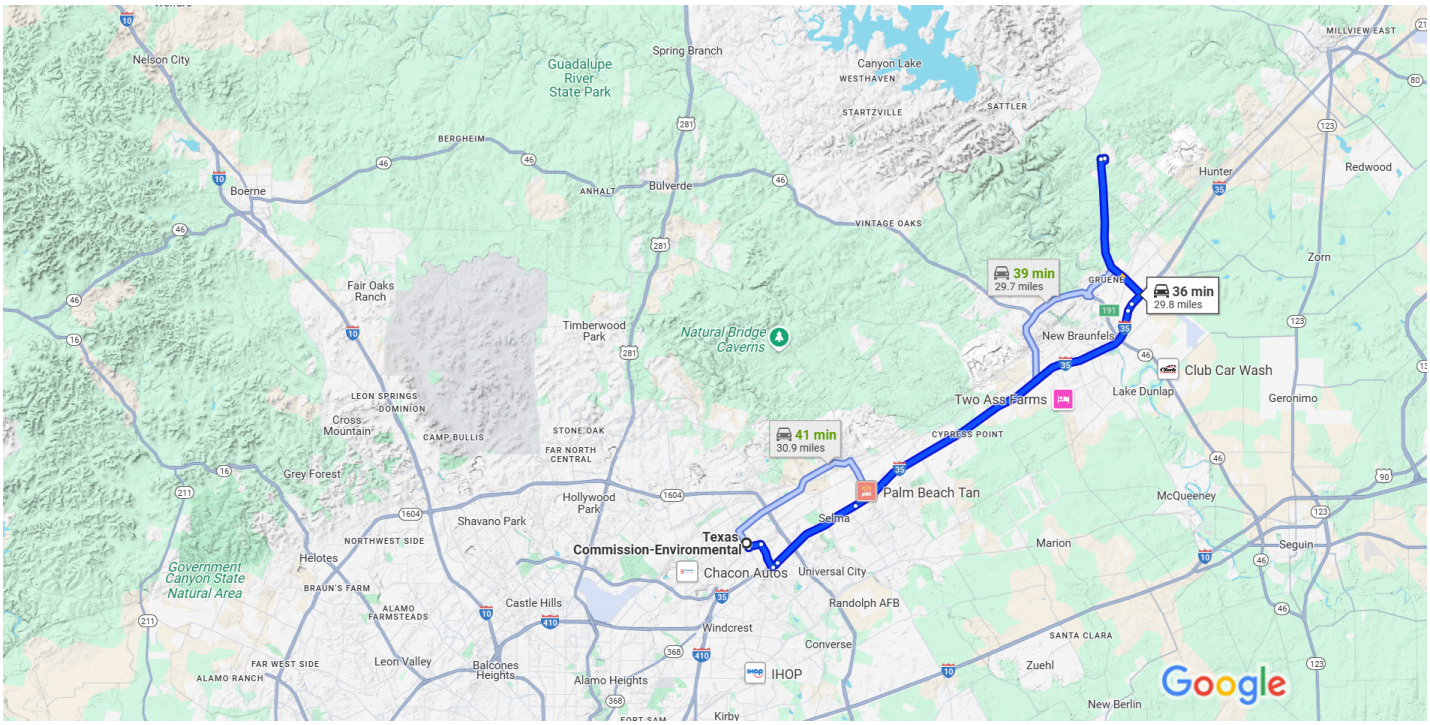
Attachment A: Location Map

Google Maps

Texas Commission-Environmental, 14250 Judson Rd, San Antonio, TX 78233 to 144 River Chase Way, New Braunfels, TX 78132

Drive 29.8 miles, 36 min



Map data ©2025 Google 2 mi

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

Get on I-35 N in Live Oak from Lookout Rd and Toepperwein Rd

6 min (2.4 mi)

1. Head southwest toward Judson Rd

285 ft

2. Turn right toward Judson Rd

85 ft

3. Turn left onto Judson Rd

482 ft

4. Turn left to stay on Judson Rd

0.1 mi

5. Turn left onto Lookout Rd

0.6 mi

6. Turn right onto Toepperwein Rd

1.2 mi

7. Turn left onto I-35 Frontage Rd

223 ft

8. Use the left lane to take the ramp onto I-35 N

0.3 mi

Follow I-35 N to I 35 N Frontage Rd in New Braunfels.
Take exit 191 from I-35 N

18 min (19.8 mi)

9. Merge onto I-35 N

4.3 mi

10. Keep left to stay on I-35 N

15.2 mi

11. Take exit 191 toward FM306/Canyon Lake

0.3 mi

Take FM306 to Collanade Dr

12 min (7.6 mi)

12. Merge onto I 35 N Frontage Rd

0.6 mi

13. Use the left 2 lanes to turn left onto FM306

6.6 mi

14. Turn right onto River Chase Way

0.2 mi

15. Turn right onto Collanade Dr

0.2 mi

144 River Chase Way
New Braunfels, TX 78132

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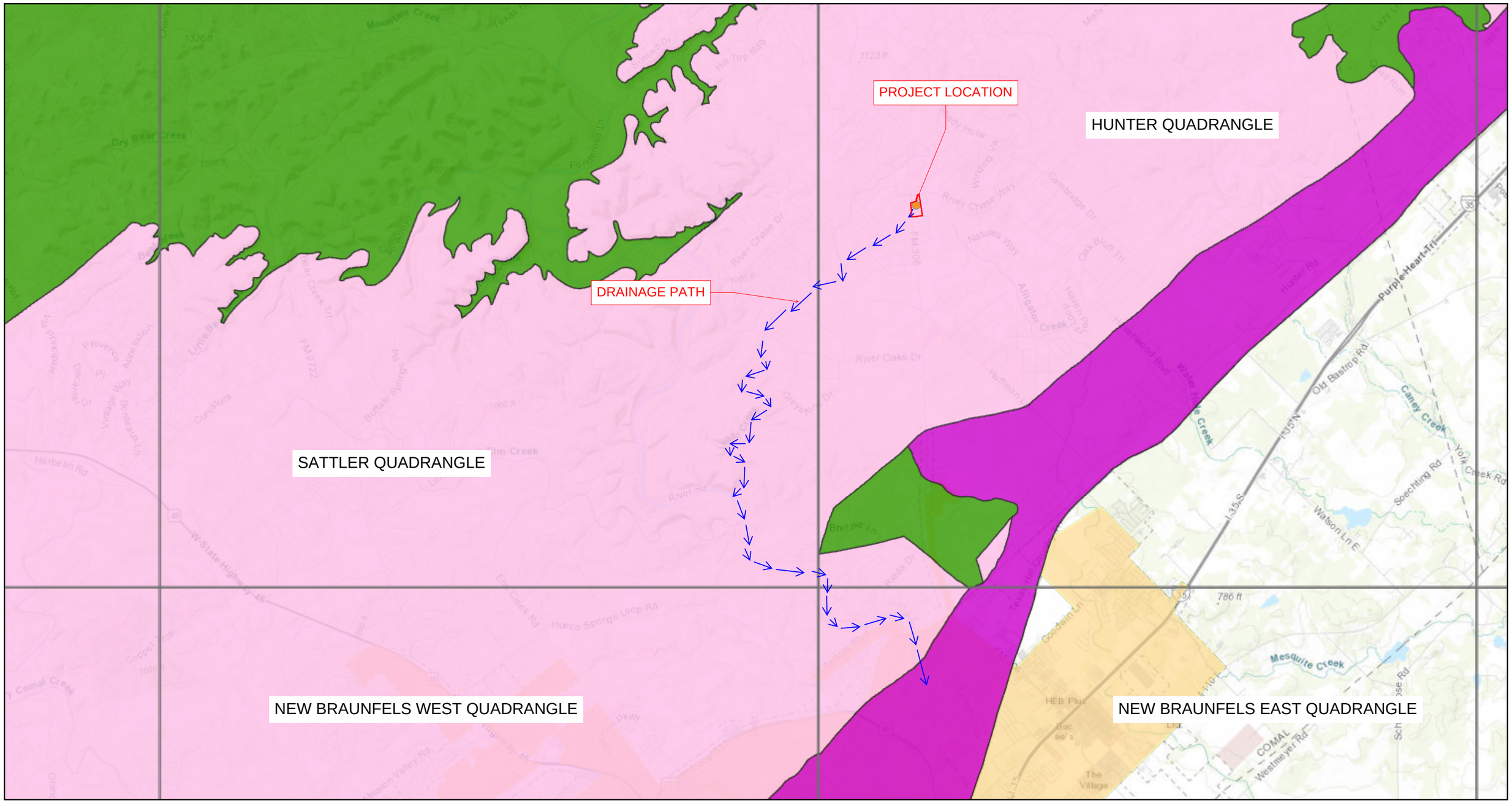
Attachment B: USGS / Edwards Recharge Zone Map

Edwards Aquifer Viewer Custom Print



3/11/2025, 5:06:10 PM

1:79,427

0 0.75 1.5 3 mi

0 1.25 2.5 5 km

- ArcGIS World Geocoding Service
- TCEQ_EDWARDS_OFFICIAL_MAPS
- 7.5 Minute Quad Grid

Edwards Aquifer

- Recharge Zone
- Transition Zone
- Contributing Zone
- Contributing Zone within the Transition Zone
- City/Place

Citations

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

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Attachment C: Project Description

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Attachment C: Project Description

Hill Country Day School is a proposed daycare located at 144 River Chase Way New Braunfels, TX. 78132. The 5.55-acre property is located in the City of New Braunfels ETJ and entirely inside the Edwards Aquifer Recharge Zone. The legal description for the tract is River Chase 5, Lot 526. The tract is not located within a 100-Year Floodplain per FEMA Panel No. 48091C0280F. The site generally drains from the north to south. The lower portion at the rear of the lot was designed as a regional detention pond. This pond is contained within an existing drainage easement called out on the plans. In accordance with 30 TAC Chapter 213, this WPAP application is being submitted for the proposed development to occur onsite.

Proposed development includes two new day school facilities, asphalt parking, concrete dumpster pad and other miscellaneous hardscape like sidewalks. This is calculated to be 1.48-acres of proposed impervious cover.

The proposed permanent BMP to treat the impervious cover is one (1) Batch Detention Pond, and three (3) rainwater harvesting tanks adhering to TCEQ's Technical Guidance Manual (TGM) RG-348. Using the TCEQ spreadsheet, the Batch Detention Pond has a treatment removal efficiency of 91%. The rooftop area captured by rainwater harvesting was removed from the total impervious cover to be treat within the removal calculations. There are approximately 0.35 acres of rooftop being treated by rainwater harvesting, bringing the total amount of impervious cover to be treated to 1.13 acres. 1.10 acres of impervious cover are being routed to the batch detention pond. The remaining 0.03 acres of impervious cover are being accounted for through overtreatment within the batch pond. Total Site generated TSS for the project is 1014 lbs. The basin itself captures about 987 lbs of TSS. This is due to some areas of the site not being captured; therefore, it is being treated as overtreatment by the basin, with and Lm Desired set at 1014 lbs.

There is an offsite drainage area that runs through the site. The 2.53-acre area is being captures and routed into the proposed batch pond. This runoff is accounted for in the water quality treatment volume as seen in the calculations

Wastewater flows generated by the project will be treated by a new septic system sized to treat the new development. Potable water will be provided by New Braunfels Utilities.

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Geologic Assessment Form

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

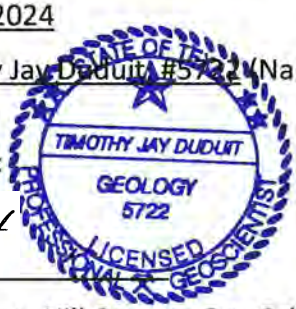
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Timothy J. Duduit Telephone: 2108876676

Date: September 22, 2024 Fax: _____

Representing: Timothy Jay Duduit #5722 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: Hill Country Day School

Project Information

1. Date(s) Geologic Assessment was performed: September 22, 2024
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)

Soil Name	Group*	Thickness(feet)
RUD: Rumple-Comfort, rubbly association, 1 to 8 % slopes	D	0-2

** 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 A: GEOLOGIC ASSESSMENT TABLE — **PROJECT NAME: Hill Country Day School**

LOCATION			FEATURE CHARACTERISTICS											EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-1	SEE MAP		FAULT	20	Kep/Kek				N65°E	10			Clay	5	35	35			X	DRAINAGE

* DATUM:_____

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

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

12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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

Date 09/22/24

Sheet __1____ of __1____

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

SITE SPECIFIC
STRATIGRAPHIC COLUMN
Hill Country Day School

System	Group	Formation	Function	Member or Informal Unit	Function	Thickness Feet	Lithology	Hydrostratigraphy
Cretaceous		Del Rio Clay	CB	NA	NA	60-90	Clay with thin layers of coquina limestone	Does not allow infiltration of surface water to subsurface.
	Edwards	Person (Edwards Aquifer)	AQ	Marine	AQ		Limestone and dolomite; honeycombed limestone interbedded with chalky porous limestone and massive, recrystallized limestone	Reefal limestone and carbonate deposits under normal open marine conditions. Zones with significant porosity and permeability are laterally extensive. Karstified unit.
				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 breecias 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)

Site Specific Geology and Soil Characteristics

Hill Country Day School, 144 River Chase Way, 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 Cretaceous-age Kainer, Person and Del Rio Formations, according to the USGS National Geologic Map Data Base https://ngmdb.usgs.gov/mapview/?center=-98.426,29.639&zoom=15.

Geologic mapping of the project site confirmed this basic stratigraphy and aerial photographs and geologic mapping confirmed that one fault occurred on the project site.

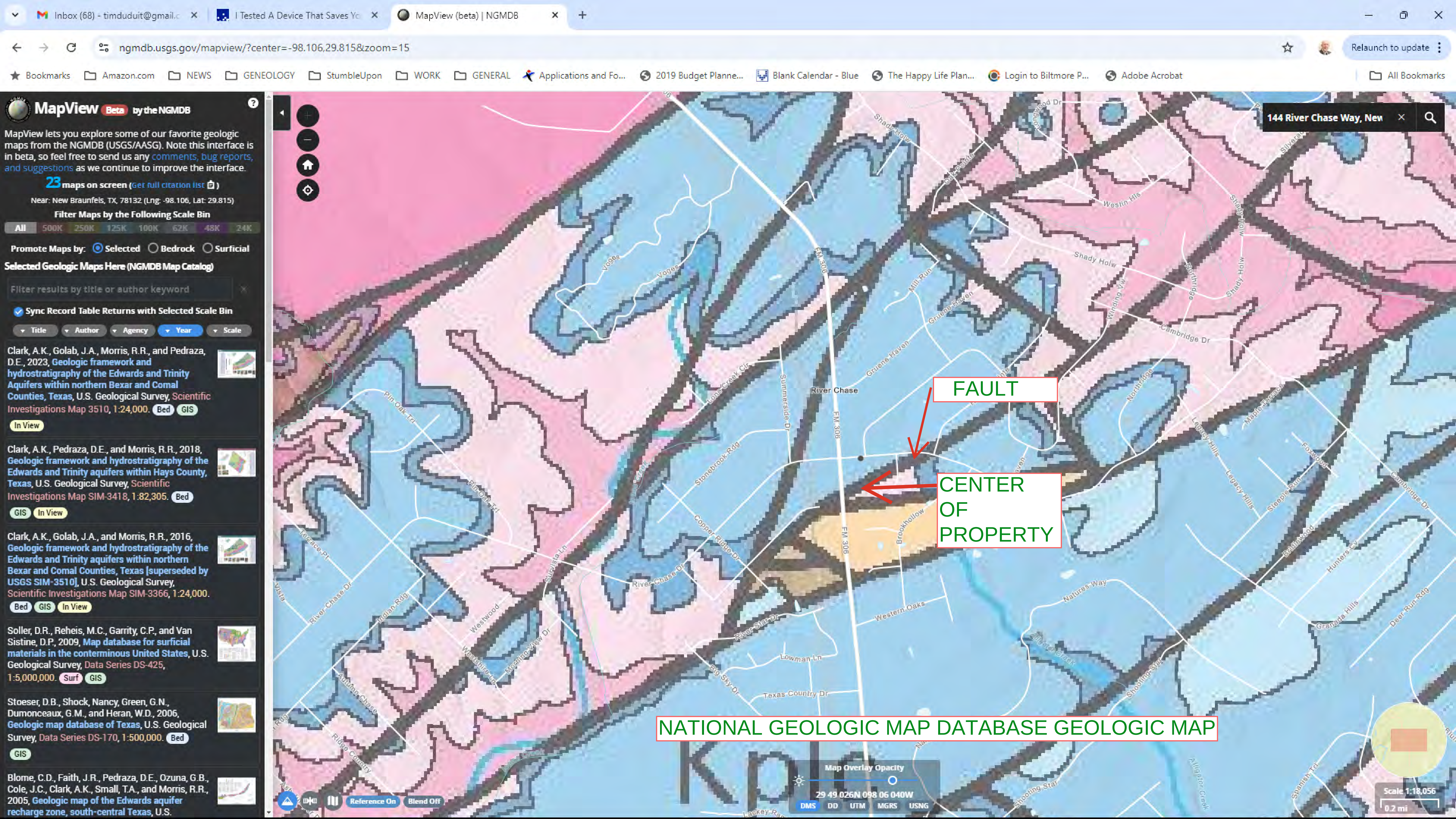
The soil at the site is the *RUD: Rumple-Comfort, rubbly association, 1 to 8 % slopes* that ranges from 0.5 to 1 foot thick, according to the USDA Web soil survey for the site. The thickness of the soils is estimated from limited exposures and topographic relief.

Site Structural Geology

The project site appears to be affected by faulting, as evidence of offset was noted over the site during the field mapping, aerial photograph review, and geologic map review. The fault trace is buried by soil and not visible in the field.

Geologic Features

The site is currently a grassy meadow with a few scattered oak trees . There are no outcrops of bedrock on the site. In general, there appears to be little or no potential for fluid movement from the surface of the project site to the Edwards Aquifer due to the lack of karstic features, presence of the Del Rio Clay, lack of rock outcrops at the site, and the presence of thick and consistent Group D clay soil at the site.


ngmdb.usgs.gov/mapview/?center=-98.106,29.815&zoom=15
MapView Beta by the NGMDB
MapView lets you explore some of our favorite geologic maps from the NGMDB (USGS/AASG). Note this interface is in beta, so feel free to send us any comments, bug reports, and suggestions as we continue to improve the interface.
23 maps on screen (Get full citation list)
Near: New Braunfels, TX, 78132 (Lng: -98.106, Lat: 29.815)
Filter Maps by the Following Scale Bin
All 500K 250K 125K 100K 62K 48K 24K
Promote Maps by: Selected Bedrock Surficial
Selected Geologic Maps Here (NGMDB Map Catalog)
Filter results by title or author keyword
Sync Record Table Returns with Selected Scale Bin
Title Author Agency Year Scale
Clark, A.K., Golab, J.A., Morris, R.R., and Pedraza, D.E., 2023, Geologic framework and hydrostratigraphy of the Edwards and Trinity Aquifers within northern Bexar and Comal Counties, Texas, U.S. Geological Survey, Scientific Investigations Map 3510, 1:24,000. Bed GIS In View
Clark, A.K., Pedraza, D.E., and Morris, R.R., 2018, Geologic framework and hydrostratigraphy of the Edwards and Trinity aquifers within Hays County, Texas, U.S. Geological Survey, Scientific Investigations Map SIM-3418, 1:82,305. Bed GIS In View
Clark, A.K., Golab, J.A., and Morris, R.R., 2016, Geologic framework and hydrostratigraphy of the Edwards and Trinity aquifers within northern Bexar and Comal Counties, Texas [superseded by USGS SIM-3510], U.S. Geological Survey, Scientific Investigations Map SIM-3366, 1:24,000. Bed GIS In View
Soller, D.R., Reheis, M.C., Garrity, C.P., and Van Sistine, D.P., 2009, Map database for surficial materials in the conterminous United States, U.S. Geological Survey, Data Series DS-425, 1:5,000,000. Surf GIS
Stoeser, D.B., Shock, Nancy, Green, G.N., Dumonceaux, G.M., and Heran, W.D., 2006, Geologic map database of Texas, U.S. Geological Survey, Data Series DS-170, 1:500,000. Bed GIS
Blome, C.D., Faith, J.R., Pedraza, D.E., Ozuna, G.B., Cole, J.C., Clark, A.K., Small, T.A., and Morris, R.R., 2005, Geologic map of the Edwards aquifer recharge zone, south-central Texas, U.S.
144 River Chase Way, New
River Chase
FM 306
FAULT
CENTER OF PROPERTY
NATIONAL GEOLOGIC MAP DATABASE GEOLOGIC MAP
Map Overlay Opacity
29 49 026N 098 06 040W
DMS DD UTM MGRS USNG
Reference On Blend Off
Scale 1:18,056
0.2 mi

LEGEND:

- WATER METER BOX
- EP — EDGE OF PAVEMENT
- PP — POWER POLE
- WATER VALVE
- OU — OU — OVERHEAD UTILITY
- WROUGHTIRON FENCE
- PIPE FENCE
- 1/2" IRON ROD FOUND (UNLESS NOTED)
- 3" PIPE POST FOUND

NOTE: The basis of bearing for this survey is the Texas State Plane Coordinate System Grid, South Central Zone (FIPS 4204) (NAD'83). All distances are on the Grid and shown in U.S. Survey feet.

Kep - Person Formation

Kek - Kainer Formation

Kdr - Del Rio Formation

U / D — FAULT - U and D indicate upthrown and downthrown sides, respectively.

Scale: 1" = 50'

RIVER CHASE WAY (R.O.W. VARIES)

N 86°01'16" E 110.00' CALLED

EP

N 85°22'09" E 110.18'

20' PUBLIC UTILITY, DRAINAGE, & EMBANKMENT/BACKSLOPE EASMENT

60' BLDG. SETBACK LINE

N 49°35'29" W 35.37'

S 40°31'28" W 35.39'

10' PUBLIC UTILITY & DRAINAGE EASMENT

20' BLDG. SETBACK LINE

N 03°58'44" W 346.18' CALLED

N 04°41'08" W 346.21'

S 04°39'53" E 330.07'

S 03°58'44" E 330.00' CALLED

LOT 491
UNIT FOUR

Kep

LOT 525

DRAINAGE, &
OPE EASMENT

N 86°12'48" E 346.88' CALLED

N 85°28'31" E 347.87'

10' PUBLIC UTILITY & DRAINAGE EASEMENT

20' BLDG. SETBACK LINE

LOT 527

EP

PP

20' WATER LINE EASEMENT

N 04°35'47" W 136.00'

N 03°52'40" W 135.91' CALLED

GW

PP

10'

10'

25' BLDG. SETBACK LINE

20' WATER LINE EASEMENT

N 09°33'48" W 398.63'

N 08°52'52" W 398.95' CALLED

PP

Kep

LOT 526

U

D

Kek

DRAINAGE EASEMENT

10' PUBLIC UTILITY & DRAINAGE EASEMENT

20' BLDG. SETBACK LINE

S 04°40'07" E 571.64'

S 03°58'44" E 572.07' CALLED

60' DRAINAGE EASEMENT

LOT 528

CONC DW

LOT 529

Formation Contact

60' BLDG. SETBACK LINE

Kdr

N 04°59'36" W 23.40' CALLED

N 05°45'16" W 23.38'

GW

PP

CONC DRAIN

S 85°18'00" W 373.56'

S 86°01'16" W 373.56' CALLED

50' DRAINAGE EASEMENT

LOT 544

LOT 545

20' PUBLIC UTILITY, DRAINAGE, & EMBANKMENT/BACKSLOPE EASMENT

F.M. 306 (R.O.W. VARIES)

EP

Trihydro CORPORATION
New Braunfels Branch Office
Texas Survey Firm 10194320
1672 Independence Dr., Ste 315
New Braunfels, Texas 78132
(P) 830/625.0337 (F) 830/626.3601

Hill Country Day School
Geologic Map

Hill Country Civil
Engineers • Consultants

Water Pollution Abatement Plan Application Form

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.

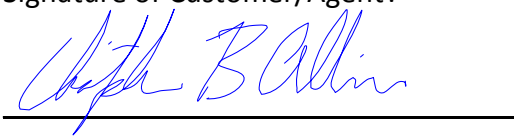
Signature

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: Christopher B. Allison, PE

Date: 03/13/2025

Signature of Customer/Agent:



Regulated Entity Name: Hill Country Day School

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): 5.55

3. Estimated projected population: 100

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	16,415	÷ 43,560 =	0.38
Parking	38,559	÷ 43,560 =	0.89
Other paved surfaces	9,495	÷ 43,560 =	0.21
Total Impervious Cover	64,469	÷ 43,560 =	1.48

Total Impervious Cover 1.48 **÷ Total Acreage** 5.55 **X 100 =** 26.7 **% Impervious Cover**

5. ☒ **Attachment A - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.

6. ☒ Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

For Road Projects Only

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

7. Type of project:

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

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

   ☐ Concrete
   ☐ Asphaltic concrete pavement
   ☐ Other: _____

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

   Width of R.O.W.: _____ feet.
   L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.

    Width of pavement area: _____ feet.
    L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
    Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

11. ☐ A rest stop will be included in this project.

    ☐ A rest stop will not be included in this project.

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

100 % Domestic	_____ Gallons/day
_____ % Industrial	_____ Gallons/day
_____ % Commingled	_____ Gallons/day
TOTAL gallons/day 1,300	

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" = 50 '.

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): 48091C0280F eff. 9/2/2009

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

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

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

☐ There are _____ (#) 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. [X] The drainage patterns and approximate slopes anticipated after major grading activities.

23. [X] Areas of soil disturbance and areas which will not be disturbed.

24. [X] Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

25. [X] Locations where soil stabilization practices are expected to occur.

26. [ ] Surface waters (including wetlands).

    [X] N/A

27. [ ] Locations where stormwater discharges to surface water or sensitive features are to occur.

    [X] There will be no discharges to surface water or sensitive features.

28. [X] Legal boundaries of the site are shown.

Administrative Information

29. [X] 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. [X] Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

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Attachment A: Factors Affecting Surface Water Quality

Attachment A: Factors Affecting Surface Water Quality

The list below are potential sources of pollution that may be reasonably expected to impact the quality of stormwater runoff from the site during construction.

- Hydrocarbons from asphalt paving construction
- Oil, fuel, grease and hydraulic fluid from construction equipment and automobiles
- Soil erosion due to site clearing, grading and demolition activities
- Trash, litter and construction debris from workers and construction activities
- Concrete truck washout
- Concrete/masonry
- Fertilizers
- Cleaning solvents

The list below are potential sources of pollution that may be reasonably expected to impact the quality of stormwater runoff from the site after construction or after development.

- Trash and litter typical of daily use from customers and tenants
- Oil, fuel, grease and hydraulic fluid from vehicles parked/traveling onsite
- Dirt and dust from landscape areas and vehicles
- Fertilizers
- Cleaning solvents

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Attachment B: Volume and Character of Stormwater

Attachment B: Volume and Character of Stormwater

The Hill Country Day School site will generate stormwater typical of a commercial development, as outlined in the TxDOT Drainage Criteria Manual. Runoff will increase due to the addition of impervious cover on the site. This additional impervious cover is already accounted for in the overall development of River Chase Unit 5 by way of regional detention ponds. One of the regional ponds is located at the rear of the property and is contained within an existing drainage easement. There are 208 acres draining to the regional pond. Existing discharge from the regional pond for the 100-yr storm is 611.53 CFS. The runoff from the proposed condition will remain unchanged at 611.53 CFS.

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Attachment C: Suitability Letter from Authorized Agent

COMAL COUNTY
ENGINEER'S OFFICE

April 7, 2025

Haleigh Almquist
144 River Chase Way
New Braunfels, TX 7132

Re: River Chase Unit 5, Lot 526, within Comal County, Texas
2025-100006

Dear Ms. Almquist:

We are in receipt of your March 20, 2025 application for the referenced proposed subdivision. We approved your application (see attached).

If you have any questions or need additional information, please contact our office.

Sincerely,

Margaret Skulteti

Margaret Skulteti, P.E.
Comal County Assistant Engineer

cc: Jen Crownover, County Commissioner Precinct No. 4

195 David Jonas Dr, New Braunfels, Texas 78132 – Phone (830) 608-2090

RECEIVED
By Kathy Griffin at 9:22 am, Mar 20, 2025

2025-100006

Application for Licensing Authority Recommendation for Private Sewerage Facilities for a Proposed Subdivision

Date: 3/19/2025

Subdivision Name: River Chase Unit 5, Lot 526

Owner's Name: Haleigh Almquist

Address: 144 River Chase Way, New Braunfels, 78132

Phone #: 512-415-5145

Fee Schedule:
5 or less tracts: $20/tract
6 or more tracts: $100 base fee + $5/tract

Total Fee: $ $20.00

Received by: Kg

Make Check Payable to Comal County

According to TAC §285.4(c), persons proposing residential subdivisions, manufactured housing communities, multi-unit residential developments, business parks, or other similar structures that use OSSFs for sewage disposal shall submit planning materials, prepared by a professional engineer or professional sanitarian, for these developments to the permitting authority and receive approval prior to submitting an OSSF application:

- An overall site plan
- Topographic map
- 100-year floodplain map
- Soil survey
- Location of water wells
- Locations of easements as identified in TAC §285.91(10) (relating to Tables)
- A complete report detailing the types of OSSFs to be considered and their compatibility with area-wide drainage and groundwater
- A comprehensive drainage plan
- Edwards Aquifer requirements that are pertinent to the proposed OSSF
- If the proposed development includes restaurants or buildings with food service establishments, the planning materials must show adequate land area for doubling the land needed for the treatment units

Comal County also asks for an existing improvements sketch and gate combination(s) in order to adequately inspect the site for use of OSSFs for sewage disposal.

H Almquist

Applicant/Agent Signature

Date of Review (must be within 45 days of receipt): 4/1/2025

☑ Approved

☐ Denied

Reason(s) for Denial: _____

Reviewer: Margaret Gulotti, D.R.

*** Note: This sheet shall be first with all planning materials listed above following behind.**

Revised August 2010

Hill Country Civil
Engineers • Consultants

Attachment D: Exception to the Required Geologic Assessment Site Plan N/A

Hill Country Civil
Engineers • Consultants

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.

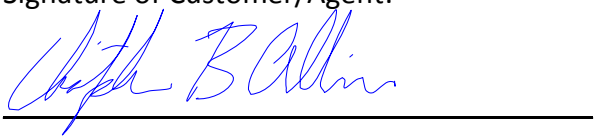
Signature

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: Christopher B. Allison, PE

Date: 03/13/2025

Signature of Customer/Agent:



Regulated Entity Name: Hill Country Day School

Project Information

Potential Sources of Contamination

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

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

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

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

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

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

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

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

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

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

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

Sequence of Construction

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

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

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

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Isaac Creek Trib. 4

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:

- [X] 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.
- [X] 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.
- [X] A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
- [X] 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. [X] 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.
   - [X] There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. [X] **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. [X] **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. [X] 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. [X] Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

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

21. [X] 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. [X] 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.

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Attachment A: Spill Response Actions

Attachment A: Spill Response Actions

Contractors working onsite with materials which could potentially cause pollution shall implement the following measures to prevent stormwater pollution.

Education of Employees or Subcontractors Who Handle Materials Which Can Cause Pollution

- Employees should know what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when a spill must be reported to the TCEQ. Information is available in 30 TAC 327.4 and 40 CFR 302.4.
- Educate employees and subcontractors on the potential dangers to humans and the environment from spills and leaks, and provide training in spill prevention and cleanup. Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees, who will use or handle potential pollutants.
- Provide for a superintendent or representative to oversee and enforce proper spill prevention and control measures.

General Measures

- To the extent that work can be accomplished safely, spills of oil, petroleum products, and substances listed under 40 CFR part 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- Store hazardous materials and waste in covered containers and protect from vandalism.
- Place spill cleanup materials where it will be readily accessible.
- Spills should be covered and protected from stormwater runoff during rainfall to the extent that it doesn't compromise clean-up activities.
- Do not bury spills onsite.
- Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMP"s.
- Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
- Contain contaminated water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

- Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function

Cleanup

- Clean up leaks and spills immediately, or as soon as it is safely practical.
- Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent materials for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
- Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly.

Minor Spills

- Minor spills such as small quantities of oil, gasoline, paint, etc, should be controlled by the first responder at the discovery of the spill.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Absorbent materials should be promptly removed and disposed of properly.
- Follow the practice below for a minor spill:
    - Contain the spread of the spill.
    - Recover spilled materials.
    - Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

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

Spills should be cleaned up immediately, or as soon as safely practical

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

Significant/Hazardous Spills

- Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
- For spills of federal reportable quantities, in conformance with the requirements in 40CFR parts 110, 119 and 302, the contractor should notify the National Response Center at (800) 424-8802.
- Notification should first be made by telephone and followed up with a written report. The services of a spill contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staff have arrived at the job site.
- Other agencies which may need to be contacted include, but are not limited to, City, Police Department, County Sheriff Office, Fire Departments, etc.

Vehicle and Equipment Maintenance

- If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
- Regularly inspect onsite vehicles and equipment for leaks and repair immediately. Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles onsite.
- Always use secondary containment, such as drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Place drip pans or absorbent materials under paving equipment when not in use.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Remove the absorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil recycled. As the oil supplier or recycler about recycling oil filters.
- Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat as if it cracked. Put into the containment area until you are sure it is not leaking.
- If fueling must occur on site, used designated areas, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
- Discourage "topping off" on fuel tanks.
- Always use secondary containment, such as drain pan, when fueling to catch spill/leaks.

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Attachment B: Potential Sources of Contamination

Attachment B: Potential Sources of Contamination

Asphalt products used on this project

- Preventative measures
    - After placement of asphalt, emulsion or coatings, the contractor will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt product curing time, the contractor will maintain standby personnel and equipment to contain any asphalt wash-off should an unexpected rain occur. The contractor will be instructed not to place asphalt products on the ground within 48 hours of forecasted rain.

Oil, grease fuel and hydrocarbon fluid contamination from construction equipment and vehicle drippings.

- Preventative measures
    - Vehicle maintenance, when possible, will be performed within the construction staging area.
    - Construction vehicles and equipment shall be checked regularly for leaks and repaired immediately.

Accidental leaks or spills of oil, petroleum products and substances listed under 40 CFR parts 110, 117, and 302 used or stored temporarily on site.

- Preventative measures
    - Contractor to incorporate regular safety meetings, a discussion of spill prevention and appropriate disposal procedures.
    - Contractor's superintendent or representative overseer shall enforce proper spill prevention and control measures.
    - Hazardous material and waste shall be stored in covered containers and protected from vandalism.
    - A stockpile of spill cleanup materials shall be stored on site where it will be readily available.

Miscellaneous trash and litter from construction workers and material wrappings.

- Preventative measures
    - Trash containers will be placed throughout the site to encourage proper trash disposal.

Construction Debris

- Preventative measures
    - Construction debris will be monitored daily by the site contractor. Debris will be collected weekly and placed in disposal bins. Situations requiring immediate attention will be addressed on a case-by-case basis.

Spills/ Overflow of waste from portable toilets

- Preventative measures
    - Portable toilets will be placed away from high traffic vehicular areas and storm drain inlets.
    - Portable toilets will be placed on a level ground surface.
    - Portable toilets will be inspected regularly for leaks and will be serviced and sanitized at time intervals that will maintain sanitary conditions.

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Attachment C: Sequence of Major Activities

Attachment C: Sequence of Major Construction Activities

The sequence of major construction activities that will disturb earth/soil of the proposed site will be completed in two stages. Initially, the site will cleared, and grubbed of existing vegetation to prepare for the proposed site plan. This stage will include installation of temporary erosion controls. Temporary controls include temporary construction entrance, silt fence, and concrete washout pit. The second stage will include the construction of buildings, parking, drives, utilities, batch detention basin, landscaping, and site cleanup. Once the site is fully stabilized with vegetation back in place, the temporary erosion controls may be removed. Both stages will disturb approximately 2.66 acres of land.

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Attachment D: Temporary Best Management Practices and Measures

Attachment D: Temporary Best Management Practices and Measures

7a 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.

There is no significant upgradient stormwater that flows across the site. The lot upstream of the site that is fully developed and stabilized flows onto the site in a sheet flow manner and will not impact the proposed development.

7b 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.

Site preparations will disturb the largest amount of soil. Therefore, before any of this work can begin, the clearing and grading contractor will be responsible for the installation of all on-site control measures. The methodology for pollution prevention of on-site stormwater will include:

- Erection of silt fence along downgradient boundary of construction activities for temporary erosion and sedimentation controls.
- Installation of stabilized construction entrance/exits to reduce the dispersion of sediment from the site.
- Installation of concrete truck washout.
- Installation of construction staging areas.

7c A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

Temporary measures are intended to provide a method of controlling and slowing the flow of runoff from the construction site. By utilizing silt fence staged down gradient and along flow paths, will allow sediment and suspended solids to settle out of stormwater flows and be captured onsite. By containing the sediment and suspended solids within the site, they will not enter the aquifer, surface streams and/or sensitive features that may exist downstream of the site.

7d 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

BMP measures utilized in this plan are intended to allow stormwater to continue downstream after passing through the BMPs. The BMPs are providing settlement of suspended solids and containment onsite, but stormwater flows will continue on their natural drainage path. Features discovered during construction will be reported and assessed in accordance with applicable regulations.

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Attachment F: Structural Practices

Attachment F: Structural Practices

The structural practices listed below are shown on the Erosion Control Plans and are listed on Attachment D of the Temporary Controls Section of the WPAP.

- 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. Currently there is one proposed stabilized construction entrance locations.

- A concrete truck washout will be located onsite to prevent pollutants to stormwater from concrete waste.

- Silt fencing 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.

- Sandbags filled with washed pea gravel will be used at storm drainage inlets prior to stabilization of the drainage areas.

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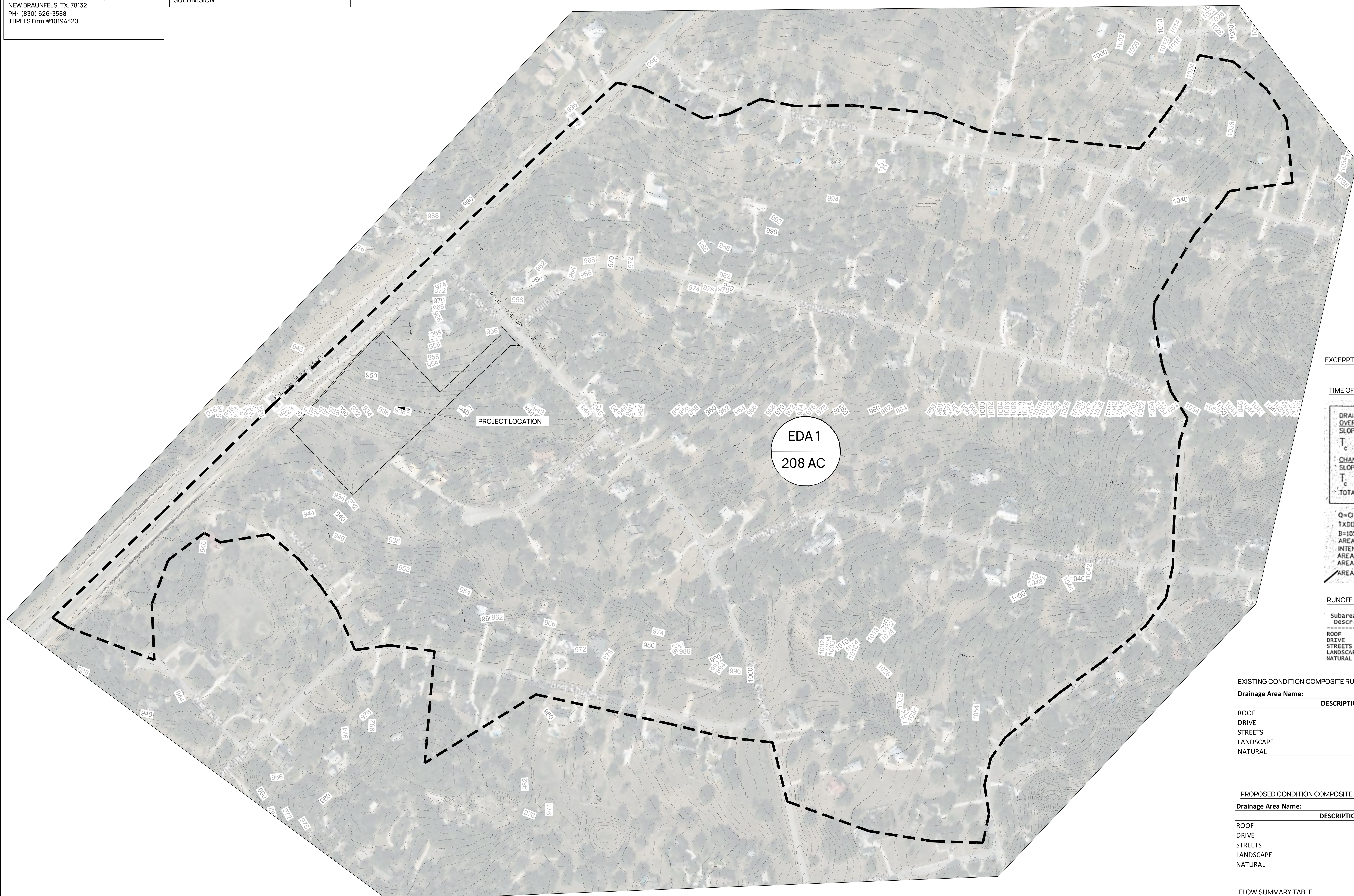
Attachment G: Drainage Area Map

SURVEY NOTE

Survey Prepared by: TRIHYDRO CORPORATION
1672 INDEPENDENCE DR. STE. 315,
NEW BRAUNFELS, TX. 78132
PH: (830) 626-3588
TBPELS Firm #10194320

LEGAL DESCRIPTION

5.550 ACRES LOT 526 OF THE RIVER CHASE UNIT 5 SUBDIVISION



0 100 200 400
SCALE: 1" = 200'

LEGEND

PROPERTY BOUNDARY
LOT LINE
EASEMENT LINE
SITE BENCHMARK
PROPERTY CORNER
GAS LINE
OVERHEAD ELECTRIC LINE
FENCE LINE
EXISTING TREE
SIGN
POWER POLE
EXISTING FLOW ARROW
101 EXISTING MINOR CONTOUR
100 EXISTING MAJOR CONTOUR
TIME OF CONCENTRATION
DRAINAGE AREA BOUNDARY
DA # / ACRES DRAINAGE AREA LABEL

EXCERPT FROM APPROVED RIVER CHASE DRAINAGE REPORT

TIME OF CONCENTRATION

DRAINAGE AREA A (208.0 ACRES)
OVERLAND FLOW:
SLOPE: (EL 1043– EL 1034) /200 = 4.5%
$T_c = \frac{200\ (0.3)}{42} / (0.045)^{0.5} = 7$ min.
CHANNELIZED FLOW:
SLOPE: (EL 1034 – EL 920) / 4000 =2.9%
T_c = 4000 / (2'/sec) / (60 sec/min) = 33 min.
TOTAL: 40 min.

Q=CIA. C=SEE BELOW $I=B/(Tc + D)^E$
TXDOT VALUES FOR COMAL COUNTY 100 YEAR EVENT:
B=105; D=8.4; E=0.758
AREA "A" Q100 WEIGHTED C= 0.53
INTENSITY 100=5.55
AREA "A" Q100 POSTDEVELOPMENT= 611 CFS
AREA "A" Q100 PREDEVELOPMENT= 596 CFS
AREA "A" DETENTION REQUIRED= 15 CFS

RUNOFF COEFFICIENTS

Subarea Descr.	Runoff 'C'
ROOF	0.970
DRIVE	0.950
STREETS	0.950
LANDSCAPE	0.460
NATURAL	0.490

EXISTING CONDITION COMPOSITE RUNOFF COEFFICIENTS

Drainage Area Name:	EDA1	
DESCRIPTION	AREA	C
ROOF	9.68	0.97
DRIVE	5.57	0.95
STREETS	5.81	0.95
LANDSCAPE	60.5	0.46
NATURAL	126.44	0.49
Total	**208**	**0.53**

PROPOSED CONDITION COMPOSITE RUNOFF COEFFICIENTS

Drainage Area Name:	PDA1	
DESCRIPTION	AREA	C
ROOF	9.98	0.97
DRIVE	6.62	0.95
STREETS	5.81	0.95
LANDSCAPE	60.5	0.46
NATURAL	125.09	0.49
Total	**208**	**0.53**

FLOW SUMMARY TABLE

Rainfall Runoff - Rational Method Calculations

Drainage Area	Contributing Area, A (Ac.)	Runoff Coefficient, C	Product of C*A	Time of Concentration TC (Min)	Intensity (in/hr) 25 yr	Intensity (in/hr) 100 yr	Peak Flow (cfs) 25 yr	Peak Flow (cfs) 100 yr
EDA1	208	0.53	110.24	40.00	4.44	5.55	489.66	611.53
PDA1	208	0.53	110.24	40.00	4.44	5.55	489.66	611.53

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PROFESSIONAL ENGINEER
03/13/2025

No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS
HCC JOB No.: 053-01
DRAWN BY.: CBA

EXISTING DRAINAGE AREA MAP

SHEET No.
11
OF 18

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SURVEY NOTE

Survey Prepared by: TRIHYDRO CORPORATION
1672 INDEPENDENCE DR. STE. 315,
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PH: (830) 626-3588
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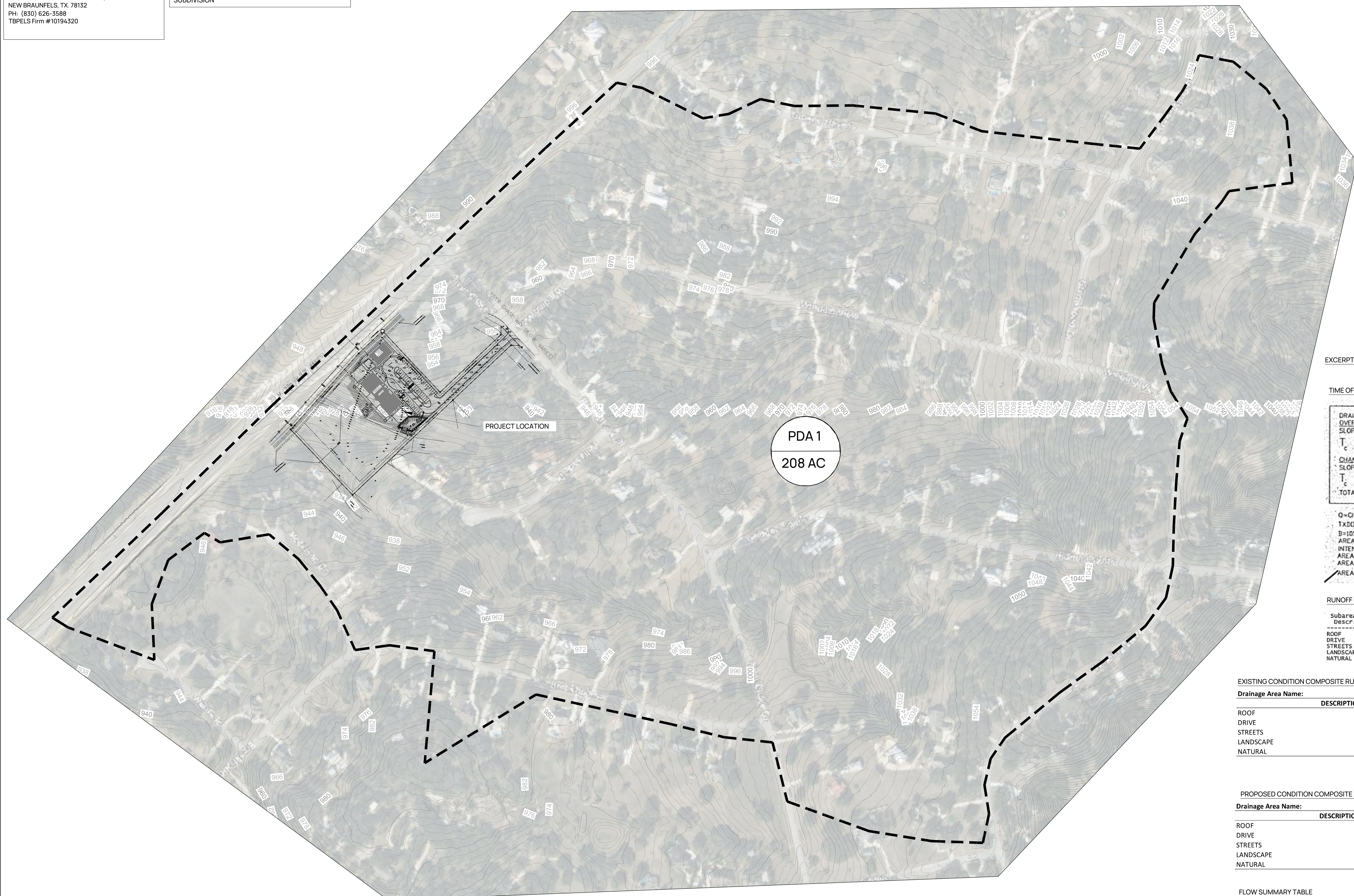

0 100 200 400
SCALE: 1"=200'

LEGEND

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- SITE BENCHMARK
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- OVERHEAD ELECTRIC LINE
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PROPOSED CONDITION COMPOSITE RUNOFF COEFFICIENTS

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03/13/2025

No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS
HCC JOB No.: 053-01
DRAWN BY.: CBA

PROPOSED DRAINAGE AREA MAP

SHEET No.
12
OF 18

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Attachment H: Temporary Sediment Pond(s) Plans and Calculations N/A

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Attachment I: Inspection and Maintenance for BMPs

Attachment I: Inspection and Maintenance for BMPs

The following list of items outlines and dictates Inspection and Maintenance for BMPs practices. Inspection and maintenance guidelines come from TCEQ RG-348.

In addition to these measures the contractor will be subject to the provisions of the TCEQ General Permit Number TXR 150000 relating to discharges from construction activities.

Temporary Construction Entrance/Exit

1. The entrance should be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repairs and/or cleanout of any measures used to trap sediment.
2. All sediment spilled, dropped, washed, or tracked onto public rights-of-way should be removed immediately by contractor.
3. When necessary, wheels should be cleaned to remove sediment prior to entrance on to public right-of-way.
4. When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin
5. All sediment should be prevented from entering any storm drain, ditch, or water course by using approved methods.

Silt Fence

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

Inlet Protection Barrier

1. Inspections should be made weekly and after each rainfall. Repair or replacement should be made promptly as needed by the contractor.
2. Remove sediment when buildup reaches a depth of 3 inches. Removed sediment should be deposited in a suitable area and in such a manner that it will not erode.
3. Check placement of devices to prevent gaps between device and curb.
4. Inspect filter fabric and patch or replace if torn or missing.
5. Structures should be removed, and the area stabilized only after the remaining drainage area has been properly stabilized.

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Attachment J: Schedule of Interim and Permanent Soil Stabilization Practices

Attachment J: Schedule of Interim and Permanent Soil Stabilization Practices

Onsite construction activities shall be conducted in accordance with the Erosion Control Plan for the project which includes the provisions of the TPDES General Permit TXR150000.

Interim on-site stabilization measures will include minimizing soil disturbances by exposing the smallest practical area of land required for the shortest duration and maximizing the use of natural vegetation. All disturbed soil will be stabilized as per project specifications in accordance with TCEQ Technical Guidance Manual RG-348 (2005).

Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site has temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of the site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is preclude by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

Interim Stabilization Measures will include one or more of the following methods.

1. Temporary Vegetation
2. Installation of blankets or matting material
3. Hydraulic Mulch
4. Sod

The interim and permanent stabilization will be installed in accordance with the standard specifications for the county or city having jurisdiction over the project, whichever is more stringent. If the governing entity does not have specifications for these items, the work shall be completed in compliance with the procedures and specifications outlined in the current Technical Guidance Manual published by the TCEQ.

Permanent Stabilization measures will include one or more of the following methods.

1. Permanent Vegetation including landscape planting with trees, shrubs, or ground cover.
2. Installation of blankets or matting material
3. Hydromulch
4. Grass Sodding
5. Rock or concrete riprap

A copy of the Erosion Control Plan is attached.

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

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

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

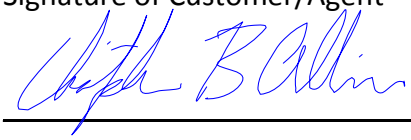
Signature

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

Print Name of Customer/Agent: Christopher B. Allison, PE

Date: 03/13/2025

Signature of Customer/Agent



Regulated Entity Name: Hill Country Day School

Permanent Best Management Practices (BMPs)

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

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

   [ ] N/A

2. [X] 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.

   [X] 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. [X] **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:

    - [X] Prepared and certified by the engineer designing the permanent BMPs and measures
    - [X] Signed by the owner or responsible party
    - [X] Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    - [X] 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.

    [X] 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.

    [X] N/A

Responsibility for Maintenance of Permanent BMP(s)

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

14. [X] 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. [X] 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

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Attachment B: BMPs for Upgradient Stormwater

Attachment B: BMPs for Upgradient Stormwater

There is a small area (2.53 acres) of upgradient stormwater flows that come onto the site in a sheet flow manner. This runoff will pose minimal erosion risk to the project location. The existing improvements upstream of the development have a natural vegetated buffer on lot that reduces and treats runoff from the improved area. Offsite runoff will be routed through the proposed batch detention pond prior to being released to the regional detention pond built with the River Chase Subdivision. Although this runoff is captured onsite in order to maintain existing flow paths it will not require water quality treatment by the day school development.

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Attachment C: BMPs for On-site Stormwater

Attachment C: BMPs for On-Site Stormwater

Proposed on-site BMPs include one (1) Batch Detention Pond and three (3) rainwater collection tanks designed in accordance with TCEQ's Technical Guidance Manual (TGM) RG-348. The batch pond will be designed as an online facility. For online facilities the principal and emergency spillways must be sized to provide 1.0 foot of freeboard during the 25-year event and to safely pass the flow from the 100-year storm. The water quality volume required in the pond is 5,489 cuft. The overall volume of the pond is 9,327 cuft. Both the 25-year and 100-year storm events are contained within the pond. The batch detention pond is sized to treat a total of 1014 lbs of TSS generated by the site.

Batch Detention basins capture and temporarily detain the water quality volume from a storm event, for a period of 12-48 hours, using an automated controller and valve. The batch detention outfall details and logic controls can be found on the attached Construction Drawings, reference the Batch Detention Pond Detail Sheets.

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Attachment D: BMPs for Surface Steams

N/A

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Attachment F: Construction Plans

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Hill Country Day School
Date Prepared: 3/13/2025

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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:
$L_{M\ TOTAL\ PROJECT}$ = 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 * =	5.55	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan * =	1.13	acres
Total post-development impervious cover fraction * =	0.20	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	1014	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 =	1.60	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.10	acres
Post-development impervious fraction within drainage basin/outfall area =	0.69	
$L_{M\ THIS\ BASIN}$ =	987	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention
Removal efficiency = 91 percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault
Batch Detention

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A x 34.6 + A_P x 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 =	1.60	acres
A_I =	1.10	acres
A_P =	0.50	acres
L_R =	1151	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 1014 lbs.

F = 0.88

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth =	1.50	inches
Post Development Runoff Coefficient =	0.49	
On-site Water Quality Volume =	4299	cubic feet

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

Off-site area draining to BMP =	2.53	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	276	cubic feet
Storage for Sediment =	915	
Total Capture Volume (required water quality volume(s) x 1.20) =	5489	cubic feet (0.13 Acre-ft)

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = NA cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate =	0.1	in/hr	Enter determined permeability rate or assumed value of 0.1
Irrigation area =	NA	square feet	
	NA	acres	

8. Extended Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = NA cubic feet

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin =	NA	cubic feet	
Minimum filter basin area =	NA	square feet	
Maximum sedimentation basin area =	NA	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	NA	square feet	For maximum water depth of 8 feet

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	NA	cubic feet	
Minimum filter basin area =	NA	square feet	
Maximum sedimentation basin area =	NA	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	NA	square feet	For maximum water depth of 8 feet

10. Bioretention System Designed as Required in RG-348 Pages 3-63 to 3-65

Required Water Quality Volume for Bioretention Basin = **NA** cubic feet

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool = **NA** cubic feet **Permanent Pool Capacity is 1.20 times the WQV**
Required capacity at WQV Elevation = **NA** cubic feet **Total Capacity should be the Permanent Pool Capacity plus a second WQV.**

12. Constructed Wetlands Designed as Required in RG-348 Pages 3-71 to 3-73

Required Water Quality Volume for Constructed Wetlands = **NA** cubic feet

13. AquaLogic™ Cartridge System Designed as Required in RG-348 Pages 3-74 to 3-78

**** 2005 Technical Guidance Manual (RG-348) does not exempt the required 20% increase with maintenance contract with AquaLogic™.**

Required Sedimentation chamber capacity = **NA** cubic feet
Filter canisters (FCs) to treat WQV = **NA** cartridges
Filter basin area (RIA_F) = **NA** square feet

14. Stormwater Management StormFilter® by CONTECH

Required Water Quality Volume for Contech StormFilter System = **NA** cubic feet

THE SIZING REQUIREMENTS FOR THE FOLLOWING BMPs / LOAD REMOVALS ARE BASED UPON FLOW RATES - NOT CALCULATED WATER QUALITY VOLUMES

15. Grassy Swales Designed as Required in RG-348 Pages 3-51 to 3-54

Design parameters for the swale:

Drainage Area to be Treated by the Swale = A = 1.87 acres
Impervious Cover in Drainage Area = 0.15 acres
Rainfall intensity = i = 1.1 in/hr
Swale Slope = 0.01 ft/ft
Side Slope (z) = 3
Design Water Depth = y = 0.33 ft
Weighted Runoff Coefficient = C = 0.36

A_{CS} = cross-sectional area of flow in Swale = 2.09 sf
P_W = Wetted Perimeter = 7.37 feet
R_H = hydraulic radius of flow cross-section = A_{CS}/P_W = 0.28 feet
n = Manning's roughness coefficient = 0.2

15A. Using the Method Described in the RG-348

Manning's Equation: $Q = \frac{1.49}{n} A_{CS} R_H^{2/3} S^{0.5}$

$b = \frac{0.134 \times Q}{y^{1.67} S^{0.5}} - zy$ = 5.26 feet

Q = CiA = 0.75 cfs

To calculate the flow velocity in the swale:

V (Velocity of Flow in the swale) = Q/A_{CS} = 0.36 ft/sec

To calculate the resulting swale length:

L = Minimum Swale Length = V (ft/sec) * 300 (sec) = 107.24 feet

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters must be modified and the solver rerun.

15B. Alternative Method using Excel Solver

Design Q = CiA = 0.75 cfs

Manning's Equation Q = 0.76 cfs Error 1 = -0.01
Swale Width= 6.00 ft

Instructions are provided to the right (green comments).

Flow Velocity 0.36 ft/s
Minimum Length = 107.24 ft

Instructions are provided to the right (blue comments).

Design Width = 6 ft
Design Discharge = 0.76 cfs Error 2 = -0.01
Design Depth = 0.33 ft
Flow Velocity = 0.32 cfs
Minimum Length = 97.48 ft

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters may be modified and the solver rerun.
If any of the resulting values still do not meet the design requirement set forth in RG-348, widening the swale bottom value may not be possible.

16. Vegetated Filter Strips Designed as Required in RG-348 Pages 3-55 to 3-57

There are no calculations required for determining the load or size of vegetative filter strips.
The 80% removal is provided when the contributing drainage area does not exceed 72 feet (direction of flow) and the sheet flow leaving the impervious cover is directed across 15 feet of engineered filter strips with maximum slope of 20% or across 50 feet of natural vegetation with a maximum slope of 10%. There can be a break in grade as long as no slope exceeds 20%.

If vegetative filter strips are proposed for an interim permanent BMP, they may be sized as described on Page 3-56 of RG-348.

17. Wet Vaults Designed as Required in RG-348 Pages 3-30 to 3-32 & 3-79

Required Load Removal Based upon Equation 3.3 = **NA** lbs

First calculate the load removal at 1.1 in/hour

RG-348 Page 3-30 Equation 3.4: Q = CiA

C = runoff coefficient for the drainage area = 0.51 **C = Runoff Coefficient = 0.546 (IC)^2 + 0.328 (IC) + 0.03**
i = design rainfall intensity = 1.1 in/hour
A = drainage area in acres = 1 acres

Q = flow rate in cubic feet per second = 0.56 cubic feet/sec

RG-348 Page 3-31 Equation 3.5: $V_{OR} = Q/A$

Q = Runoff rate calculated above = 0.56 cubic feet/sec
A = Water surface area in the wet vault = 150 square feet

V_{OR} = Overflow Rate = 0.00 feet/sec

Percent TSS Removal from Figure 3-1 (RG-348 Page 3-31) = 53 percent

Load removed by Wet Vault = #VALUE! lbs

If a bypass occurs at a rainfall intensity of less than 1.1 in/hours
Calculate the efficiency reduction for the actual rainfall intensity rate

Actual Rainfall Intensity at which Wet Vault bypass Occurs = 0.5 in/hour

Fraction of rainfall treated from Figure 3-2 RG-348 Page 3-32 = 0.75 percent
Efficiency Reduction for Actual Rainfall Intensity = 0.83 percent

To solve for bottom width of the trapezoidal swale (b) using the Excel solver:
Excel can simultaneously solve the "Design Q" (C217) vs "Manning's Q" (C219) by varying the "Swale Width" (C220).
The required "Swale Width" occurs when the "Design Q" = "Manning's Q"

First, highlight Cell F219 (Error 1 value). The equation showing in the fx screen for Cell F219 should be "= C217-C219"
Then click on "Tools" and "Solver". The "Solver Parameters" screen pops up.
The value in the "Set Target cell" should be F219 "Error 1 ="
The value in the "By Changing Cells" should be C220 "Swale Width"
Click on solve.

The resulting "Swale Width" must be less than 10 feet to meet the requirements of the TGM.
If the resulting "Swale Width" exceeds 10 feet then the design parameters must be revised and the solver run again.

If there is not the option for "Solver" under "Tools"
Click on "Tools" and "Add Ins" and then check "Solver Add-in"
Then proceed as instructed above.

If you would like to increase the bottom width of the trapezoidal swale (b):
Excel can simultaneously solve the "Design Q" (C217) vs "Design Discharge" (C232) by varying the "Design Depth" (C233).
The required "Design Depth" for a 10-foot bottom width occurs when the "Design Q" (C217) = the "Design Discharge" (C232).

First set the desired bottom width in Cell C231.
Highlight Cell F232. The equation showing in the fx screen for Cell F232 should be "= C217-C232"

Click on "Tools" and "Solver". The "Solver Parameters" screen pops up.
The value in the "Set Target cell" should be F232 "Error 2"
The value in the "By Changing Cells" should be C233 "Design Depth"
Click on solve.

The resulting "Design Depth" must be equal to or less than 0.33 feet to meet the requirements of the TGM.
If the resulting "Design Depth" exceeds 0.33 feet then the design parameters must be revised and the solver run again.
First set the desired bottom width in Cell C231.
Highlight Cell F232. The equation showing in the fx screen for Cell F232 should be "= C217-C232"
Click on "Tools" and "Solver". The "Solver Parameters" screen pops up.
The value in the "Set Target cell" should be F232 "Error 2"
The value in the "By Changing Cells" should be C233 "Design Depth"
Click on solve.

The resulting "Design Depth" must be equal to or less than 0.33 feet to meet the requirements of the TGM.
If the resulting "Design Depth" exceeds 0.33 feet then the design parameters must be revised and the solver run again.

Resultant TSS Load removed by Wet Vault = #VALUE! lbs

18. Permeable Concrete Designed as Required in RG-348 Pages 3-79 to 3-83

PERMEABLE CONCRETE MAY ONLY BE USED ON THE CONTRIBUTING ZONE

19. BMPs Installed in a Series Designed as Required in RG-348 Pages 3-32

Michael E. Barrett, Ph.D., P.E. recommended that the coefficient for E_2 be changed from 0.5 to 0.65 on May 3, 2006

$E_{TOT} = [1 - ((1 - E_1) X (1 - 0.65E_2) x (1 - 0.25E_3))] X 100 =$ 93.36 percent NET EFFICIENCY OF THE BMPs IN THE SERIES

EFFICIENCY OF FIRST BMP IN THE SERIES = E_1 = 85.00 percent

EFFICIENCY OF THE SECOND BMP IN THE SERIES = E_2 = 70.00 percent

EFFICIENCY OF THE THIRD BMP IN THE SERIES = E_3 = 75.00 percent

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
(A_I AND A_P VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT} X P X (A_I X 34.6 X A_P X 0.54) =$ 1180.87 lbs

20. Stormceptor

Required TSS Removal in BMP Drainage Area= **NA** lbs
Impervious Cover Overtreatment= 0.0000 ac
TSS Removal for Uncaptured Area = 0.00 lbs

BMP Sizing

Effective Area = NA EA
Calculated Model Size(s) = #N/A
Actual Model Size (if multiple values provided in Calculated Model Size or if you are choosing a larger model size) = 0 Model Size

Surface Area = #N/A ft^2
Overflow Rate = #VALUE! V_{or}
Rounded Overflow Rate = #VALUE! V_{or}
BMP Efficiency % = #VALUE! %
L_R Value = #VALUE! lbs

TSS Load Credit = #VALUE! lbs

Is Sufficient Treatment Available? (TSS Credit ≥ TSS Uncapt.) #VALUE!

TSS Treatment by BMP (LM + TSS Uncapt.) = #VALUE!

21. Vortech

Required TSS Removal in BMP Drainage Area= **NA** lbs
Impervious Cover Overtreatment= 0.0000 ac
TSS Removal for Uncaptured Area = 0.00 lbs

BMP Sizing

Effective Area = NA EA
Calculated Model Size(s) = #N/A

Actual Model Size (if choosing larger model size) = Vx1000 Pick Model Size

Surface Area = 7.10 ft^2
Overflow Rate = #VALUE! V_{or}
Rounded Overflow Rate = #VALUE! V_{or}
BMP Efficiency % = #VALUE! %
L_R Value = #VALUE! lbs

TSS Load Credit = #VALUE! lbs

Is Sufficient Treatment Available? (TSS Credit ≥ TSS Uncapt.) #VALUE!

TSS Treatment by BMP (LM + TSS Uncapt.) = #VALUE!

Texas Commission on Environmental Quality
Water Pollution Abatement Plan
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following/listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director (ED), nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code (TAC), Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following/listed "construction notes" restricts the powers of the ED, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, TAC, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the ED's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, TAC § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following/listed "construction notes" in no way represent an approved exception by the ED to any part of Title 30 TAC, Chapters 213 and 217, or any other TCEQ applicable regulation

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.

2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.

3. If any sensitive feature(s) (caves, solution cavity, sink hole, etc.) is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. Construction activities may not be resumed until the TCEQ has reviewed and approved the appropriate protective measures in order to protect any sensitive feature and the Edwards Aquifer from potentially adverse impacts to water quality.

4. No temporary or permanent hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.

5. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the approved plans and manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.

6. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.

7. Sediment must be removed from the sediment traps or sedimentation basins not later than

when it occupies 50% of the basin's design capacity.

8. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.

9. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.

10. If portions of the site will have a temporary or permanent cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.

11. The following records shall be maintained and made available to the TCEQ upon request:
    - the dates when major grading activities occur;
    - the dates when construction activities temporarily or permanently cease on a portion of the site; and
    - the dates when stabilization measures are initiated.

12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

    A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;

    B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;

    C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office 12100 Park 35 Circle, Building A Austin, Texas 78753-1808 Phone (512) 339-2929 Fax (512) 339-3795	San Antonio Regional Office 14250 Judson Road San Antonio, Texas 78233-4480 Phone (210) 490-3096 Fax (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

SURVEY NOTE

Survey Prepared by: TRIHYDRO CORPORATION
1672 INDEPENDENCE DR. STE. 315,
NEW BRAUNFELS, TX. 78132
PH: (830) 626-3588
TBPELS Firm #10194320

LEGAL DESCRIPTION

5.550 ACRES LOT 526 OF THE RIVER CHASE UNIT 5 SUBDIVISION

GENERAL CONSTRUCTION NOTES:

1. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL BUILDING CODES APPLICABLE TO THIS PROJECT. FURTHERMORE, THE CONTRACTOR WILL BE RESPONSIBLE FOR SECURING REQUIRED PERMITS AND SHALL NOTIFY ALL GOVERNMENT AGENCIES, TCEQ, AND/OR UTILITY AGENCIES AFFECTED BY THE PROPOSED CONSTRUCTION IMPROVEMENTS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY SYSTEMS, PLANS AND DESIGNS APPLICABLE TO THE PROJECT. HILL COUNTRY CIVIL DOES NOT EXTEND TO OR INCLUDE DESIGNS OR PLANS PERTAINING TO THE SAFETY OF THE CONTRACTOR, SUBCONTRACTORS, EMPLOYEES OR PROJECT SITE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL SAFETY REGULATIONS, CODES AND ORDINANCES ARE BEING MET DURING THE DURATION OF THE PROJECT.
3. CONTRACTOR SHALL FOLLOW ALL SAFETY REQUIREMENTS AND REGULATIONS OUTLINED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
4. CONTRACTOR SHALL KEEP A COPY OF THE APPROVED PLANS AT THE JOBSITE THROUGHOUT THE DURATION AND COMPLETION OF THE PROJECT.
5. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH LOCAL TV, ELECTRIC, GAS, WATER, SEWER AND PHONE PROVIDERS AS REQUIRED TO PROVIDE SERVICE TO THE PROJECT SITE. IN ADDITION, CONTRACTOR SHALL COORDINATE ANY INTERRUPTIONS OF UTILITY SERVICE TO THE APPLICABLE SERVICE PROVIDER.
6. CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN OPERATING NEAR OR AROUND EXISTING GAS LINES. CONTRACTOR SHALL NOTIFY GAS COMPANY 72 HOURS PRIOR TO CONSTRUCTION WHEN OPERATING NEAR GAS LINE FACILITIES.
7. CONTRACTOR SHALL PROTECT ALL EXISTING FACILITIES INCLUDING BUT NOT LIMITED TO UTILITIES, PAVEMENT, STREETS, CURB AND GUTTER, TREES, LANDSCAPING, IRRIGATION SYSTEMS, ETC., IMPACTED BY THE PROJECT CONSTRUCTION LIMITS. CONTRACTOR RESTORE ANY DISTURBED AREAS IMPACTED BY CONSTRUCTION TO ITS ORIGINAL OR BETTER CONDITION, INCLUDING ANY AREAS DAMAGED REQUIRING REPAIR (NO SEPARATE PAY ITEM).
8. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION ACTIVITY (ON OR OFFSITE) FOR THE PROJECT. FURTHERMORE, CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, TELEPHONE, SEWER, FIBER OPTIC, ELECTRIC, DUCT BANKS, IRRIGATION LINES AND GAS LINES.
9. LOCATION AND DEPICTION OF UTILITIES SHOWN ARE FOR REFERENCE ONLY AND PER NOTE 8 ABOVE, SHOULD BE CONFIRMED BEFORE STARTING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY REPAIR COSTS SHALL BE BORNE BY THE CONTRACTOR
10. CONTRACTOR SHALL PROTECT EXISTING TREES, BOTH DEPICTED ON THE CONSTRUCTION DRAWINGS AND THOSE TREES WHICH ARE NOT AS WELL. ANY TREES THAT EXIST ON SITE NOT SHOWN TO BE REMOVED, BUT APPEAR TO BE DISTURBED, OR REQUIRED TO BE REMOVED IN ORDER TO MEET THE PROPOSED SITE PLAN, SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT, CIVIL ENGINEER OR OWNER PRIOR TO REMOVAL.
11. DURING CONSTRUCTION, CONTRACTOR SHALL MAINTAIN UNRESTRICTED DRAINAGE. NO PONDING OF STORM DRAINAGE SHALL BE PERMITTED IN AREAS OF PREPARED SUBGRADE OR EXCAVATION, EMBANKMENT. IF PONDING SHOULD OCCUR, CONTRACTOR SHALL IMMEDIATELY PUMP OUT OR GRAVITY DRAIN PONDING WATER OUT OF IMPACTED AREAS. IF ANY DAMAGE OCCURRED TO SUBGRADE, BUILDING PAD OR EXCAVATION AREAS, THE SOILS MUST BE DRIED OUT, REMOVED, REPLACED AND RE-COMPACTED.
12. DISTURBED AREAS (CONSTRUCTION AREAS) SHALL BE STRIPPED OF VEGETATION, LOOSE TOPSOIL, ORGANICS, BRUSH AND DEBRIS. AFTERWARDS, THE EXPOSED SUBGRADE SHALL SHALL BE PROOF ROLLED WITH A MINIMUM 25 TON PNEUMATIC ROLLER. ANY WEAK AREAS DETECTED SHALL BE REMOVED AND REPLACED WITH SUITABLE SOILS OF SIMILAR TYPE (CLASSIFICATION, MOISTURE CONTENT AND DENSITY).
13. IF REQUIRED TO MODIFY EXISTING GRADE, FILL MATERIALS SHOULD BE PLACED ON PREPARED SURFACES IN LIFTS NOT EXCEED 8 INCHES (LOOSE MEASURE), WITH COMPACTED THICKNESS NOT TO EXCEED 6 INCHES OR AS INDICATED IN SITE GEOTECHNICAL REPORT. FILL SHALL BE COMPACTED TO OPTIMUM MOISTURE CONTENT OR UP TO +3 PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT TO A MINIMUM OF 95% MAXIMUM DENSITY AS DETERMINED BY TXDOT, TEX-114-E OR AS DESCRIBED IN THE SITE GEOTECHNICAL REPORT.
14. ALL FILL MATERIALS SHALL BE CLEAR OF DEBRIS, ORGANICS AND VEGETATION. IF IMPORTED FILL IS USED, IT SHALL BE A RELATIVELY HOMOGENEOUS PARTICLE SIZE DISTRIBUTION, WITH MAX SIZE OF 3 INCHES , PLASTICITY INDEX BETWEEN 7 AND 20 AND A LIQUID LIMIT LESS THAN 40; OR AS INDICATED ON THE GEOTECHNICAL REPORT.
15. ANY EXCESS EXCAVATION MATERIALS NOT USED, SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFFSITE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS.
16. CONTRACTOR IS RESPONSIBLE FOR FILING WITH THE TCEQ FOR THE TEMPORARY STORM WATER POLLUTION PREVENTION PLAN NOTICE TO PROCEED AND NOTICE OF TERMINATION AT THE START AND END OF CONSTRUCTION.
17. AFTER COMPLETION OF CONSTRUCTION, THE SITE SHALL BE THOROUGHLY CLEANED OF CONSTRUCTION DEBRIS, SEDIMENT, MATERIAL, ETC. PRIOR TO TURNING OVER TO OWNER.
18. CONTRACTOR SHALL INCLUDE IN THEIR BASE BID ANY TRAFFIC AND/OR PEDESTRIAN CONTROL DEVICES, PLANS OR LAYOUT NECESSARY FOR CONSTRUCTION; INCLUDING SEQUENCING OF CONSTRUCTION, DELIVERIES OF CONSTRUCTION MATERIAL AND EQUIPMENT, AND DEMOLITION ACTIVITIES, SO THAT THE ADJACENT ROADWAYS AND NEIGHBORING PROPERTIES HAVE SUITABLE VEHICULAR AND PEDESTRIAN ACCESS.
19. NOTES, CALLOUTS OR ITEMS NOTED AS "BY-OTHERS" SHALL BE CONSIDERED OUTSIDE THE SCOPE OF SERVICES PERFORMED BY HILL COUNTRY CIVIL. THESE ITEMS ARE CALLED OUT FOR REFERENCE ONLY, AND THE CONTRACTOR SHALL CONFIRM WITH OWNER, OTHER CONSULTANT OR MANUFACTURE FOR PLANS, OR DESIGNS DETAILING THOSE SPECIFIC ITEMS.
20. CONTRACTOR IS RESPONSIBLE FOR ALL VERTICAL AND HORIZONTAL CONTROL THROUGHOUT CONSTRUCTION.

NBU GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL BE APPROVED BY NEW BRAUNFELS UTILITIES AND COMPLY WITH THE CURRENT "NEW BRAUNFELS UTILITIES WATER SYSTEMS CONNECTION/CONSTRUCTION POLICY".
2. CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBU WATER SYSTEMS ENGINEERING AT 830-608-8971 WITH AT LEAST TWO (2) WORKING DAYS (48 HOURS) NOTICE. WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED A NOTICE TO PROCEED FROM NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
3. THE DEVELOPER DEDICATES THE WATER / WASTEWATER MAINS UPON COMPLETION BY THE CONTRACTOR AND ACCEPTANCE BY THE NEW BRAUNFELS UTILITIES WATER SYSTEM. NBU WILL OWN AND MAINTAIN SAID WATER / WASTEWATER MAINS WHICH ARE LOCATED WITHIN PLATTED UTILITY EASEMENTS OR PUBLIC ROW OF PROPOSED DEVELOPMENTS. (AS APPLICABLE).
4. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS OFFICERS, DIRECTORS, OR CONSULTANTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.
5. CONTRACTOR TO CONTACT THE ENGINEER-OF-RECORD (EOR) FOR ANY FIELD CHANGES. ANY REVISIONS OR CHANGES TO THE APPROVED CONSTRUCTION PLANS WILL REQUIRE ADDITIONAL APPROVAL BY NBU IN WRITING.
6. CONTRACTOR AND / OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES, AND EXISTING UTILITIES (NOT ADJUSTED ON PLANS). COST OF RESTORATION, IF ANY, SHALL BE THE CONTRACTOR'S ENTIRE EXPENSE.
8. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE (1) INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.
9. CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES AND TAXES AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
10. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.
11. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
12. THE CONTRACTOR SHALL NOT PLACE ANY MATERIALS ON THE RECHARGE ZONE OF THE EDWARDS AQUIFER WITHOUT AN APPROVED WATER POLLUTION ABATEMENT PLAN FROM THE TCEQ 31 TAC 313.4 AND 31 TAC 313.9.
13. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (TMUTCD) AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.
14. CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.
15. THE LOCATION OF UTILITIES, EITHER UNDERGROUND OR OVERHEAD, SHOWN WITHIN THE RIGHT OF WAY ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION OPERATIONS.
16. OSHA REGULATIONS PROHIBIT OPERATIONS THAT WILL BRING PERSONS OR EQUIPMENT WITHIN 10 FEET OF AN ENERGIZED LINE. WHERE WORKMEN AND/OR EQUIPMENT MUST WORK CLOSE TO AN ENERGIZED ELECTRICAL LINE, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL POWER COMPANY INVOLVED AND MAKE WHATEVER ADJUSTMENTS NECESSARY TO ENSURE THE SAFETY OF THOSE WORKMEN.
17. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION. CONTRACTORS SHALL CALL THE ONE CALL SYSTEM FOR WATER/WASTEWATER LOCATION.
18. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192 (8), GAS COMPANIES MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
19. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGERS. THE CONSTRUCTION METHODS SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC. THE CONTINUOUS MOVEMENT OF THE TRAFFIC IN ONE DIRECTION, AT MINIMUM, SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE WORK AREA ANY LOOSE MATERIAL RESULTING FROM CONTRACT OPERATIONS AT THE END OF EACH WORKDAY.
20. PRIOR TO ORDERING MATERIALS TO BE USED IN CONSTRUCTION, CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FOUR (4) COPIES OF THE SOURCE, TYPE, GRADATION, MATERIAL SPECIFICATION DATA AND / OR SHOP DRAWINGS, AS APPLICABLE, TO SATISFY THE REQUIREMENTS OF THE FOLLOWING ITEMS AND ALL MATERIAL ITEMS REFERRED TO IN THESE LISTED ITEMS:
    A. WATER MAINS AND SERVICES
    B. WASTEWATER MAINS AND SERVICES
21. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. WASTEWATER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO NBU CONNECTION AND CONSTRUCTION POLICY MANUAL.
22. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
23. UTILITY TRENCH COMPACTION WITH STREET R.O.W.
    A. ALL UTILITY TRENCH COMPACTION TEST WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER.
    B. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE.
    C. EACH LAYER OF MATERIAL SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEXT METHODS TEX-113-E, TEX 114-E, TEX-115-E.
    D. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR.
    E. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

NBU WATER NOTES:

1. THE POINT OF DELIVERY FOR AN OWNED AND MAINTAINED WATER LINE IS TYPICALLY THE DOMESTIC OR IRRIGATION WATER METER, FIRE LINE UP TO THE CONTAINMENT BACKFLOW DEVICE, OR HYDRANT METER OR AS DETERMINED BY NBU.
2. WATER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE NBU WATER CONNECTION POLICY.
3. ALL WATER MAINS SHALL BE CONSTRUCTED OF AWWA C900 DR 14 PVC, AWWA C900 DR 18 PVC OR MINIMUM CL 250 DUCTILE IRON PIPE.
4. ALL RESIDENTIAL WATER SERVICES SHALL BE SINGLE SERVICES CONSTRUCTED OF 1-INCH ASTM B88 TYPE K COPPER TUBING. 1-INCH AWWA C901 SDR9 CTS POLYETHYLENE TUBING MAY BE PERMITTED WITH SPECIAL APPROVAL FROM NBU ONLY.
5. ALL 2-INCH SERVICE LINES SHALL BE CONSTRUCTED OF AWWA C901 SDR9 CTS POLYETHYLENE TUBING.
6. WATER MAINS SHALL HAVE A MINIMUM OF 48 INCHES OF COVER TO FINISHED GRADE. CONCRETE ENCASEMENT WILL BE REQUIRED IF MINIMUM COVER CANNOT BE MET.
7. PIPE BEDDING OF WATER LINES SHALL BE COMPLIANT WITH NBU SPECIFICATION NO. 120, "UTILITY TRENCHING AND BACKFILL".
8. CONTRACTOR SHALL INSTALL LINE STOPPERS AT THEIR COST FOR AN OUTAGE DURING CONSTRUCTION IF SYSTEM VALVES ARE NOT AVAILABLE OR THE EXISTING VALVES DO NOT FUNCTION. LINE STOPPERS WILL BE REQUIRED BASED ON THE FOLLOWING CRITERIA:
    a. IF THE NUMBER OF RESIDENTIAL CUSTOMERS AFFECTED IS GREATER THAN 20 AND EXPECTED TO LAST MORE THAN 4 HOURS.
    b. IF ANY COMMERCIAL CUSTOMERS ARE AFFECTED BY THE OUTAGE THEN THE USE OF LINE STOPPERS WILL BE DETERMINED ON A CASE BY CASE BASIS.
    c. IF ANY CRITICAL CARE CUSTOMERS ARE AFFECTED BY THE OUTAGE THEN THE USE OF LINE STOPPERS WILL BE DETERMINED ON A CASE BY CASE BASIS.
    d. SYSTEM CONDITIONS MAY REQUIRE A LINE STOPPER AND MAY NOT BE KNOWN UNTIL CONSTRUCTION COMMENCES.
9. CONTRACTOR WILL KEEP THE AREA ON TOP OF, AROUND, AND WITHIN THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
10. PLACEMENT OF METER BOXES OR VAULTS IN SIDEWALKS, DRIVEWAYS, DRIVE AISLES, PARKING AREAS, OR OTHER AREAS EXPOSED TO VEHICULAR TRAFFIC IS NOT PERMITTED. ANY METER BOXES OR VAULTS SET IN THESE AREAS WILL BE RELOCATED AT THE CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
11. METER BOXES OR VAULTS MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
12. METER BOXES FOR 5/8-INCH AND 1-INCH METERS MUST BE DFW PLASTICS DFW38C 14-AF1MP.
13. METER BOXES FOR 1.5" METERS MUST BE DFW PLASTICS DFW65C-14-AF1MP.
14. METER BOXES FOR 2" METERS MUST BE DFW PLASTICS DFW1730F-12-AF1MP.
15. THRUST BLOCKS ARE NOT PERMITTED WITHOUT SPECIAL APPROVAL. JOINTS MUST BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBU AND RESTRAINT LENGTH SHALL BE SUBMITTED TO NBU AT THE TIME OF PLAN SUBMITTAL.
16. CONTRACTOR SHALL INSTALL TRACER WIRE ON TOP OF NON-FERROUS WATER MAINS IN ACCORDANCE WITH NBU SPECIFICATIONS. TRACER WIRE SHOULD RUN FROM VALVE TO VALVE AND EXIT AT A TRACER WIRE ACCESS POINT. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE. EXCESS WIRE SHOULD BE COILED WITHIN THE TRACER WIRE ACCESS POINT RISER.
17. CONTRACTOR SHALL COORDINATE WITH THE ASSIGNED WATER/WASTEWATER INSPECTOR FOR COMPLETION OF THE FIELD ACCEPTANCE CHECKLIST. ALL TESTING AND ACCEPTANCE SHALL CONFORM TO NBU SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO:
    a. BACTERIOLOGICAL TESTING
    b. HYDROSTATIC TESTING (PERFORMED VALVE TO VALVE)
18. THE NBU WATER SYSTEM SHALL BE PROTECTED FROM HAZARDS WITH APPROPRIATE BACKFLOW PREVENTION ASSEMBLIES INSTALLED ON ALL IRRIGATION SYSTEMS, FIRE SUPPRESSION SYSTEMS AND MULTI-UNIT COMPLEXES ALONG WITH MULTI-LEVEL PROPERTIES ON THE DOMESTIC METER CONTAINMENT. NBU CAN ASSIST WITH THE DECISION ON APPROPRIATE BACKFLOW ASSEMBLIES ON A CASE-BY-CASE BASIS. CONTACT NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM
19. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED UPON INSTALLATION AND REPORTS SENT TO NBU VIA THE ONLINE TRACKING SYSTEM. CONTACT AN NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM
20. ALL RESIDENTIAL AND COMMERCIAL PROPERTIES SHALL HAVE A CUSTOMER SERVICE INSPECTION CERTIFICATE (CSI INSPECTION) COMPLETED UPON COMPLETION OF THE BUILDING OR HOME STRUCTURE. CONTACT AN NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR, SUB-CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE, OR STRUCTURAL/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, SHALL REVIEW THESE PLANS AND GEOTECHNICAL REPORT, THE INSTALLATION SITES WITHIN THE PROJECT AREA IN ORDER TO IMPLEMENT CONTRACTORS TRENCH EXCAVATION SAFETY PROTECTION PLAN, SYSTEMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM OSHA STANDARDS, SPECIFICALLY, CONTRACTOR AND/OR RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PLAN IN ACCORDANCE WITH OSHA REGULATIONS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND/OR AROUND THE EXPOSED TRENCH EXCAVATION.

CAUTION!

CONTRACTOR SHALL EXERCISE CAUTION DURING DEMOLITION, EXCAVATION, CLEARING AND CONSTRUCTION ACTIVITIES NEAR OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL COMPLY WITH ALL SAFETY REGULATIONS WHEN OPERATING NEAR POWER LINES.

DIG TESS:

CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION ACTIVITY (ON OR OFFSITE) FOR THE PROJECT.

Hill Country Civil
Engineers • Consultants

STATE OF TEXAS
CHRISTOPHER B. ALLISON
131240
LICENSED PROFESSIONAL ENGINEER
03/13/2025

No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS
HCC JOB No.: 053-01
DRAWN BY.: CBA

GENERAL CONSTRUCTION NOTES

SHEET No.
2
OF 18

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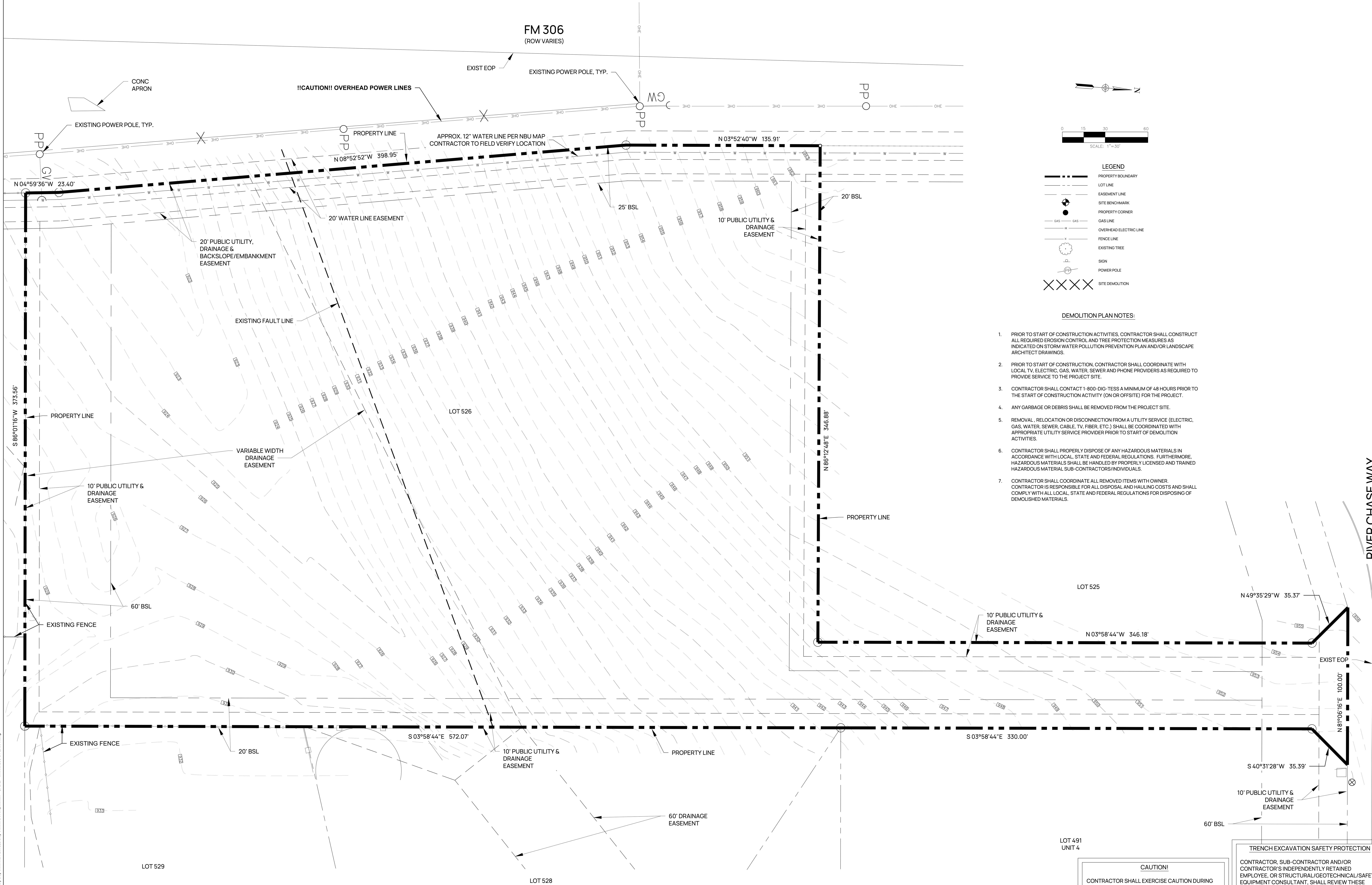

LEGEND

- PROPERTY BOUNDARY
- LOT LINE
- EASEMENT LINE
- SITE BENCHMARK
- PROPERTY CORNER
- GAS LINE
- OVERHEAD ELECTRIC LINE
- FENCE LINE
- EXISTING TREE
- SIGN
- POWER POLE
- SITE DEMOLITION

DEMOLITION PLAN NOTES:

1. PRIOR TO START OF CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL CONSTRUCT ALL REQUIRED EROSION CONTROL AND TREE PROTECTION MEASURES AS INDICATED ON STORM WATER POLLUTION PREVENTION PLAN AND/OR LANDSCAPE ARCHITECT DRAWINGS.
2. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH LOCAL TV, ELECTRIC, GAS, WATER, SEWER AND PHONE PROVIDERS AS REQUIRED TO PROVIDE SERVICE TO THE PROJECT SITE.
3. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION ACTIVITY (ON OR OFFSITE) FOR THE PROJECT.
4. ANY GARBAGE OR DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE.
5. REMOVAL , RELOCATION OR DISCONNECTION FROM A UTILITY SERVICE (ELECTRIC, GAS, WATER, SEWER, CABLE, TV, FIBER, ETC.) SHALL BE COORDINATED WITH APPROPRIATE UTILITY SERVICE PROVIDER PRIOR TO START OF DEMOLITION ACTIVITIES.
6. CONTRACTOR SHALL PROPERLY DISPOSE OF ANY HAZARDOUS MATERIALS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. FURTHERMORE, HAZARDOUS MATERIALS SHALL BE HANDLED BY PROPERLY LICENSED AND TRAINED HAZARDOUS MATERIAL SUB-CONTRACTORS/INDIVIDUALS.
7. CONTRACTOR SHALL COORDINATE ALL REMOVED ITEMS WITH OWNER. CONTRACTOR IS RESPONSIBLE FOR ALL DISPOSAL AND HAULING COSTS AND SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS FOR DISPOSING OF DEMOLISHED MATERIALS.

CAUTION!

CONTRACTOR SHALL EXERCISE CAUTION DURING DEMOLITION, EXCAVATION, CLEARING AND CONSTRUCTION ACTIVITIES NEAR OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL COMPLY WITH ALL SAFETY REGULATIONS WHEN OPERATING NEAR POWER LINES.

DIG TESS:

CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION ACTIVITY (ON OR OFFSITE) FOR THE PROJECT.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR, SUB-CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE, OR STRUCTURAL/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, SHALL REVIEW THESE PLANS AND GEOTECHNICAL REPORT, THE INSTALLATION SITES WITHIN THE PROJECT AREA IN ORDER TO IMPLEMENT CONTRACTORS TRENCH EXCAVATION SAFETY PROTECTION PLAN, SYSTEMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM OSHA STANDARDS, SPECIFICALLY , CONTRACTOR AND/OR RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PLAN IN ACCORDANCE WITH OSHA REGULATIONS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND/OR AROUND THE EXPOSED TRENCH EXCAVATION.

Hill Country Civil
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www.hillcountrycivil.com

STATE OF TEXAS
CHRISTOPHER B. ALLISON
131240
LICENSED
PROFESSIONAL ENGINEER
03/13/2025

No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS

HCC JOB No.: 053-01
DRAWN BY.: CBA

EXISTING CONDITIONS AND DEMOLITION PLAN

SHEET No.
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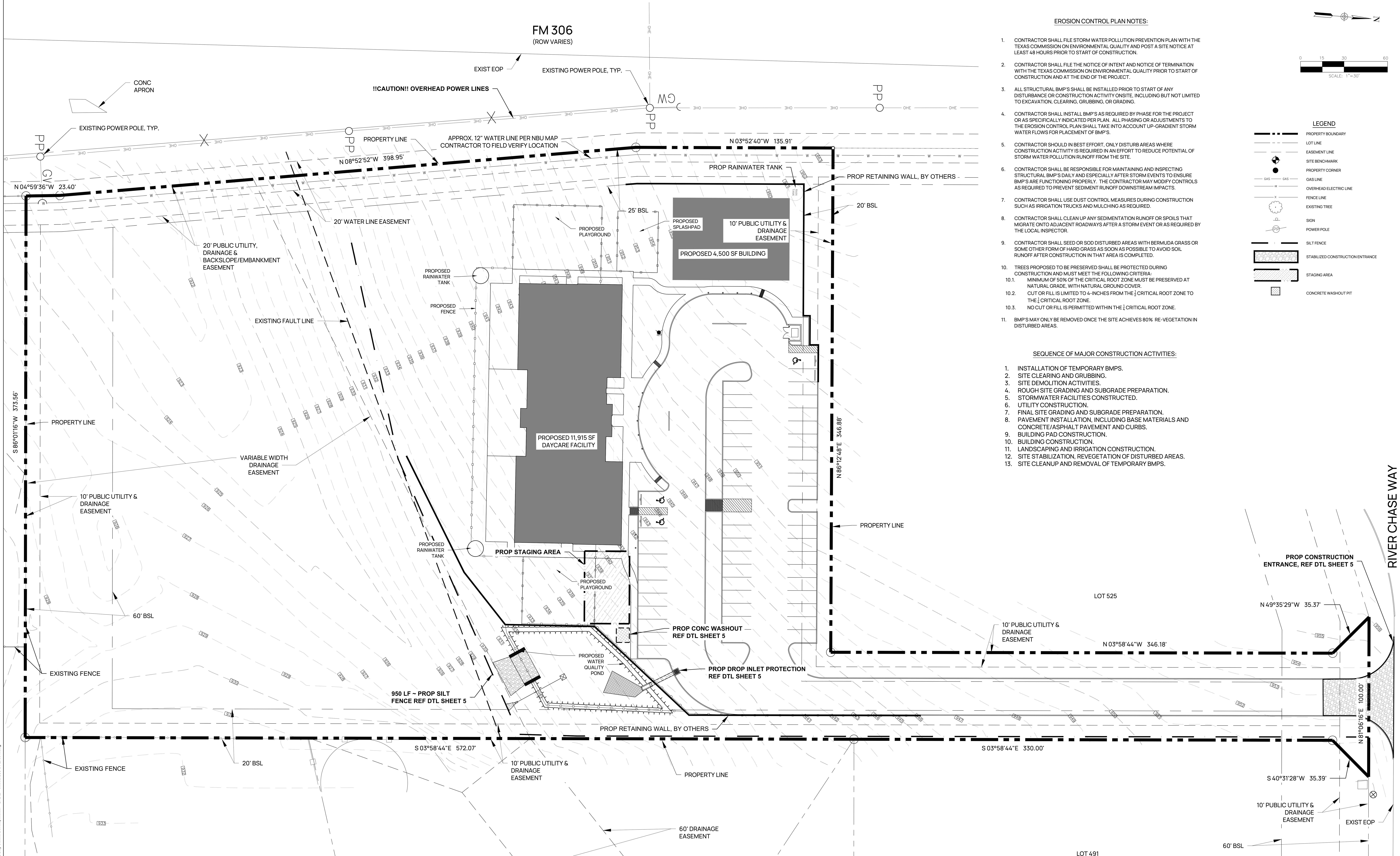

EROSION CONTROL PLAN NOTES:

1. CONTRACTOR SHALL FILE STORM WATER POLLUTION PREVENTION PLAN WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND POST A SITE NOTICE AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR SHALL FILE THE NOTICE OF INTENT AND NOTICE OF TERMINATION WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PRIOR TO START OF CONSTRUCTION AND AT THE END OF THE PROJECT.
3. ALL STRUCTURAL BMP'S SHALL BE INSTALLED PRIOR TO START OF ANY DISTURBANCE OR CONSTRUCTION ACTIVITY ONSITE, INCLUDING BUT NOT LIMITED TO EXCAVATION, CLEARING, GRUBBING, OR GRADING.
4. CONTRACTOR SHALL INSTALL BMP'S AS REQUIRED BY PHASE FOR THE PROJECT OR AS SPECIFICALLY INDICATED PER PLAN. ALL PHASING OR ADJUSTMENTS TO THE EROSION CONTROL PLAN SHALL TAKE INTO ACCOUNT UP-GRADIENT STORM WATER FLOWS FOR PLACEMENT OF BMP'S.
5. CONTRACTOR SHOULD IN BEST EFFORT, ONLY DISTURB AREAS WHERE CONSTRUCTION ACTIVITY IS REQUIRED IN AN EFFORT TO REDUCE POTENTIAL OF STORM WATER POLLUTION RUNOFF FROM THE SITE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND INSPECTING STRUCTURAL BMP'S DAILY AND ESPECIALLY AFTER STORM EVENTS TO ENSURE BMP'S ARE FUNCTIONING PROPERLY. THE CONTRACTOR MAY MODIFY CONTROLS AS REQUIRED TO PREVENT SEDIMENT RUNOFF DOWNSTREAM IMPACTS.
7. CONTRACTOR SHALL USE DUST CONTROL MEASURES DURING CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS REQUIRED.
8. CONTRACTOR SHALL CLEAN UP ANY SEDIMENTATION RUNOFF OR SPOILS THAT MIGRATE ONTO ADJACENT ROADWAYS AFTER A STORM EVENT OR AS REQUIRED BY THE LOCAL INSPECTOR.
9. CONTRACTOR SHALL SEED OR SOD DISTURBED AREAS WITH BERMUDA GRASS OR SOME OTHER FORM OF HARD GRASS AS SOON AS POSSIBLE TO AVOID SOIL RUNOFF AFTER CONSTRUCTION IN THAT AREA IS COMPLETED.
10. TREES PROPOSED TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND MUST MEET THE FOLLOWING CRITERIA:
    - 10.1. MINIMUM OF 50% OF THE CRITICAL ROOT ZONE MUST BE PRESERVED AT NATURAL GRADE, WITH NATURAL GROUND COVER.
    - 10.2. CUT OR FILL IS LIMITED TO 4-INCHES FROM THE $\frac{1}{2}$ CRITICAL ROOT ZONE TO THE $\frac{1}{4}$ CRITICAL ROOT ZONE.
    - 10.3. NO CUT OR FILL IS PERMITTED WITHIN THE $\frac{1}{4}$ CRITICAL ROOT ZONE.
11. BMP'S MAY ONLY BE REMOVED ONCE THE SITE ACHIEVES 80% RE-VEGETATION IN DISTURBED AREAS.

SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES:

1. INSTALLATION OF TEMPORARY BMPS.
2. SITE CLEARING AND GRUBBING.
3. SITE DEMOLITION ACTIVITIES.
4. ROUGH SITE GRADING AND SUBGRADE PREPARATION.
5. STORMWATER FACILITIES CONSTRUCTED.
6. UTILITY CONSTRUCTION.
7. FINAL SITE GRADING AND SUBGRADE PREPARATION.
8. PAVEMENT INSTALLATION, INCLUDING BASE MATERIALS AND CONCRETE/ASPHALT PAVEMENT AND CURBS.
9. BUILDING PAD CONSTRUCTION.
10. BUILDING CONSTRUCTION.
11. LANDSCAPING AND IRRIGATION CONSTRUCTION.
12. SITE STABILIZATION, REVEGETATION OF DISTURBED AREAS.
13. SITE CLEANUP AND REMOVAL OF TEMPORARY BMPS.

LEGEND

- PROPERTY BOUNDARY
- LOT LINE
- EASEMENT LINE
- SITE BENCHMARK
- PROPERTY CORNER
- GAS LINE
- OVERHEAD ELECTRIC LINE
- FENCE LINE
- EXISTING TREE
- SIGN
- POWER POLE
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- STAGING AREA
- CONCRETE WASHOUT PIT

CAUTION!

CONTRACTOR SHALL EXERCISE CAUTION DURING DEMOLITION, EXCAVATION, CLEARING AND CONSTRUCTION ACTIVITIES NEAR OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL COMPLY WITH ALL SAFETY REGULATIONS WHEN OPERATING NEAR POWER LINES.

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STATE OF TEXAS
CHRISTOPHER B. ALLISON
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No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS

HCC JOB No.: 053-01
DRAWN BY.: CBA

EROSION CONTROL PLAN

SHEET No.
4
OF 18

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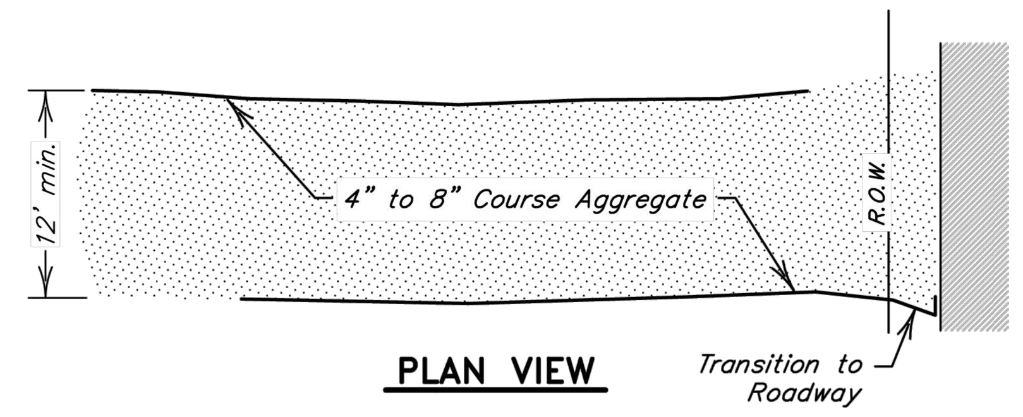
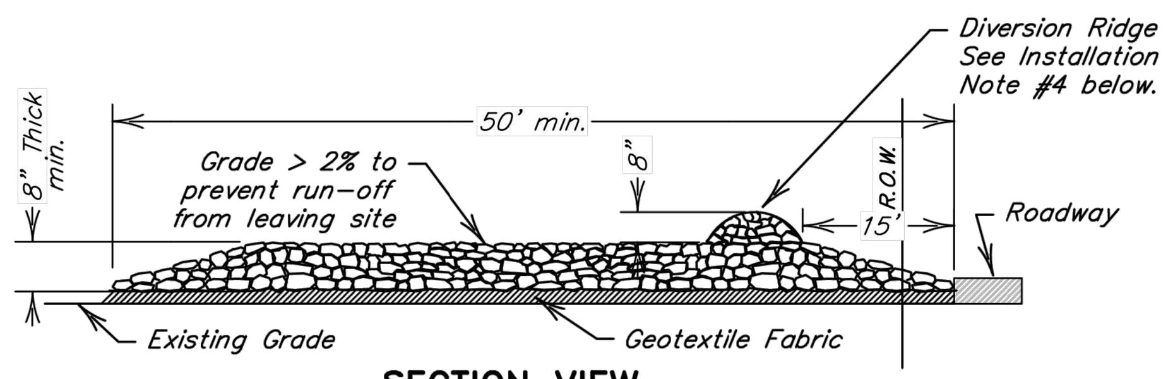




MATERIALS:

1. The aggregate should consist of four (4) inch to eight (8) inch washed stone over a stable foundation as specified in the plan.
2. The aggregate should be placed with a minimum thickness of eight (8) inches.
3. The geotextile fabric should be designed specifically for use as a soil filtration media with an approximate weight of 6 oz./sq.yd., a Mullen burst rating of 140 #/sq.in., and an equivalent opening size greater that a U.S. Sieve No. 50.
4. If a washing facility is required, a level area with a minimum of four (4) inch diameter washed stone or commercial rack should be included in the plans. Wastewater should be diverted to a sediment trap or basin.

INSTALLATION:

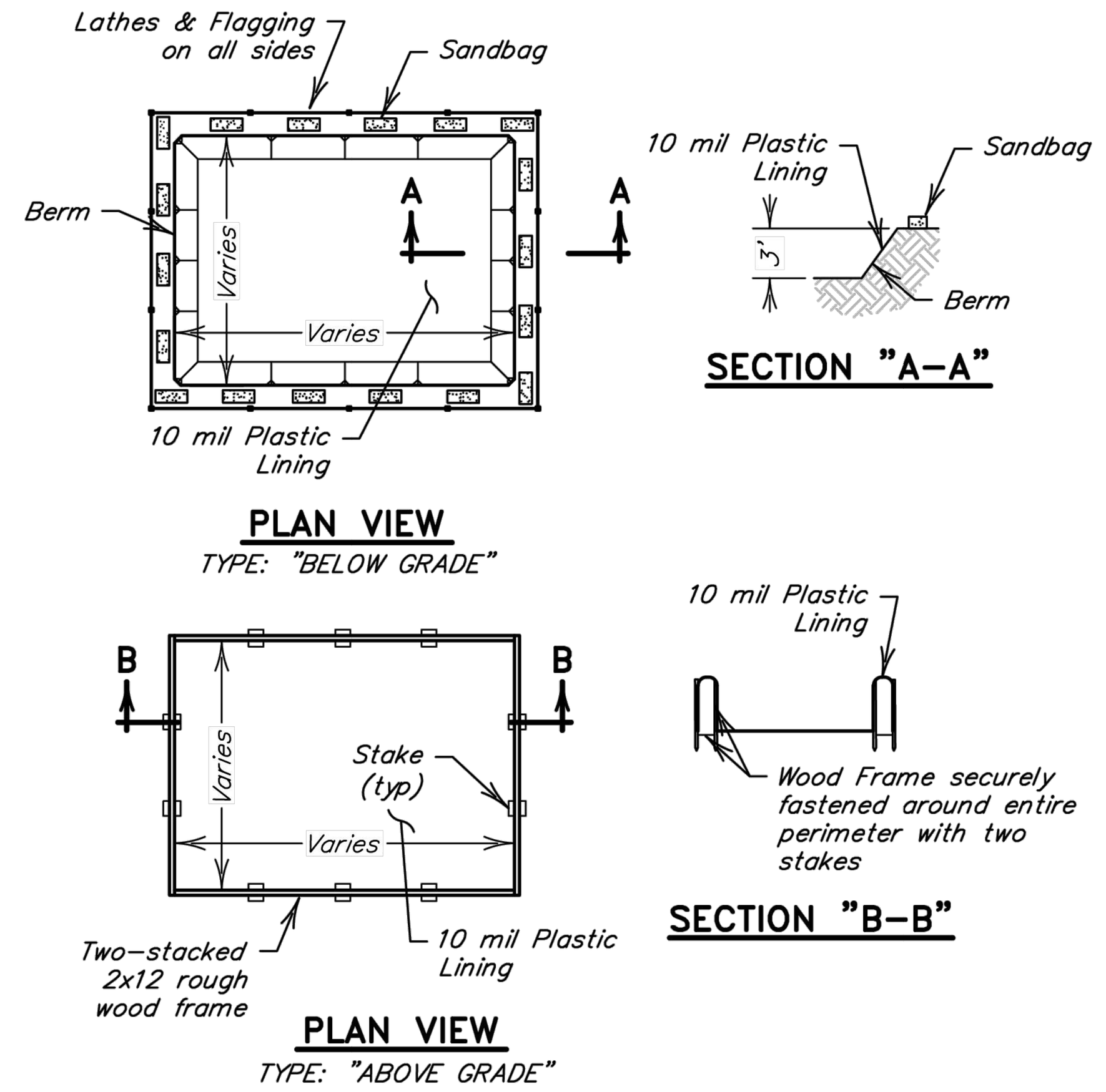
1. Avoid curves on public roads and steep slopes. Remove vegetation and other objectionable material from the foundation area. Grade a crown in the center of the foundation for positive drainage.
2. The minimum width of the facility should be either twelve (12) feet or the full width of Exit roadway, whichever is greater.
3. The Construction Entrance should be at least fifty (50) feet long.
4. If the slope toward the road exceeds two (2) percent, construct a ridge six (6) inches to eight (8) inches high with three to one (3H:1V) side slopes across the foundation approximately fifteen (15) feet from the Entrance to divert runoff away from the public road.
5. Place geotextile fabric and grade foundation to improve stability, especially where wet conditions are anticipated.
6. Place stone to dimensions and grade shown on plans. Leave the surface smooth and sloped for drainage.
7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin.
8. Install a pipe under pad as needed to maintain proper public road drainage.

INSPECTION AND MAINTENANCE GUIDELINES:

1. The Entrance should be maintained in a condition which will prevent the tracking and flowing of sediment into public right-of-way. This may require a periodic top dressing of additional stone as conditions demand and repairing and/or cleaning out any measures used to trap sediment.
2. All sediment spilled, dropped, washed or tracked onto the public right-of-way should be removed immediately by the Contractor.
3. When necessary vehicular wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.
4. When washing is required it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
5. All sediment should be prevented from entering any storm drain, ditch, or water course by using approved methods.

TEMPORARY CONSTRUCTION ENTRANCE/EXIT

(NTS)

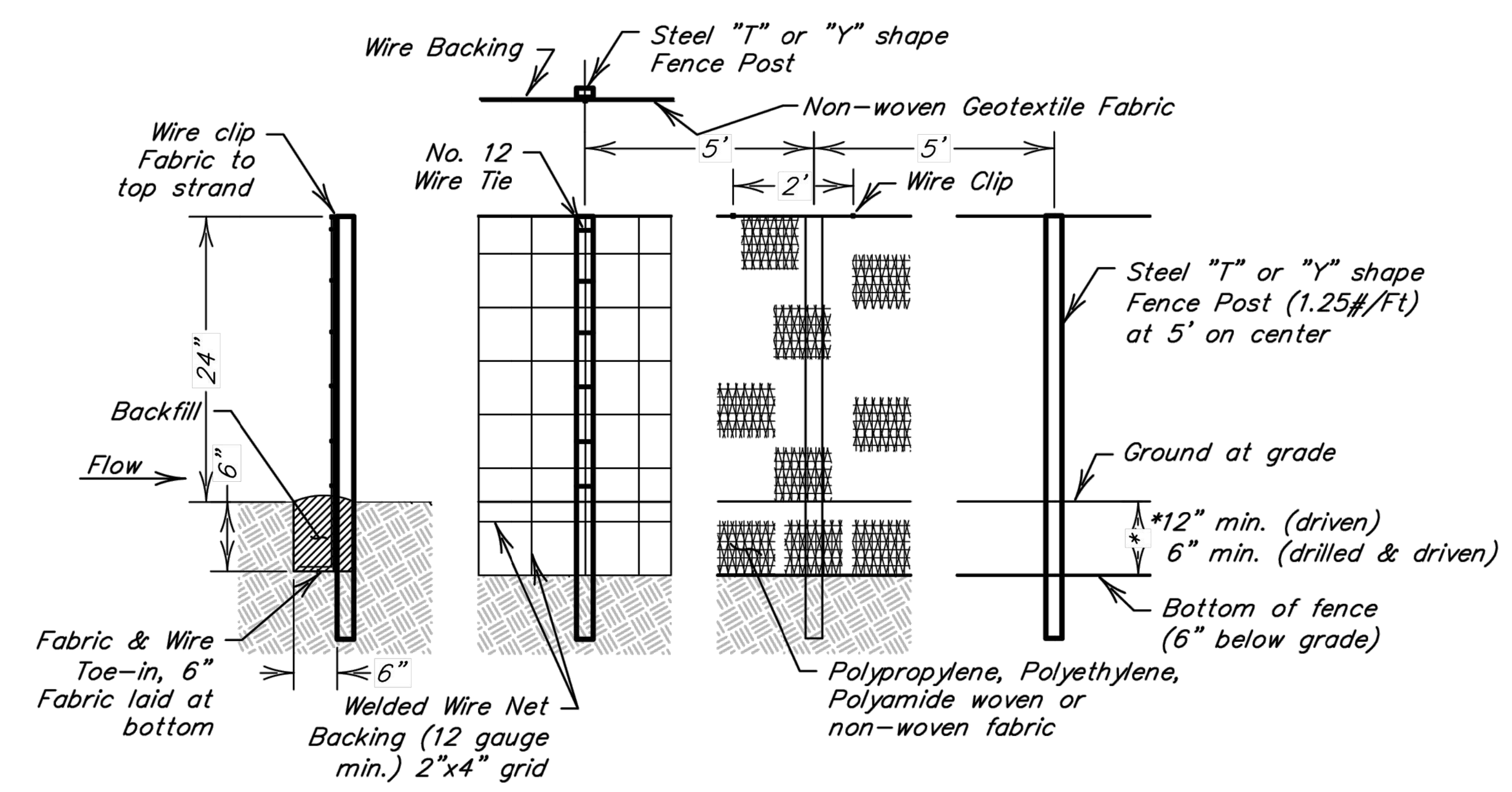


NOTES:

1. Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
2. Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.
3. Below grade concrete washout facilities are typical. These consist of a lined excavation sufficiently large to hold expected volume of washout material. Above grade facilities are used if excavation is not practical. Temporary concrete washout facility (type above grade) should be constructed as shown on the details at the end of this section, with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.
4. When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of. Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

CONCRETE WASHOUT AREA

(NTS)



MATERIALS:

1. Silt fence material should be polypropylene, polyethylene or polyamide woven or non-woven fabric. The fabric width should be thirty-six (36) inches with a minimum unit weight of 4.5 oz./sq.yd., a mullen burst strength exceeding 190 #/sq.in., ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
2. Fence posts should be made of hot rolled steel, at least four (4) feet long with Tee or Y-bar cross section, surface painted or galvanized, minimum nominal weight 1.25 #/ft, and Brindell hardness exceeding 140.
3. Woven wire backing to support the fabric should be galvanized twelve (12) gauge minimum two by four (2x4) inch welded wire.

INSTALLATION:

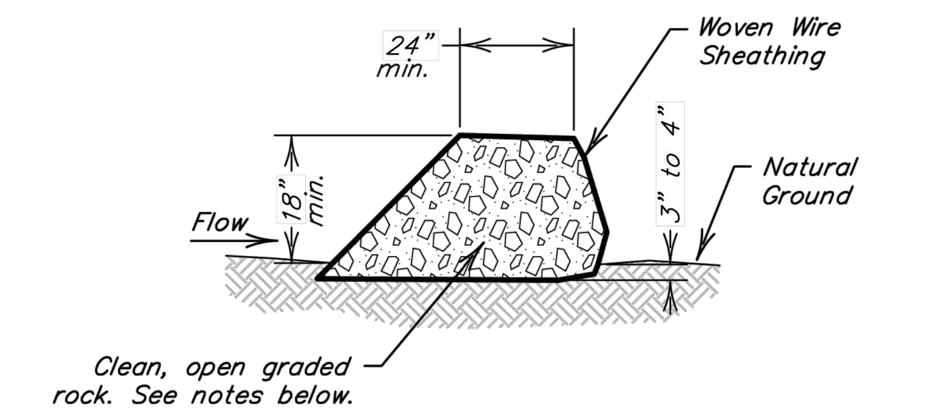
1. Steel posts which support the silt fence should be installed on a slight angle toward the anticipated runoff source. Posts must be embedded a minimum of one (1) foot deep and spaced not more than eight (8) feet on center. Where water concentrates the maximum spacing should be six (6) feet.
2. Lay out fencing down-slope of disturbed area following the contour as closely as possible. The fence should be sited so that the maximum drainage area is one-quarter (1/4) acre per one-hundred (100) feet of fence.
3. The toe of the silt fence should be trenched in with a spade or mechanical trencher so that the down-slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g. pavement or rock outcrop) weight fabric flap with three (3) inches of pea gravel on uphill side to prevent flow from seeping under the fence.
4. The trench must be a minimum of six (6) inches deep and six (6) inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.
5. Silt fence should be securely fastened to each steel support post or to woven wire which is in turn attached to the steel fence post. There should be a securely fastened three (3) foot overlap where ends of the fabric meet.
6. Silt fence should be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.

INSPECTION AND MAINTENANCE GUIDELINES:

1. Inspect all fencing weekly and after any rainfall event.
2. Remove sediment when buildup reaches 6 inches.
3. Replace any torn fabric or install a second line of fencing parallel to the torn section.
4. During the course of construction activities, Contractor shall replace or repair any crushed, collapsed sections. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
5. When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be re-vegetated. The fence itself should be disposed of in an approved landfill.

SILT FENCE

(NTS)



MATERIALS:

1. The berm structure should be secured with a woven wire sheathing having a maximum opening of one (1) inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoat rings.
2. Clean, open graded three (3) inch to five (5) inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected five (5) inch to eight (8) inch diameter rocks may be used.

INSTALLATION:

1. Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be twenty (20) gauge woven wire mesh with one (1) inch openings.
2. Berm should have a top width of two (2) feet minimum with side slopes being two to one (2H:1V) ratio slope or flatter.
3. Place the rock along the sheathing as shown above to a height not less than eighteen (18) inches.
4. Wrap the wire sheathing around the rock and secure with tie wire so that the ends of the sheathing overlap at least two (2) inches. The berm should retain its shape when walked upon.
5. Berm should be built along the contour at zero percent grade or as near as possible.
6. The ends of the berm should be tied into existing up-slope grade and the berm should be buried in a trench approximately three (3) to four (4) inches deep to prevent failure of the control.

INSPECTION AND MAINTENANCE GUIDELINES:

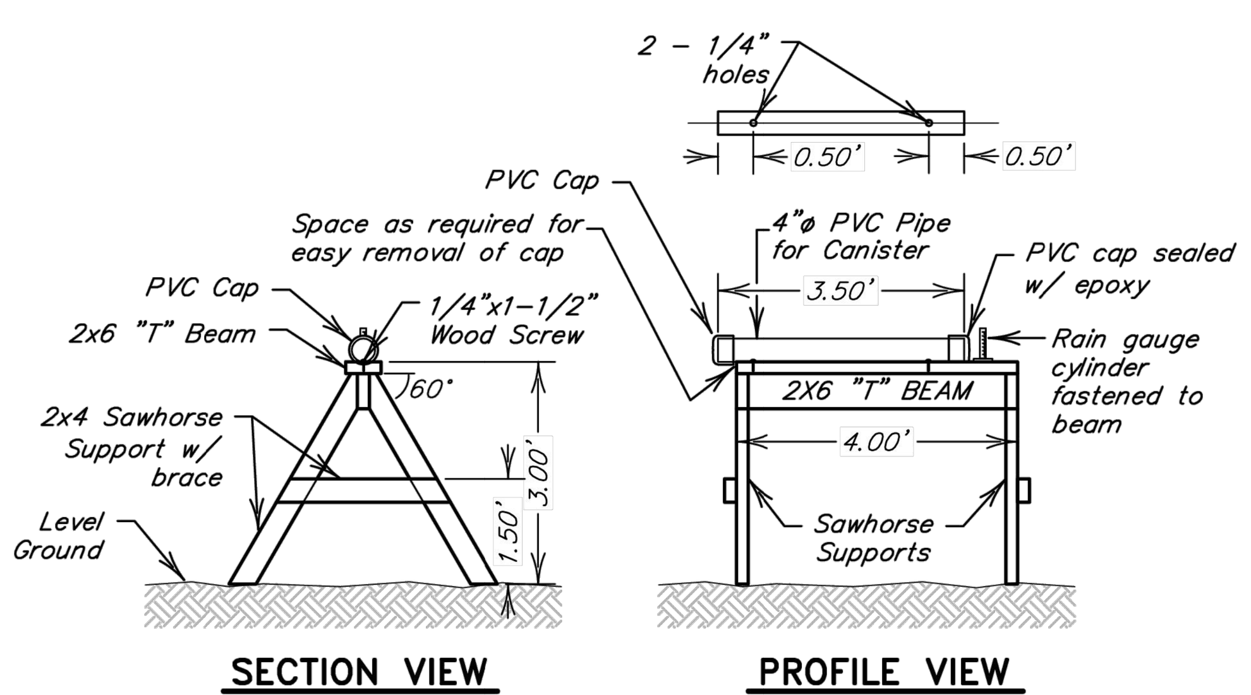
1. Inspection should be made weekly and after each rainfall by the responsible party. For installations in stream beds additional daily inspections should be made.
2. Remove sediment and other debris when buildup reaches six (6) inches and dispose of the accumulated silt in a approved manner that will not cause any additional siltation.
3. Repair any loose wire sheathing.
4. The berm should be reshaped as needed during inspection.
5. The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
6. The rock berm should be left in place until all upstream areas are stabilized and accumulated silt is removed.

ROCK BERM

(NTS)

GENERAL S.W.P.P.P. NOTES:

1. The location of Erosion and Sedimentation Control facilities are approximate. Contractor may modify, relocate, or add facilities with prior authorization from the Engineer.
2. Where a note or detail differs from the official Texas Commission On Environmental Quality (TCEQ) latest edition regulations, the TCEQ note or detail shall apply.



NOTES:

1. This canister shall be used to store the complete Storm Water Pollution Prevention Plan (SWPPP) and all other related documents so that they are available on-site for the Inspector.
2. The canister shall be located on solid level ground adjacent to the construction entrance and on the opposite side of the Concrete Washout Area.

S.W.P.P.P. DOCUMENT CONTAINER

(NTS)

GUIDELINES FOR INSTALLATION:

1. Preserve natural vegetation or planting in clumps, blocks or strips in generally the easiest and most successful method.
2. All unstable steep slopes should be left in natural vegetation.
3. Fence or flag clearing limits and keep all equipment and construction debris out of the natural areas.
4. Keep all excavations outside the dripline of trees and shrubs.
5. Debris or extra soil should be pushed into the buffer zone area because it will cause from burying and smothering.
6. The minimum width of a vegetative buffer used for sediment control should be fifty (50) feet.

INSPECTION AND MAINTENANCE GUIDELINES:

Inspection and careful maintenance are important to ensure healthy vegetation. The need for routine maintenance such as mowing, fertilizing, irrigating, and weed and pest control will depend on the species of plants and trees, soil types, location, and climatic conditions. County agricultural extension agencies are a good source of this type of information.

VEGETATIVE BUFFER

(NTS)

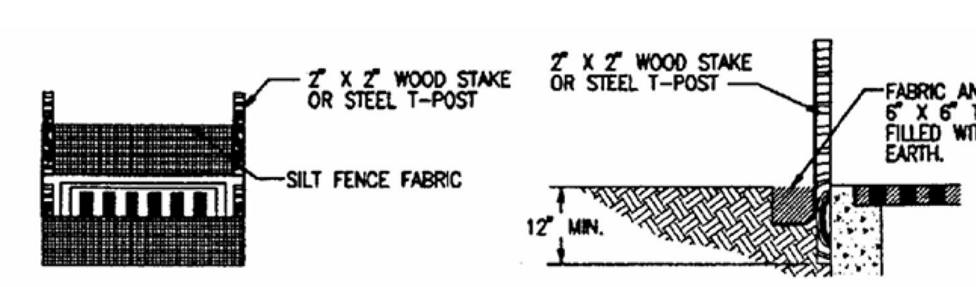
Drop Inlet Protection

In developments for which drainage is to be conveyed by underground storm sewers (i.e., streets with curbs and gutters), all inlets that may receive storm runoff from disturbed areas should be protected. Care should be taken when choosing a specific type of inlet protection, so that excessive ponding in an area of high construction activity does not become so inconvenient that it is removed or bypassed. In such situations, a structure with an adequate overflow mechanism should be utilized.

It should also be noted that inlet protection devices are designed to be installed on construction sites and caution should be used when installed on streets and roads open to the public. When used on public streets these devices will cause ponding of runoff, which can cause flooding and can present a traffic hazard.

Notes:

1. Use a nonwoven filter fence with a minimum weight of 4.0 oz/yd^2.
2. Use 2″ x 4″ pressure treated wood stakes or galvanized steel, tubular in cross-section or standard fence "T" posts.
3. Wire mesh should be standard hardware cloth or comparable wire mesh with an opening size not to exceed 1/2 inch.
4. If the drop inlet is above the finished grade, the grate may be completely covered with filter fabric. The fabric should be securely attached to the entire perimeter of the inlet using 1″x 2″ wood strips and appropriate fasteners.
5. Inspect frequently and replace the filter cloth and other materials when clogged with sediment. Dispose of sediment in a manner that will not cause additional siltation.
6. When construction is complete, properly dispose of any sediment buildup. The filter fabric materials should be disposed of in an approved landfill. Serviceable components may be salvaged for reuse.



Silt Fence Drop Inlet Protection

DROP INLET PROTECTION

(NTS)

Texas Commission on Environmental Quality - Water Pollution Abatement Plan -General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer:

The following/listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director (ED), nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code (TAC), Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the
following/listed "construction notes" restricts the powers of the ED, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, TAC, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the ED's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, TAC § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following/listed "construction notes" in no way represent an approved exception by the ED to any part of Title 30 TAC, Chapters 213 and 217, or any other TCEQ applicable regulation.

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.
2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.
3. If any sensitive feature(s) (caves, solution cavity, sink hole, etc.) is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. Construction activities may not be resumed until the TCEQ has reviewed and approved the appropriate protective measures in order to protect any sensitive feature and the Edwards Aquifer from potentially adverse impacts to water quality.
4. No temporary or permanent hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.
5. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the approved
6. plans and manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.
7. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.
8. Sediment must be removed from the sediment traps or sedimentation basins not later than TCEQ-0592 (Rev. July 15, 2015) Page 2 of 2 when it occupies 50% of the basin's design capacity.
9. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.
10. If portions of the site will have a temporary or permanent cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.
11. The following records shall be maintained and made available to the TCEQ upon request:
    - the dates when major grading activities occur;
    - the dates when construction activities temporarily or permanently cease on a portion of the site; and
    - the dates when stabilization measures are initiated.
12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
    A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
    B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
    C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office
12100 Park 35 Circle, Building A
Austin, Texas 78753-1808
Phone (512) 339-2929
Fax (512) 339-3795

San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480
Phone (210) 490-3096
Fax (210) 545-4329

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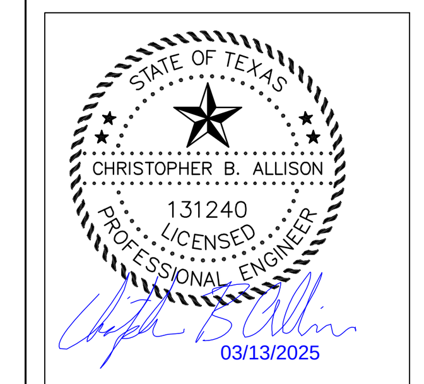

App. | Revisions | Date | No.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS

HCC JOB No.: 053-01
DRAWN BY: CBA

EROSION CONTROL DETAILS

SHEET No.
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OF 18

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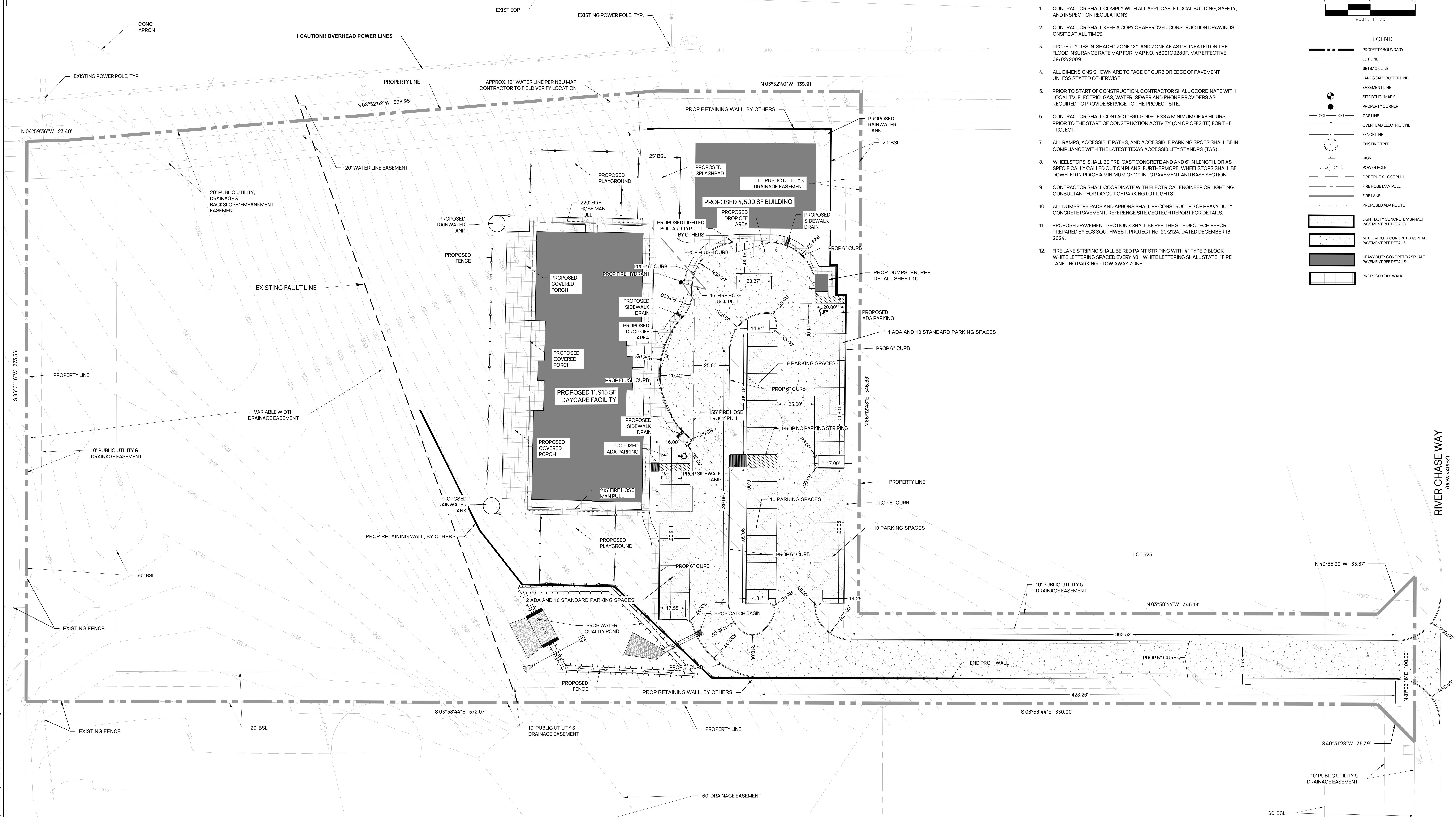
SURVEY NOTE

Survey Prepared by: TRIHYDRO CORPORATION
1672 INDEPENDENCE DR. STE. 315,
NEW BRAUNFELS, TX. 78132
PH: (830) 626-3588
TBPELS Firm #10194320

LEGAL DESCRIPTION

5.550 ACRES LOT 526 OF THE RIVER CHASE UNIT 5 SUBDIVISION



SITE PLAN NOTES

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL BUILDING, SAFETY, AND INSPECTION REGULATIONS.
2. CONTRACTOR SHALL KEEP A COPY OF APPROVED CONSTRUCTION DRAWINGS ONSITE AT ALL TIMES.
3. PROPERTY LIES IN SHADED ZONE "X", AND ZONE AE AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR MAP NO. 48091C0280F, MAP EFFECTIVE 09/02/2009.
4. ALL DIMENSIONS SHOWN ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS STATED OTHERWISE.
5. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH LOCAL TV, ELECTRIC, GAS, WATER, SEWER AND PHONE PROVIDERS AS REQUIRED TO PROVIDE SERVICE TO THE PROJECT SITE.
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION ACTIVITY (ON OR OFFSITE) FOR THE PROJECT.
7. ALL RAMPS, ACCESSIBLE PATHS, AND ACCESSIBLE PARKING SPOTS SHALL BE IN COMPLIANCE WITH THE LATEST TEXAS ACCESSIBILITY STANDRS (TAS).
8. WHEELSTOPS SHALL BE PRE-CAST CONCRETE AND AND 6' IN LENGTH, OR AS SPECIFICALLY CALLED OUT ON PLANS. FURTHERMORE, WHEELSTOPS SHALL BE DOWELED IN PLACE A MINIMUM OF 12" INTO PAVEMENT AND BASE SECTION.
9. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL ENGINEER OR LIGHTING CONSULTANT FOR LAYOUT OF PARKING LOT LIGHTS.
10. ALL DUMPSTER PADS AND APRONS SHALL BE CONSTRUCTED OF HEAVY DUTY CONCRETE PAVEMENT. REFERENCE SITE GEOTECH REPORT FOR DETAILS.
11. PROPOSED PAVEMENT SECTIONS SHALL BE PER THE SITE GEOTECH REPORT PREPARED BY ECS SOUTHWEST, PROJECT No. 20:2124, DATED DECEMBER 13, 2024.
12. FIRE LANE STRIPING SHALL BE RED PAINT STRIPING WITH 4" TYPE D BLOCK WHITE LETTERING SPACED EVERY 40'. WHITE LETTERING SHALL STATE: "FIRE LANE - NO PARKING - TOW AWAY ZONE".

0 15 30 60
SCALE: 1"=30'

LEGEND

PROPERTY BOUNDARY
LOT LINE
SETBACK LINE
LANDSCAPE BUFFER LINE
EASEMENT LINE
SITE BENCHMARK
PROPERTY CORNER
GAS LINE
OVERHEAD ELECTRIC LINE
FENCE LINE
EXISTING TREE
SIGN
POWER POLE
FIRE TRUCK HOSE PULL
FIRE HOSE MAN PULL
FIRE LANE
PROPOSED ADA ROUTE
LIGHT DUTY CONCRETE/ASPHALT PAVEMENT REF DETAILS
MEDIUM DUTY CONCRETE/ASPHALT PAVEMENT REF DETAILS
HEAVY DUTY CONCRETE/ASPHALT PAVEMENT REF DETAILS
PROPOSED SIDEWALK

CAUTION!

CONTRACTOR SHALL EXERCISE CAUTION DURING DEMOLITION, EXCAVATION, CLEARING AND CONSTRUCTION ACTIVITIES NEAR OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL COMPLY WITH ALL SAFETY REGULATIONS WHEN OPERATING NEAR POWER LINES.

DIG TESS:

CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION ACTIVITY (ON OR OFFSITE) FOR THE PROJECT.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR, SUB-CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE, OR STRUCTURAL/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, SHALL REVIEW THESE PLANS AND GEOTECHNICAL REPORT, THE INSTALLATION SITES WITHIN THE PROJECT AREA IN ORDER TO IMPLEMENT CONTRACTORS TRENCH EXCAVATION SAFETY PROTECTION PLAN, SYSTEMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM OSHA STANDARDS, SPECIFICALLY, CONTRACTOR AND/OR RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PLAN IN ACCORDANCE WITH OSHA REGULATIONS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND/OR AROUND THE EXPOSED TRENCH EXCAVATION.

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STATE OF TEXAS
CHRISTOPHER B. ALLISON
131240
LICENSED
PROFESSIONAL ENGINEER
03/13/2025

No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS

HCC JOB No.: 053-01
DRAWN BY.: CBA

OVERALL SITE PLAN

SHEET No.
6
OF 18

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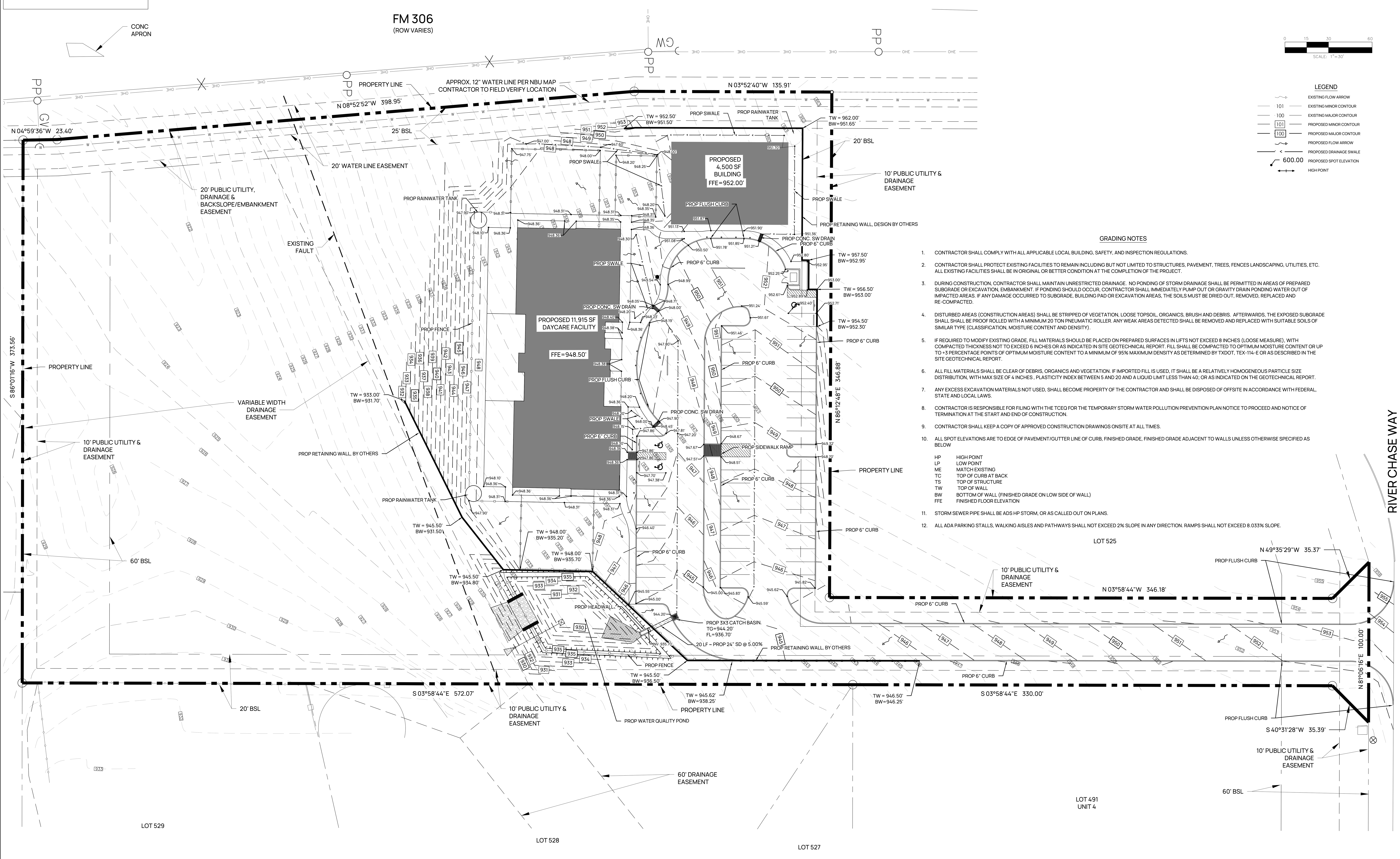
SURVEY NOTE

Survey Prepared by: TRIHYDRO CORPORATION
1672 INDEPENDENCE DR. STE. 315,
NEW BRAUNFELS, TX. 78132
PH: (830) 626-3588
TBPELS Firm #10194320

LEGAL DESCRIPTION

5.550 ACRES LOT 526 OF THE RIVER CHASE UNIT 5 SUBDIVISION



GRADING NOTES

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL BUILDING, SAFETY, AND INSPECTION REGULATIONS.
2. CONTRACTOR SHALL PROTECT EXISTING FACILITIES TO REMAIN INCLUDING BUT NOT LIMITED TO STRUCTURES, PAVEMENT, TREES, FENCES LANDSCAPING, UTILITIES, ETC. ALL EXISTING FACILITIES SHALL BE IN ORIGINAL OR BETTER CONDITION AT THE COMPLETION OF THE PROJECT.
3. DURING CONSTRUCTION, CONTRACTOR SHALL MAINTAIN UNRESTRICTED DRAINAGE. NO PONDING OF STORM DRAINAGE SHALL BE PERMITTED IN AREAS OF PREPARED SUBGRADE OR EXCAVATION, EMBANKMENT. IF PONDING SHOULD OCCUR, CONTRACTOR SHALL IMMEDIATELY PUMP OUT OR GRAVITY DRAIN PONDING WATER OUT OF IMPACTED AREAS. IF ANY DAMAGE OCCURRED TO SUBGRADE, BUILDING PAD OR EXCAVATION AREAS, THE SOILS MUST BE DRIED OUT, REMOVED, REPLACED AND RE-COMPACTED.
4. DISTURBED AREAS (CONSTRUCTION AREAS) SHALL BE STRIPPED OF VEGETATION, LOOSE TOPSOIL, ORGANICS, BRUSH AND DEBRIS. AFTERWARDS, THE EXPOSED SUBGRADE SHALL SHALL BE PROOF ROLLED WITH A MINIMUM 20 TON PNEUMATIC ROLLER. ANY WEAK AREAS DETECTED SHALL BE REMOVED AND REPLACED WITH SUITABLE SOILS OF SIMILAR TYPE (CLASSIFICATION, MOISTURE CONTENT AND DENSITY).
5. IF REQUIRED TO MODIFY EXISTING GRADE, FILL MATERIALS SHOULD BE PLACED ON PREPARED SURFACES IN LIFTS NOT EXCEED 8 INCHES (LOOSE MEASURE), WITH COMPACTED THICKNESS NOT TO EXCEED 6 INCHES OR AS INDICATED IN SITE GEOTECHNICAL REPORT. FILL SHALL BE COMPACTED TO OPTIMUM MOISTURE CONTENT OR UP TO +3 PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT TO A MINIMUM OF 95% MAXIMUM DENSITY AS DETERMINED BY TXDOT, TEX-114-E OR AS DESCRIBED IN THE SITE GEOTECHNICAL REPORT.
6. ALL FILL MATERIALS SHALL BE CLEAR OF DEBRIS, ORGANICS AND VEGETATION. IF IMPORTED FILL IS USED, IT SHALL BE A RELATIVELY HOMOGENEOUS PARTICLE SIZE DISTRIBUTION, WITH MAX SIZE OF 4 INCHES , PLASTICITY INDEX BETWEEN 5 AND 20 AND A LIQUID LIMIT LESS THAN 40; OR AS INDICATED ON THE GEOTECHNICAL REPORT.
7. ANY EXCESS EXCAVATION MATERIALS NOT USED, SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFFSITE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS.
8. CONTRACTOR IS RESPONSIBLE FOR FILING WITH THE TCEQ FOR THE TEMPORARY STORM WATER POLLUTION PREVENTION PLAN NOTICE TO PROCEED AND NOTICE OF TERMINATION AT THE START AND END OF CONSTRUCTION.
9. CONTRACTOR SHALL KEEP A COPY OF APPROVED CONSTRUCTION DRAWINGS ONSITE AT ALL TIMES.
10. ALL SPOT ELEVATIONS ARE TO EDGE OF PAVEMENT/GUTTER LINE OF CURB, FINISHED GRADE, FINISHED GRADE ADJACENT TO WALLS UNLESS OTHERWISE SPECIFIED AS BELOW

    HP HIGH POINT
    LP LOW POINT
    ME MATCH EXISTING
    TC TOP OF CURB AT BACK
    TS TOP OF STRUCTURE
    TW TOP OF WALL
    BW BOTTOM OF WALL (FINISHED GRADE ON LOW SIDE OF WALL)
    FFE FINISHED FLOOR ELEVATION

11. STORM SEWER PIPE SHALL BE ADS HP STORM, OR AS CALLED OUT ON PLANS.
12. ALL ADA PARKING STALLS, WALKING AISLES AND PATHWAYS SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION. RAMPS SHALL NOT EXCEED 8.033% SLOPE.

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144 RIVER CHASE WAY
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OVERALL GRADING PLAN

SHEET No.
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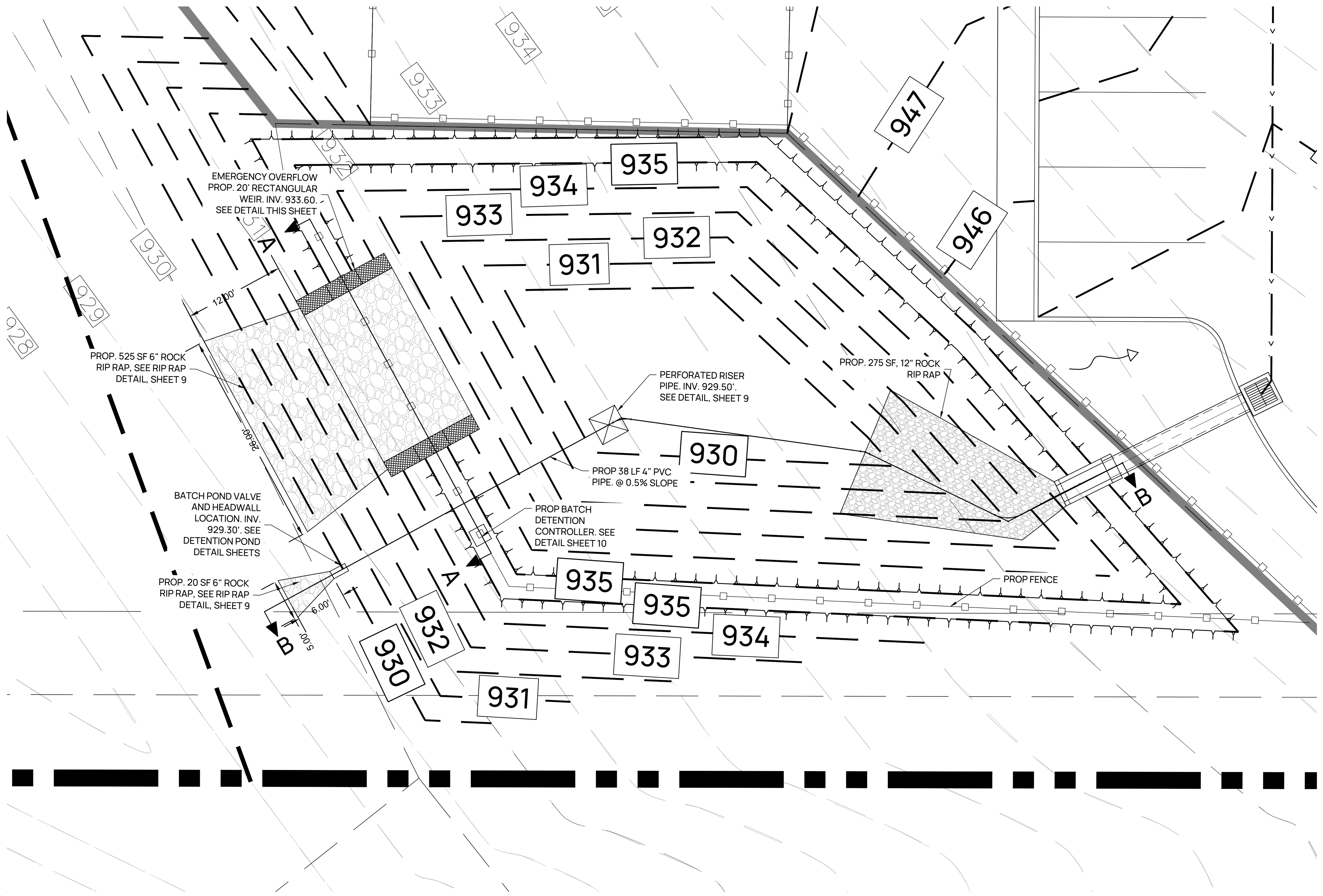
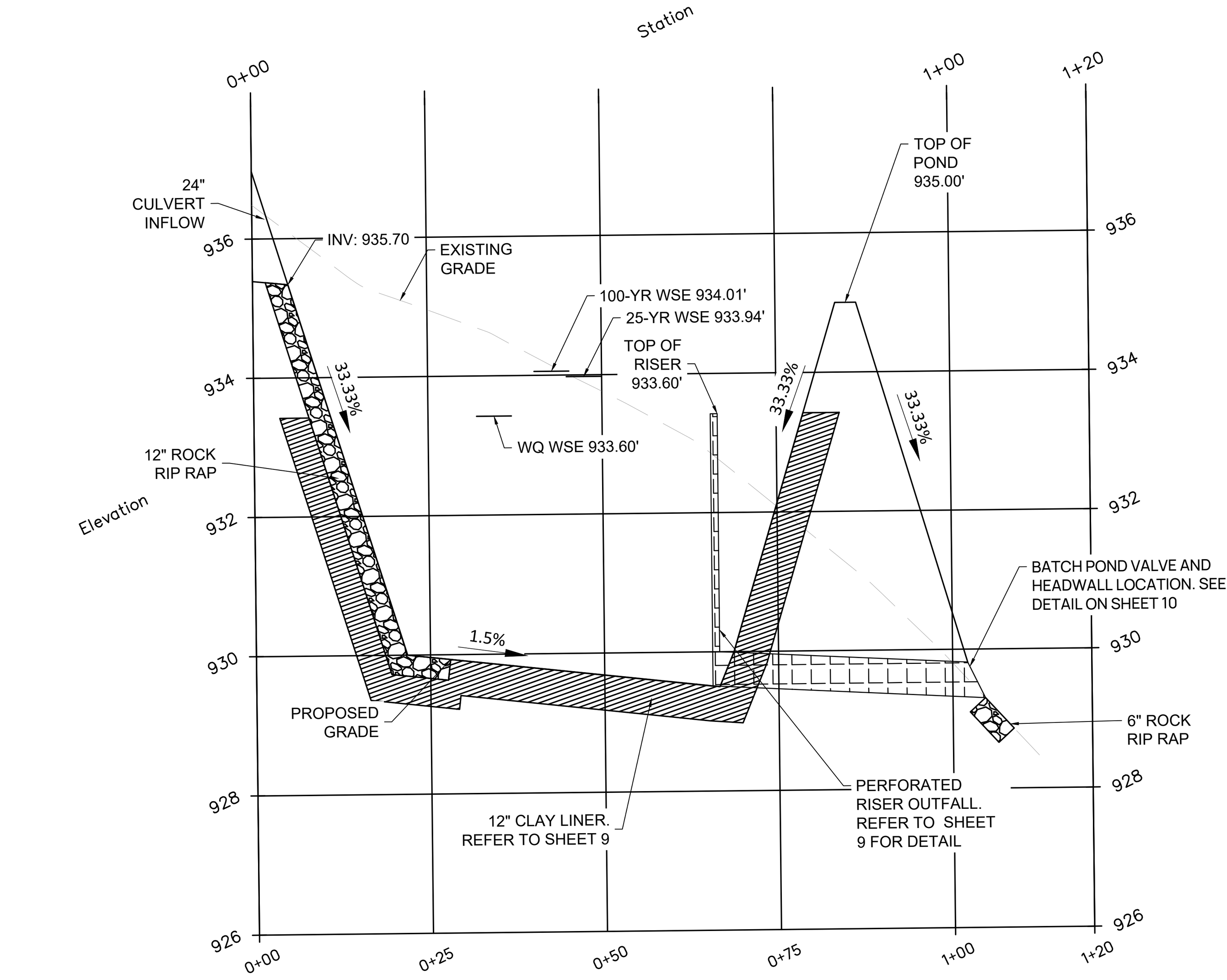


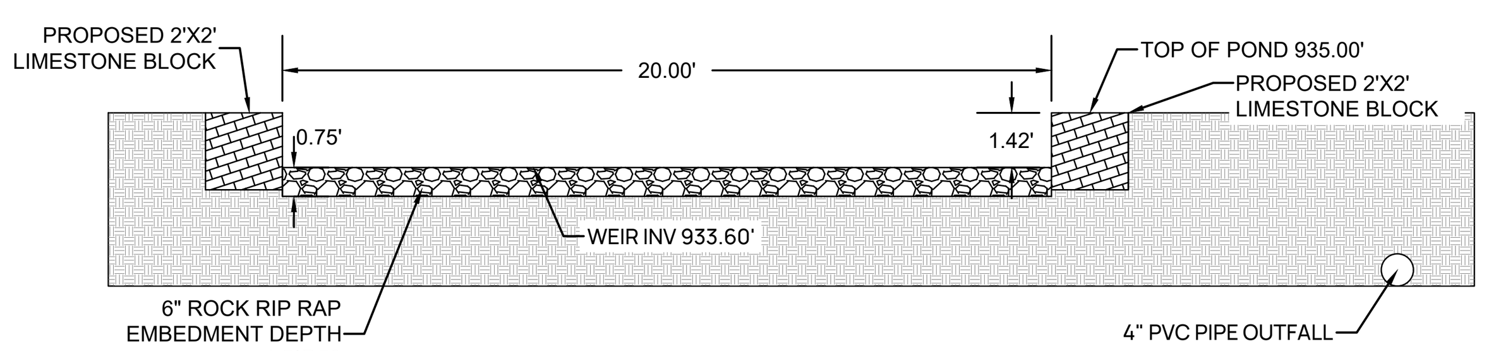
BATCH DETENTION POND

1"=10'



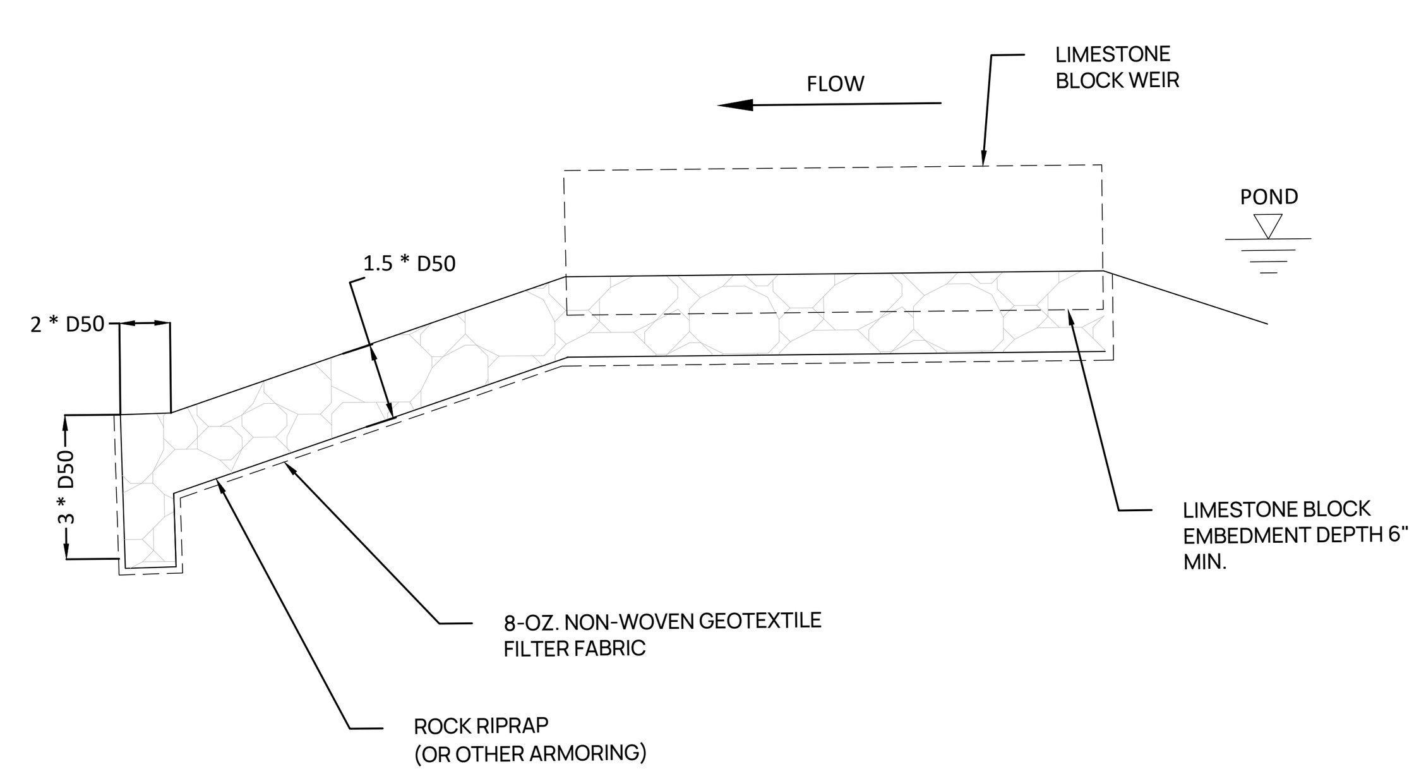
POND PROFILE CROSS-SECTION B-B

1"=40' HORIZONTAL 1"=4' VERTICAL



BATCH DETENTION POND CROSS-SECTION A-A

N.T.S.



POND WEIR CROSS-SECTION & RIP RAP TYP.

N.T.S.

WATER QUALITY NOTES:

1. REQUIRED WATER QUALITY VOLUME IN POND 1 IS: 5,489 CF
2. PROVIDED WATER QUALITY VOLUME IN POND 1 IS: 5,500 CF AT ELEVATION 933.60'

SCALE: 1"=10'

LEGEND

- PROPERTY BOUNDARY
- LOT LINE
- SETBACK LINE
- LANDSCAPE BUFFER LINE
- EASEMENT LINE
- SITE BENCHMARK
- PROPERTY CORNER
- GAS LINE
- OVERHEAD ELECTRIC LINE
- FENCE LINE
- EXISTING TREE
- SIGN
- POWER POLE
- FIRE LANE
- EXISTING FLOW ARROW
- 101 EXISTING MINOR CONTOUR
- 100 EXISTING MAJOR CONTOUR
- 101 PROPOSED MINOR CONTOUR
- 100 PROPOSED MAJOR CONTOUR
- PROPOSED FLOW ARROW
- 600.00 PROPOSED SPOT ELEVATION
- PROPOSED DRAINAGE SWALE/CONCENTRATED FLOW PATH IN PAVED AREAS

DETENTION PLAN NOTES:

1. THE CONSTRUCTION HEIGHT OF AN EARTHEN EMBANKMENT SHALL BE EQUAL TO THE DESIGN HEIGHT PLUS THE AMOUNT NECESSARY TO ENSURE THAT THE DESIGN HEIGHT WILL BE MAINTAINED ONCE ALL SETTLEMENT HAS TAKEN PLACE. ALL EARTHEN EMBANKMENTS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
2. ALL ROCK RIP RAP SHALL BE A MINIMUM 6" IN DIAMETER AND HAVE A MINIMUM APRON LENGTH OF 6' UNLESS SIZE IS SPECIFIED ON THE PLANS. EMBEDMENT DEPTH OF RIP RAP SHALL BE 1.5 TIMES THE DIAMETER OF THE ROCK.
3. ALL DISTURBED AREAS SHALL BE RESTORED AND PERMANENTLY REVEGETATED UNLESS OTHERWISE NOTED IN THE PLANS.
4. AT A MINIMUM DISTURBED AREAS NEED TO BE REVEGETATED AS PER TXDOT ITEM 164 SEEDING FOR EROSION CONTROL. PLANTING MUST FOLLOW EITHER SAN ANTONIO OR AUSTIN TXDOT REQUIREMENTS FOR SEED WEIGHT PER ACRE.
5. THE PLANTED AREAS SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX INCHES. THE IRRIGATION SHALL OCCUR AT TEN-DAY INTERVALS DURING THE FIRST TWO MONTHS, RAINFALL OCCURRENCES OF $\frac{1}{2}$ INCH OF MORE SHALL POSTPONE THE WATERING SCHEDULE FOR ONE WEEK.
6. REFER TO DETENTION POND DETAILS SHEETS FOR ADDITIONAL DETAILS ON POND DESIGN.

CAUTION!

CONTRACTOR SHALL EXERCISE CAUTION DURING DEMOLITION, EXCAVATION, CLEARING AND CONSTRUCTION ACTIVITIES NEAR OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL COMPLY WITH ALL SAFETY REGULATIONS WHEN OPERATING NEAR POWER LINES.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR, SUB-CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE, OR STRUCTURAL/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, SHALL REVIEW THESE PLANS AND GEOTECHNICAL REPORT, THE INSTALLATION SITES WITHIN THE PROJECT AREA IN ORDER TO IMPLEMENT CONTRACTORS TRENCH EXCAVATION SAFETY PROTECTION PLAN, SYSTEMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM OSHA STANDARDS, SPECIFICALLY , CONTRACTOR AND/OR RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PLAN IN ACCORDANCE WITH OSHA REGULATIONS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND/OR AROUND THE EXPOSED TRENCH EXCAVATION.

DIG TESS:

CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION ACTIVITY (ON OR OFFSITE) FOR THE PROJECT.

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03/13/2025

No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL

144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS

HCC JOB No.: 053-01 DRAWN BY.: CBA

DETENTION POND

SHEET No.

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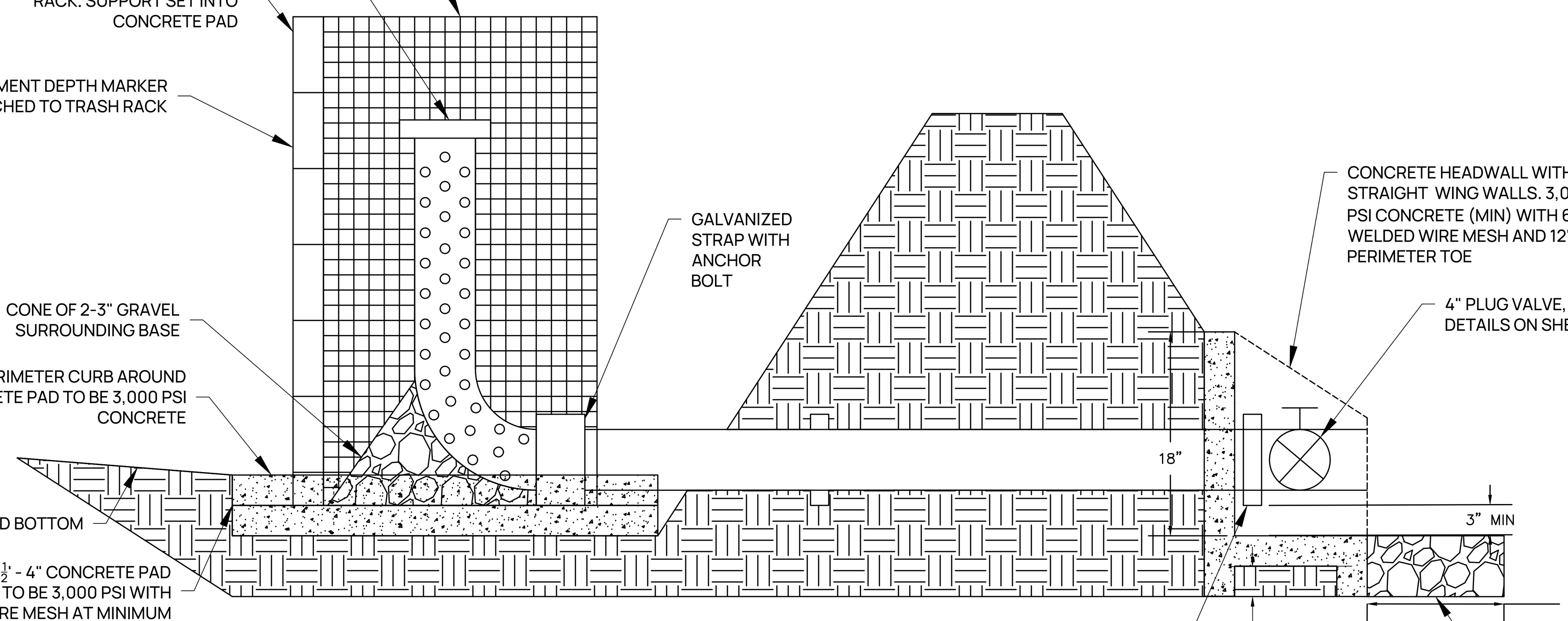
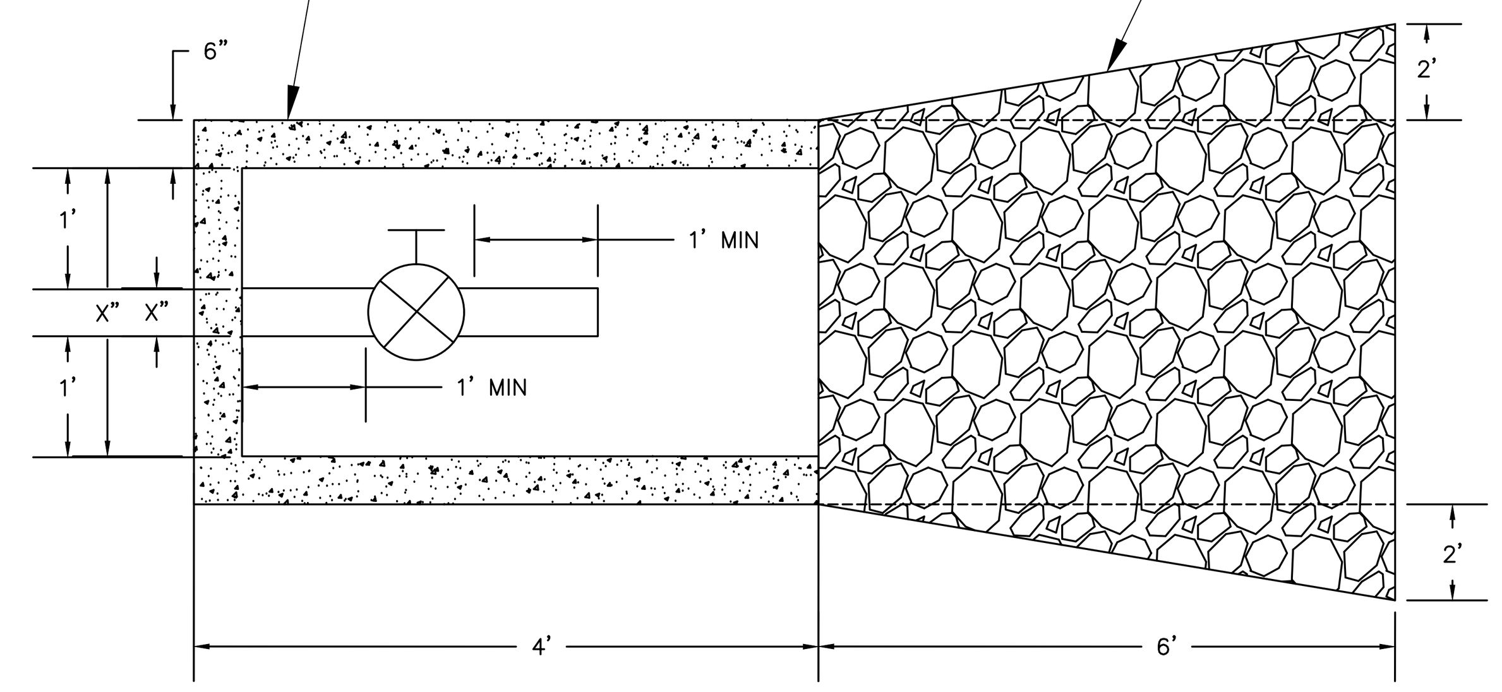


SIDE VIEW OF RISER

N.T.S.

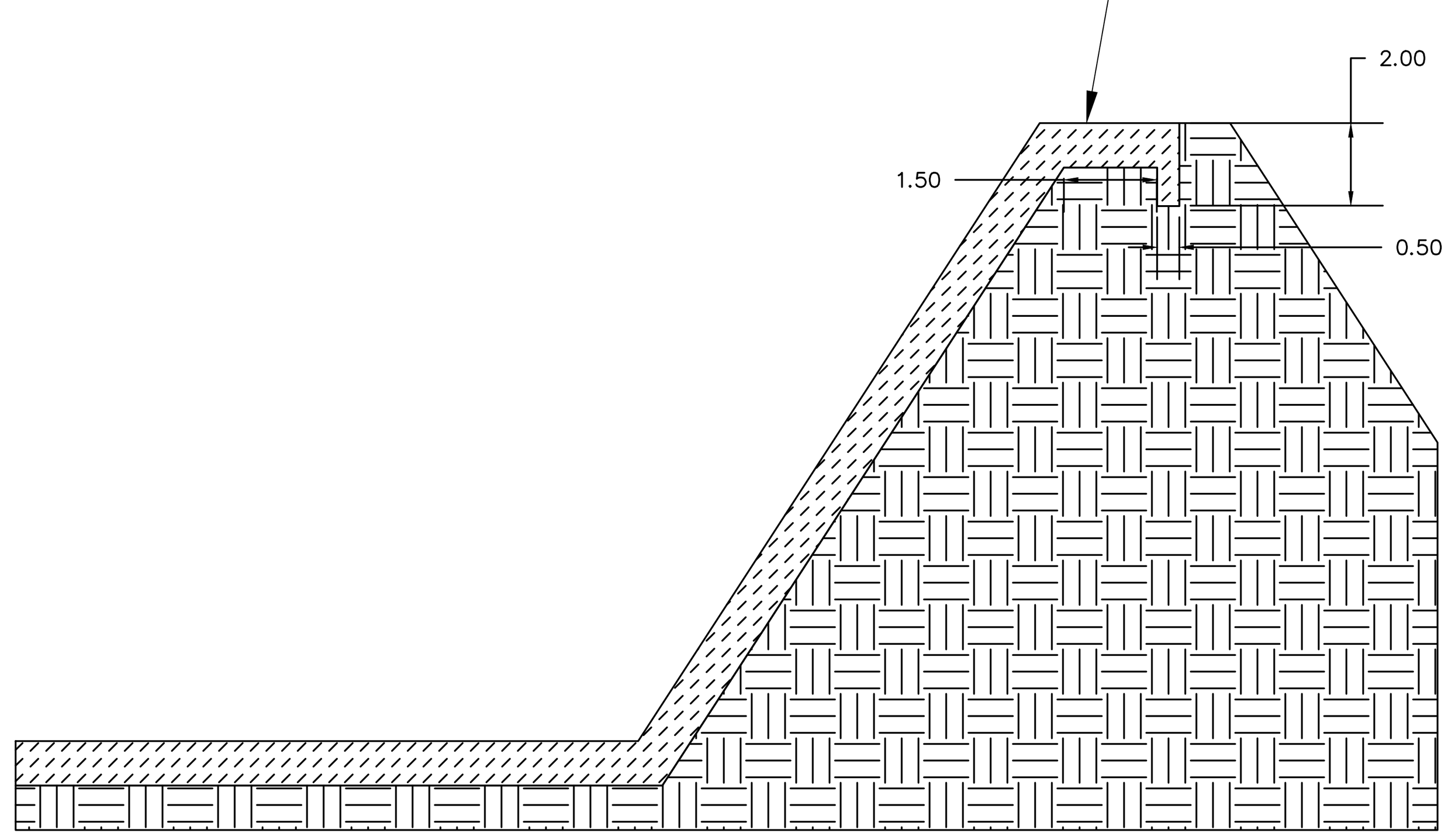


HEADWALL AND RIP RAP DETAIL

N.T.S.

NOTES

1. ROCK RIP RAP APRON SIZES SHOWN ARE MINIMUM. ADDITIONAL RIP RAP MAY BE INSTALLED IF DESIRED.
2. ROCK RIP RAP EMBEDMENT DEPTH SHALL BE AT LEAST 1.5 TIMES THE DIAMETER OF THE ROCK.



BASIN LINER DETAIL

NOTES

1. CLAY LINER TO MEET SPECIFICATIONS FOUND IN THE TCEQ RG-348 SECTION 3.4.2 BASIN LINING REQUIREMENTS. A GEOTEXTILE LINER MAY BE USED IN PLACE OF THE CLAY LINER. ADDITIONAL SPECS PROVIDED ON THIS SHEET.
2. THE CLAY LINER SHALL BE INSTALLED UP THE EMBANKMENT OF THE POND VERTICALLY TO A MINIMUM OF THE WATER QUALITY ELEVATION CALLED OUT ON THE PLANS.

3.4.2 Basin Lining Requirements

Impermeable liners should be used for water quality basins (retention, extended detention, sand filters, wet ponds and constructed wetlands) located over the recharge zone and in areas with the potential for groundwater contamination. Impermeable liners may be clay, concrete or geomembrane. If geomembrane is used, suitable geotextile fabric should be placed on the top and bottom of the membrane for puncture protection and the liners covered with a minimum of 6 inches of compacted topsoil. The topsoil should be stabilized with appropriate vegetation. Clay liners should meet the specifications in Table 3-6 and have a minimum thickness of 12 inches.

Table 3-6 Clay Liner Specifications (COA, 2004)

Property	Test Method	Unit	Specification
Permeability	ASTM D-2434	cm/sec	1×10^{-6}
Plasticity Index of Clay	ASTM D-423 & D-424	%	Not less than 15
Liquid Limit of Clay	ASTM D-2216	%	Not less than 30
Clay Particles Passing	ASTM D-422	%	Not less than 30
Clay Compaction	ASTM D-2216	%	95% of Standard Proctor Density

If a geomembrane liner is used it should have a minimum thickness of 30 mils and be ultraviolet resistant. The geotextile fabric (for protection of geomembrane) should be nonwoven geotextile fabric and meet the specifications in Table 3-7.

Table 3-7 Geotextile Fabric Specifications (COA, 2004)

Property	Test Method	Unit	Specification (min)
Unit Weight		oz/yd^2	8
Filtration Rate		in/sec	0.08
Puncture Strength	ASTM D-751*	lb	125
Mullen Burst Strength	ASTM D-751	psi	400
Tensile Strength	ASTM D-1682	lb	200
Equiv. Opening Size	US Standard Sieve	No.	80

*modified

Installation methods for geomembrane liners vary according to the site requirements. Figure 3-13 shows a typical installation on an earthen slope with the top of the liner keyed in above the maximum water level of the basin. Figure 3-14 presents an example of geomembrane liner attached to the exterior of a concrete or rock wall. The "liquid membrane" shown in the figure is a hot fluid-applied, rubberized asphalt typically used for waterproofing and roofing applications, such as Hydrotech 6125 or equivalent.

BASIN LINER REQUIREMENTS

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144 RIVER CHASE WAY
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DRAWN BY.: CBA

DETENTION POND DETAILS (1 OF 2)

SHEET No.
9
OF 18

C:\HCC\OneDrive - Hill Country Civil\Projects\053 Hill Country Day School\01 Lot 526 Day School Development\1 - CAD\2 - Sheets\053-01 DET PONDS.dwg
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Batch Detention Pond Specification Submittal

Preface – The following specifications describe the general function and components of a typical Texas Commission on Environmental Quality (TCEQ) approved batch detention pond. The system operates as an "off-grid" electronically controlled solar powered storm water management unit. This batch detention system uses a water level sensor, solar power panel, logic controller w/ microprocessor, and a plug valve with actuator to meet batch detention standards as set by the TCEQ.

Certification – All of the components described below meet TCEQ's batch detention specifications for a 91% Total Suspended Solid removal rate. See attached logic flow chart for overview of system cycles.

Components:

- Valve – 4" or 6", cast iron, actuated by an electric motor, valve placed in concrete vault when installed below ground, valve placed on concrete pad due to weight
- Actuator – low voltage motor mounted on top of valve, bolted in place to concrete vault ceiling
- Extended bonnet - Cold rolled steel stem extension that connects valve to actuator when valve is used in subgrade applications, stainless steel flanges
- Main board – 24-volt panel that controls all aspects of batch control system
- Batteries – two 12-volt 35 amp/hr. sealed lead acid (SLA) connected in series
- Solar Panel – 24-volt 30-watt. One charge controller regulates solar panel power for batch control system.
- Sensor 1 – float switch – mounted on trash rack that indicates when water present in pond and when pond is empty
- Sensor 2 – position sensor in actuator – determines the orientation of the valve to control positions for start and stop

RAINWATER SPECIALISTS RIGHT AS RAIN

For additional information please contact
Rainwater Specialists
512-677-7246
www.txrws.com

Controller Programming – All functions of the system are factory programmed which allows the control box, valve, and actuator to received and send commands on their own based on environmental conditions without any human interaction. Manual mode to override switch to open and close valve by flip of a switch and to test all components during inspections. Reset button to reset controller.

Alerts - The main board will illuminate an exterior red light for the following conditions:

- Improper valve function
- Low battery
- Sensor 1 float switch inoperable

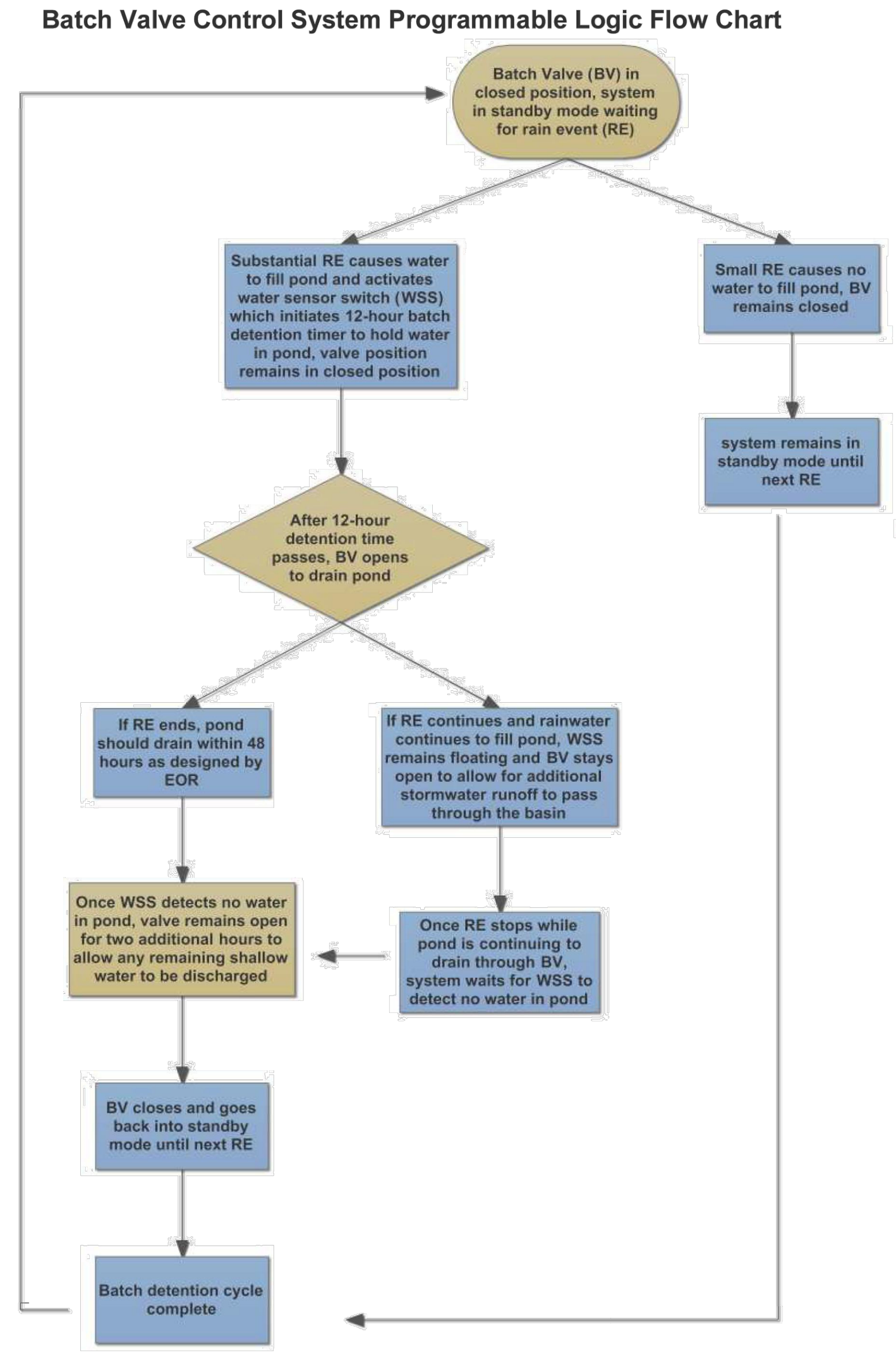
Manual Control - In case of electronic inoperability or failed actuator, an effortless clutchless handwheel on the actuator can be turned to open or close valve manually, easy-to-read position indicator displays open/closed valve position

Service Schedule:

- Batteries – Sealed lead acid batteries can have a design life of anywhere from 3-5 years. Many factors affect service life of the battery, temperature being ones of those factors. Recommended replacement is every 3-5 years. Batteries can be tested annually to determine remaining life expectancy. Battery terminals to be inspected annually.
- Solar Panel(s) - Solar panels last 25-30 years. Annual inspection of the batch detention system should verify the surface of the solar panel is clean, facing south, is secure, and has no debris/trees blocking panel from sun.

Quality Installation - Rainwater Specialists, LLC agrees to perform in a good and workmanlike manner. All work detailed in the detailed scope of work sheet shall guarantee the installation of all products and material according to manufacturer's written instructions and construction industry standards.

Batch Valve Control System Programmable Logic Flow Chart



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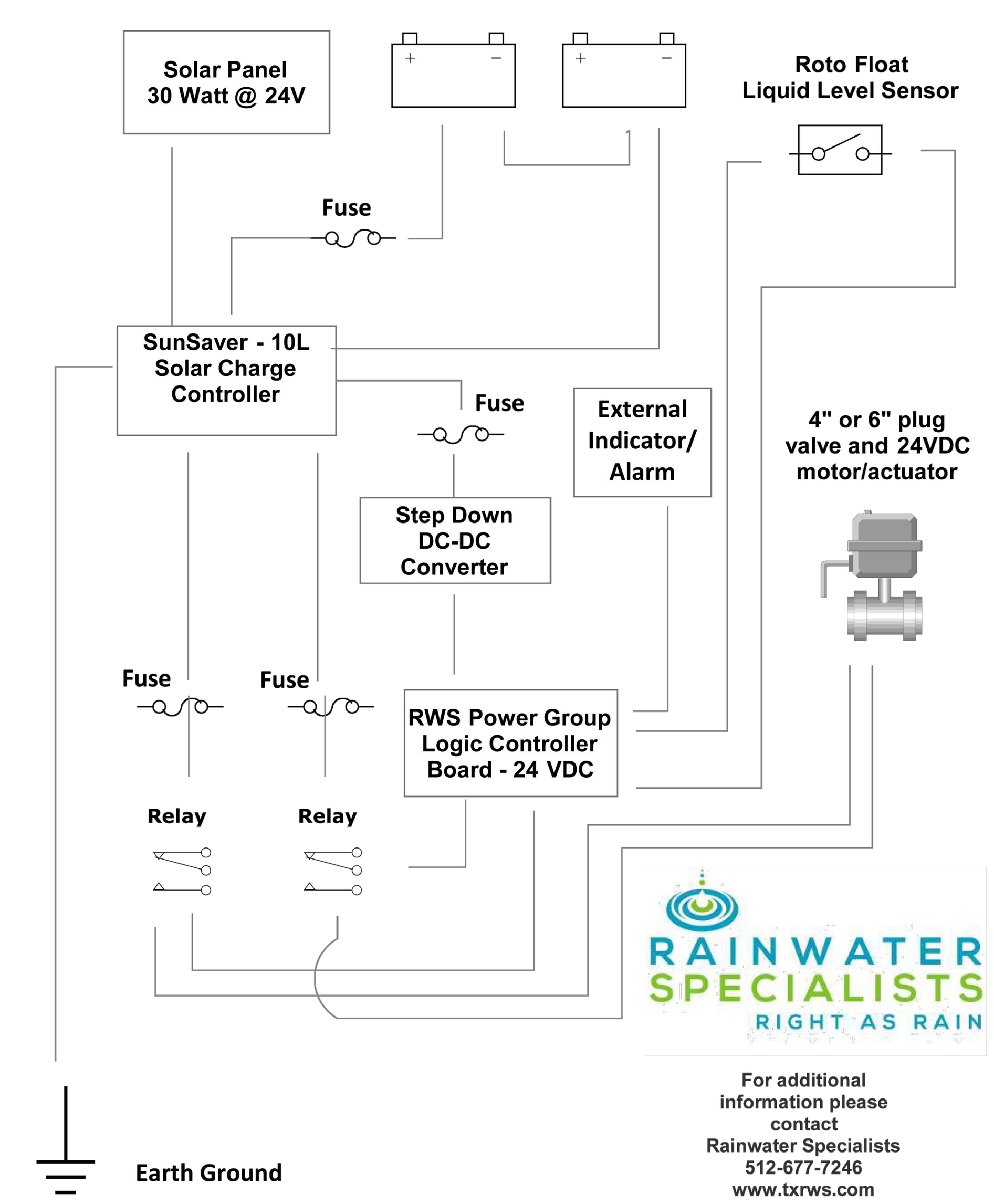
Circuit Block Diagram



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RAINWATER SPECIALISTS RIGHT AS RAIN

Rainwater Specialists, LLC
15001 Crosscreek Dr.
Austin, TX 78737
www.rainwaterspecialists.com
512-677-RAIN

Batch Detention Pond Solar Specifications and Performance

System Power Consumption – 6.15 AH/day or ~75 wh/day average @ 8 valve turns maximum/week, sized for 5 days of autonomy

Control Board System – 24VDC PCB with error indication and remote cell output

Valve – 24 VDC @ 9 amps, one turn @ 16 seconds

Solar Panel - Solarland 30 Watt, 24 Volts polycrystalline solar module with junction box. Vmp: 34.4V, Imp: 0.87A, Voc: 43.2V, Isc: 0.96A. 21.3" x 20.08" x 1.18", 8.27 lbs.

Charge controller - SunSaver 10 10 Amp, 24 Volt solar charge controller with LVD 6' x 2.18' x 1.32'

Batteries - Universal Power Group UB12350(Group U1) 12V 35 amph 7.68" x 5.16" x 6.14" 23.15lbs

---

Valworx

Electric Actuated Butterfly Valves

Ductile Iron Lug Body ASME 150#
2" to 6" Pipe

SERIES **5673**

Features

- Direct mount lug butterfly valve with ISO5211 mount
- Epoxy coated ductile iron body with 316 SS disc
- Unique wave line seat reduces torque and extends seal life
- Visual valve position indicator
- Rugged aluminum Type 4X weatherproof actuator
- Heavy duty motors with overload protection
- Thermostatically controlled anti-condensation heater
- Manual override with end of travel mechanical stops
- Two auxiliary position confirmation limit switches
- EPS - Electronic Positioning System models available
- Actuators CSA Listed per UL429 and CSA C22.2

Applications

EPDM seals typically used for on-off control of water and other compatible media. NBR (Buna-N) seals typically used for air, oil, vacuum and other compatible media. FPM (Viton) seals typically used for on-off control of hydrocarbons, oils and other compatible chemicals/media. Suitable for use with ANSI/ASME Class 125/150 pipe flanges. Actuators designed for 70% duty cycle.

Operation

On-Off electric actuated valve uses power-to-open and power-to-close, stays in the last known position with loss of power. On receipt of a continuous voltage signal, the motor runs and via a rugged all metal gear system rotates the ball 90°. The motor is automatically stopped by internal cams striking limit switches. On receipt of a reversing continuous signal, the motor turns in the opposite direction reversing the valve position. Power connections direct to terminal strip via included cable connector, or optional 1/2" NPT conduit adapters.

Description

Electric operated direct mount butterfly valves with epoxy- coated ductile iron lug body are designed for commercial and industrial applications. Valve mounts between two standard ANSI/ASME Class 150 flanges and includes integral molded flange gaskets. Disc is precision machined 316SS. Two piece stem and disc design enhances the flow capacity and reduces turbulence. Rugged corrosion resistant electric actuator includes a manual override, valve position confirmation switches, thermostatically controlled anti-condensation heater, and over-torque protection.

Approvals

Actuators
- CSA Listed to:
  - UL429 and CSA C22.2 no 139
  - Type 4X, IP67 weatherproof enclosure
- CE conformance
  - ISO5211 Mounting

Valves
- Design complies with API-609, MSS SP-67
- Tests per API-598, AWWA C502-87
- CE according to PED 97/23/EC, ISO5208

Construction

Valve Body	Epoxy coated ductile iron
Disc	316 stainless steel CF8M
Disc Seat/Liner	EPDM, NBR (Buna-N) or FPM (Viton)
Stem/Stem Seals	420 stainless steel / (2) v-ring, same material as seat
Gear Drive	Heavy duty alloy steel and aluminum bronze, self locking
Actuator Enclosure	Aluminum, polyester powder painted, Type 4X, IP67
Visual Valve Position Indicator	Clear polycarbonate window, ,red/yellow open-closed
Fasteners	Stainless Steel
Auxiliary Limit Switches	2 x SPDT (125VAC/5A)

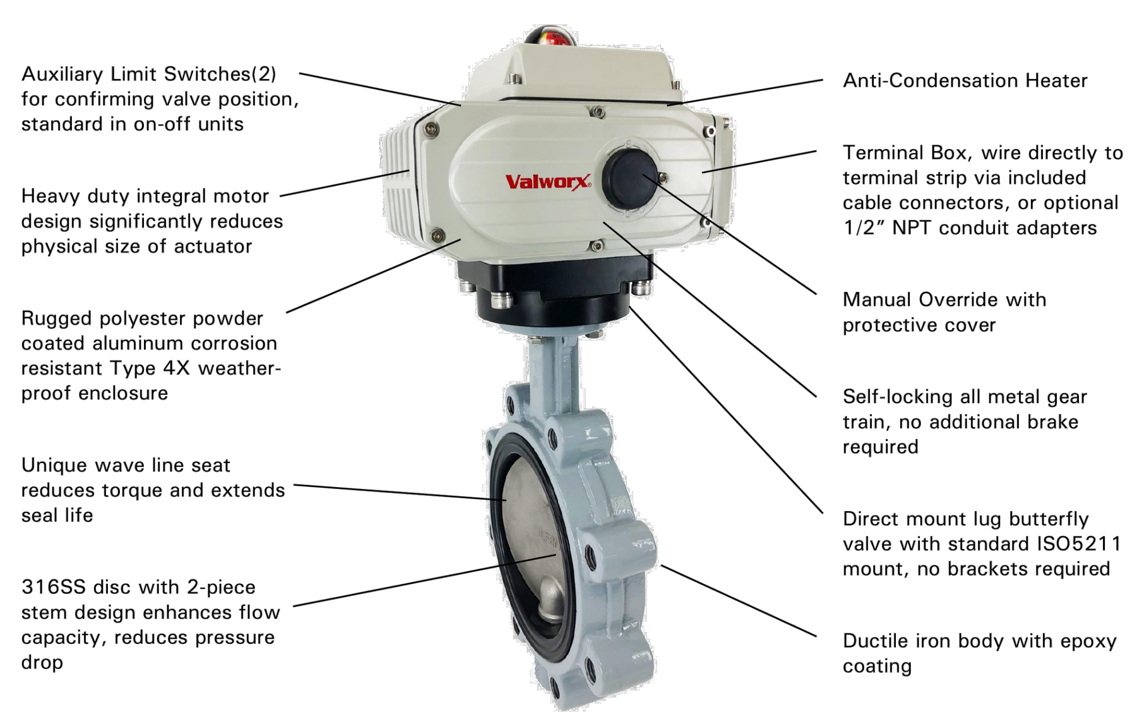
Valworx

Electric Actuated Butterfly Valves

Ductile Iron Lug Body ASME 150#
Features and P/T Chart

SERIES **5673**

Construction Features



Visual Valve Position Indicator

Pressure Rating

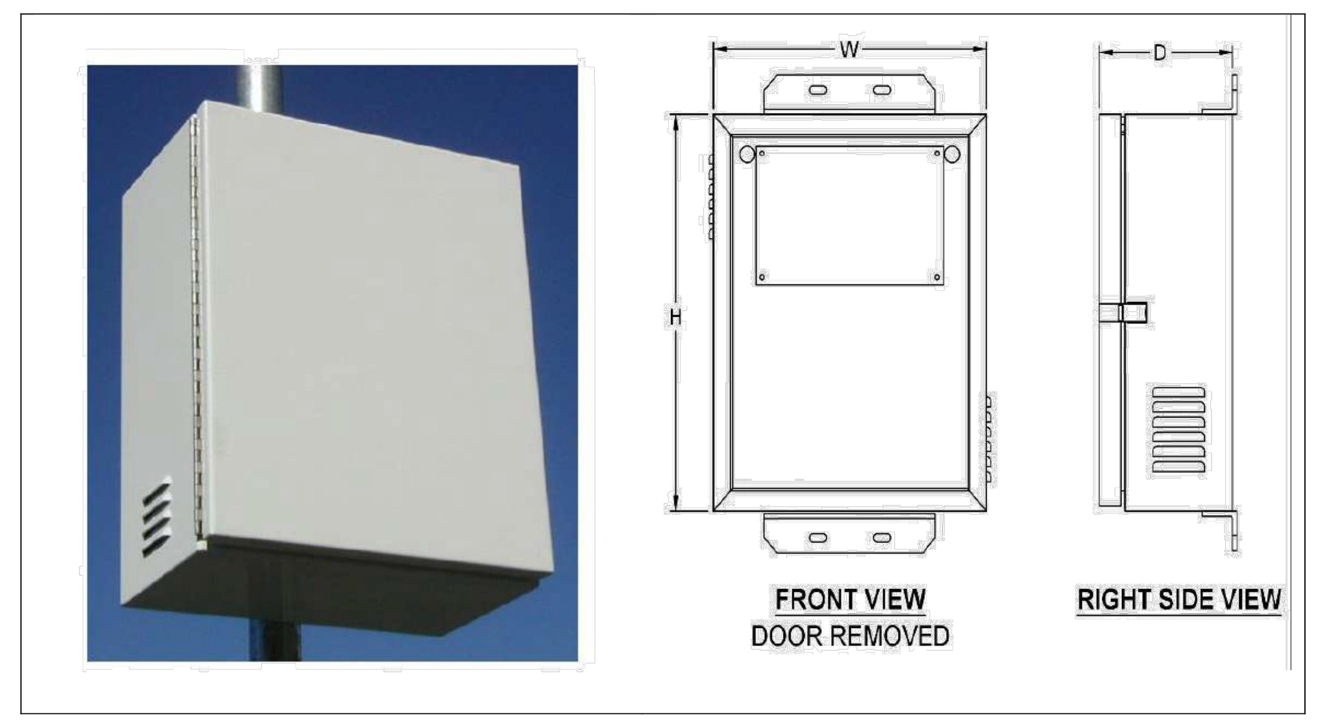
Pressure Rating: 230 PSI (16 Bar), Vacuum 29in Hg

Temperature Rating

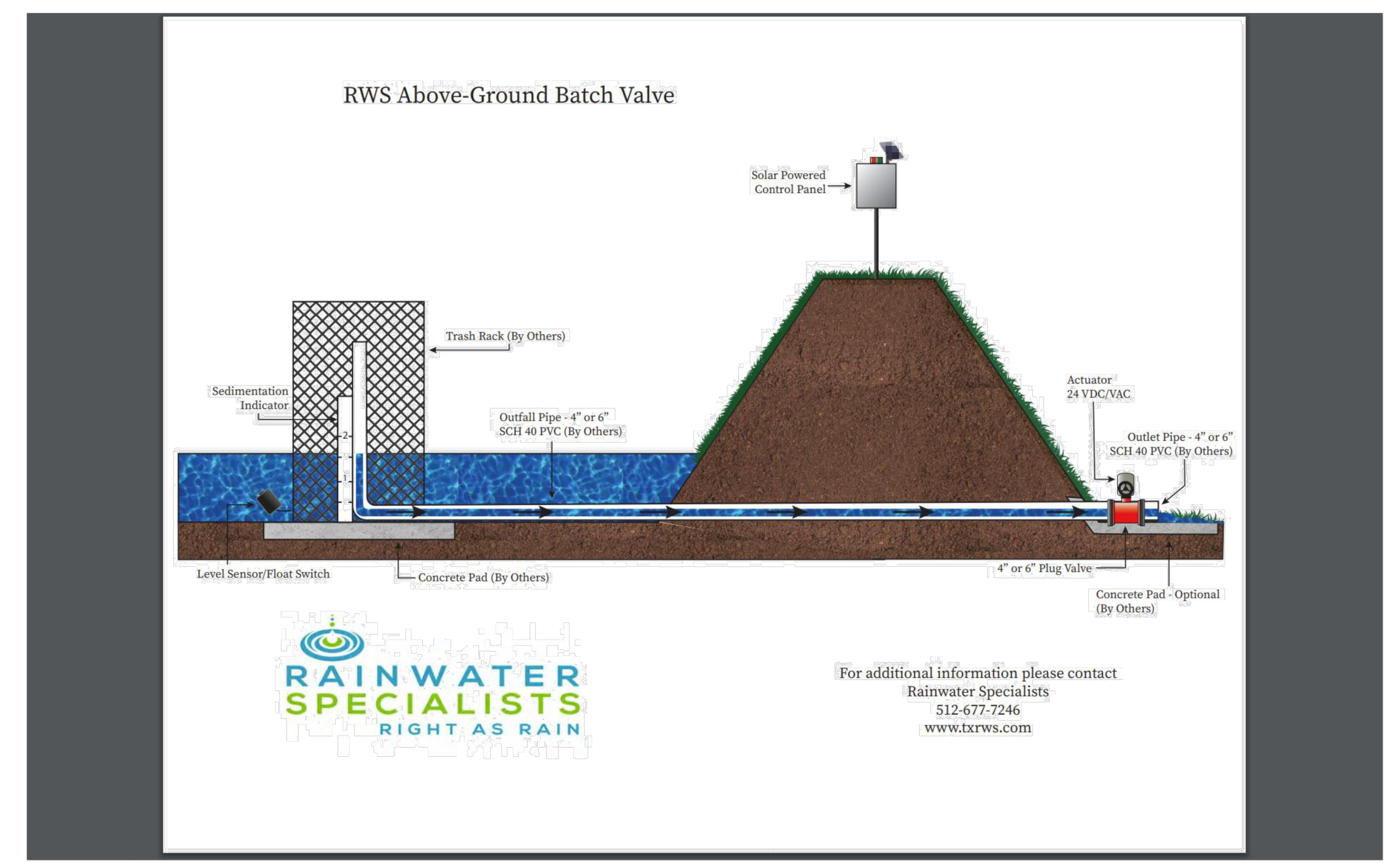
Actuator Temperature Rating: -13 to 131° F (-25 to 55° C)

Valve Temperature Rating: EPDM seals 0 to 248° F (-18 to 120°C)
NBR (Buna-N) seals 5 to 185° F (-15 to 85°C)
FPM (Viton) seals 5 to 338° F (-15 to 170°C)

Ground Mount Controller and Battery Enclosure



- Standard boxes are fabricated from .125" thick 5052--H32 aluminum
- Standard finish is a bright white polyester powder--coat inside and out
- Heavy--duty stainless steel continuous
- Two 7/8" diameter wire holes
- Heavy--duty stainless steel continuous hinge
- Built to NEMA 3R specifications
- Seams are continuously welded and then sanded smooth
- Filtered or screened ventilation louvers
- Adjustable tension stainless steel padlock hasp
- Hinged front door with PORON door gasket
- Removable component mounting plate
- Supplied with u--bolts (when pole specified)



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Phone: 817-659-9078 or 210-378-4953
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STATE OF TEXAS
CHRISTOPHER B. ALLISON
131240
LICENSED
PROFESSIONAL ENGINEER
03/13/2025

No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS
HCC JOB No.: 053-01 DRAWN BY.: CBA

DETENTION POND DETAILS (2 OF 2)

SHEET No.
10
OF 18

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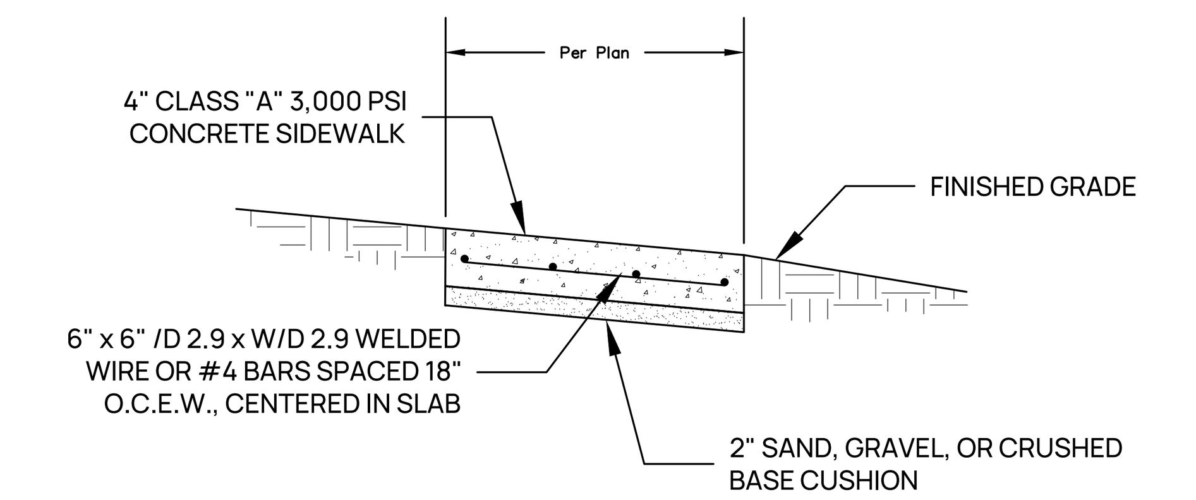
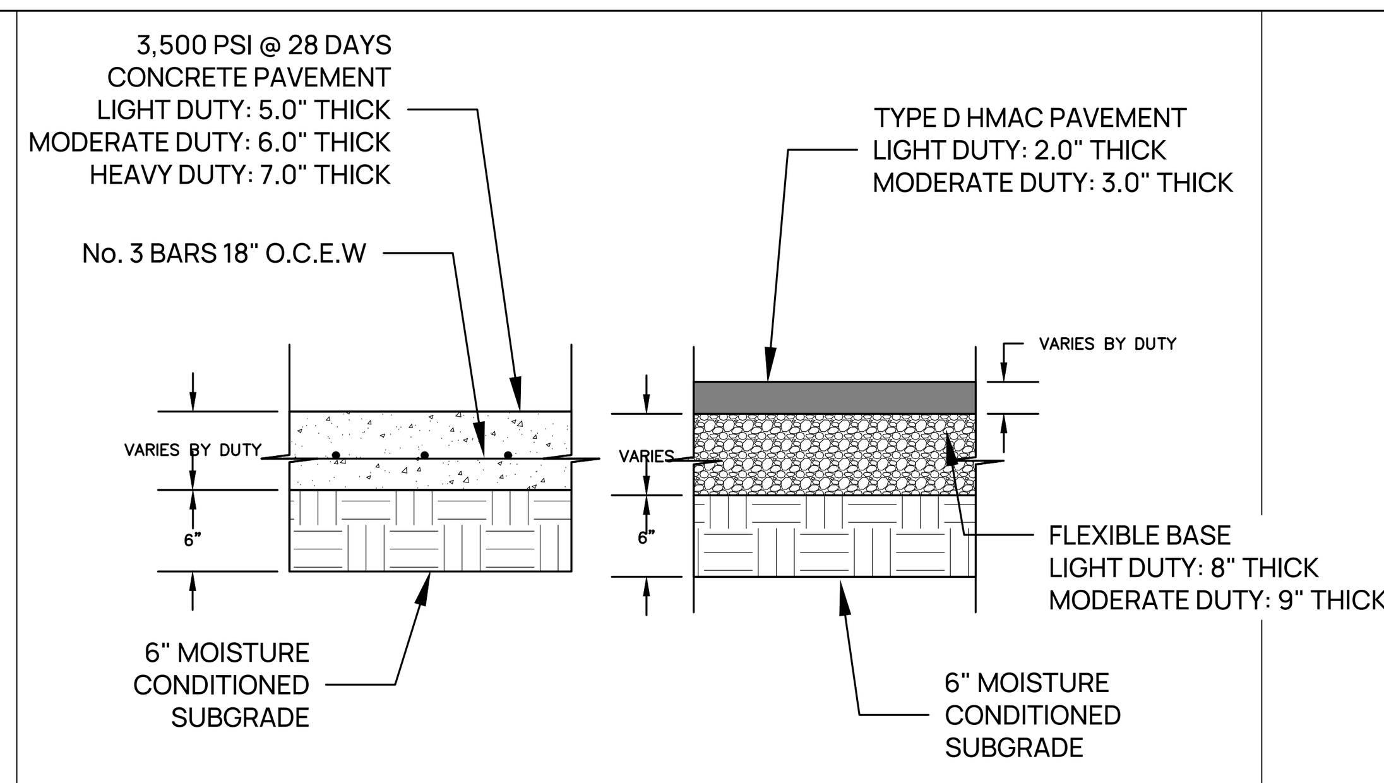
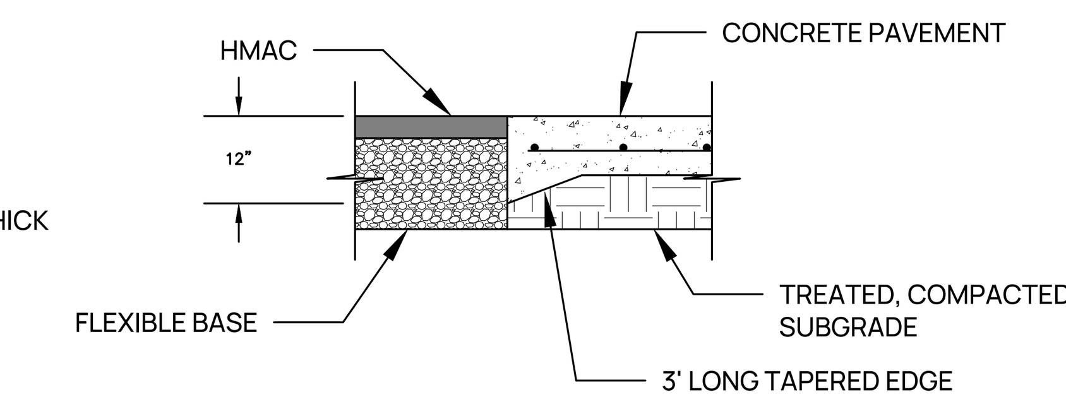


TYPICAL SIDEWALK
N.T.S

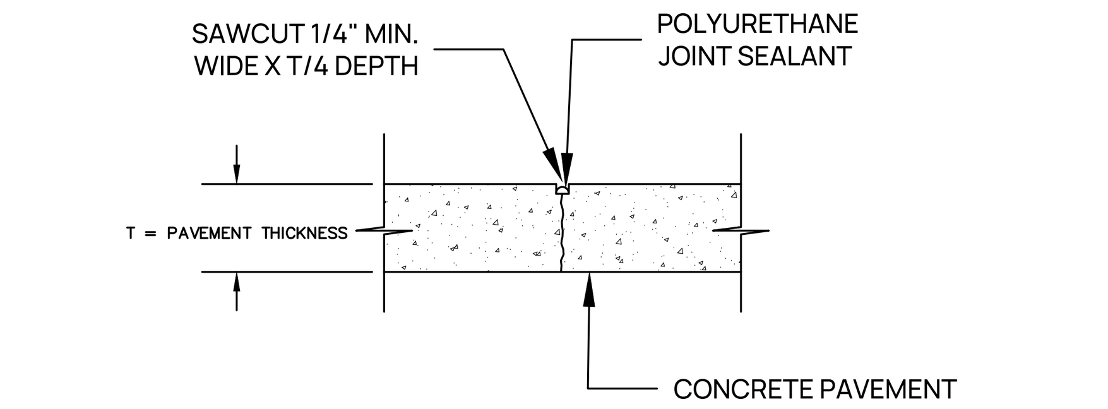


ALL PAVEMENT SECTIONS ARE BASED ON RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT PREPARED BY ECS SOUTHWEST, DATED DEC 13, 2024, PROJECT No.20:2124
REFERENCE REPORT FOR MORE DETAILS

PAVEMENT SECTIONS
N.T.S

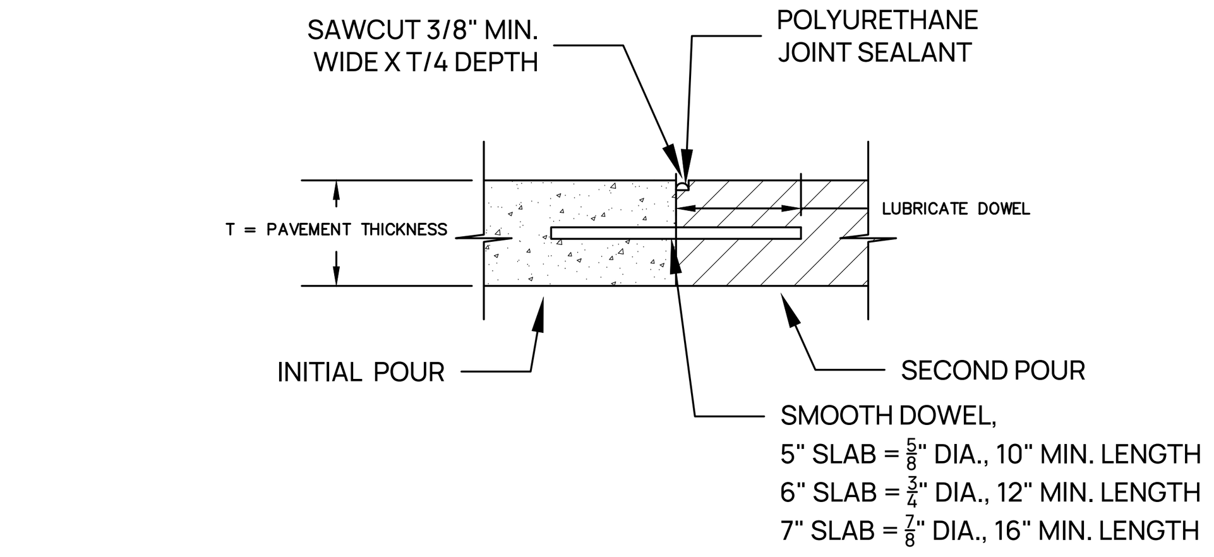


CONCRETE/ASHPALT JUNCTURE
N.T.S



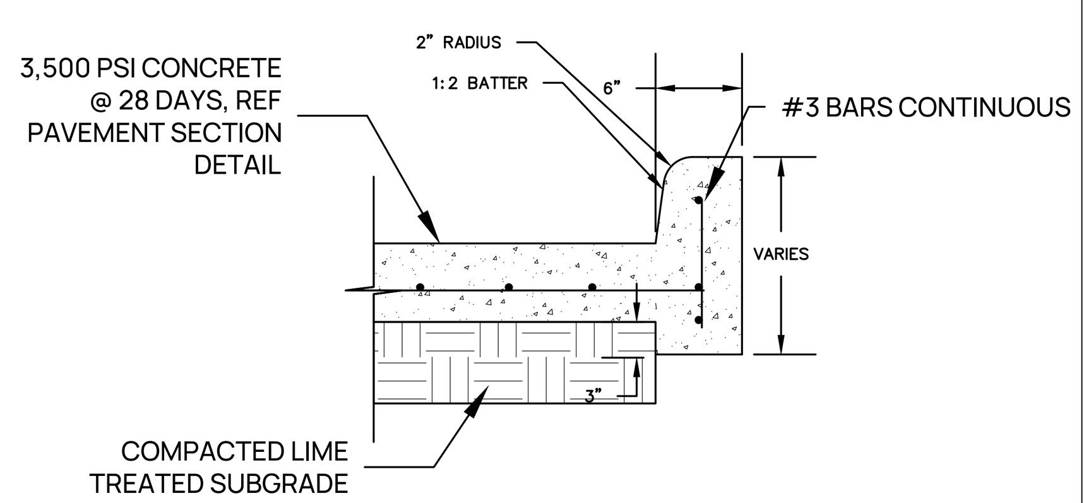
ALL PAVEMENT SECTIONS ARE BASED ON RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT PREPARED BY ECS SOUTHWEST, DATED DEC 13, 2024, PROJECT No.20:2124
REFERENCE REPORT FOR MORE DETAILS

CONTROL JOINT DETAIL
N.T.S

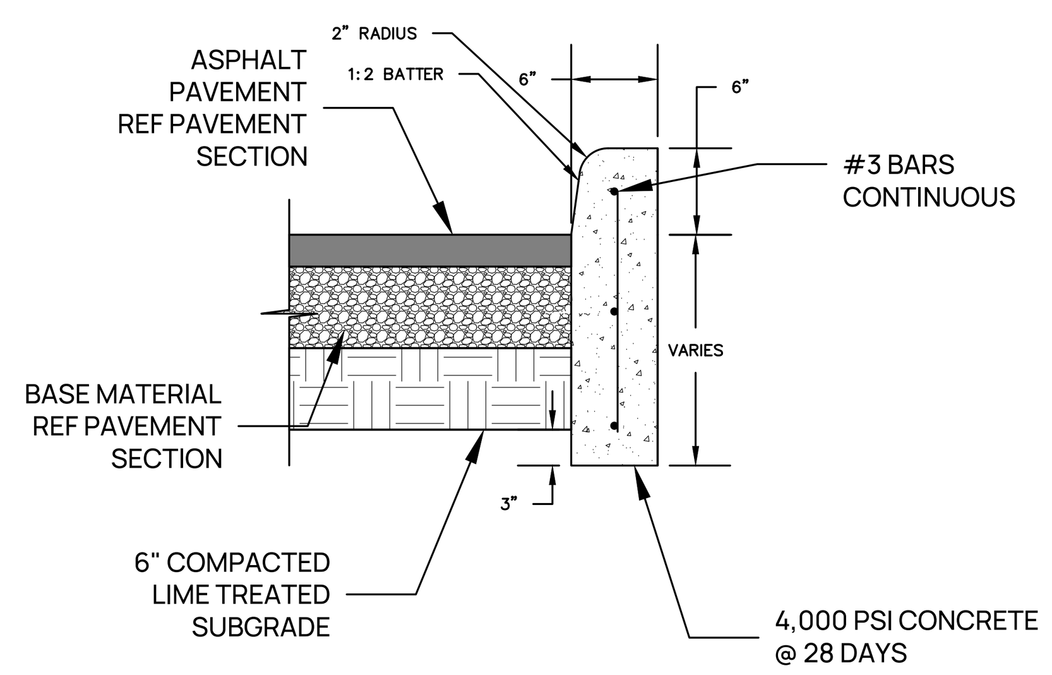


ALL PAVEMENT SECTIONS ARE BASED ON RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT PREPARED BY ECS SOUTHWEST, DATED DEC 13, 2024, PROJECT No.20:2124
REFERENCE REPORT FOR MORE DETAILS

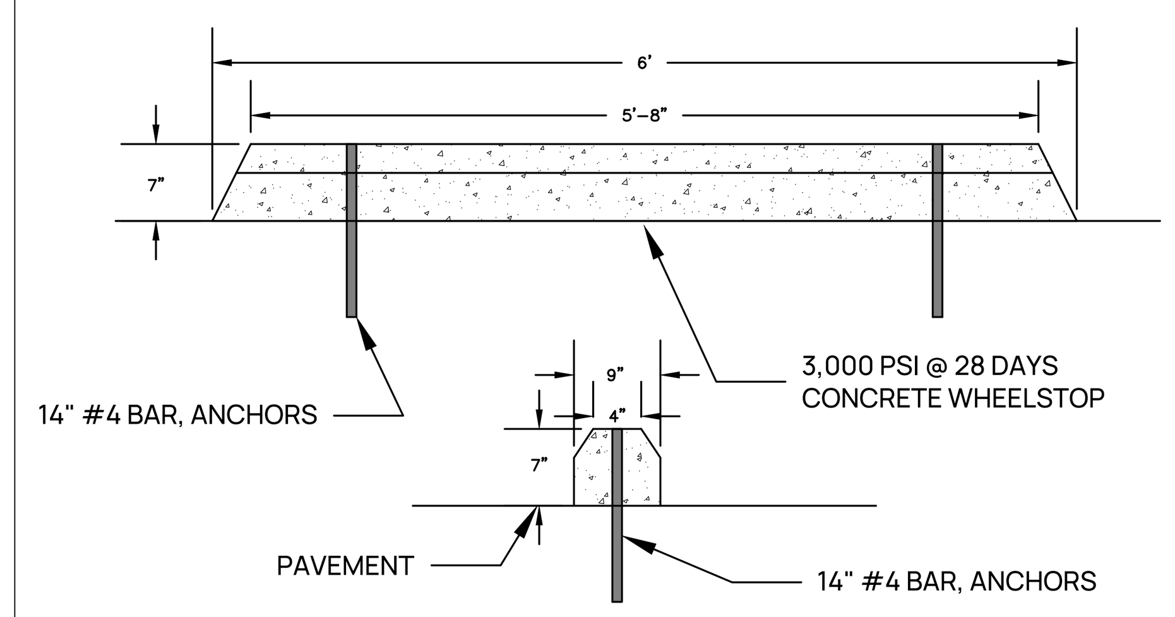
CONSTRUCTION JOINT DETAIL
N.T.S



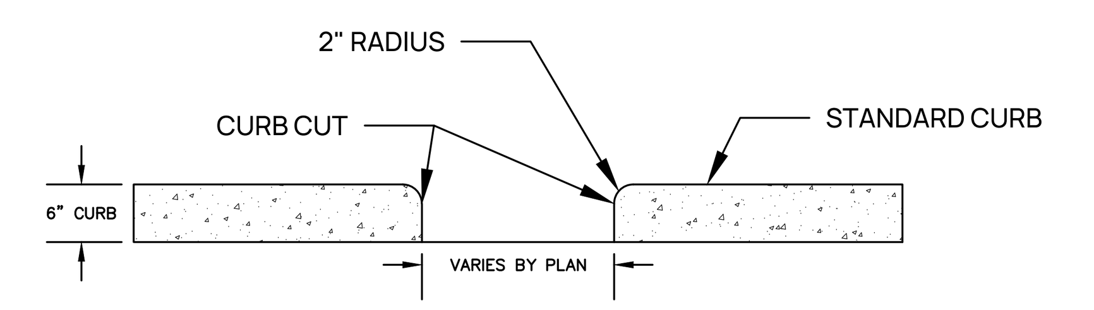
STANDARD 6" CURB - CONCRETE PAVEMENT
N.T.S



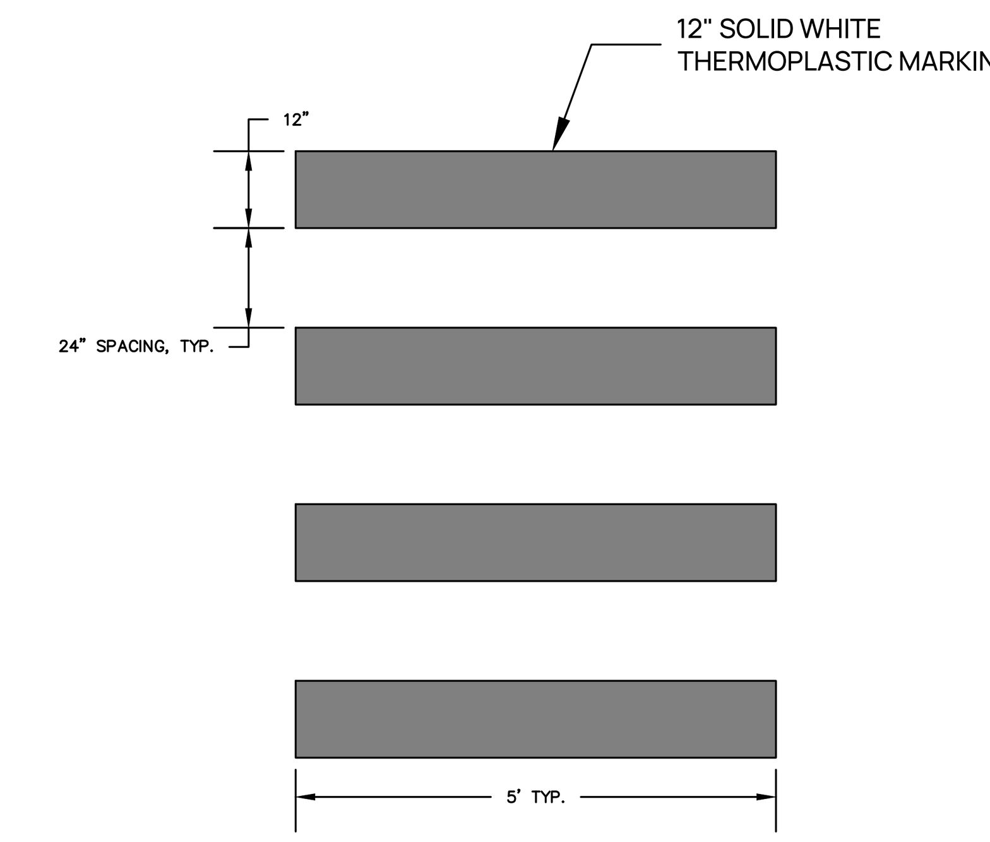
STANDARD 6" CURB - ASPHALT PAVEMENT
N.T.S



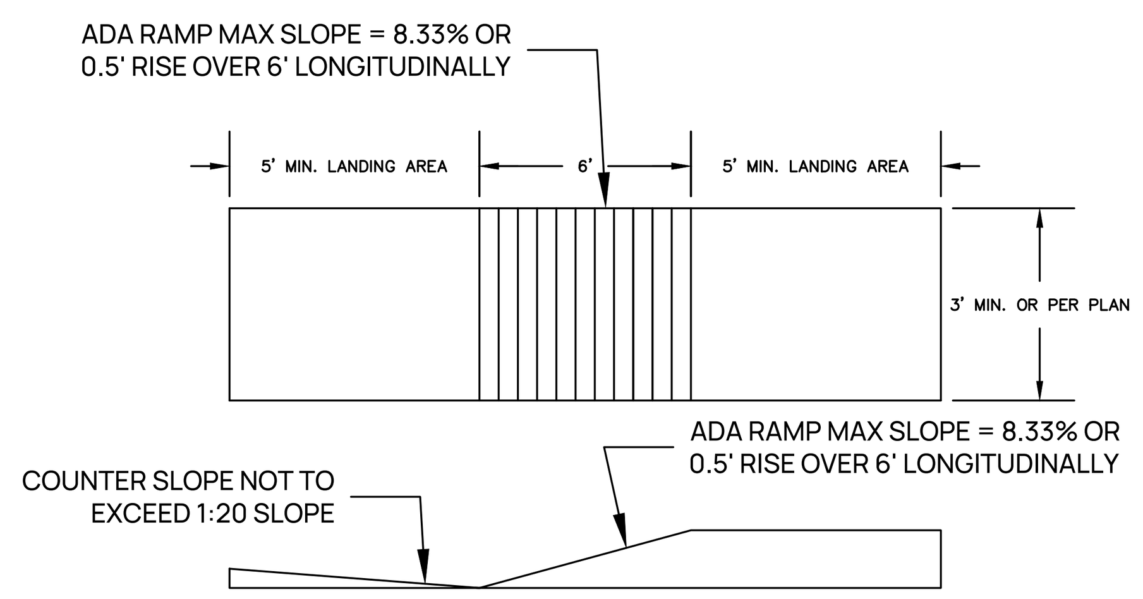
TYPICAL WHEELSTOP
N.T.S



TYPICAL CURB OPENING
N.T.S

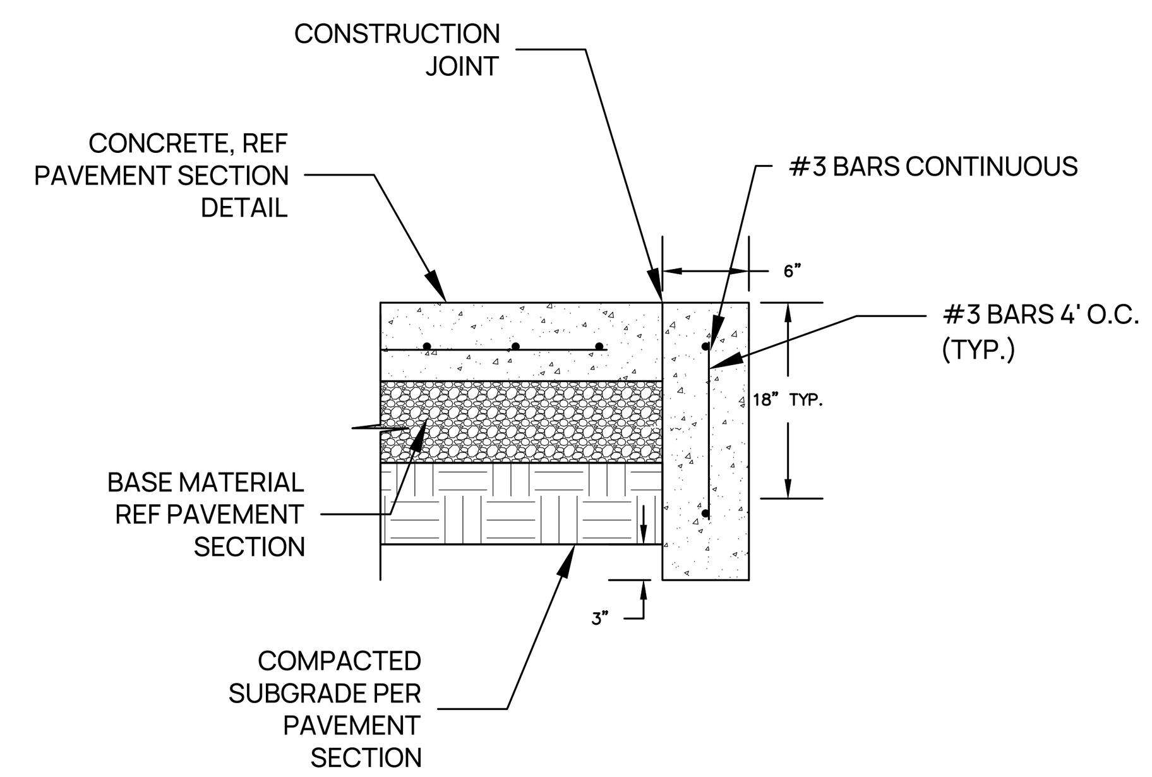


TYPICAL CROSSWALK STRIPING
N.T.S

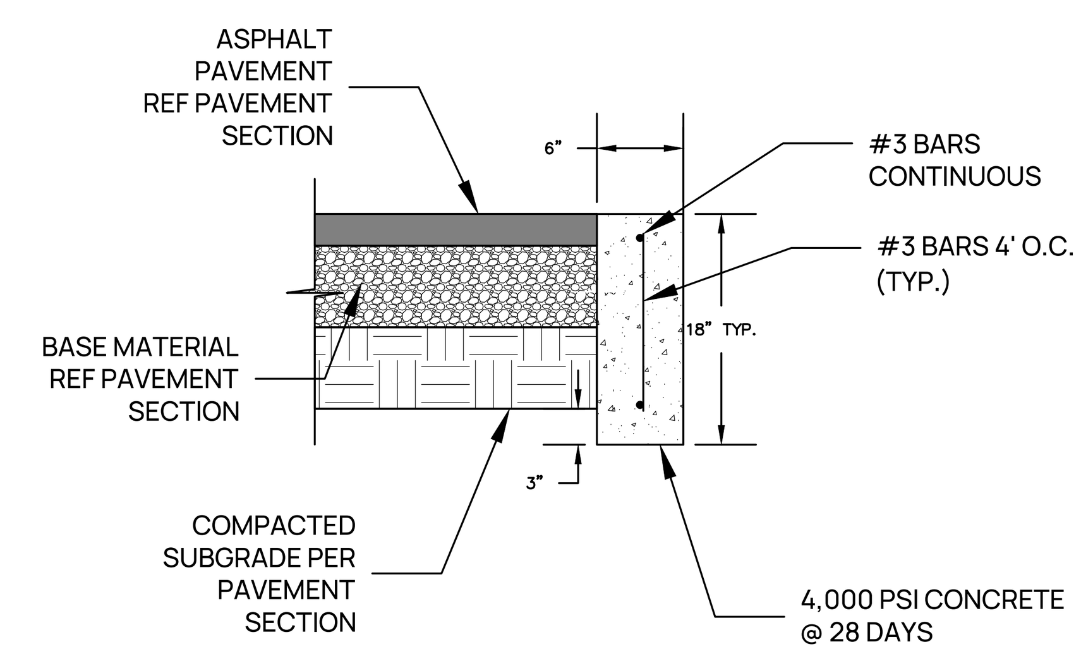


1. RAMPS SHALL BE IN ACCORDANCE WITH TAS STANDARDS, NOT TO EXCEED 1:12 SLOPE. WHEN RAMP RUNS EXCEED 0.5' OVER 6', HANDRAILS WILL BE REQUIRED. CROSS SLOPE ON RAMPS NOT TO EXCEED 2% SLOPE.
2. MAXIMUM SLOPE IN ANY DIRECTION AT LANDING AREAS NOT TO EXCEED 2% SLOPE.
3. ALL LANDINGS, RAMPS, PARKING, LOADING AREAS AND SIGNAGE SHALL BE COMPLIANT WITH TEXAS ACCESSIBILITY STANDARDS PER TAS STANDARDS SECTION 4.6.4.
4. REFERENCE DIMENSION CONTROL PLAN AND SITE GRADING PLAN FOR SPECIFIC RAMP DESIGN. THE DEPICTION ABOVE IS AN EXAMPLE OF A TYPICAL EXAMPLE.

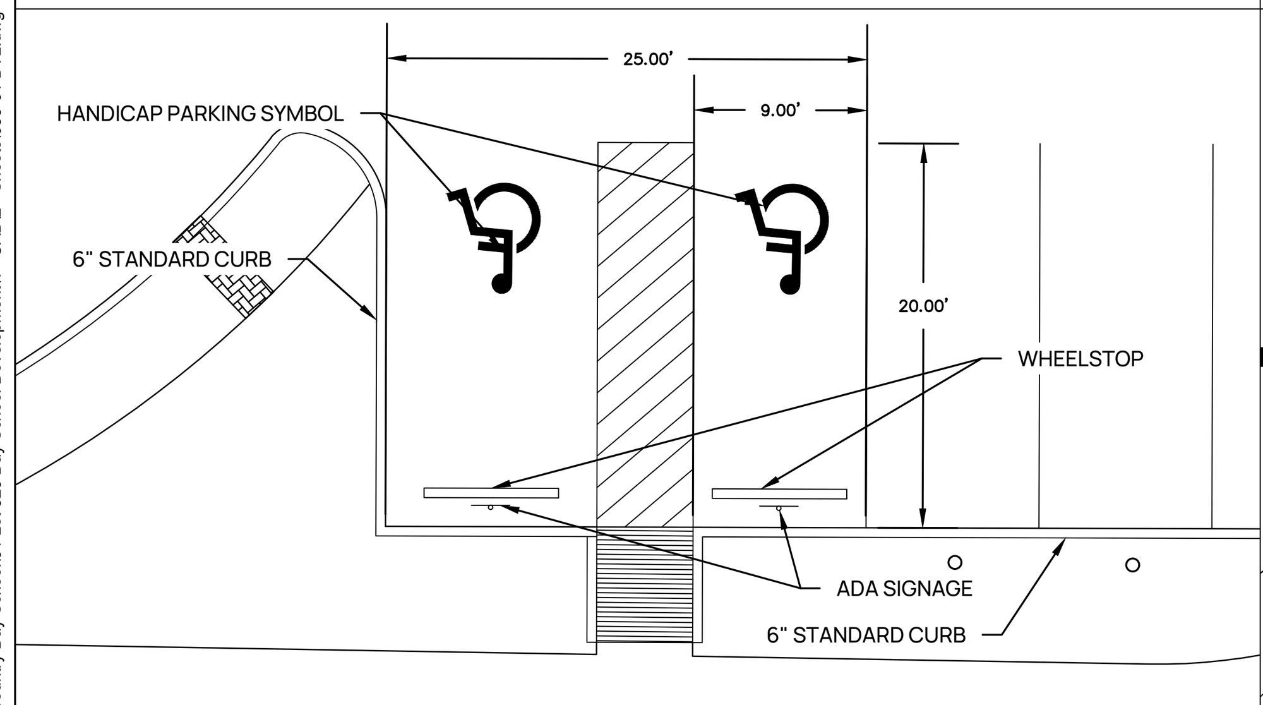
TYPICAL ADA RAMP
N.T.S



STANDARD 6" FLUSH CURB - CONCRETE PAVEMENT
N.T.S

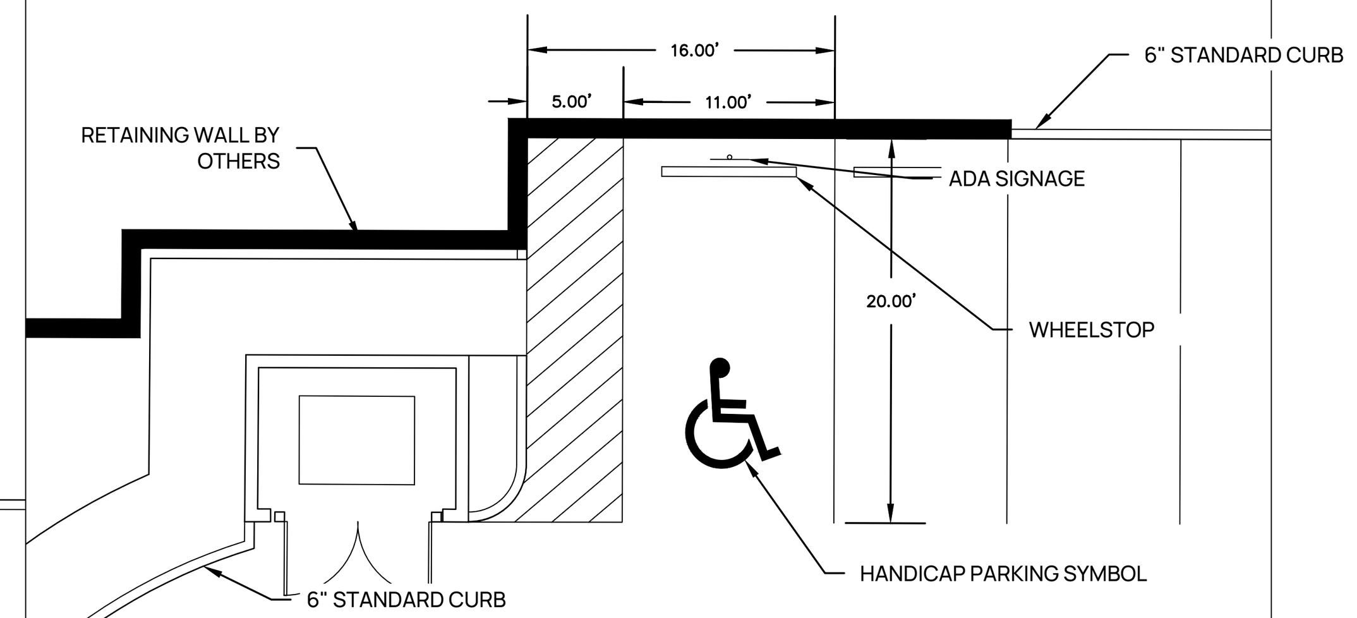


STANDARD 6" FLUSH CURB - ASPHALT PAVEMENT
N.T.S



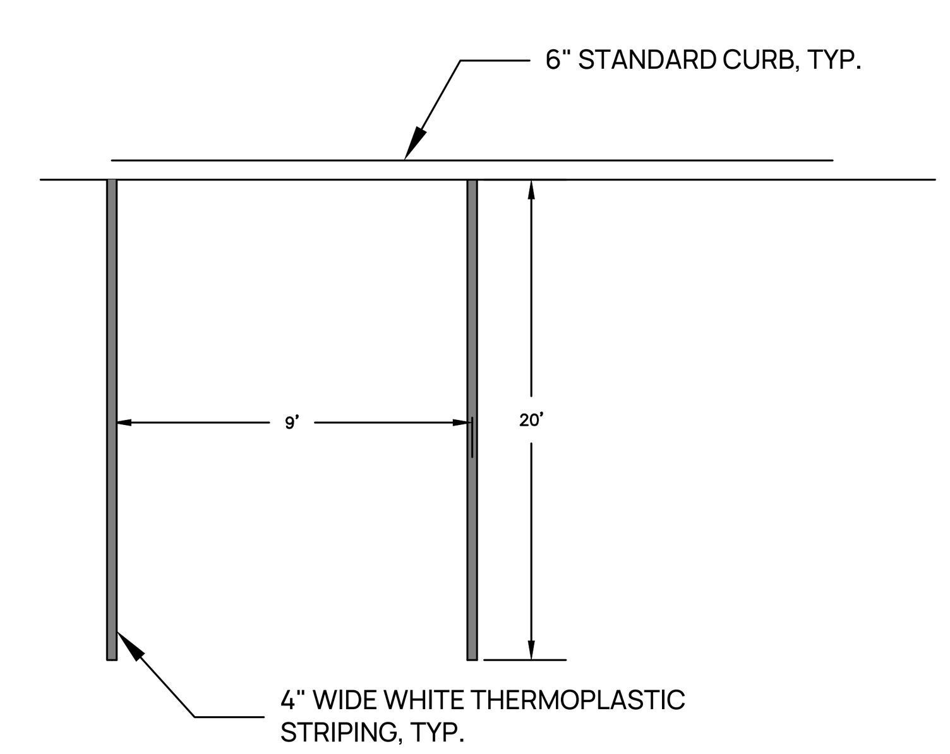
1. NO SLOPES IN ANY DIRECTION IN ADA PARKING AND LOADING AREA SHALL EXCEED 2% SLOPE.
2. ALL STRIPING SHALL BE 4" WIDE WHITE THERMOPLASTIC PAINT.
3. ALL LANDINGS, RAMPS, PARKING, LOADING AREAS AND SIGNAGE SHALL BE COMPLIANT WITH TEXAS ACCESSIBILITY STANDARDS PER TAS STANDARDS SECTION 4.6.4.
4. REFERENCE DIMENSION CONTROL PLAN FOR SPECIFIC ADA PARKING AREA DIMENSIONS. THE DEPICTION ABOVE IS AN EXAMPLE OF A TYPICAL EXAMPLE.

TYPICAL ADA PARKING
N.T.S



1. NO SLOPES IN ANY DIRECTION IN ADA PARKING AND LOADING AREA SHALL EXCEED 2% SLOPE.
2. ALL STRIPING SHALL BE 4" WIDE WHITE THERMOPLASTIC PAINT.
3. ALL LANDINGS, RAMPS, PARKING, LOADING AREAS AND SIGNAGE SHALL BE COMPLIANT WITH TEXAS ACCESSIBILITY STANDARDS PER TAS STANDARDS SECTION 4.6.4.
4. REFERENCE DIMENSION CONTROL PLAN FOR SPECIFIC ADA PARKING AREA DIMENSIONS. THE DEPICTION ABOVE IS AN EXAMPLE OF A TYPICAL EXAMPLE.

TYPICAL ADA PARKING
N.T.S



TYPICAL PARKING SPACE STRIPING
N.T.S

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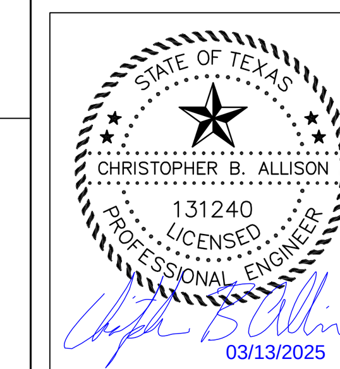

No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS

HCC JOB No.: 053-01
DRAWN BY.: CBA

SITE DETAILS (1 OF 2)

SHEET No.
16
OF 18

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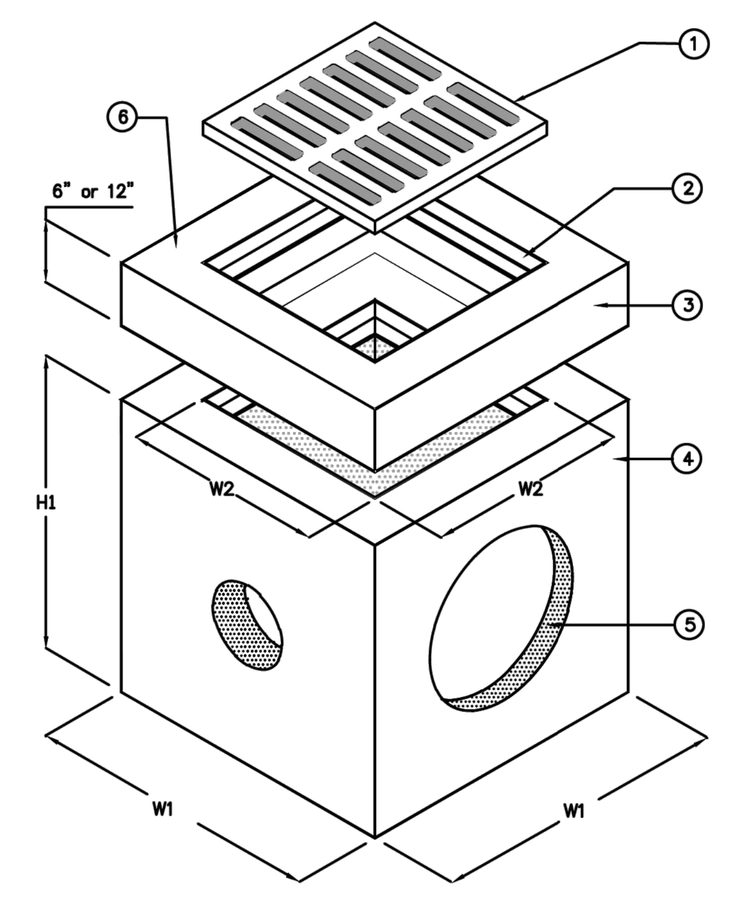
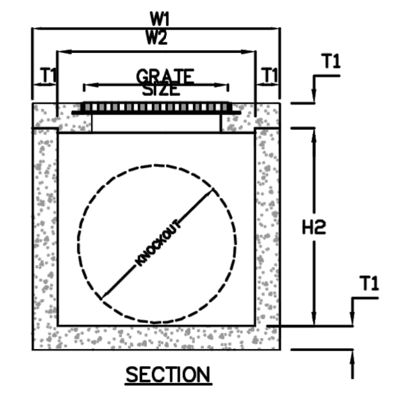
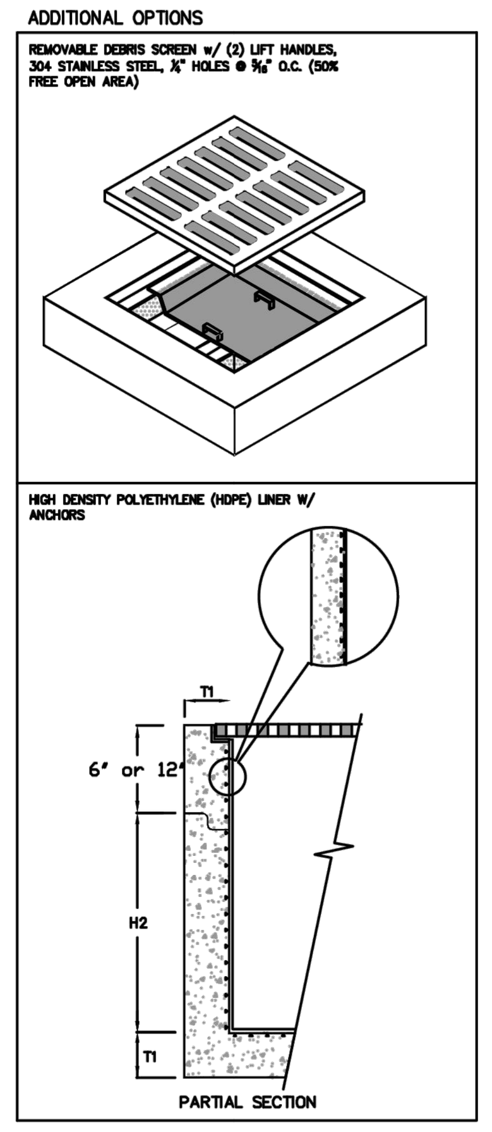


NOTE: KNOCKOUTS–STD, PENETRATIONS–OPTIONAL

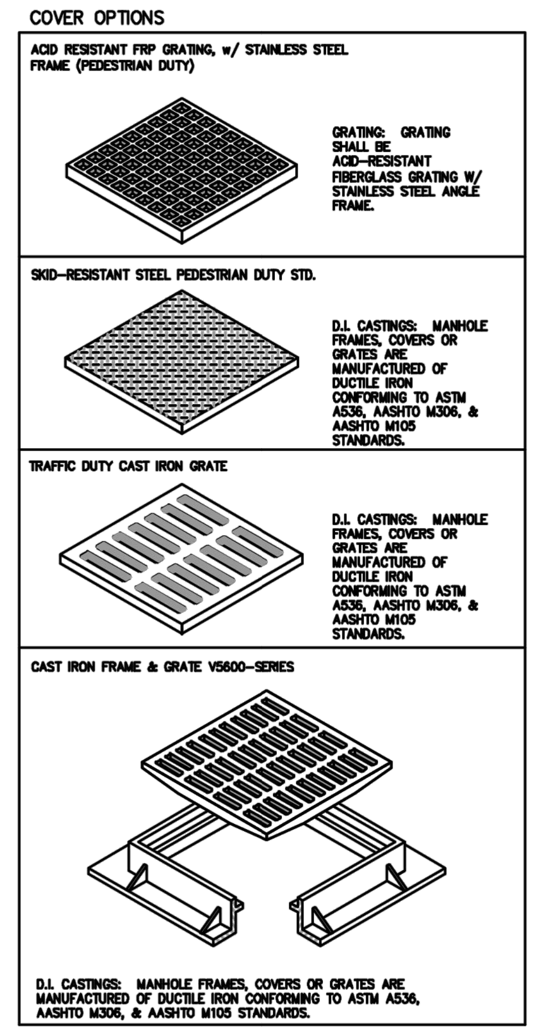


KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	GRATE OR COVER AS REQUESTED, SEE OPTIONS
2	1	CAST–IN STEEL FRAME
3	1	OPTIONAL TOP/EXTENSION 6" TO 18"
4	1	PRECAST CONCRETE BASIN SECTION
5	4	KNOCKOUTS (STD) AND PENETRATIONS (OPT) AS REQUIRED, SEE KO DIMENSION FOR MAXIMUM PIPE O.D.*
6	1	NAMEPLATE INDICATING: MFG: PARKUSA 888–611–PARK WWW.PARKUSA.COM MODEL: CB–01 DATE MANUFACTURED

ADDITIONAL OPTIONS



COVER OPTIONS



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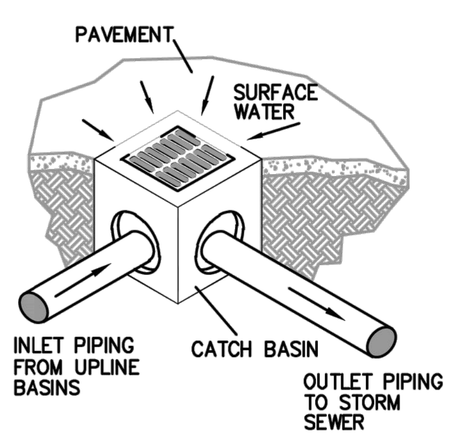
MODEL	W1	W2	H1	H2	T1	T2	KO	GRATE SIZE	OPEN AREA	WEIGHT LBS
CB–12	15"	10"	21"	18"	3"	2"	10"	12"x12"x1"	90	180
CB–14	20"	12"	28"	24"	4"	4"	12"	14"x14"x1½"	120	600
CB–18	24"	16"	34"	30"	4"	4"	15"	18"x18"x1½"	168	1,000
CB–20	26"	18"	34"	30"	4"	4"	17"	20"x20"x1½"	170	1,335
CB–24	32"	22"	41"	36"	5"	5"	22"	24"x24"x2"	268	2,245
CB–27	37"	25"	42"	36"	6"	6"	24"	27"x27"x2"	350	2,875
CB–30	42"	30"	42"	36"	6"	6"	30"	32"x32"x2"	490	3,675
CB–36	48"	36"	42"	36"	6"	6"	32"	38"x38"x2"	693	4,585
CB–48	60"	48"	54"	48"	6"	6"	48"	38"x38"x2"	693	7,250
*CB–60	72"	60"	66"	60"	6"	6"	60"	38"x38"x2"	693	10,500
*CB–72	84"	72"	78"	72"	6"	6"	72"	38"x38"x2"	693	15,350
*CB–84	96"	84"	78"	72"	6"	6"	72"	38"x38"x2"	693	19,500

*KNOCKOUTS NOT AVAILABLE



SPECIFICATIONS

CONCRETE : CLASS I/II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH.

REINFORCEMENT: GRADE 60 REINFORCED. STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

C.I. CASTINGS: CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48–76 CLASS 30.

A	.	.	.
REV	DATE	BY	DESCRIPTION

PROJECT: .
CUSTOMER: .
ENGINEER: .
ORDER #: . PROJ #: .
DATE: . LOCATION: .

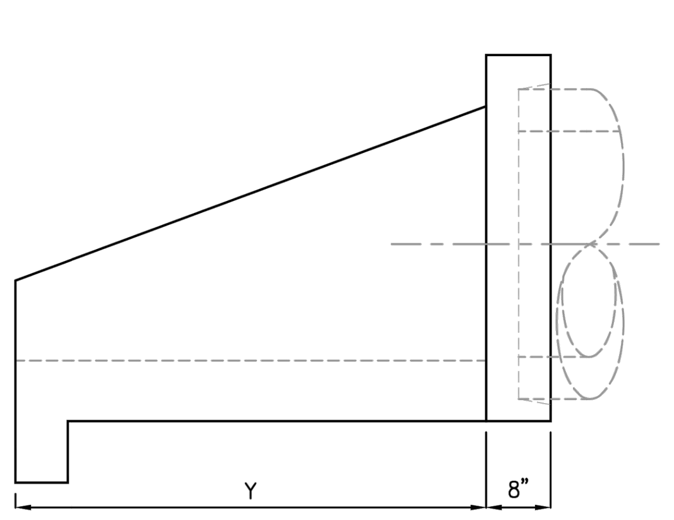
PARK USA — A Northwest Pipe Company

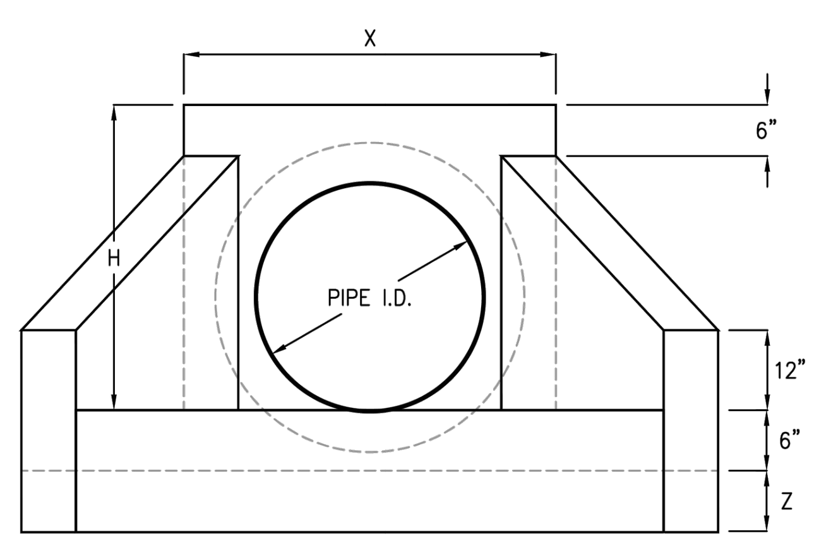
CATCH BASIN
MODEL CB – 12" THRU 84"

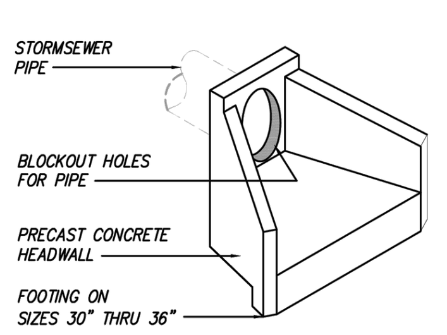
MARK: –
LINE: –
STA: –
SHEET: –
DATE: –

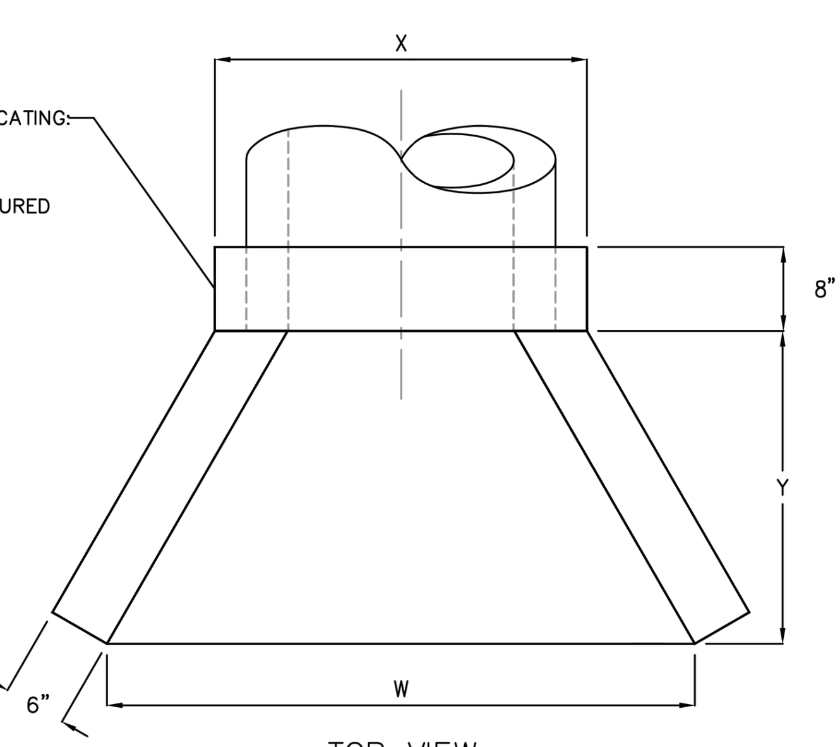
PM	PC	DRN	ENG	DWG. NO.	REV.
.	.	.	.	CB–1	A
DATE .					

CREATED ON 4/16/2024 BY — LAST MODIFIED ON 4/16/2024 3:18 PM BY Kw
PLOTTED ON 4/16/2024 3:18 PM BY Vu, Kota, C:\Users\Vu\Desktop\file replacement details\CB–1









MODEL	PIPE DIA	DIMENSIONS					
		H	W	X	Y	Z	WEIGHT (LBS)
HW–12	12"	2'–6"	4'–3"	3'–0"	2'–0"	N/A	2,700
HW–15	15"	2'–6"	4'–3"	3'–0"	2'–0"	N/A	2,700
HW–18	18"	2'–6"	4'–3"	3'–0"	2'–0"	N/A	2,600
HW–21	21"	3'–0"	5'–10"	3'–2"	3'–0"	N/A	4,300
HW–24	24"	3'–0"	5'–10"	3'–2"	3'–0"	N/A	4,200
HW–30	30"	3'–6'	7'–6"	4'–1"	4'–0"	9"	6,200
HW–36	36"	4'–1"	9'–3"	4'–8"	5'–0"	9"	8,100
HW–42	42"	4'–11"	12'–6"	5'–10"	6'–0"	12"	11,000
HW–48	48"	4'–11"	12'–6"	5'–10"	6'–0"	12"	11,000

SPECIFICATIONS

CONCRETE: CLASS II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION INCLUDING WALLS AND FLOOR.

REINFORCEMENT: GRADE 60 REINFORCED. NO. 4 STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL. BAR BENDING AND PLACEMENT SHALL WITH THE LATEST ACI STANDARDS.

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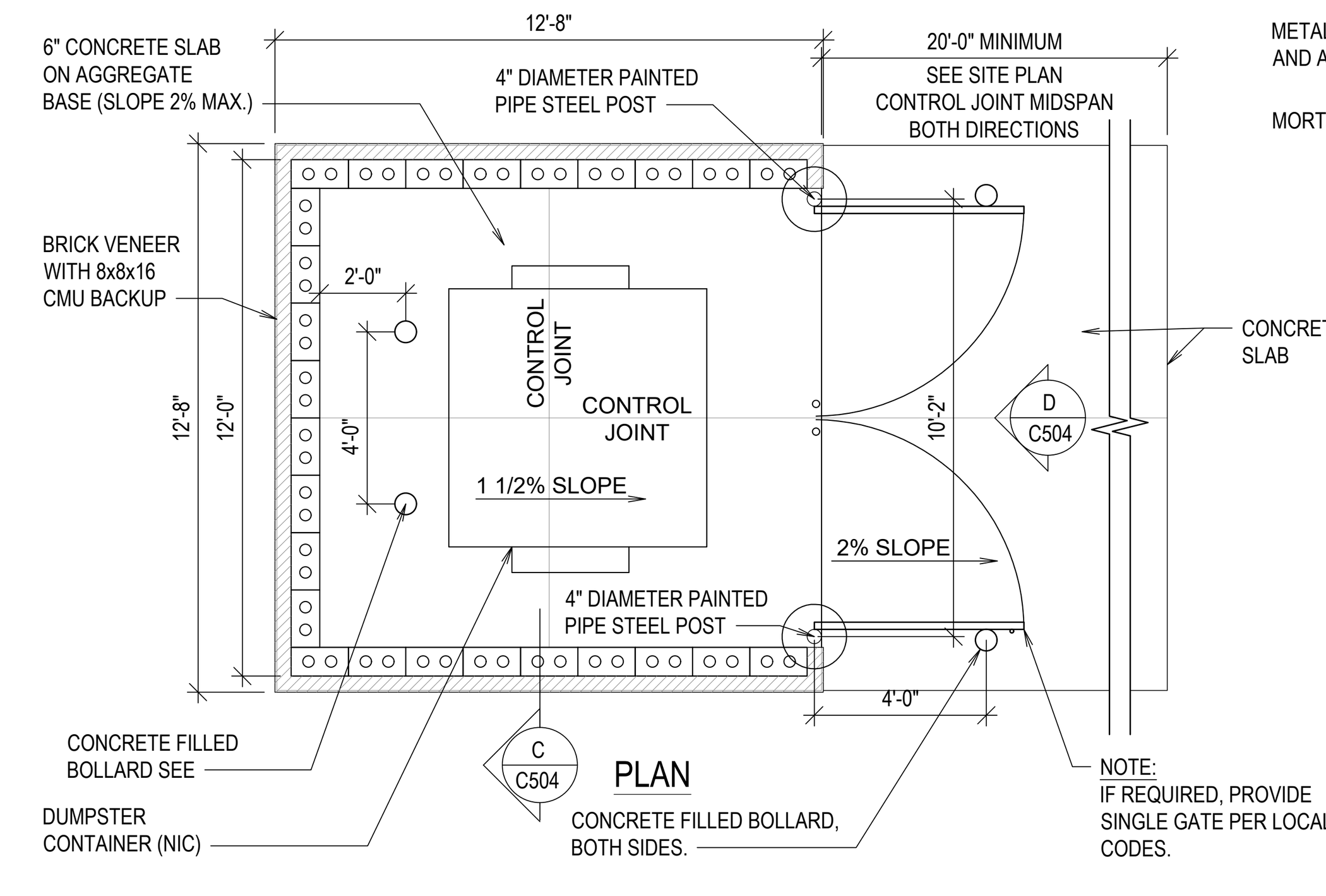
PROJECT: .
CUSTOMER: .
ENGINEER: .
ORDER #: . PROJ #: .
DATE: . LOCATION: .

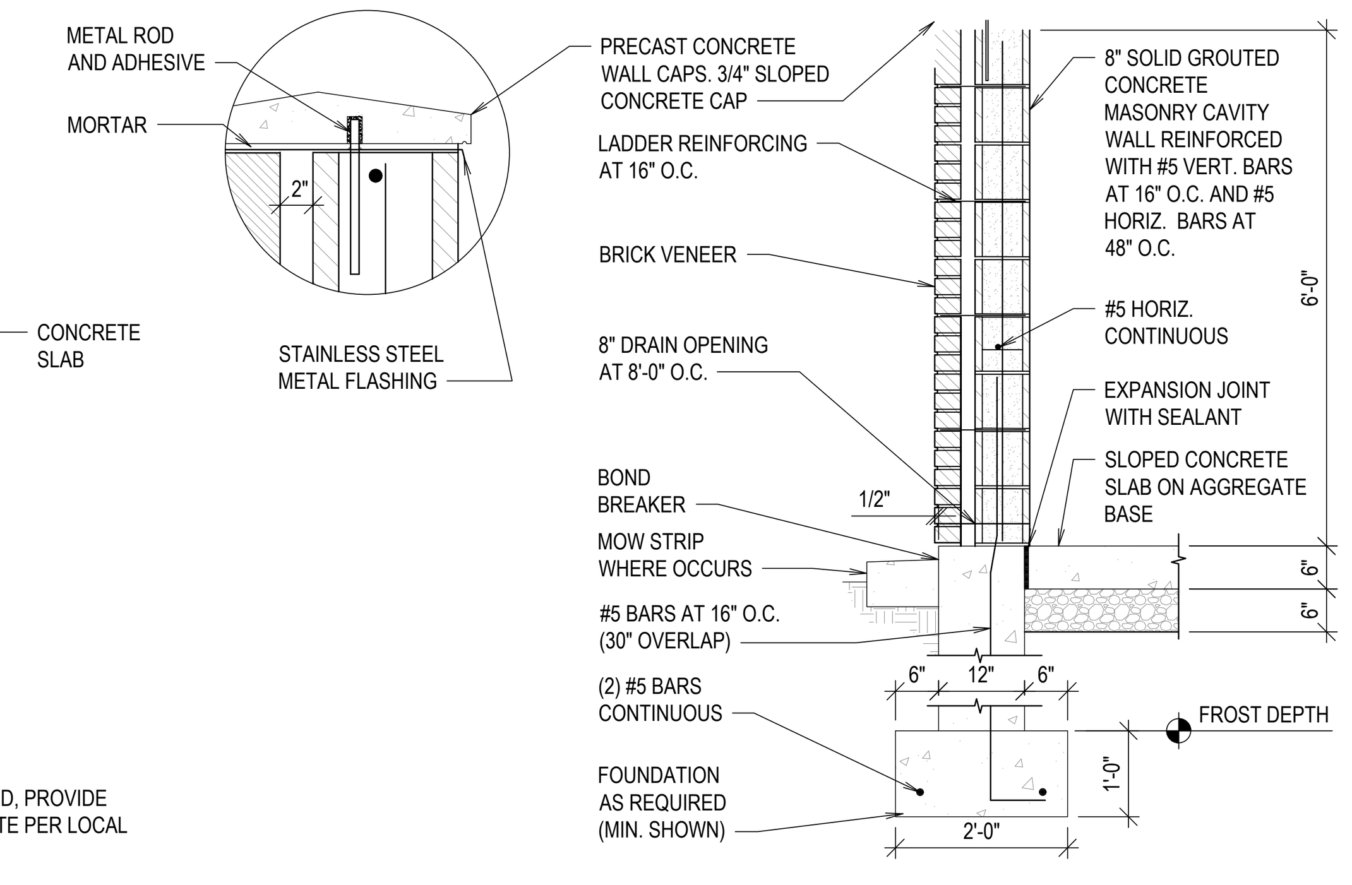
PARK USA
www.parkusa.com 888–611–PARK

HEADWALL FOR STORMWATER PIPING
MODEL HW 12" THRU 48"

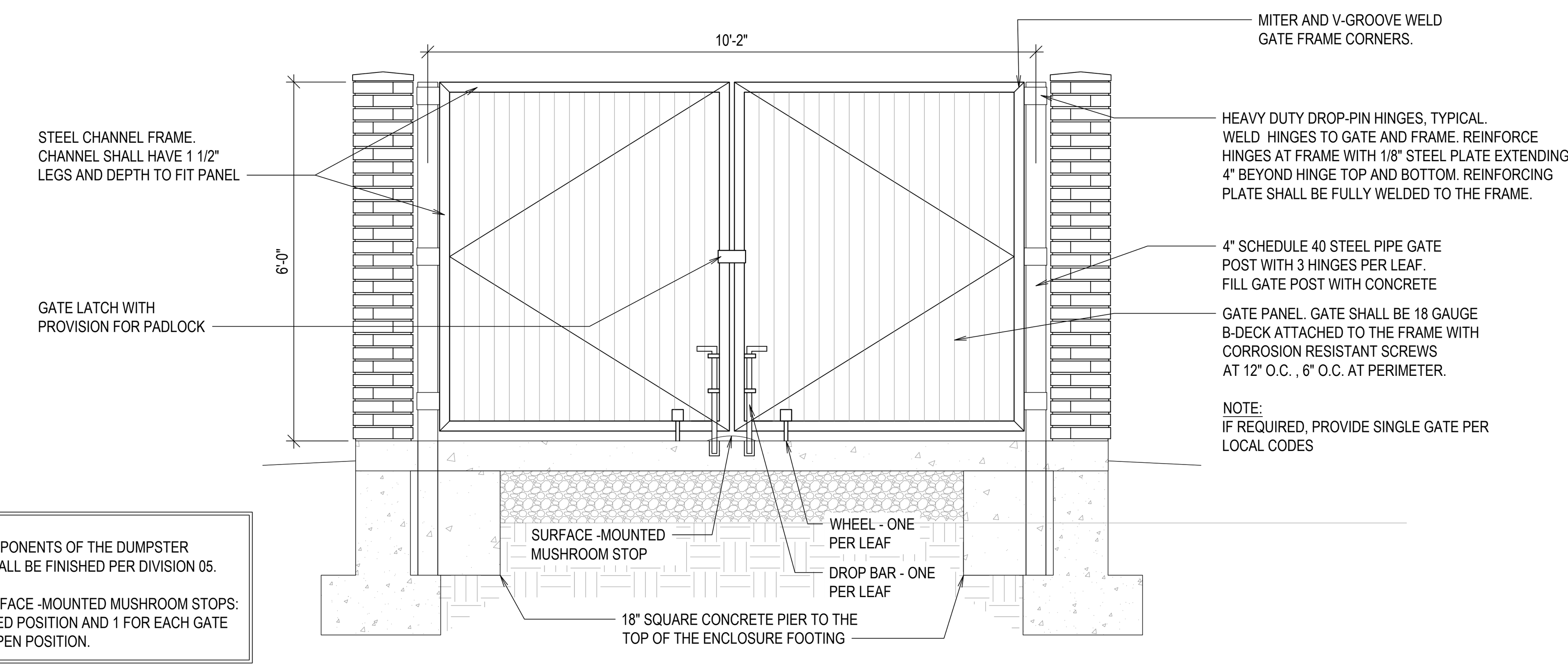
PM	PC	DRN	ENG	DWG. NO.	REV.
.	.	.	.	HW–1	
DATE 01/2019					



(A) MASONRY WALL DUMPSTER ENCLOSURE

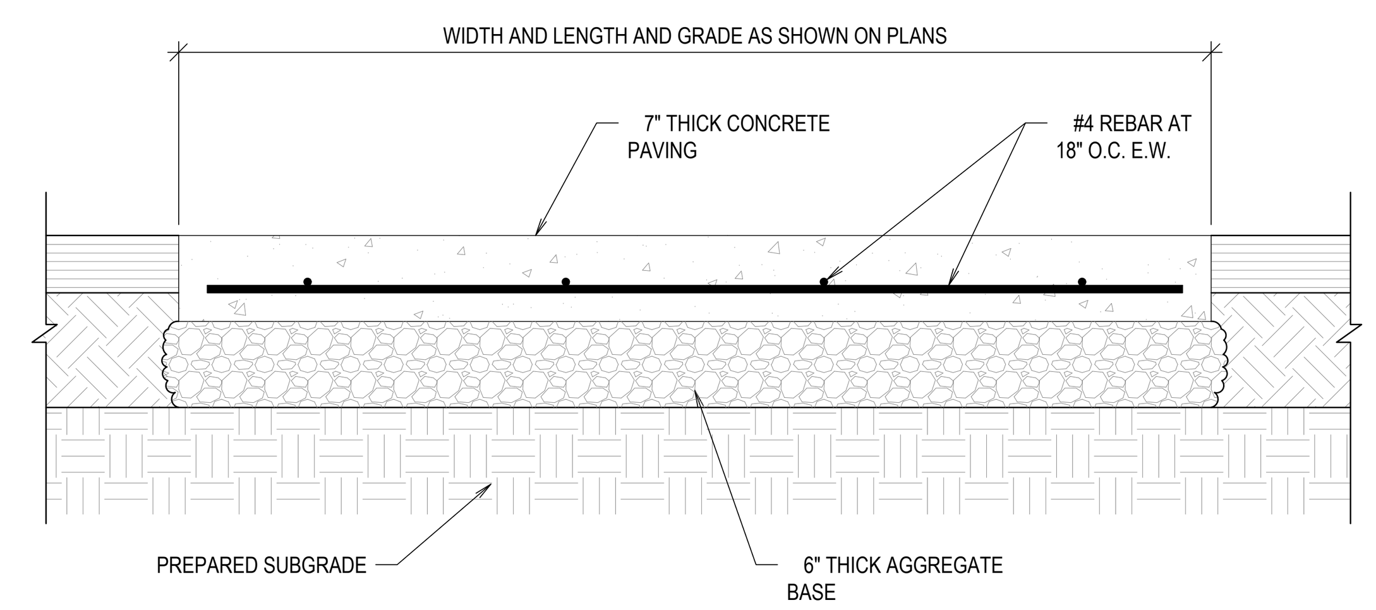


(B) MASONRY WALL DUMPSTER ENCLOSURE



NOTES:
1. ALL STEEL COMPONENTS OF THE DUMPSTER ENCLOSURE SHALL BE FINISHED PER DIVISION 05.
2. PROVIDE 3 SURFACE -MOUNTED MUSHROOM STOPS: 1 AT THE CLOSED POSITION AND 1 FOR EACH GATE LEAF AT THE OPEN POSITION.

(C) MASONRY WALL DUMPSTER GATE



(D) DUMPSTER PAD SECTION

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391 Landa Street, Ste. 120A, New Braunfels, TX 78130
Phone: 817-909-9870 / 830-214-7653
www.hillcountrycivil.com

STATE OF TEXAS
CHRISTOPHER B. ALLISON
131240
LICENSED PROFESSIONAL ENGINEER
03/13/2025

No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS
HCC JOB No.: 053-01
DRAWN BY.: CBA

SITE DETAILS (2 OF 2)

SHEET No.
17
OF 18

C:\HCC\OneDrive - Hill Country Civil\Projects\053 Hill Country Day School\053-01 Lot 526 Day School Development\1 - CAD\2 - Sheets\053-01 DTL.dwg

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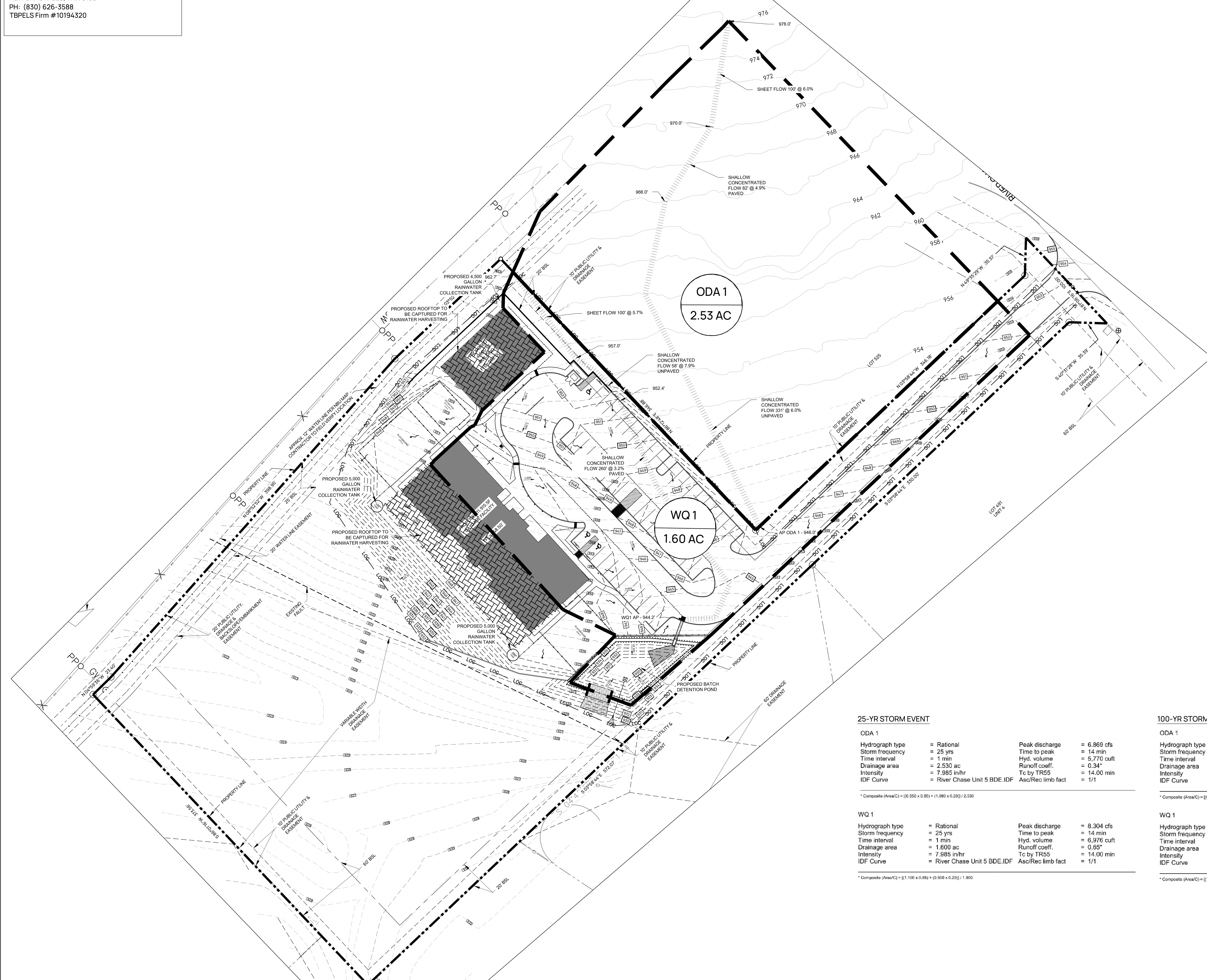
SURVEY NOTE

Survey Prepared by: TRIHYDRO CORPORATION
1672 INDEPENDENCE DR. STE. 315,
NEW BRAUNFELS, TX. 78132
PH: (830) 626-3588
TBPELS Firm #10194320

LEGAL DESCRIPTION

5.550 ACRES LOT 526 OF THE RIVER CHASE UNIT 5 SUBDIVISION



LEGEND

- PROPERTY BOUNDARY
- LOT LINE
- EASEMENT LINE
- SITE BENCHMARK
- PROPERTY CORNER
- GAS LINE
- OVERHEAD ELECTRIC LINE
- FENCE LINE
- EXISTING TREE
- SIGN
- POWER POLE
- FLOW ARROW
- EXISTING MINOR CONTOUR (101)
- EXISTING MAJOR CONTOUR (100)
- TIME OF CONCENTRATION
- DRAINAGE AREA BOUNDARY
- DRAINAGE AREA LABEL (DA # / ACRES)
- AREA TO BE CAPTURED FOR RAINWATER HARVESTING
- LIMITS OF CONSTRUCTION (LOC)

SCALE: 1"=50'

TIME OF CONCENTRATION

ODA 1

Description	A	B	C	Totals
Sheet Flow				
Manning's n-value	= 0.410	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 4.12	0.00	0.00	
Land slope (%)	= 6.00	0.00	0.00	
Travel Time (min)	**= 12.44**	**+ 0.00**	**+ 0.00**	**= 12.44**
Shallow Concentrated Flow				
Flow length (ft)	= 82.00	331.00	0.00	
Watercourse slope (%)	= 4.90	6.00	0.00	
Surface description	= Paved	Unpaved	Paved	
Average velocity (ft/s)	=4.50	3.95	0.00	
Travel Time (min)	**= 0.30**	**+ 1.40**	**+ 0.00**	**= 1.70**
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	=0.00	0.00	0.00	
Flow length (ft)	({0})0.0	0.0	0.0	
Travel Time (min)	**= 0.00**	**+ 0.00**	**+ 0.00**	**= 0.00**
Total Travel Time, Tc				**14.00 min**

WQ 1

Description	A	B	C	Totals
Sheet Flow				
Manning's n-value	= 0.410	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 4.12	0.00	0.00	
Land slope (%)	= 5.70	0.00	0.00	
Travel Time (min)	**= 12.70**	**+ 0.00**	**+ 0.00**	**= 12.70**
Shallow Concentrated Flow				
Flow length (ft)	= 58.00	260.00	0.00	
Watercourse slope (%)	= 7.90	3.20	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	=4.53	3.64	0.00	
Travel Time (min)	**= 0.21**	**+ 1.19**	**+ 0.00**	**= 1.40**
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	=0.00	0.00	0.00	
Flow length (ft)	({0})0.0	0.0	0.0	
Travel Time (min)	**= 0.00**	**+ 0.00**	**+ 0.00**	**= 0.00**
Total Travel Time, Tc				**14.00 min**

25-YR STORM EVENT

ODA 1

Hydrograph type	= Rational	Peak discharge	= 6.869 cfs
Storm frequency	= 25 yrs	Time to peak	= 14 min
Time interval	= 1 min	Hyd. volume	= 5,770 cuft
Drainage area	= 2.530 ac	Runoff coeff.	= 0.34*
Intensity	= 7.985 in/hr	Tc by TR55	= 14.00 min
IDF Curve	= River Chase Unit 5 BDE.IDF	Asc/Rec limb fact	= 1/1

* Composite (Area/C) = [(0.550 x 0.85) + (1.980 x 0.20)] / 2.530

WQ 1

Hydrograph type	= Rational	Peak discharge	= 8.304 cfs
Storm frequency	= 25 yrs	Time to peak	= 14 min
Time interval	= 1 min	Hyd. volume	= 6,976 cuft
Drainage area	= 1.600 ac	Runoff coeff.	= 0.65*
Intensity	= 7.985 in/hr	Tc by TR55	= 14.00 min
IDF Curve	= River Chase Unit 5 BDE.IDF	Asc/Rec limb fact	= 1/1

* Composite (Area/C) = [(1.100 x 0.85) + (0.500 x 0.20)] / 1.600

100-YR STORM EVENT

ODA 1

Hydrograph type	= Rational	Peak discharge	= 8.557 cfs
Storm frequency	= 100 yrs	Time to peak	= 14 min
Time interval	= 1 min	Hyd. volume	= 7,188 cuft
Drainage area	= 2.530 ac	Runoff coeff.	= 0.34*
Intensity	= 9.947 in/hr	Tc by TR55	= 14.00 min
IDF Curve	= River Chase Unit 5 BDE.IDF	Asc/Rec limb fact	= 1/1

* Composite (Area/C) = [(0.550 x 0.85) + (1.980 x 0.20)] / 2.530

WQ 1

Hydrograph type	= Rational	Peak discharge	= 10.35 cfs
Storm frequency	= 100 yrs	Time to peak	= 14 min
Time interval	= 1 min	Hyd. volume	= 8,690 cuft
Drainage area	= 1.600 ac	Runoff coeff.	= 0.65*
Intensity	= 9.947 in/hr	Tc by TR55	= 14.00 min
IDF Curve	= River Chase Unit 5 BDE.IDF	Asc/Rec limb fact	= 1/1

* Composite (Area/C) = [(1.100 x 0.85) + (0.500 x 0.20)] / 1.600

25-YR STORM EVENT BATCH POND

BATCH POND

Hydrograph type	= Reservoir	Peak discharge	= 13.51 cfs
Storm frequency	= 25 yrs	Time to peak	= 16 min
Time interval	= 1 min	Hyd. volume	= 12,743 cuft
Inflow hyd. No.	= 5 - BATCH POND INFLOW	Max. Elevation	= 933.93 ft
Reservoir name	= <New Pond>	Max. Storage	= 6,102 cuft

100-YR STORM EVENT BATCH POND

BATCH POND

Hydrograph type	= Reservoir	Peak discharge	= 18.07 cfs
Storm frequency	= 100 yrs	Time to peak	= 15 min
Time interval	= 1 min	Hyd. volume	= 15,876 cuft
Inflow hyd. No.	= 5 - BATCH POND INFLOW	Max. Elevation	= 934.01 ft
Reservoir name	= <New Pond>	Max. Storage	= 6,288 cuft

BATCH POND STAGE STORAGE

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	929.50	12	0	0
0.50	930.00	613	118	118
1.50	931.00	999	798	917
2.50	932.00	1,474	1,229	2,145
3.50	933.00	2,041	1,750	3,895
4.50	934.00	2,701	2,363	6,258
5.50	935.00	3,453	3,069	9,327

WATER QUALITY NOTES

1. RAINWATER HARVESTING TANKS ARE SIZED TO CAPTURE THE FIRST 1.5 INCHES OF RUNOFF OVER THE ROOFTOP HATCHED ON THE PLAN PER TCEQ RG-348 SECTION 3.3.2.

   PROPOSED 4,500 SF BUILDING: CAPTURE AREA: 4,500 SF, REQ. CAPTURE VOLUME: 562.5 CUBIC FEET ~ 4,207.8 GAL REQ. ~ PROP: 4,500 GAL TANKS

   PROPOSED 11,915 SF BUILDING: CAPTURE AREA: 10,625 SF, REQ CAPTURE VOLUME: 1328.13 CUBIC FEET ~ 9,935.1 GAL REQ. ~ PROP: 2- 5,000 GAL TANKS

2. THE UNCAPTURED PORTION OF THE ROOFTOP AND PARKING LOT WILL BE ROUTED TO A PROPOSED BATCH DETENTION POND FOR TREATMENT.

Hill Country Civil
Engineers • Consultants
Texas Firm License No. F-22812

STATE OF TEXAS
CHRISTOPHER B. ALLISON
131240
LICENSED
PROFESSIONAL ENGINEER
03/13/2025

No.	Date	Revisions	App.

HILL COUNTRY DAY SCHOOL
144 RIVER CHASE WAY
NEW BRAUNFELS, TEXAS
HCC JOB No.: 053-01
DRAWN BY.: CBA

WATER QUALITY SITE PLAN

SHEET No.
12
OF 18

Copyright Hill Country Civil, LLC March 13, 2025

Hill Country Civil
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Attachment G: Inspection, Maintenance, Repair and Retrofit Plan

Attachment G: Inspection, Maintenance, Repair, Retrofit Plan

Batch Detention Pond:

Pest Management:

An Integrated Pest Management Plan should be developed for vegetated areas. This plan should specify how problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides. It should also address the maintaining of proper drainage for the site through the batch detention ponds.

Seasonal Mowing and Lawn Care:

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.

Inspection and Maintenance/Repair:

Inspections should take place a minimum of twice a year. Once 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 event 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 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. In addition, electrical control system should be included in the inspection schedule. If the valve is damaged or not functioning to achieve the required drawdown time, then the valve should be repaired or replaced.

Debris and Litter 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 the possible clogging or obstructions and any debris removed.

Sediment Removal:

Sediment accumulating near culverts and in channels needs to be removed when they build up to 3 inches at any spot. Excess sediment should be removed by hand or with flat-bottomed shovels. If areas are eroded, they should be filled, compacted to final grade. Sediment removal should be performed periodically, as determined through inspection.

Public Education:

The delegation of maintenance responsibilities is for the landowner. However, localities should provide an active educational program to encourage the recommended practices. Landscapers for the site will also need to be educated on the suitable practices for lawn up keep throughout the year with limited amount of the pesticides or fertilizer.

Detention Pond/BMP Records

☐ Inspection Date: _____

Type of Inspection: _____

Comments: _____

_____

_____

_____

Signature: _____ (Inspector)

☐ Maintenance Date: _____

Work Performed: _____

Comments: _____

_____

_____

_____

Signature: _____ (Maintenance Personnel)

☐ Other Date: _____

Comments: _____

_____

_____

_____

_____

_____

Signature: _____ (Title:) _____

Responsibility of Maintenance

I Haleigh Almquist,
Print Name

CEO/Founder
Title – Owner/President/Other

Hill Country Day School LLC
Corporation/Partnership/Entity Name

Agree to assume the responsibility of maintaining the permanent BMPs constructed as part of the Pecan Park Bulverde development in accordance with the rules and regulations of the Texas Commission on Environmental Quality (TCEQ).

I also understand that:

1. I am 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.

2. 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.

Haleigh Almquist 3/13/2025
Applicant's Signature Date

Contact Person: Haleigh Almquist
Entity: Hill Country Day School
Mailing Address: 3212 Shooting Star
New Braunfels, TX 78132
Telephone: 512-415-5145

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Attachment I: Measures for Minimizing Surface Stream Contamination

N/A

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Agent Authorization Form

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

I Haleigh Almquist,
Print Name

Founder/CEO,
Title - Owner/President/Other

of Hill Country Day School,
Corporation/Partnership/Entity Name

have authorized Christopher B. Allison, PE
Print Name of Agent/Engineer

of Hill Country Civil LLC
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:

Haleigh Almquist
Applicant's Signature

12-19-2025
Date

THE STATE OF Texas §

County of Comal §

BEFORE ME, the undersigned authority, on this day personally appeared Haleigh Almquist 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 19 day of February, 2025.

NOTARY PUBLIC

KIMBERLY A. PALACIOS
Notary Public, State of Texas
Comm. Expires 05-23-2026
Notary ID 131579521

Kimberly A Palacios
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 05-23-2026

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Application Fee Form

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Hill Country Day School
Regulated Entity Location: 144 River Chase Way New Braunfels, TX 78132
Name of Customer: Haleigh Almquist
Contact Person: Christopher B. Allison, PE Phone: (817) 659-9078
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
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

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

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	5.55 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: Haleigh Almquist Date: 2/19/2025

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

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Core Data Form

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

☐ Other

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

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	2/17/2025

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* — *If new Customer, enter previous Customer below:*

Almquist Haleigh

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
805389472	32093388919	99-2235131	

11. Type of Customer:

☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees

☐ 0-20 ☒ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?

☒ **Yes** ☐ **No**

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

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

15. Mailing Address:							
Hill Country Day School							
3212 Shooting Star							
City	New Braunfels	**State**	TX	**ZIP**	78132	**ZIP + 4**	

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	hello@hillcountrydayschool.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 415-5145		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

Hill Country Day School

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	Hill Country Day School							
	144 River Chase Way							
	City	New Braunfels	**State**	TX	**ZIP**	78132	**ZIP + 4**	
24. County	Comal							

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

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

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

27. Latitude (N) In Decimal:	29.8137		**28. Longitude (W) In Decimal:**	98.106981	
Degrees 29	Minutes 48	Seconds 49.32	Degrees 98	Minutes 6	Seconds 25.13

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)
8351		624410	

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

Early Childhood Schooling

34. Mailing Address:								
	3212 Shooting Star							
	City	**New Braunfels**	**State**	**TX**	**ZIP**	**78132**	**ZIP + 4**	
35. E-Mail Address:	**hello@hillcountrydayschool.com**							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(512) 415-5145		( ) -

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

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

SECTION IV: Preparer Information

40. Name:	Christopher B. Allison, PE	**41. Title:**	Managing Partner

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(817 **)** 659-9078		**( )** -	blake@hillcountrycivil.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:	Hill Country Day School	**Job Title:**	Founder/CEO	
Name *(In Print):*	Haleigh Almquist		**Phone:**	**(** 512 **)** 415- **5145**
Signature:	Haleigh Almquist		**Date:**	2/19/2025