



LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

August 2023



August 23, 2023

Ms. Lillian Butler
Texas Commission on Environmental Quality (TCEQ)
Region 13
14250 Judson Road
San Antonio, Texas 78233-4480

Re: Leon Creek Greenway - Al Rohde Park & Buddy Calk Trailhead
Water Pollution Abatement Plan Modification

Dear Ms. Butler:

Please find included herein the Al Rohde Park & Buddy Calk Trailhead Water Pollution Abatement Plan Modification. This Water Pollution Abatement Plan Modification has been prepared in accordance with the regulations of the Texas Administrative Code (30 TAC 213) and current policies for development over the Edwards Aquifer Recharge Zone.

This Water Pollution Abatement Plan Modification applies to an approximate 4.46-acre site as identified by the project limits (24.707 ac legal limit). Please review the plan information for the items it is intended to address. If acceptable, please provide a written approval of the plan in order that construction may begin at the earliest opportunity.

Appropriate review fees (\$4,000) and fee application are included. If you have questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,
Pape-Dawson Consulting Engineers, LLC



Jason T. Diamond, P.E.
Vice President

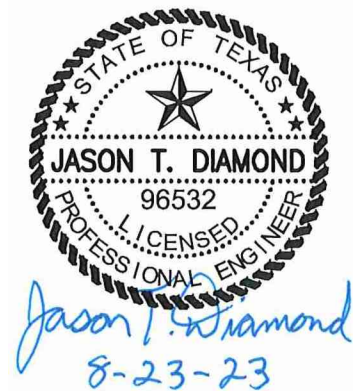
Attachments

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LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

August 2023



**EDWARDS AQUIFER
APPLICATION COVER PAGE
(TCEQ-20705)**

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:					2. Regulated Entity No.:				
3. Customer Name:					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):				
9. Application Fee:			10. Permanent BMP(s):						
11. SCS (Linear Ft.):			12. AST/UST (No. Tanks):						
13. County:			14. Watershed:						

Application Distribution

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

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

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

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

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

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

Print Name of Customer/Authorized Agent

Jason T. Diamond

08/23/2023

Signature of Customer/Authorized Agent

Date

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

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

**GENERAL INFORMATION
FORM (TCEQ-0587)**

General Information Form

Texas Commission on Environmental Quality

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

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

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

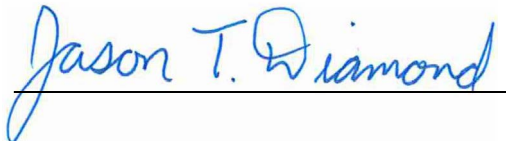
Signature

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

Print Name of Customer/Agent: Jason T. Diamond, P.E.

Date: 08/23/2023

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Leon Creek Greenway - Al Rohde Park & Buddy Calk Trailhead

2. County: Bexar

3. Stream Basin: Upper Leon Creek

4. Groundwater Conservation District (If applicable): Edwards Aquifer Authority

5. Edwards Aquifer Zone:

Recharge Zone

Transition Zone

6. Plan Type:

WPAP

SCS

Modification

AST

UST

Exception Request

7. Customer (Applicant):

Contact Person: Bill Pennell

Entity: City of San Antonio Parks and Recreation Department

Mailing Address: PO Box 839966

City, State: San Antonio, TX

Zip: 78232

Telephone: (210) 207-8480

FAX: (210) 207-2197

Email Address: BILL.PENNELL@SANANTONIO.GOV

8. Agent/Representative (If any):

Contact Person: Jason Diamond, P.E.

Entity: Pape-Dawson Engineers, Inc.

Mailing Address: 2000 NW Loop 410

City, State: San Antonio, Texas

Zip: 78213

Telephone: (210) 375-9000

FAX: (210) 375-9010

Email Address: jdiamond@pape-dawson.com

9. Project Location:

- The project site is located inside the city limits of San Antonio.
- The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
- 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.

From TCEQ's regional office, turn right toward Judson Road, approximately 2.5 miles before turning left toward N Loop 1604 W. Travel west for approximately 13 miles, before taking the IH-10 E exit. Travel east on IH 10 for approximately 2 miles. Take the exit for DeZavala Rd. Travel west on DeZavala for approximately 2.2 miles. The site is located on the southwest corner of Babcock Rd and Spring Rain Dr.

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

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: completed

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

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

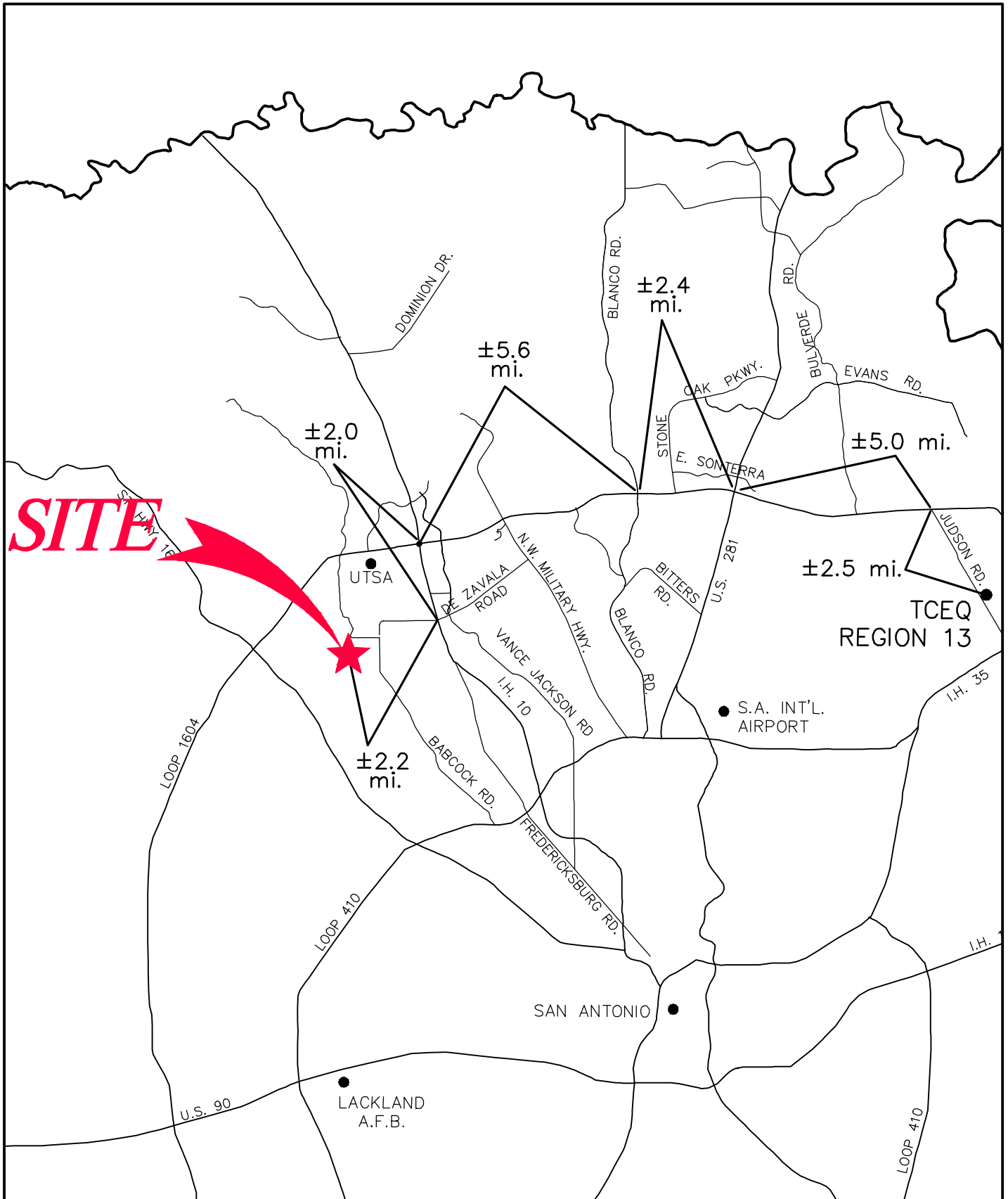
17. I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:
- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
 - (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and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

Administrative Information

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

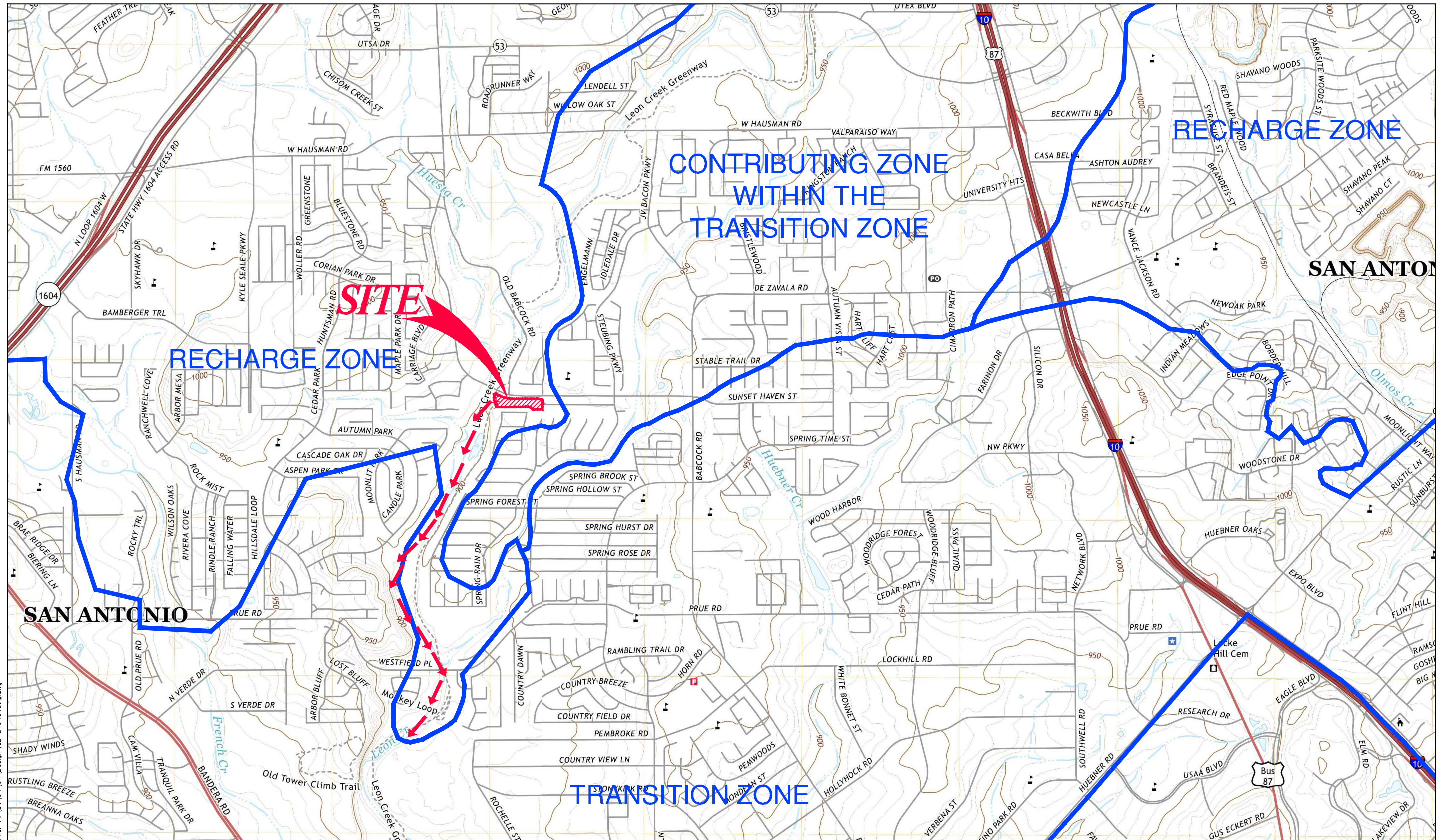
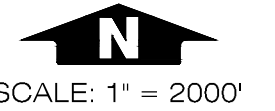
ATTACHMENT A

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD Water Pollution Abatement Plan Modification



ATTACHMENT B

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD
Water Pollution Abatement Plan Modification



Date: Aug 09, 2023, 2:48pm User ID: mgregory
 File: P:\84\94\04\Design\04 849404.dwg.dwg

GENERAL LOCATION MAP - CASTLE HILLS, TX QUAD
 DRAINAGE FLOW → → →
 Pape-Dawson Engineers, Inc.

ATTACHMENT C

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment C – Project Description

The Leon Creek Greenway - Al Rohde Park & Buddy Calk Trailhead Water Pollution Abatement Plan Modification (WPAP MOD) is a modification of the previously approved Leon Creek Greenway, Segment 1 WPAP approved on July 8, 2008 (EAPP ID 13-08040101). The Leon Creek Greenway project was a two-segment project to develop a hike and bike trail system along the length of Leon Creek, including parking lots and trailhead plazas. The total site area for Segment 1 extends over a 392.67-acre from Buddy Calk Trailhead to the intersection of Leon Creek and Bandera Road. Approx. 100 acres of the northern portion was located in the Recharge Zone with 1.8 acres of impervious cover (1.8%). The approved PBMPs are 50-ft natural vegetative strips designed to remove 2,940 lbs of TSS (1,469 required) to comply with the required minimum 80% removal of the increase in TSS.

This Leon Creek Greenway - Al Rohde Park & Buddy Calk Trailhead WPAP MOD proposes limited demolition of existing concrete walkways along the park and trailhead and installation of new shade structures, walkways, a basketball court, agility equipment area, nature area, pedestrian bridge, and tree plantings on a project limits of approximately 4.46 acres (24.707 ac legal limit) within the City of San Antonio, Bexar County, Texas. This site is located at the southwest corner of Babcock Rd and Spring Rain Dr. The project site is developed as a park and trailhead, lies within the Upper Leon Creek watershed, and does contain the 100-year floodplain. There were no naturally occurring sensitive geological features within the project limits identified in the Geologic Assessment.

This application will serve as self-reporting of the existing 0.123-ac of impervious cover for the existing Al Rohde Park, as no TCEQ approved WPAP can be found. As part of this application the increase in impervious cover of this Park and proposed increase in impervious cover for this as well as the Buddy Calk Trailhead will be accounted for treatment in the previously approved treatment capacity of the fifty-foot (50') natural VFS (EAPP ID 13-08040101).

This WPAP MOD proposes demolition, clearing, grading, excavation, construction of walkways, a basketball court, agility equipment area, nature area, and pedestrian bridge for the renovation of an existing park and trailhead. The 0.586 ac of existing trailhead will have minor improvements but will remain. Approximately 0.032 acres of existing impervious cover from the trail and park will be removed, and approximately 0.164 acres of impervious cover is proposed, resulting in a net increase of 0.132 acres of impervious cover. When added to the existing 0.123 ac of impervious cover contributed by the park, the total will be 0.255 ac, or 1.03%, of the 24.707 ac legal limit of the site which will require treatment. The previously approved natural VFS can provide 1,471 lbs of additional treatment capacity (2,940 lbs - 1,469 lbs). The existing VFS will provide compensatory treatment for the 0.255 ac of increased impervious cover, which will contribute 208 lbs of TSS. All PBMPs have been designed in accordance with the Texas Commission on Environmental Quality's (TCEQ) Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in Total Suspended Solids (TSS) from the site. Upon completion of the proposed improvements, there will be 0.841 ac of impervious cover within the park and trailhead. Please see treatment calculations included in the exhibits section of this application.

No wastewater will be produced by these improvements.

GEOLOGIC ASSESSMENT FORM
(TCEQ-0585)

Geologic Assessment

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Geologist: Henry E. Stultz III, P.G.

Telephone: 210-375-9000

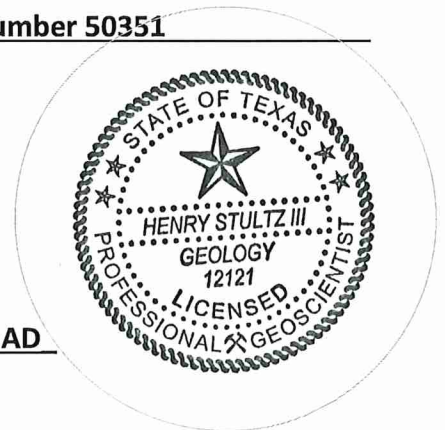
Date: July 10, 2023

Fax: 210-375-9090

Representing: Pape-Dawson Engineers, Inc., TBPB registration number 50351

Signature of Geologist:





Regulated Entity Name: AL ROHDE PARK & BUDDY CALK TRAILHEAD

Project Information

1. Date(s) Geologic Assessment was performed: June 30, 2023

2. Type of Project:

WPAP

AST

SCS

UST

3. Location of Project:

Recharge Zone

Transition Zone

Contributing Zone within the Transition Zone

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

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Lewisville silty clay, 1-3% slopes (LvB)	B	4-6
Tinn and Frio soils, 0-1% slopes, frequently flooded (Tf)	D	6+
Sunev loam, 1-3% slopes (VaB)	B	2-5

* Soil Group Definitions (Abbreviated)

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

6. **Attachment B – Stratigraphic Column.** A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.
7. **Attachment C – Site Geology.** A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
8. **Attachment D – Site Geologic Map(s).** The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'
 Applicant's Site Plan Scale: 1" = 40'
 Site Geologic Map Scale: 1" = 40'
 Site Soils Map Scale (if more than 1 soil type): 1" = 200'
9. Method of collecting positional data:
 - Global Positioning System (GPS) technology.
 - Other method(s). Please describe method of data collection: _____
10. The project site 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 ____ (#) 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: AL ROHDE PARK & BUDDY CALK TRAILHEAD

GEOLOGIC ASSESSMENT TABLE

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									<40	≥40	<1.6	≥1.6	
S-1	29.55711°	-98.62774°	F	20	Kgt/Kdr		N66°E	10			F	5	35	35	X		Hillside	

** DATUM: NAD 83



I have read, I understand, 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.

[Signature]

Date July 10, 2023

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

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

12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

ATTACHMENT B
Stratigraphic Column

AL ROHDE PARK BUDDY CALK TRAILHEAD

Geologic Assessment (TCEQ-0585)

Attachment B – Stratigraphic Column

Period	Epoch	Group	Formation	Member	Thickness	Lithology	Hydro-logic Unit	Hydro-stratigraphic Unit	Hydrologic Function	Porosity	Cavern Development	
Cretaceous	Late Cretaceous	Washita	Del Rio Clay	--	40-50	Fossiliferous blue-green to yellow-brown clay with thin beds of packstone; contains iron nodules; <i>Ilymatogyra arietina</i>	Upper confining unit to the Edwards aquifer	--	Confining	None	None	
			Georgetown	--	20-30	Reddish-brown, gray to light tan, shaley mudstone and wackestone; commonly contains black dendrites, iron nodules, and iron staining; often fossiliferous with <i>Plesioturrites brazoensis</i> , <i>Waconella wacoensis</i> common		I	Confining	MO	None	
	Early Cretaceous	Edwards	Person	Cyclic and marine, undivided		80-90	Pelletal limestone; ranges from chalk to mudstone and milliolid grainstone; thin to massive beds; some crossbedding evident; a packstone containing large caprinids is present near contact with the overlying Georgetown Formations; chert is common as beds and large nodules	Edwards Aquifer	II	Aquifer	MO, BU, VUG, BP, FR, CV	Many subsurface; might be associated with earlier karst development
				Leached and collapsed, undivided		70-90	Hard, dense, recrystallized limestone; mudstone, wackestone, packstone, and grainstone; contains chert as beds and large nodules; heavily bioturbated with iron-stained beds; often stromatolitic; <i>Toucasia</i> sp. Often found above contact with the underlying regional dense member; <i>Montastrea roemeriana</i> and oysters rare		III	Aquifer	BU, VUG, FR, BP, BR, CV	Extensive lateral development; large rooms
				Regional dense		20-24	Dense, shaly limestone; oyster shell mudstone and iron wackestone; wispy iron staining; chert nodules rarer than in the rest of the chert-bearing Edwards Group		IV	Confining	FR, CV	Very few; only vertical fracture enlargement
		Kainer	Grainstone		40-50	Hard, dense limestone that consists mostly of a tightly cemented milliolid skeletal fragment grainstone; contains interspersed chalky mudstone and wackestone; chert as beds and nodules; crossbedding and ripple marks are common primarily at the contact with the overlying regional dense bed	V		Aquifer	IP, IG, BU, FR, BP, CV	Few	
			Kirsch-berg Evaporite		40-50	Highly altered crystalline limestone and chalky mudstone with occasional grainstone associated with tidal channels; chert as beds and nodules, boxwork molds are common, matrix recrystallized to a coarse grain spar; intervals of collapse breccia and travertine deposits	VI		Aquifer	IG, MO, VUG, FR, BR, CV	Probably extensive cave development	
			Dolomitic		90-120	Hard, dense to granular, dolomitic limestone; chert as beds and nodules (absent in lower 20 ft); <i>Toucasia</i> sp. abundant; lower three-fourths composed of sucrosic dolomites and grainstones with hard, dense limestones interspersed; upper one-fourth composed mostly of hard, dense mudstone, wackestone, packstone, grainstone, and recrystallized dolomites with bioturbated beds	VII		Aquifer	IP, IC, IG, MO, BU, VUG, FR, BP, CV	Cave development as shafts with minor horizontal extent	
			Basal nodular		40-50	Moderately hard, shaly, nodular, burrowed mudstone to milliolid grainstone that also contains dolomite; contains dark, spherical textural features known as black rotund bodies; <i>Ceratostreon texana</i> , <i>Caprina</i> sp., milliolids, and gastropods	VIII		Aquifer, confining unit in areas without caves	IP, MO, BU, BP, FR, CV	Large lateral caves at surface	

Source: Clark, Golab, and Morris (2016); Cavern development modified from Stein and Ozuna (1995). Porosity types - Fabric selective: IP, Interparticle porosity; IG, Intergranular porosity; IC, Intercrystalline porosity; SH, shelter porosity; MO, moldic porosity; BU, burrowed porosity; FE, fenestral; BP, bedding plane porosity. Not fabric selective: FR, fracture porosity; CH, channel porosity; BR, breccia; VUG, vug porosity; CV, cave porosity.

ATTACHMENT C
Site Geology

AL ROHDE PARK & BUDDY CALK TRAILHEAD

Geologic Assessment

Attachment C – Site Geology

SUMMARY

The Al Rohde Park & Buddy Calk Trailhead site is located at the southwest corner of Babcock Road and Spring Rain, in San Antonio, Bexar County, Texas.

Based on the results of the field survey conducted in accordance with *Instructions for Geologists for Geologic Assessments in the Edwards Aquifer Recharge/Transition Zones (TCEQ-0585 Instructions)*, no naturally occurring sensitive features were identified on site. The overall potential for fluid migration to the Edwards Aquifer for the site is low.

SITE GEOLOGY

As observed through field evidence, the geologic formation which outcrops at the surface within the subject site is the Georgetown (Kgt) formation and the Del Rio Clay (Kdr) formation. The Kgt formation is characterized by reddish-brown to light tan marly limestone. Karst development within the Kgt generally does not occur. The Kdr is a blue-green to yellow-brown waxy clay. Karst development within the Kdr does not occur.

The predominant trend of faults in the vicinity of the site is approximately N66°E, based on faults identified during the previous mapping of the area.

FEATURE DESCRIPTIONS:

A description of the features observed onsite is provided below:

Feature S-1

Feature S-1 is an interformational fault that juxtaposes the Kgt to the northwest with the Kgt and Kdr to the southeast. It was identified by review of aerial photography and published maps. Lack of evidence of enhanced permeability and the presence of fine-grained soil cover suggests a low probability for rapid infiltration.

AL ROHDE PARK & BUDDY CALK TRAILHEAD

Geologic Assessment

REFERENCES

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: U.S. Geological Survey Scientific Investigations Map 3366, scale 1:24,000, 20 p. pamphlet.

Nationwide Environmental Title Research, LLC. Historical Aerials, HistoricAerials.com. <https://www.historicaerials.com/viewer>, June 30, 2023.

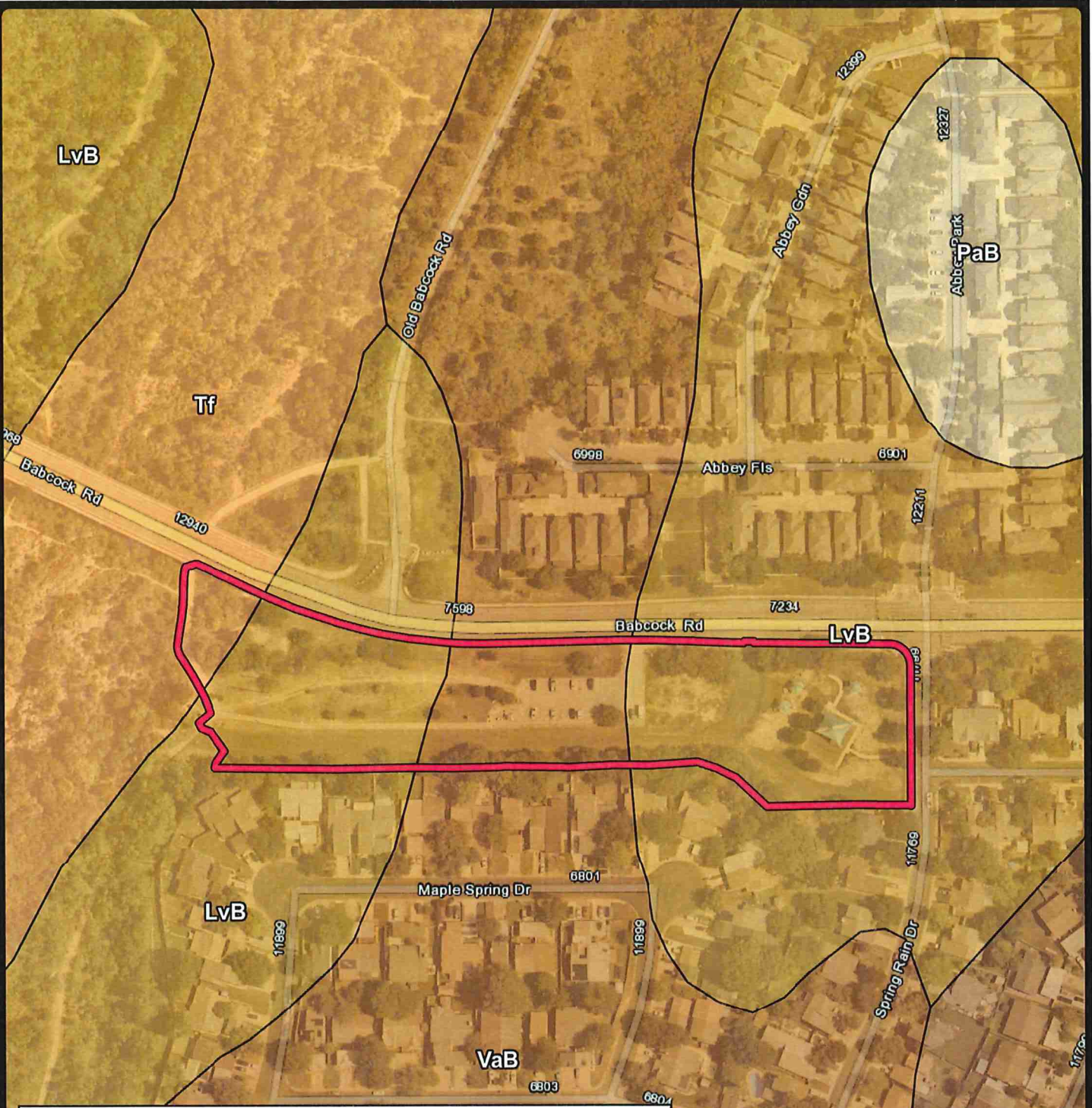
Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov/>, June 30, 2023.

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

Texas Water Development Board, Wells in TWDB Groundwater Database Viewer, <https://www3.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer>, June 30, 2023.

U.S. Geological Survey, National Water Information System: Mapper, <https://maps.waterdata.usgs.gov/mapper/index.html>, June 30, 2023.

ATTACHMENT D
Site Geologic Map(s)



LEGEND

- Project Limits
- LvA - Lewisville silty clay, 0 to 1 percent slopes
- LvB - Lewisville silty clay, 1 to 3 percent slopes
- PaB - Patrick soils, 1 to 3 percent slopes, rarely flooded
- Tf - Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded
- VaB - Sunev loam, 1 to 3 percent slopes

N
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A

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FEET
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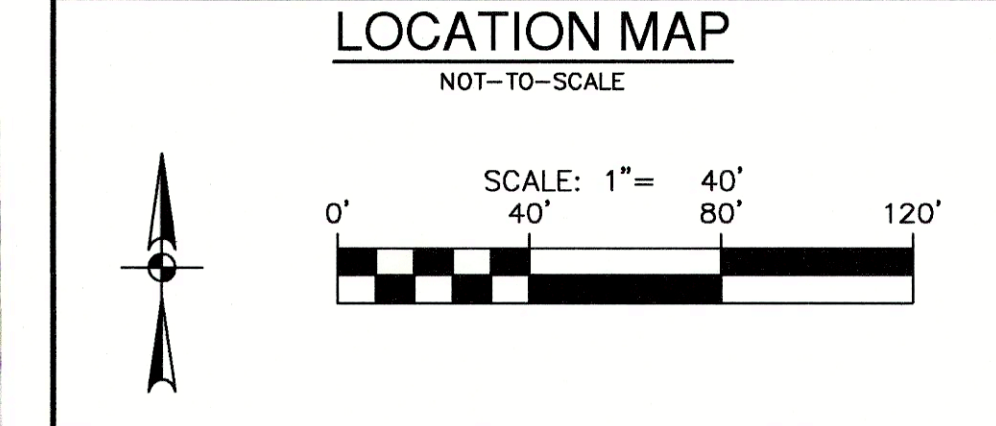
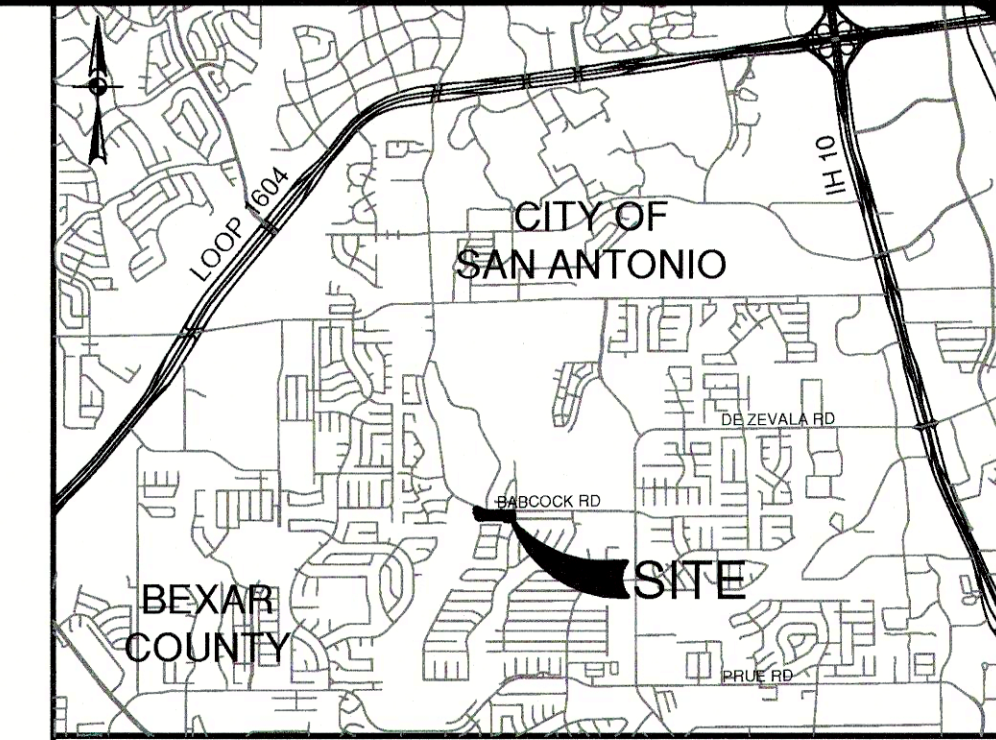
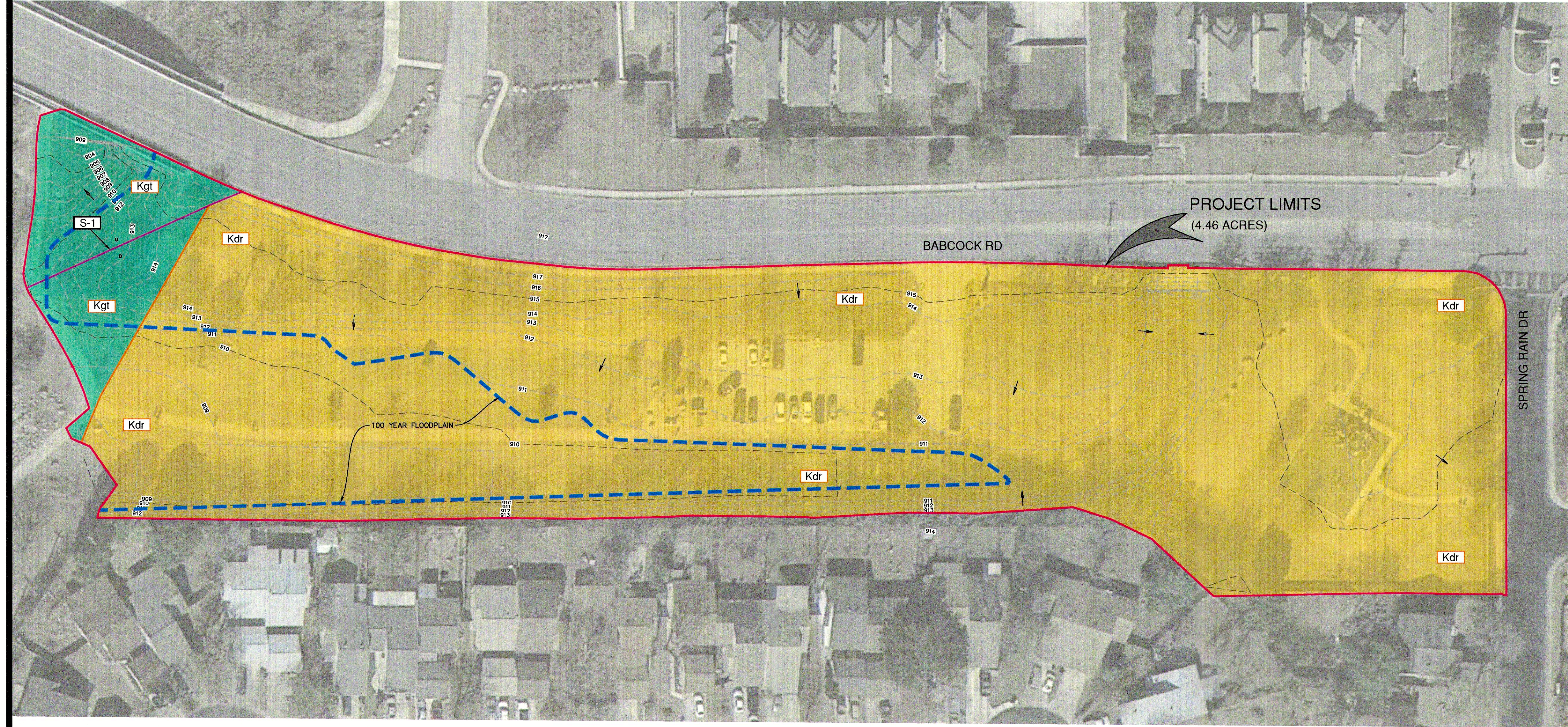
JOB NO.	8494-04
DATE	Jul 2023
DESIGNER	HS
CHECKED	HDJ
SHEET	ATTACHMENT D

**AL ROHDE PARK &
BUDDY CALK TRAILHEAD
BEXAR COUNTY, TEXAS
SITE SOILS MAP**

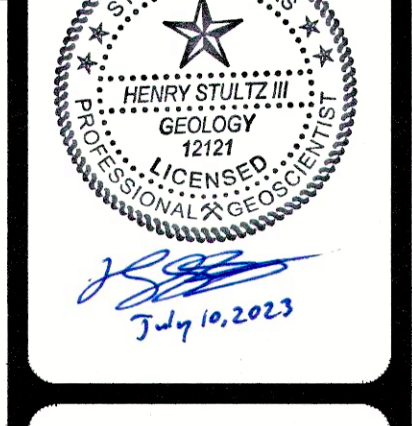
**Pape-Dawson
ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

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NO.	REVISION	DATE



LEGEND	
—	PROJECT LIMITS
- - - - -	EXISTING CONTOUR LINE
- - - - -	100 YEAR FLOODPLAIN
—	STREAM
GEOLOGIC FORMATIONS	
Qal	ALLUVIUM
Kef	EAGLE FORD
Kbu	BUDA
Kdr	DEL RIO
Kgt	GEORGETOWN
Kep	PERSON
KeK	KAINER
Kgr	GLEN ROSE
SYMBOLS AND LINES	
S-1	POTENTIAL RECHARGE FEATURE
- - - - -	CONTACT, LOCATED APPROXIMATELY
- - - - -	CONTACT, INFERRED
- - - - -	FAULT, LOCATED APPROXIMATELY (D, DOWNTHROWN SIDE; U, UPTHROWN SIDE)
- - - - -	FAULT, EXTRAPOLATED
- - - - -	FAULT, INFERRED
∠	STRIKE AND DIP OF BEDDING
∠	STRIKE AND DIP OF JOINTS
∠	STRIKE OF VERTICAL JOINTS
○	CAVE
○	SOLUTION CAVITY
○	SOLUTION ENLARGED FRACTURE
○	SWALLOW HOLE
○	SINKHOLE
○	NON-KARST CLOSED DEPRESSION
○	ZONE
○	OTHER NATURAL BEDROCK FEATURES
○	SPRING/SEEP
○	MAN-MADE FEATURE IN BEDROCK
○	WATER WELL
○	SANITARY SEWER LINE
○	STORM DRAIN LINE

NOTE: THE GEOSCIENTIST SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR PURPOSES OF GEOLOGIC INFORMATION. ALL OTHER INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SIGNED AND SEALED CIVIL ENGINEERING DRAWINGS.

NOTE: THE RECHARGE ZONE BOUNDARY IS NOT WITHIN THE AREA SHOWN ON THIS SHEET. THE SITE IS LOCATED ENTIRELY WITHIN THE RECHARGE ZONE.

PAPE-DAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2800 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #470 | TEPG FIRM REGISTRATION #59351

AL ROHDE PARK & BUDDY CALK TRAILHEAD
 CITY OF SAN ANTONIO, TEXAS
 WATER POLLUTION ABATEMENT PLAN
 SITE GEOLOGIC MAP

JOB NO.	8494-04
DATE	JULY 2023
DESIGNER	HS
CHECKED_HDJ	DRAWN HS
SHEET	1 OF 1

ATTACHMENT D

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE UNLESS OTHERWISE NOTED. Imagery © 2016, CAPOOL/Digital Globe, Terra Orbital/Imagery Program, USA Farm Service Agency.

**MODIFICATION OF A
PREVIOUSLY APPROVED
WATER POLLUTION
ABATEMENT PLAN (TCEQ-
0590)**

Modification of a Previously Approved Plan

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), 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.

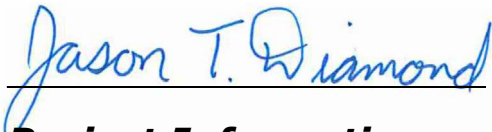
Signature

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 request for a **Modification of a Previously Approved Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Jason T. Diamond, P.E.

Date: 08/23/2023

Signature of Customer/Agent:



Project Information

1. Current Regulated Entity Name: Leon Creek Greenway - Al Rohde Park & Buddy Calk Trailhead

Original Regulated Entity Name: Leon Creek Greenway, Segment 1

Regulated Entity Number(s) (RN): 105489553

Edwards Aquifer Protection Program ID Number(s): 13-08040101

The applicant has not changed and the Customer Number (CN) is: 600130652

The applicant or Regulated Entity has changed. A new Core Data Form has been provided.

2. **Attachment A: Original Approval Letter and Approved Modification Letters.** A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):
- 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;
 - 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;
 - Development of land previously identified as undeveloped in the original water pollution abatement plan;
 - Physical modification of the approved organized sewage collection system;
 - Physical modification of the approved underground storage tank system;
 - Physical modification of the approved aboveground storage tank system.
4. Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

<i>WPAP Modification</i>	<i>Approved Project</i>	<i>Proposed Modification</i>
<i>Summary</i>		
Acres	<u>392.67(100 ac regulated)</u>	<u>4.46 of 24.707</u>
Type of Development	<u>Commercial</u>	<u>Parks</u>
Number of Residential Lots	<u>N/A</u>	<u>N/A</u>
Impervious Cover (acres)	<u>1.8</u>	<u>0.255</u>
Impervious Cover (%)	<u>1.8</u>	<u>1.03</u>
Permanent BMPs	<u>VFS</u>	<u>VFS</u>
Other	_____	_____

<i>SCS Modification</i>	<i>Approved Project</i>	<i>Proposed Modification</i>
<i>Summary</i>		
Linear Feet	_____	_____
Pipe Diameter	_____	_____
Other	_____	_____

<i>AST Modification</i>	<i>Approved Project</i>	<i>Proposed Modification</i>
<i>Summary</i>		
Number of ASTs	_____	_____
Volume of ASTs	_____	_____
Other	_____	_____

<i>UST Modification</i>	<i>Approved Project</i>	<i>Proposed Modification</i>
<i>Summary</i>		
Number of USTs	_____	_____
Volume of USTs	_____	_____
Other	_____	_____

5. **Attachment B: Narrative of Proposed Modification.** A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved, including any previous modifications, and how this proposed modification will change the approved plan.

6. **Attachment C: Current Site Plan of the Approved Project.** A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
 - The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
 - The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
 - The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
 - The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
 - The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.

7. The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.
 - Acreage has not been added to or removed from the approved plan.

8. 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

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 8, 2008

Mr. Brandon Ross
City of San Antonio Parks and Recreation Department
P.O. Box 839966
San Antonio, Texas 78232

Re: Edwards Aquifer, Bexar County
NAME OF PROJECT: Leon Creek Greenway, Segment 1; Located at 12160 Babcock Road; San Antonio, Texas
TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program ID No. 2785.00; Investigation No. 641291; Regulated Entity No. RN105489553

Dear Mr. Ross:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the above-referenced project submitted to the San Antonio Regional Office by Arias & Associates, Inc. on behalf of City of San Antonio Parks and Recreation Department on April 1, 2008. Final review of the WPAP was completed after additional material was received on June 5, 2008, June 23, 2008, and July 3, 2008. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The Leon Creek Greenway project is a two segment project that will develop a hike and bike trail system along the entire length of Leon Creek from Loop 1604 to Bandera Road and will include parking lots and trailhead plazas. The above referenced project is limited to Segment 1, which will extend from Buddy Calk Trailhead (on Babcock Road) to the intersection of Leon Creek and Bandera Road, where the trail will connect to existing trails in O.P. Schnabel Park.

The total site area for Segment 1 is 392.67 acres. Approximately 100 acres of the northern portion of the site is on the Edwards Aquifer Recharge Zone (RZ), 269.61 acres is located on the Edwards Aquifer Transition Zone (TZ) and the remaining 23.49 acres are located off any of the Edwards Aquifer Recharge

REPLY TO: REGION 13 • 14250 JUDSON RD. • SAN ANTONIO, TEXAS 78233-4480 • 210-490-3096 • FAX 210-545-4329

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • Internet address: www.tceq.state.tx.us

Mr. Brandon Ross
July 8, 2008
Page 2

Zone boundaries. The proposed impervious cover for the project is 5.09 acres, of which, 1.8 acres (1.8 percent) is located over the RZ and 2.4 acres (0.89 percent) is located over the TZ.

Since surface water flow over the site flows from RZ to the TZ and does not flow back to the RZ, the regulated area for the project will be the portion of the site located within the RZ.

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 100 acres. It will include a bike and hike trail along Leon Creek, one proposed trailhead (Oxbow Trailhead) and improvements to an existing trailhead (Buddy Calk Trailhead). The impervious cover will be 1.8 acres (1.8 percent). No Project wastewater will be generated by this project.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, natural vegetative filter strips, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 1,469 pounds of TSS generated from the 1.8 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The individual treatment measures will consist of:

1. The filter strips extends along the entire length of the contributing area;
2. The slope does not exceed 10%;
3. The minimum dimension of the filter strips (in the direction of the flow) is not less than 50 feet;
4. The contributing area to the filter strips is relatively flat so that runoff is distributed evenly to the vegetated areas without the use of a level spreader;
5. The vegetated filter strips lie above the elevation of the 2-yr, 3-hr storm of any adjacent drainage.

GEOLOGY

According to the original geologic assessment (GA) included with the application, only the project area (25 ft wide trail; approximately 4.5 acres within a 100 acre site) was surveyed, in which the geologist stated that most of the trail lies on Quaternary alluvial terrace deposits and no sensitive features were discovered.

A second GA was submitted as an update to the originally submitted GA, in which the rest of the site (approximately 95.5 acres) was surveyed and assessed. According to the geologist, the majority of the site surveyed lies on Quaternary alluvial terrace deposits, with outcrops of Buda Limestone with in Leon Creek, and a small outcrop of Edwards Limestone at the northern end of the site. Out of the 27 features identified, only four were assessed as sensitive and were described as: a zone of Faults/Fractures (LC033), a zone of fractured rock outcrops (LC037 and LC052), and a zone of closed depressions (LC057). In the GA report, the geologist stated that LC057 contained two small ponds that were holding water at the time of the site assessment and therefore had minimal infiltration.

The San Antonio Regional Office site assessment, conducted on June 27, 2008, revealed the two ponds included in the zone of closed depressions (feature LC057) appeared to be manmade and were holding water even though no significant rainfall events had not occur in approximately 9 to 10 month. In addition, the majority of the fractures noted within feature LC037 were not enlarged and appeared to be

Mr. Brandon Ross
 July 8, 2008
 Page 3

cemented. The remainder of the site was as described in the GA and no additional features were observed on-site.

SENSITIVE FEATURE

Natural buffers were proposed for the four features assessed as sensitive. Except for feature LC057, no regulated activities (such as construction or soil disturbing activities) will take place within the natural buffers. The size is generally based on the drainage area for each sensitive feature.

The setbacks described in the following table.

Identification No.	Name	Buffer Description
LC033	Zone of Faults/Fractures	Minimum of 50 ft in all directions and 200 ft upstream of the feature.
LC037	Zone of fractured rock outcrops	Minimum of 50 ft in all directions and 200 ft upstream of the feature.
LC052	Zone of fractured rock outcrops	Minimum of 50 ft in all directions and 200 ft upstream of the feature.
LC057	Zone of closed depressions	*Minimum of 50 ft in all directions and 200 ft upstream of the feature.

*Sec Special Condition IV.

SPECIAL CONDITIONS

- I. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.
- II. Before construction can commence, an updated site plan that contains the locations of the sensitive features and their individual buffer areas shall be submitted to the TCEQ, San Antonio Regional Office.
- III. The TCEQ recommends that any asphalt emulsion and/or pavement be placed when rain is not forecast.
- IV. Regulated activities within the natural buffer area of feature LC057 will be allowed because the two man-made ponds adjacent to the proposed trail are holding water and have been documented to hold water at any given time, according to aerial photos taken in different years. This is an indication that the relative infiltration to the Edwards is minimal to none. It was also based on scope of the proposed project. The proposed project is to improve an existing trail. To move the trail would require additional soil disturbance thereby creating a bigger environmental impact than proposed. The regulated activity approved within the buffer area of LC057 is only for the construction of the proposed hike and bike trail.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the application.

Mr. Brandon Ross

July 8, 2008

Page 4

3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

Mr. Brandon Ross

July 8, 2008

Page 5

11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. Zero wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the 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). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden storm water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director 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.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

18. 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 San Antonio Regional Office within 30 days of site completion.
19. The applicant shall be 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

Mr. Brandon Ross

July 8, 2008

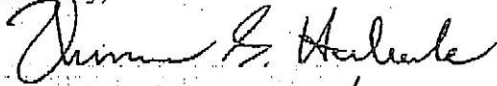
Page 6

transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact Javier Anguiano of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4019.

Sincerely,



Mark R. Vickery, P.G.
Executive Director
Texas Commission on Environmental Quality

MRV/JA/eg

Enclosures: Deed Recordation Affidavit, Form TCEQ-0625
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Sonya C. Alcocer, Arias & Associates, Inc.
Mr. Scott Halty, San Antonio Water System
Ms. Velma Danielson, Edwards Aquifer Authority
Ms. Renee Green, P.E., Bexar County Public Works
TCEQ Central Records, Building F, MC212

ATTACHMENT B

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment B – Narrative of Proposed Modification

The Leon Creek Greenway - Al Rohde Park & Buddy Calk Trailhead Water Pollution Abatement Plan Modification (WPAP MOD) is a modification of the previously approved Leon Creek Greenway, Segment 1 WPAP approved on July 8, 2008 (EAPP ID 13-08040101). The Leon Creek Greenway project was a two-segment project to develop a hike and bike trail system along the length of Leon Creek, including parking lots and trailhead plazas. The total site area for Segment 1 extends over a 392.67-acre from Buddy Calk Trailhead to the intersection of Leon Creek and Bandera Road. Approx. 100 acres of the northern portion was located in the Recharge Zone with 1.8 acres of impervious cover (1.8%). The approved PBMPs are 50-ft natural vegetative strips designed to remove 2,940 lbs of TSS (1,469 required) to comply with the required minimum 80% removal of the increase in TSS.

This Leon Creek Greenway - Al Rohde Park & Buddy Calk Trailhead WPAP MOD proposes limited demolition of existing concrete walkways along the park and trailhead and installation of new shade structures, walkways, a basketball court, agility equipment area, nature area, pedestrian bridge, and tree plantings on a project limits of approximately 4.46 acres (24.707 ac legal limit) within the City of San Antonio, Bexar County, Texas. This site is located at the southwest corner of Babcock Rd and Spring Rain Dr. The project site is developed as a park and trailhead, lies within the Upper Leon Creek watershed, and does contain the 100-year floodplain. There were no naturally occurring sensitive geological features within the project limits identified in the Geologic Assessment.

This application will serve as self-reporting of the existing 0.123-ac of impervious cover for the existing Al Rohde Park, as no TCEQ approved WPAP can be found. As part of this application the increase in impervious cover of this Park and proposed increase in impervious cover for this as well as the Buddy Calk Trailhead will be accounted for treatment in the previously approved treatment capacity of the natural VFS.

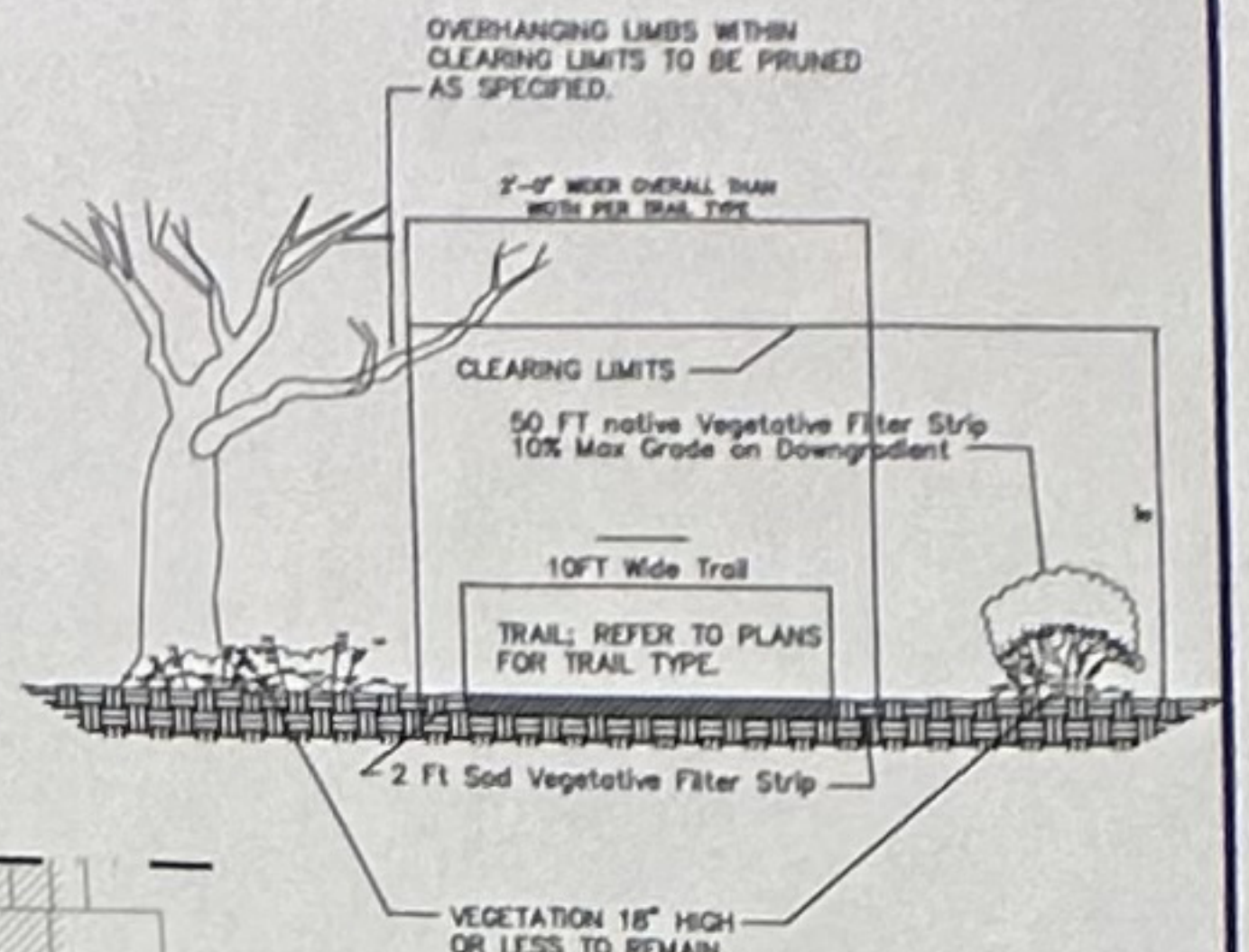
This WPAP MOD proposes demolition, clearing, grading, excavation, construction of walkways, a basketball court, agility equipment area, nature area, and pedestrian bridge for the renovation of an existing park and trailhead. The 0.586 ac of existing trailhead will have minor improvements but will remain. Approximately 0.032 acres of existing impervious cover from the trail and park will be removed, and approximately 0.164 acres of impervious cover is proposed, resulting in a net increase of 0.132 acres of impervious cover. When added to the existing 0.123 ac of impervious cover contributed by the park, the total will be 0.255 ac, or 1.03%, of the 24.707 ac legal limit of the site which will require treatment. The previously approved natural VFS can provide 1,471 lbs of additional treatment capacity (2,940 lbs - 1,469 lbs). The existing VFS will provide compensatory treatment for the 0.255 ac of increased impervious cover, which will contribute 208 lbs of TSS. All PBMPs have been designed in accordance with the Texas Commission on Environmental Quality's (TCEQ) Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in Total Suspended Solids (TSS) from the site. Upon completion of the proposed improvements, there will be 0.841 ac of impervious cover within the park and trailhead. Please see treatment calculations included in the exhibits section of this application.

No wastewater will be produced by these improvements.

ATTACHMENT C

CONSTRUCTION PHASING

1. CONTRACTOR TO INSTALL STORM WATER MANGEMENT CONTROL DEVICES PER T.C.E.Q. REQUIREMENTS.
2. CONTRACTOR TO BEGIN CONSTRUCTION AT SOUTHERNMOST END OF PROJECT. THIS WILL INCLUDE ADD ALTERNATE 1 IF IMPLEMENTED.
3. CONTRACTOR SHALL CONSTRUCT LOW WATER CROSSINGS A-E FROM SOUTH TO NORTH FIRST IF THE FORECAST FOR WEATHER IS DRY, OTHERWISE THE CONTRACTOR SHALL WORK IN AREAS OF GREATER ELEVATION.
4. AT THE END OF CONSTRUCTION CONTRACTOR SHALL REMOVE AND APPROPRIATELY DISPOSE OF ALL STORM WATER CONTROL DEVICES (N.S.P.I.)



THE PEDESTRIAN AND BICYCLE TRAIL IS A LINEAR FEATURE THAT HAS NUMEROUS UPGRADIENT AREAS. IMPERVIOUS COVER IS LESS THAN 20% AND THEREFORE UNCAPTURED STORMWATER WILL OCCUR THROUGHOUT THE SITE.

GRADING ACTIVITIES ARE NOT CONSIDERED TO BE EXTENSIVE ENOUGH TO AFFECT EXISTING SLOPE CONTOURS AND THE PLAN IS SHOWN WITH EXISTING CONTOURS.

THE CONTRACTOR SHALL ONLY DISTURB AREAS OF CONSTRUCTED TRAIL SHOWN ON THE MAP, PLUS 2 FT. OF SHOULDER ON EACH SIDE OF THE TRAIL. AT TRAILHEADS THE CONTRACTOR SHALL NOT DISTURB AREA MORE THAN 4 FT. FROM THE EDGE OF PROPOSED PAVEMENT.

SEEDING SHALL OCCUR IN ALL DISTURBED AREAS ALONG THE PROJECT LIMITS WITH SOD PLACED AT 2 FT. ALONG THE EDGE OF PAVING AS A PERMANENT BMP.

GEOLOGIC FEATURES ARE NOTED ON THE GEOLOGIC EXHIBIT WITH PROPOSED TRAIL ALIGNMENT.

ALL INSPECTION AND MAINTENANCE OF TBMP'S LOCATED OVER THE RECHARGE ZONE SHALL CONFORM TO EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL (RG-348), SECTION 1.4.

DURING CONSTRUCTION OF ASPHALT TRAIL SECTIONS THE CONTRACTOR SHALL REVIEW THE WEATHER FORECAST PRIOR TO PLACING ASPHALT TO PREVENT THE EXPOSURE OF ASPHALT EMULSION TO ANY POTENTIAL RAINFALL EVENT.

CONTRACTOR SHALL PLACE 2 FT. BLOCK SOD ALONG TRAIL - BOTH SIDES THIS WILL PROVIDE A PERMANENT VEGETATIVE FILTER STRIP ALONG WITH NATURAL VEGETATION

SEEDING SHALL OCCUR IN ALL DISTURBED AREAS ALONG THE PROJECT LIMITS WITH SOD PLACED AT 2 FT. ALONG THE EDGE OF PAVING AS A PERMANENT BMP.

STABILIZED CONSTRUCTION EXIT

LEON VISTA TRAILHEAD

PARK POLICE OFFICE EMERGENCY ACCESS LOCATION

TWDB DOCUMENTED WATER WELL 6827910

SEEDING SHALL OCCUR IN ALL DISTURBED AREAS ALONG THE PROJECT LIMITS WITH SOD PLACED AT 2 FT. ALONG THE EDGE OF PAVING AS A PERMANENT BMP.

STABILIZED CONSTRUCTION EXIT

ADD ALTERNATE 1

WETLAND AREA TO BE PROTECTED

KKYX CAVE FEATURE LCO23 50' NON DISTURBANCE AREA AROUND CAVE

NOTE: RECHARGE ZONE DATA FROM TCEQ WEBSITE - EDWARDS AQUIFER MAP VIEWER
www.tceq.state.tx.us/compliance/field_ops/eapp/viewer.html

NOTE: FLOODPLAIN INFORMATION FROM FEMA FLOOD INSURANCE RATE MAP NO. 48029C0244 F, AND 48029C0244 F EFFECTIVE DATE JANUARY 4, 2002

* PROJECT AREA INCLUDES 25 FT AREA SURVEYED BY THE PROJECT GEOLOGIST AND IS INDICATED IN THE LEGEND BY CONCRETE TRAIL AND ASPHALT TRAIL.

NOTE: THE AREA OF THIS PROJECT IS LARGELY WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN AND IS SUBJECT TO FREQUENT INUNDATION. CONTRACTOR IS SOLELY RESPONSIBLE FOR LOSS OR DAMAGE TO EQUIPMENT CAUSED BY STORMWATER.

MATCH LINE THIS SHEET

MATCH LINE STA. 113+50

SOLUTION WIDENED FRACTURE FEATURE LCO14

PAVILION

O.P. SCHNABEL TRAILHEAD

SEEDING SHALL OCCUR IN ALL DISTURBED AREAS ALONG THE PROJECT LIMITS WITH SOD PLACED AT 2 FT. ALONG THE EDGE OF PAVING AS A PERMANENT BMP.

CONTRACTOR SHALL PLACE 2 FT. BLOCK SOD ALONG TRAIL - BOTH SIDES THIS WILL PROVIDE A PERMANENT VEGETATIVE FILTER STRIP ALONG WITH NATURAL VEGETATION

EMERGENCY ACCESS LOCATION NEIGHBORHOOD CONNECTION

LIMITS OF PARKS PROPERTY

LOW WATER CROSSING "A"

LOW WATER CROSSING "B"

LOW WATER CROSSING "C"

LOW WATER CROSSING "D"

LOW WATER CROSSING "E"

LOW WATER CROSSING "F"

LOW WATER CROSSING "G"

LOW WATER CROSSING "H"

LOW WATER CROSSING "I"

LOW WATER CROSSING "J"

LOW WATER CROSSING "K"

LOW WATER CROSSING "L"

LOW WATER CROSSING "M"

LOW WATER CROSSING "N"

LOW WATER CROSSING "O"

LOW WATER CROSSING "P"

LOW WATER CROSSING "Q"

LOW WATER CROSSING "R"

LOW WATER CROSSING "S"

LOW WATER CROSSING "T"

LOW WATER CROSSING "U"

LOW WATER CROSSING "V"

LOW WATER CROSSING "W"

LOW WATER CROSSING "X"

LOW WATER CROSSING "Y"

LOW WATER CROSSING "Z"

LEGEND

- 0.7% DRAINAGE ARROW/ GENERAL SLOPE
- CONCRETE TRAIL * (PROJECT AREA)
- ASPHALT TRAIL * (PROJECT AREA)
- SILT FENCING
- ROCK FILTER DAM
- TWDB TEXAS WATER DEVELOPMENT BOARD
- EDWARDS AQUIFER TRANSITION ZONE
- EDWARDS AQUIFER RECHARGE ZONE

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NO.	DESCRIPTION	DATE	DWN.	CHK.

STATE OF TEXAS
JESS W SWAIM
99204
LICENSED PROFESSIONAL ENGINEER

CLAUNCH & MILLER, INC.
Engineering Consultants
4203 Gardendale, Suite 103 • San Antonio, Texas 78229
(210) 949-1262 • Fax (210) 949-1334 • www.claunchmiller.com

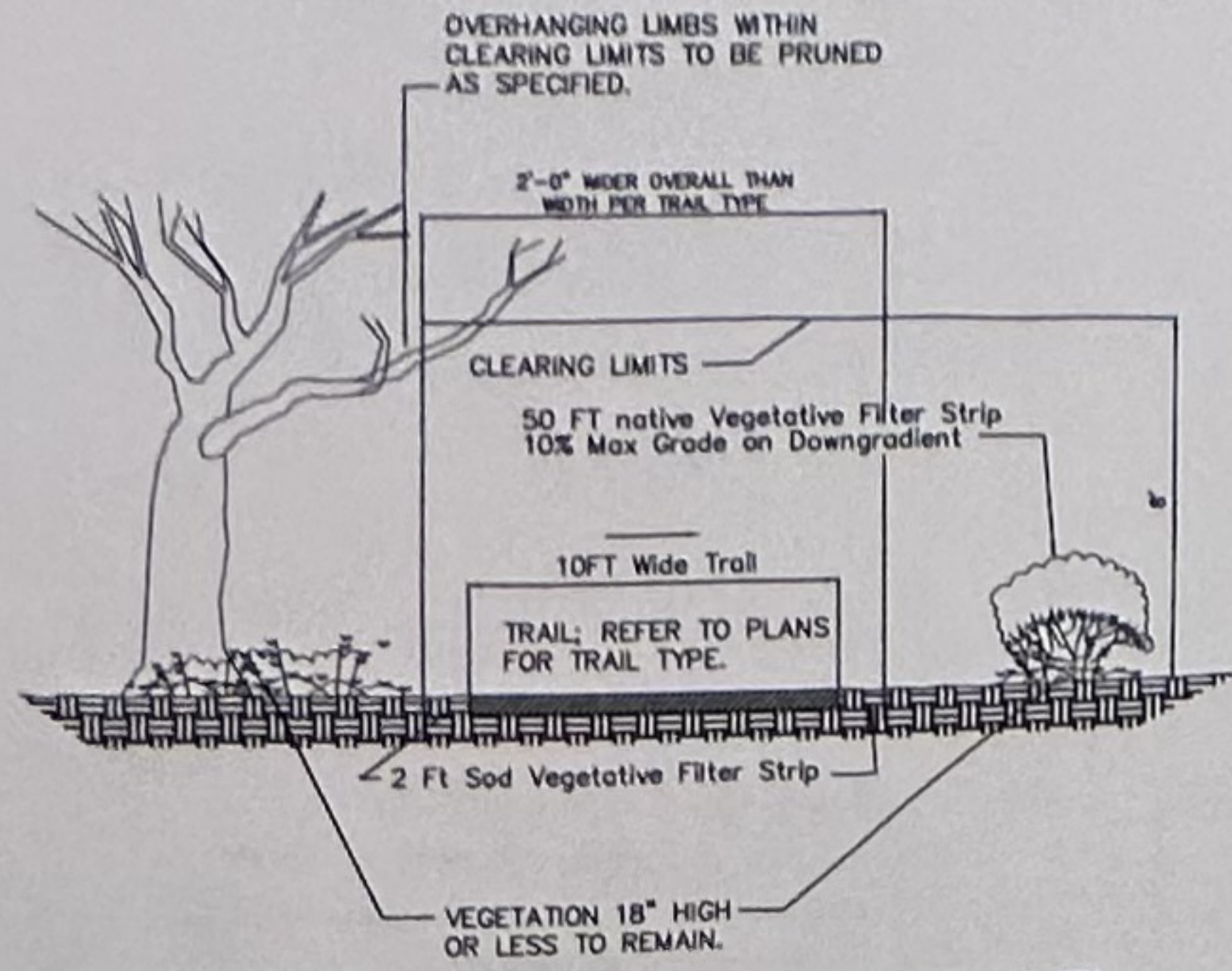
City of San Antonio
Leon Creek
Greenway Development Project - Segment 1

Leon Creek
WPAP Site Layout

Job No.: 07-032
Date: February, 2008
Dwn By: R. Russell
Chkd By: E. Rydell

Scale:
HORIZ: 400'
VERT: N/A

SHEET
1
OF XX



NOTE: DETAIL IS TYPICAL FOR ALL TRAILS FLUSH AT GRADE OR RAISED. N.T.S.

CONSTRUCTION PHASING

1. CONTRACTOR TO INSTALL STORM WATER MANGEMENT CONTROL DEVICES PER T.C.E.Q. REQUIREMENTS.
2. CONTRACTOR TO BEGIN CONSTRUCTION AT SOUTHERNMOST END OF PROJECT. THIS WILL INCLUDE ADD ALTERNATE I IF IMPLEMENTED.
3. CONTRACTOR SHALL CONSTRUCT LOW WATER CROSSINGS A-E FROM SOUTH TO NORTH FIRST IF THE FORECAST FOR WEATHER IS DRY, OTHERWISE THE CONTRACTOR SHALL WORK IN AREAS OF GREATER ELEVATION.
4. AT THE END OF CONSTRUCTION CONTRACTOR SHALL REMOVE AND APPROPRIATELY DISPOSE OF ALL STORM WATER CONTROL DEVICES (N.S.P.I.)

TCEQ-0592 (Rev. 3/15/07) Page 1 of 2
Texas Commission on Environmental Quality
Water Pollution Abatement Plan

General Construction Notes
1. Written construction notification must be given to the appropriate TCEQ regional office no later than 48 hours prior to commencement of the regulated activity. Information must include the date on which the regulated activity will commence, the name of the approved plan for the regulated activity, and the name of the prime contractor and the name and telephone number of the contact person.
2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan and the TCEQ letter indicating the specific conditions of the approved plan. During the course of the regulated activities, the contractor is required to keep on-site copies of the approved plan and approved letter.
3. If any sensitive features are encountered during construction, the regulated activities must be immediately suspended. The appropriate TCEQ regional office must be immediately notified. The sensitive feature may not proceed until the TCEQ has reviewed and approved the proposed measures to protect the sensitive feature and the Edwards Aquifer from any potential adverse impacts to water quality.
4. No temporary aboveground flammable and hazardous substance storage tank system is allowed within 100 feet of a domestic, municipal, irrigation, or public water supply well, or other sensitive features.
5. Prior to commencement of construction, all temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. Controls specified in the temporary storm water section of the approved Edwards Aquifer Protection Plan are required during construction. If inspections indicate a control has been used inappropriately, or incorrectly, the contractor must replace or modify the control for site situations. The controls must remain in place until disturbed areas are revegetated and the areas have become permanently stabilized.
6. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize adverse impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
7. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reached by 50%. A permanent stake must be provided that can indicate when the sediment occupies 50% of the basin volume.
8. 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 by wind).
9. All spoils (excavated materials) 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. Stabilization measures shall be initiated as soon as practicable in portions of the site where TCEQ-0592 (Rev. 3/15/07) Page 2 of 2 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 ceases is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, as soon as practicable, the contractor shall be required to initiate stabilization measures. Stabilization measures do not have to be initiated on that portion of the site in order experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.
11. The following records shall be maintained and made available to the TCEQ upon request: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; and the dates when stabilization measures are initiated.
12. The holder of any approved Edwards Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

- A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, ditches, 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
2800 S. H. 35, Suite 100
Austin, Texas 78704-5712
Phone (512) 339-2929
Fax (512) 339-3795
San Antonio Regional Office
14250 Julian Road
San Antonio, Texas 78233-4480
Phone (210) 490-3086
Fax (210) 545-4329
- THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.



SEEDING SHALL OCCUR IN ALL DISTURBED AREAS ALONG THE PROJECT LIMITS WITH SOD PLACED AT 2 FT. ALONG THE EDGE OF PAVING AS A PERMANENT BMP.

CONTRACTOR SHALL PLACE 2 FT. BLOCK SOD ALONG TRAIL - BOTH SIDES THIS WILL PROVIDE A PERMANENT VEGETATIVE FILTER STRIP ALONG WITH NATURAL VEGETATION

THE PEDESTRIAN AND BICYCLE TRAIL IS A LINEAR FEATURE THAT HAS NUMEROUS UPGRADIENT AREAS. IMPERVIOUS COVER IS LESS THAN 20% AND THEREFORE UNCAPTURED STORMWATER WILL OCCUR THROUGHOUT THE SITE.

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DURING CONSTRUCTION OF ASPHALT TRAIL SECTIONS THE CONTRACTOR SHALL REVIEW THE WEATHER FORECAST PRIOR TO PLACING ASPHALT TO PREVENT THE EXPOSURE OF ASPHALT EMULSION TO ANY POTENTIAL RAINFALL EVENT.

FOR CONSTRUCTION OF TEMPORARY BMP'S WITHIN THE RECHARGE ZONE THE CONTRACTOR SHALL REFER TO RG-348 SECTION 1.4 ONLY. SEE THE EDWARDS AQUIFER RULES TECHNICAL GUIDANCE ON BEST MANAGEMENT PRACTICES FOR DETAIL.

- LEGEND**
- 5-7% DRAINAGE ARROW/ GENERAL SLOPE
 - CONCRETE TRAIL * (PROJECT AREA)
 - ASPHALT TRAIL * (PROJECT AREA)
 - SILT FENCING
 - ROCK FILTER DAM
 - TWDB TEXAS WATER DEVELOPMENT BOARD
 - EDWARDS AQUIFER TRANSITION ZONE
 - EDWARDS AQUIFER RECHARGE ZONE

NOTE: THE AREA OF THIS PROJECT IS LARGELY WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN AND IS SUBJECT TO FREQUENT INUNDATION. CONTRACTOR IS SOLELY RESPONSIBLE FOR LOSS OR DAMAGE TO EQUIPMENT CAUSED BY STORMWATER.

NOTE: RECHARGE ZONE DATA FROM TCEQ WEBSITE - EDWARDS AQUIFER MAP VIEWER
www.tceq.state.tx.us/compliance/field_ops/capp/viewer.html

NOTE: FLOODPLAIN INFORMATION FROM FEMA FLOOD INSURANCE RATE MAP NO. 48029C0242 F, AND 48029C0244 F - EFFECTIVE DATE JANUARY 4, 2002

* PROJECT AREA INCLUDES 25 FT AREA SURVEYED BY THE PROJECT GEOLOGIST AND IS INDICATED IN THE LEGEND BY CONCRETE TRAIL AND ASPHALT TRAIL.

MK.	DESCRIPTION	DATE	DWN.	CHK.

Jan W. Swaim
6-5-2008

CLAUNCH & MILLER, INC.
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(210) 949-1262 • Fax (210) 949-1334 • www.claunchmiller.com

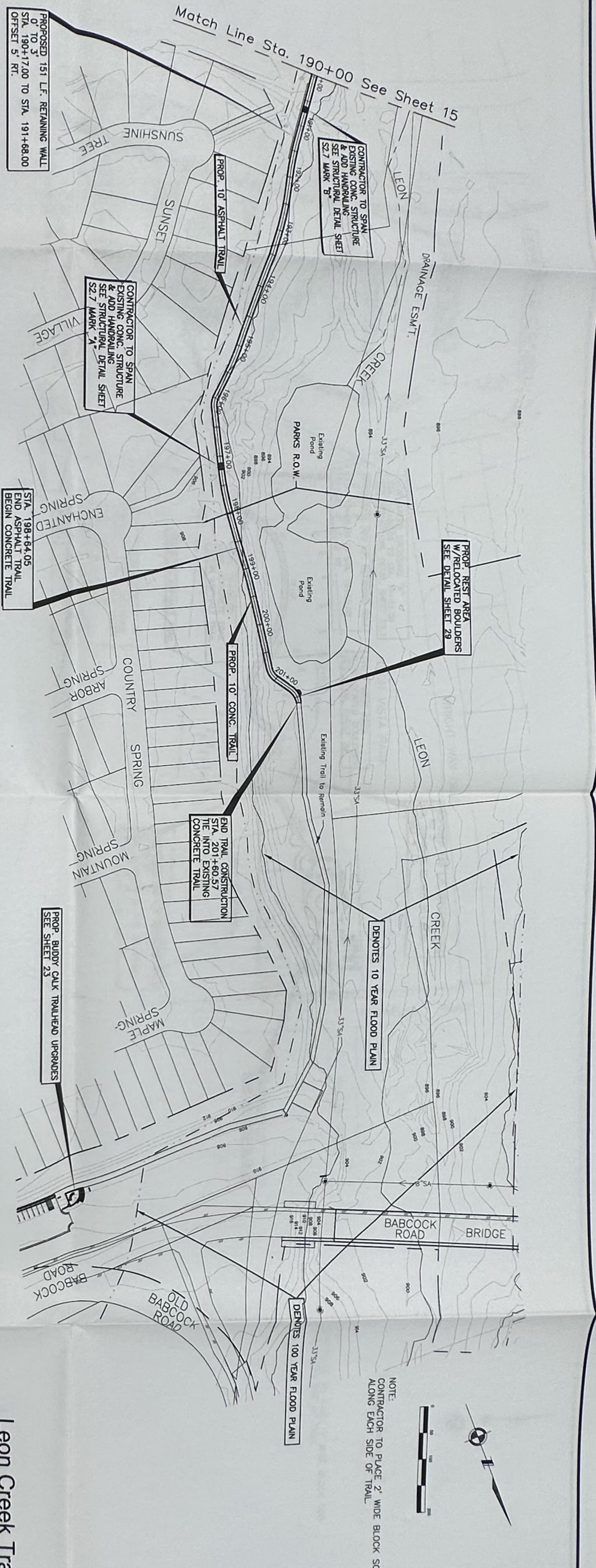
City of San Antonio
Leon Creek
Greenway Development Project - Segment I
Leon Creek
WPAP Site Layout

Job No.: 07-032
Date: February, 2008
Dwn By: R. Russell
Chd By: E. Rydell

Scale:
HORZ: 400'
VERT: N/A

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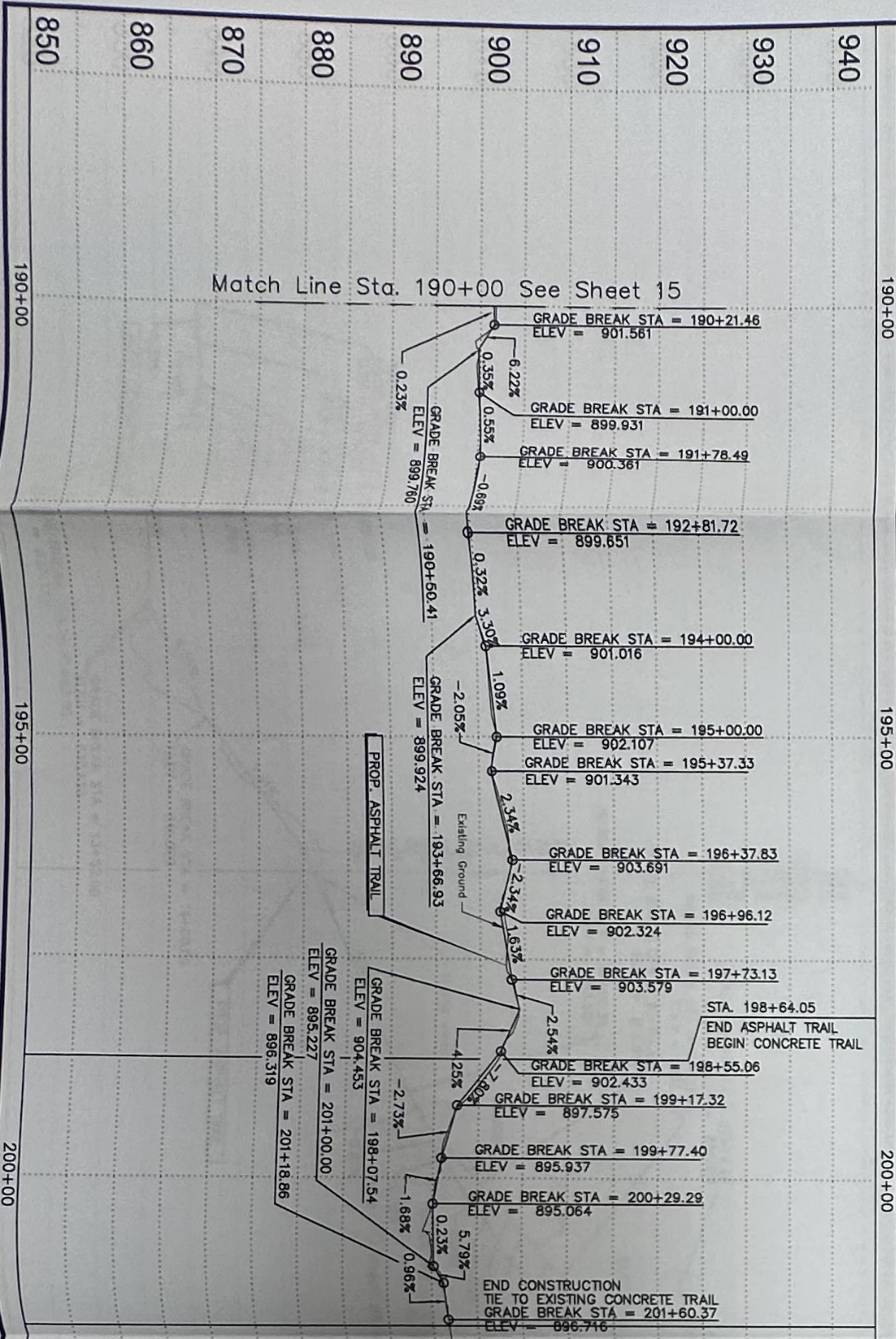


REFER TO SHEET 5 FOR ALIGNMENT DATA. FINAL TRAIL LOCATION MAY BE ADJUSTED IN THE FIELD. THE ALIGNMENT SHALL BE STAKED AT 50' INTERVALS AND PROVIDED PRIOR TO ANY EASING OR CONNECTION TO PAVEMENT. EASING OR CONNECTION SHALL BE CONNECTED WITH SMOOTH PAD.

POWER POLE
MAILBOX
CITY WIRE
WATER VALVE
OVERHEAD ELECTRIC
FIRE HYDRANT
WATER METER
GAS VALVE
CHAIN LINK FENCE
WOOD FENCE

NOTE:
CONTRACTOR TO PLACE 2' WIDE BLOCK SOD ALONG EACH SIDE OF TRAIL.

LEGEND:
 TREE W/DRP LINE
 TELEPHONE MANHOLE
 EXIST. SANITARY MANHOLE
 EXIST. STORM MANHOLE
 CABLE TV
 EXIST. WATER MAIN
 GAS MAIN
 SANITARY SEWER
 STORM SEWER
 ELECTRIC CABLE
 NO SEPARATE PAY ITEM
 PROP. CONCRETE TRAIL
 PROP. ASPHALT TRAIL



Match Line Sta. 190+00 See Sheet 15

Match Line Sta. 190+00 See Sheet 15

PROPOSED 151 LF. RETAINING WALL OF STA. 191+17.00 TO STA. 191+68.00 OFFSET 5' RT.

CONTRACTOR TO SPAN EXISTING CONC. STRUCTURE & ADD HANDRAILING SEE STRUCTURAL DETAIL SHEET S27 MARK 'B'

CONTRACTOR TO SPAN EXISTING CONC. STRUCTURE & ADD HANDRAILING SEE STRUCTURAL DETAIL SHEET S27 MARK 'A'

STA. 198+64.05 END ASPHALT TRAIL BEGIN CONCRETE TRAIL

END TRAIL CONSTRUCTION SET INTO EXISTING CONCRETE TRAIL

PROPOSED BUDDY GALK TRAILHEAD UPGRADES SEE SHEET 23

DENOTES 10 YEAR FLOOD PLAN

DENOTES 100 YEAR FLOOD PLAN

NOTE:
CONTRACTOR TO PLACE 2' WIDE BLOCK SOD ALONG EACH SIDE OF TRAIL.

THIS PROFILE IS TO BE USED AS A GUIDELINE FOR THE CONSTRUCTION OF THIS PROJECT. PLEASE SEE CROSS SECTION DETAIL (SHEET 2) FOR LIMITATIONS OF THIS PROFILE. THE PROFILE IS TO BE USED TO MINIMIZE CUT AND FILL AND GRADE WILL BE REQUIRED TO MINIMIZE CUT AND FILL.

Leon Creek Trail

TCQ-R13
REV 01/2008
SAN ANTONIO

CLAINCH & MILLER INC.
Engineering Consultants
1201 Guadalupe, Suite 101, San Antonio, Texas 78203
(210) 589-5252 • Fax: (210) 589-5254 • www.clainchmiller.com

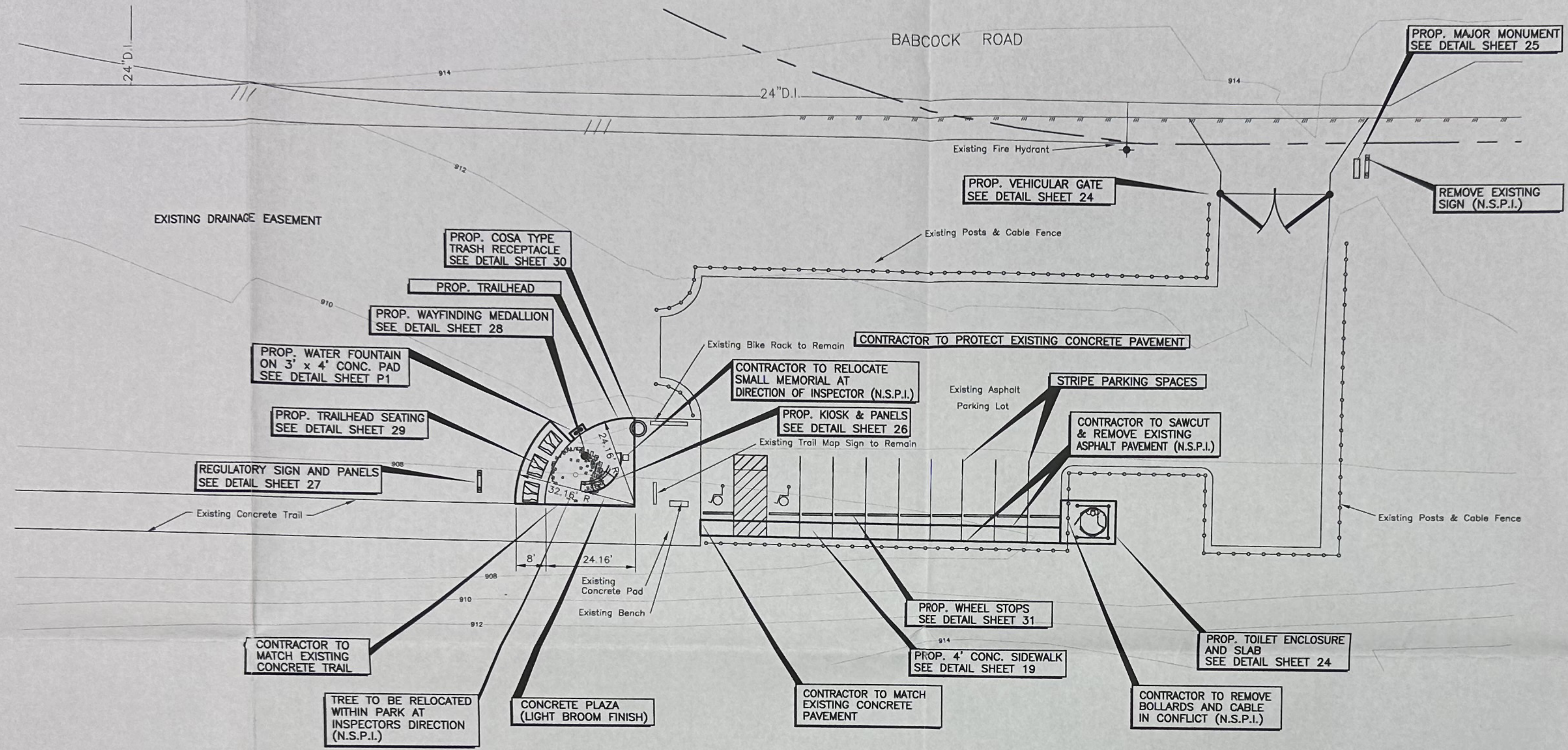
City of San Antonio
Leon Creek
Greenway Development Project - Segment 1

Leon Creek
Sta. 190+00 to Sta. 201+67.39

Job No. 07-032
Date: February, 2008
Drawn By: R. Russell
Checked By: E. Ryndel

Scale: HORIZ : 1"=100'
VERT : 1"=10'

SHEET 16 OF 25



Buddy Calk Park Major Trailhead

POWER POLE
MAILBOX
GUY WIRE
WATER VALVE
OVERHEAD ELECTRIC
FIRE HYDRANT
WATER METER
GAS VALVE
CHAIN LINK FENCE
WOOD FENCE
TREE W/DRIP LINE
TELEPHONE MANHOLE
EXIST. SANITARY MANHOLE
EXIST. STORM MANHOLE
CABLE TV
EXIST. WATER MAIN
GAS MAIN
SANITARY SEWER
STORM SEWER
ELECTRIC CABLE
TELEPHONE CABLE
NO SEPARATE PAY ITEM
BOULDERS FROM CREEK

REFER TO SHEET 5 OF FOR ALIGNMENT DATA
FINAL TRAIL LOCATION MAY BE ADJUSTED IN THE FIELD. THE ALIGNMENT SHALL BE STAKED AT 50' INCREMENTS AND APPROVED PRIOR TO ANY CLEARING OR CONSTRUCTION. ALL POINTS SHALL BE CONNECTED WITH SMOOTH RADII.

REFER TO SHEETS E1-E5 & P1-P2 FOR WATER AND ELECTRIC DETAILS

REFER TO SHEETS 24-35 FOR TRAILHEAD DETAILS.

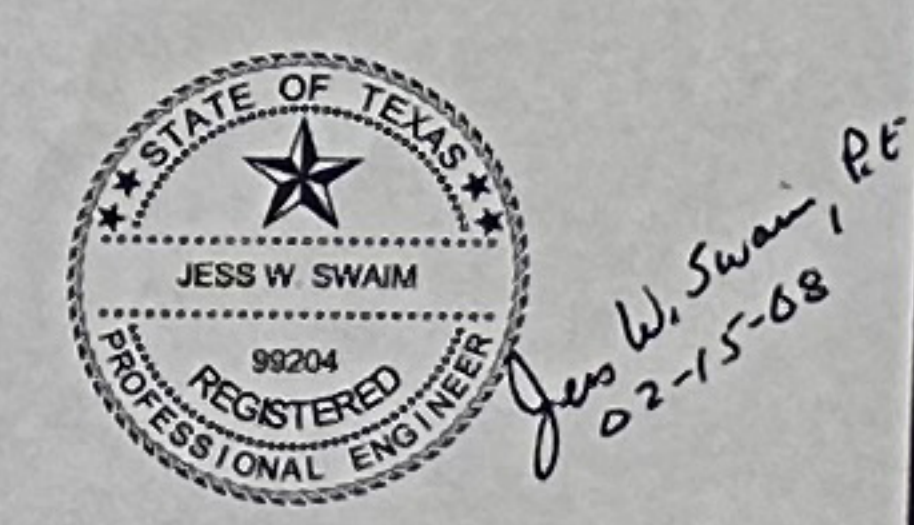
CONTRACTOR TO LOCATE UTILITIES IN CONSTRUCTION AREA PRIOR TO CONSTRUCTION ACTIVITY. ANY DAMAGE TO EXISTING UTILITIES WILL BE AT THE CONTRACTOR'S EXPENSE.

CONTRACTOR TO SEED DISTURBED CONSTRUCTION AREA OUTSIDE OF PAVEMENT

REFER TO SHEETS LP1.01 - LP1.03 FOR LANDSCAPING DETAILS

TCEQ-R73
APR 01 2008
SAN ANTONIO

NO.	DATE	BY	CHK.



CLAUNCH & MILLER, INC.
Engineering Consultants
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City of San Antonio
Leon Creek
Greenway Development Project - Segment I
Leon Creek
Buddy Calk Park Trailhead

Job No.: 07-032	Scale: HORZ : 20' VERT : 4'	SHEET 23 OF 35
Date: February, 2008		
Dwn By: R. Russell		
Chkd By: E. Rydell		

**WATER POLLUTION
ABATEMENT PLAN
APPLICATION FORM (TCEQ-
0584)**

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.

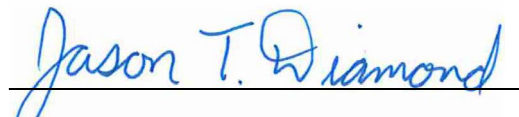
Signature

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: Jason T. Diamond, P.E.

Date: 08/23/2023

Signature of Customer/Agent:



Regulated Entity Name: Leon Creek Greenway - Al Rohde Park & Buddy Calk Trailhead

Regulated Entity Information

1. The type of project is:

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

2. Total site acreage (size of property): 4.46 of 24.707

3. Estimated projected population: N/A

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

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops		÷ 43,560 =	
Parking		÷ 43,560 =	
Other paved surfaces	11,106	÷ 43,560 =	0.255
Total Impervious Cover	11,106	÷ 43,560 =	0.255

Total Impervious Cover $0.255 \div$ **Total Acreage** $24.707 \times 100 = 1.03\%$ **Impervious Cover**

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

For Road Projects Only

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

7. Type of project:
 - TXDOT road project.
 - County road or roads built to county specifications.
 - City thoroughfare or roads to be dedicated to a municipality.
 - Street or road providing access to private driveways.
8. Type of pavement or road surface to be used:
 - Concrete
 - Asphaltic concrete pavement
 - Other: _____
9. Length of Right of Way (R.O.W.): _____ feet.
 Width of R.O.W.: _____ feet.
 $L \times W =$ _____ $\text{Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} =$ _____ acres.
10. Length of pavement area: _____ feet.
 Width of pavement area: _____ feet.
 $L \times W =$ _____ $\text{Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} =$ _____ acres.
 Pavement area _____ acres \div R.O.W. area _____ acres $\times 100 =$ _____ % impervious cover.
11. A rest stop will be included in this project.
 A rest stop will not be included in this project.

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

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

15. Wastewater will be disposed of by:

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

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

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

- Sewage Collection System (Sewer Lines):

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

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

The SCS was previously submitted on _____.

The SCS was submitted with this application.

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

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

- Existing.
 Proposed.

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = 40'.

18. 100-year floodplain boundaries:

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

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

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): DFIRM (Digital Flood Insurance Rate Map for Bexar County, Texas and Incorporated Areas) Panel No. 48029C0210G, Dated 09/29/2010

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

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

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

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

- The wells are not in use and have been properly abandoned.
 The wells are not in use and will be properly abandoned.
 The wells are in use and comply with 16 TAC §76.

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

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

- All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
 No sensitive geologic or manmade features were identified in the Geologic Assessment.

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

Administrative Information

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

ATTACHMENT A

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment A – Factors Affecting Water Quality

Potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the site during construction include:

- Soil erosion due to the clearing of the site;
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings;
- Hydrocarbons from asphalt paving operations;
- Miscellaneous trash and litter from construction workers and material wrappings;
- Concrete truck washout.
- Potential overflow/spills from portable toilets

Potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the site after development include:

- Oil, grease, fuel and hydraulic fluid contamination from vehicle drippings;
- Dirt and dust which may fall off vehicles; and
- Miscellaneous trash and litter.

ATTACHMENT B

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment B – Volume and Character of Stormwater

Stormwater runoff will increase as a result of this development. For a 25-year storm event, the overall project will generate approximately 28 cfs. The runoff coefficient for the site changes from approximately 0.24 before development to 0.26 after development. Values are based on the Rational Method using runoff coefficients per the City of San Antonio Unified Development Code.

**TEMPORARY STORMWATER
SECTION (TCEQ-0602)**

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

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

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

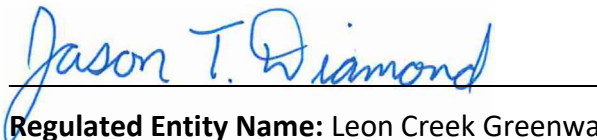
Signature

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

Print Name of Customer/Agent: Jason T. Diamond, P.E.

Date: 08/23/2023

Signature of Customer/Agent:



Regulated Entity Name: Leon Creek Greenway - Al Rohde Park & Buddy Calk Trailhead

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: Construction Staging Area

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: Leon Creek

Temporary Best Management Practices (TBMPs)

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

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

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

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

Soil Stabilization Practices

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

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

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

Administrative Information

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

ATTACHMENT A

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment A – Spill Response Actions

In the event of an accidental leak or spill:

- Spill must be contained and cleaned up immediately.
- Spills will not be merely buried or washed with water.
- Contractor shall take action to contain spill. Contractor may use sand or other absorbent material stockpiled on site to absorb spill. Absorbent material should be spread over the spill area to absorb the spilled product.
- In the event of an uncontained discharge the contractor shall utilize onsite equipment to construct berms downgradient of the spill with sand or other absorbent material to contain and absorb the spilled product.
- Spill containment/absorbent materials along with impacted media must be collected and stored in such a way so as not to continue to affect additional media (soil/water). Once the spill has been contained, collected material should be placed on poly or plastic sheeting until removed from the site. The impacted media and cleanup materials should be covered with plastic sheeting and the edges weighed down with paving bricks or other similarly dense objects as the material is being accumulated. This will prevent the impacted media and cleanup materials from becoming airborne in windy conditions or impacting runoff during a rain event. The stockpiled materials should not be located within an area of concentrated runoff such as along a curb line or within a swale.
- Contaminated soils and cleanup materials will be sampled for waste characterization. When the analysis results are known the contaminated soils and cleanup materials will be removed from the site and disposed in a permitted landfill in accordance with applicable regulations.
- The contractor will be required to notify the owner, who will in turn contact TCEQ to notify them in the event of a significant hazardous/reportable quantity spill. Additional notifications as required by the type and amount of spill will be conducted by owner or owner's representative.

In the event of an accidental significant or hazardous spill:

The contractor will be required to report significant or hazardous spills in reportable quantities to:

- 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. https://www.tceq.texas.gov/response/spills/spill_rq.html
- For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

- Notification should first be made by telephone and followed up with a written report.
- The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
- Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.
- Contaminated soils will be sampled for waste characterization. When the analysis results are known the contaminated soils will be removed from the site and disposed in a permitted landfill in accordance with applicable regulations.

Additional guidance can be obtained from TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) Section 1.4.16. Contractor shall review this section.

ATTACHMENT B

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan

Attachment B – Potential Sources of Contamination

Other potential sources of contamination during construction include:

- | | | |
|----------------------|---|--|
| Potential Source | ● | Asphalt products used on this project. |
| Preventative Measure | ■ | 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 a forecasted rain. |
| Potential Source | ● | Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle dripping. |
| Preventative Measure | ■ | 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. |
| Potential Source | ● | 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 Measure | ■ | Contractor to incorporate into 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 materials and wastes 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 accessible. |
| Potential Source | ● | Miscellaneous trash and litter from construction workers and material wrappings. |
| Preventive Measure | ■ | Trash containers will be placed throughout the site to encourage proper trash disposal. |
| Potential Source | ● | Construction debris. |
| Preventive Measure | ■ | Construction debris will be monitored daily by contractor. Debris will be collected weekly and placed in disposal bins. Situations requiring immediate attention will be addressed on a case by case basis. |

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan

- | | | |
|----------------------|---|---|
| Potential Source | ● | Spills/Overflow of waste from portable toilets |
| Preventative Measure | ■ | 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. |

ATTACHMENT C

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment C – Sequence of Major Activities

The sequence of major activities which disturb soil during construction on this site will be divided into two stages. The first is site preparation that will include installation of TBMPs, clearing and grubbing of vegetation where applicable. This will disturb approximately 4.46 acres. The second is construction that will include demolition of existing pavement, construction of new pavement areas, shade structures, pedestrian bridge, landscaping and site cleanup. This will disturb approximately 4.46 acres.

ATTACHMENT D

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment D – Temporary Best Management Practices and Measures

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.

No upgradient water will cross the site. All TBMPs are adequate for the drainage areas they serve.

- b. 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 preparation, which is the initiation of all activity on the project, 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: (1) erection of silt fences along the downgradient boundary of construction activities for temporary erosion and sedimentation controls, (2) installation of rock berms with silt fencing downgradient from areas of concentrated stormwater flow for temporary erosion control, (3) Installation of gravel bags and drain inlet protection at inlets and downgradient areas of construction activities for sediment control (4) installation of stabilized construction entrance/exit(s) to reduce the dispersion of sediment from the site, and (5) installation of construction staging area(s).

Prior to the initiation of construction, all previously installed control measures will be repaired or reestablished for their designed or intended purpose. This work, which is the remainder of all activity on the project, may also disturb additional soil. The construction contractor will be responsible for the installation of all remaining on-site control measures that includes installation of the concrete truck washout pit(s), as construction phasing warrants.

Temporary measures are intended to provide a method of slowing the flow of runoff from the construction site in order to allow sediment and suspended solids to settle out of the runoff. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features.

- c. 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 slowing the flow of runoff from the construction site in order to allow sediment and suspended solids to settle out of the runoff. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features.

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

- d. 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. This will allow stormwater runoff to continue downgradient to streams or features that may exist downstream of the site.

ATTACHMENT F

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment F – Structural Practices

The following structural measures will be installed prior to the initiation of site preparation activities:

- Erection of silt fences along the downgradient boundary of construction, as located on Exhibit 1 and illustrated in Exhibit 2.
- Installation of gravel bags and drain inlet protection at inlets and downgradient areas of construction activities, as located on Exhibit 1 and illustrated in Exhibit 2.
- Installation of stabilized construction entrance/exit(s) and construction staging area(s), as located on Exhibit 1, and illustrated on Exhibit 2.

The following structural measures will be installed at the initiation of construction activities or as appropriate based on the construction sequencing:

- Installation of concrete truck washout pit(s), as required and located on Exhibit 1 and illustrated on Exhibit 2.

ATTACHMENT G

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment G – Drainage Area Map

No more than ten (10) acres will be disturbed within a common drainage area at one time as the site is comprised of multiple sub-drainage areas. All TBMPs utilized are adequate for the drainage areas served.

ATTACHMENT I

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

INSPECTIONS

Designated and qualified person(s) shall inspect Pollution Control Measures weekly and within 24 hours after a storm event. An inspection report that summarizes the scope of the inspection, names and qualifications of personnel conducting the inspection, date of the inspection, major observations, and actions taken as a result of the inspection shall be recorded and maintained as part of Storm Water TPDES data for a period of three years after the Notice of Termination (NOT) has been filed. A copy of the Inspection Report Form is provided in this Storm Water Pollution Prevention Plan.

As a minimum, the inspector shall observe: (1) significant disturbed areas for evidence of erosion, (2) storage areas for evidence of leakage from the exposed stored materials, (3) structural controls (rock berm outlets, silt fences, drainage swales, etc.) for evidence of failure or excess siltation (over 6 inches deep), (4) vehicle exit point for evidence of off-site sediment tracking, (5) vehicle storage areas for signs of leaking equipment or spills, (6) concrete truck rinse-out pit for signs of potential failure, (7) embankment, spillways, and outlet of sediment basin (where applicable) for erosion damage, and (8) sediment basins (where applicable) for evidence that basin has accumulated 50% of its volume in silt. Deficiencies noted during the inspection will be corrected and documented within seven calendar days following the inspection or before the next anticipated storm event if practicable.

Contractor shall review Sections 1.3 and 1.4 of TCEQ's Technical Guidance Manual for additional BMP inspection and maintenance requirements.

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Pollution Prevention Measure	Inspected in Compliance	Corrective Action Required	
		Description (use additional sheet if necessary)	Date Completed
Best Management Practices			
Natural vegetation buffer strips			
Temporary vegetation			
Permanent vegetation			
Sediment control basin			
Silt fences			
Rock berms			
Gravel filter bags			
Drain inlet protection			
Other structural controls			
Vehicle exits (off-site tracking)			
Material storage areas (leakage)			
Equipment areas (leaks, spills)			
Concrete washout pit (leaks, failure)			
General site cleanliness			
Trash receptacles			
Evidence of Erosion			
Site preparation			
Roadway or parking lot construction			
Utility construction			
Drainage construction			
Building construction			
Major Observations			
Sediment discharges from site			
BMPs requiring maintenance			
BMPs requiring modification			
Additional BMPs required			

_____ A brief statement describing the qualifications of the inspector is included in this SWP3.

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

"I further certify I am an authorized signatory in accordance with the provisions of 30 TAC §305.128."

Inspector's Name

Inspector's Signature

Date

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD Water Pollution Abatement Plan Modification

PROJECT MILESTONE DATES

Date when major site grading activities begin:

<u>Construction Activity</u>	<u>Date</u>
Installation of BMPs	
_____	_____
_____	_____
_____	_____
_____	_____

Dates when construction activities temporarily or permanently cease on all or a portion of the project:

<u>Construction Activity</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

Dates when stabilization measures are initiated:

<u>Stabilization Activity</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
Removal of BMPs	
_____	_____

ATTACHMENT J

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

Interim on-site stabilization measures, which are continuous, will include minimizing soil disturbances by exposing the smallest practical area of land required for the shortest period of time and maximizing use of natural vegetation. As soon as practical, all disturbed soil will be stabilized as per project specifications in accordance with pages 1-35 to 1-60 of TCEQ's Technical Guidance Manual (TGM) RG-348 (2005). Mulching, netting, erosion blankets and seeding are acceptable.

Stabilization measures will be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and except as provided below, will be initiated no more than fourteen (14) days after the construction activity in that portion of the site has temporarily or permanently ceased. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonably arid conditions, stabilization measures must be initiated as soon as practicable.

**PERMANENT STORMWATER
SECTION (TCEQ-0600)**

Permanent Stormwater Section

Texas Commission on Environmental Quality

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

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

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

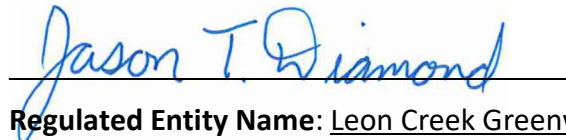
Signature

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

Print Name of Customer/Agent: Jason T. Diamond, P.E.

Date: 08/23/2023

Signature of Customer/Agent



Regulated Entity Name: Leon Creek Greenway - Al Rohde Park & Buddy Calk Trailhead

Permanent Best Management Practices (BMPs)

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

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

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

N/A

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

N/A

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

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

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

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

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

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

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

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

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

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

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

Responsibility for Maintenance of Permanent BMP(s)

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

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

ATTACHMENT B

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment B – BMPs for Upgradient Stormwater

Upgradient water will not flow across the project limits.

The proposed Permanent Best Management Practices (PBMPs) for stormwater treatment are the existing fifty-foot (50') natural VFS (EAPP ID 13-08040101) which will provide compensatory treatment for the 0.255 ac of increased impervious cover, which will contribute 208 lbs of TSS. All PBMPs have been designed in accordance with the Texas Commission on Environmental Quality's (TCEQ) Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in Total Suspended Solids (TSS) from the site.

ATTACHMENT C

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment C – BMPs for On-Site Stormwater

The proposed Permanent Best Management Practices (PBMPs) for stormwater treatment are the existing fifty-foot (50') natural VFS (EAPP ID 13-08040101) which will provide compensatory treatment for the 0.255 ac of increased impervious cover, which will contribute 208 lbs of TSS. All PBMPs have been designed in accordance with the Texas Commission on Environmental Quality's (TCEQ) Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in Total Suspended Solids (TSS) from the site

ATTACHMENT D

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment D – BMPs for Surface Streams

The proposed Permanent Best Management Practices (PBMPs) for stormwater treatment are the existing fifty-foot (50') natural VFS (EAPP ID 13-08040101) which will provide compensatory treatment for the 0.255 ac of increased impervious cover, which will contribute 208 lbs of TSS. All PBMPs have been designed in accordance with the Texas Commission on Environmental Quality's (TCEQ) Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in Total Suspended Solids (TSS) from the site

ATTACHMENT F

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD Water Pollution Abatement Plan Modification

Attachment F – Construction Plans

Please refer to the Exhibits Section of this application for the Water Pollution Abatement Site Plans.

ATTACHMENT G

**Responsibility for Maintenance of
Permanent BMPs and measures After Construction is Complete**

This document has been prepared to provide a description and schedule for the performance of maintenance on permanent pollution abatement measures. Maintenance measures to be performed will be dependant on what permanent pollution abatement measures are incorporated into a project.

It should also be noted that the timing and procedures presented herein and general guidelines, adjustments to the time and procedures may have to be made depending on project specific characteristics as well as other weather related conditions.

Where a project is occupied by the owner, the owner may provide for maintenance with his own skilled forces or contract for recommended maintenance of Permanent Best Management Practices. Where a project is occupied or leased by a tenant, the owner shall require tenants to contract for such maintenance services through a lease agreement, property owners' association covenants, or other binding documents.

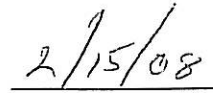
I understand that I am responsible for the Permanent Pollution Abatement Measures included in this project until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property, or ownership is transferred.

I, the owner, have read and understand the requirements of the attached Maintenance Plan and schedule.



Signature

City of San Antonio
Parks and Recreation Department
P.O. Box 839966
San Antonio, TX 78283



Date

**Inspection and Maintenance Schedule
For
Permanent Pollution Abatement Measures**

Recommended Frequency	Task to be Performed													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
After Rainfall										X				
Monthly										X				
Quarterly			X							X				
Yearly										X				

See description of maintenance task to be performed on the following pages. Frequency of maintenance task may vary depending on amount of rainfall and other weather related conditions.

A written record shall be kept of inspection results and maintenance performed.

	Included in this project	
1. Check depth of vegetation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Check depth of Silt deposit in basin	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Removal of debris and trash	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
4. Cut-off valve	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Inlet splash pad	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Underdrain system	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Structural integrity	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8. Discharge Pipe	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9. Drawdown Time	<input type="checkbox"/> Yes	<input type="checkbox"/> No
10. Vegetated Filter Strips	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
11. For Pump Stations	<input type="checkbox"/> Yes	<input type="checkbox"/> No
12. For Pump Stations	<input type="checkbox"/> Yes	<input type="checkbox"/> No
13. For Pump Stations	<input type="checkbox"/> Yes	<input type="checkbox"/> No
14. Visually inspect security fencing for damage or breach	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Maintenance Procedures for Permanent Pollution Abatement Measures

3. Removal of debris and trash. Any filter strip structures should be kept free of debris and litter to reduce floatables being flushed downstream. Accumulated trash and debris shall be raked or collected and disposed of properly. *Written record should be kept of inspection results and maintenance performed.*

10. Vegetative Filter Strip. Check filter strip for signs of concentrated flow and erosion. Areas of filter strip showing signs of erosion shall be repaired by scarifying the eroded area; reshaping, regrading, and placement of block sod in checkerboard pattern over the affected area. *Written record of the inspection findings and corrective actions performed should be made.*

ATTACHMENT I

LEON CREEK GREENWAY - AL ROHDE PARK & BUDDY CALK TRAILHEAD

Water Pollution Abatement Plan Modification

Attachment I – Measures for Minimizing Surface Stream Contamination

Any points where discharge from the site is concentrated and erosive velocities exist will include appropriately sized energy dissipators to reduce velocities to non-erosive levels.

**AGENT AUTHORIZATION FORM
(TCEQ-0599)**

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

I Bill Pennell
Print Name

Assistant Capital Programs Manager
Title - Owner/President/Other

of City of San Antonio Parks and Recreation Department
Corporation/Partnership/Entity Name

have authorized Pape-Dawson Consulting Engineers, LLC
Print Name of Agent/Engineer

of Pape-Dawson Consulting Engineers, 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:

BM RM
Applicant's Signature

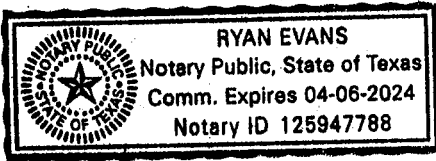
08/17/2023
Date

THE STATE OF TEXAS §

County of BEXAR §

BEFORE ME, the undersigned authority, on this day personally appeared BILL PENNELL, 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 17th day of AUGUST, 2023



[Signature]
NOTARY PUBLIC
RYAN EVANS
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 04-06-2024

**APPLICATION FEE FORM
(TCEQ-0574)**

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Leon Creek Greenway-Al Rohde Park & Buddy Calk Trailhead

Regulated Entity Location: Southwest corner of Babcock Rd and Spring Rain Dr., SATX 78249

Name of Customer: City of San Antonio Parks and Recreation Department

Contact Person: Bill Pennell

Phone: (210) 207-6101

Customer Reference Number (if issued):CN 600130652

Regulated Entity Reference Number (if issued):RN 105489553

Austin Regional Office (3373)

Hays

Travis

Williamson

San Antonio Regional Office (3362)

Bexar

Medina

Uvalde

Comal

Kinney

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

Austin Regional Office

San Antonio Regional Office

Mailed to: TCEQ - Cashier

Overnight Delivery to: TCEQ - Cashier

Revenues Section

12100 Park 35 Circle

Mail Code 214

Building A, 3rd Floor

P.O. Box 13088

Austin, TX 78753

Austin, TX 78711-3088

(512)239-0357

Site Location (Check All That Apply):

Recharge Zone

Contributing Zone

Transition Zone

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	4.46 of 24.707 legal limit Acres	\$ 4,000
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	\$
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: Jason T. Diamond

Date: 08/3/2023

Application Fee Schedule

Texas Commission on Environmental Quality

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

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

Extension of Time Requests

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

**CORE DATA FORM
(TCEQ-10400)**



TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other	
2. Customer Reference Number (if issued)	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number (if issued)
CN 600130652		RN 105489553

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)	
<input type="checkbox"/> New Customer		<input type="checkbox"/> Update to Customer Information	
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)		<input type="checkbox"/> Change in Regulated Entity Ownership	
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:	
City of San Antonio Parks and Recreation Department			
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
11. Type of Customer:	<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Other:	
12. Number of Employees		13. Independently Owned and Operated?	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		<input type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following			
<input type="checkbox"/> Owner		<input type="checkbox"/> Operator	
<input type="checkbox"/> Occupational Licensee		<input type="checkbox"/> Responsible Party	
<input type="checkbox"/> Owner & Operator		<input type="checkbox"/> Voluntary Cleanup Applicant	
<input type="checkbox"/> Other:			
15. Mailing Address:			
	City	State	ZIP
16. Country Mailing Information (if outside USA)		17. E-Mail Address (if applicable)	
18. Telephone Number	19. Extension or Code	20. Fax Number (if applicable)	
() -		() -	

SECTION III: Regulated Entity Information

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

23. Street Address of the Regulated Entity: <i>(No PO Boxes)</i>							
	City		State		ZIP		ZIP + 4
24. County	Bexar						

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	Southwest corner of Babcock Rd and Spring Rain Dr.							
26. Nearest City	San Antonio				State	TX	Nearest ZIP Code	78249
27. Latitude (N) In Decimal:	29.556829			28. Longitude (W) In Decimal:	-98.625267			
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds			
29	33	24.6	98	37	31.0			
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)				
1799			713990					
33. What is the Primary Business of this entity? <i>(Do not repeat the SIC or NAICS description.)</i>								
Recreational walking and bike trails, Parks								
34. Mailing Address:	PO Box 839966							
	City	San Antonio	State	TX	ZIP	78283	ZIP + 4	3966
35. E-Mail Address:	BILL.PENNEL@SANANTONIO.GOV							
36. Telephone Number	37. Extension or Code			38. Fax Number <i>(if applicable)</i>				
(210) 207-6101				() -				

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

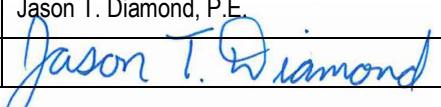
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source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

SECTION IV: Preparer Information

40. Name:	Jean Autrey, P.E., CESSWI		41. Title:	Project Manager
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
(210) 375-9000	2604	(210) 375-9010	jautrey@pape-dawson.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:	Pape-Dawson Engineers, Inc.	Job Title:	Vice President
Name <i>(In Print)</i> :	Jason T. Diamond, P.E.	Phone:	(210) 375- 9000
Signature:		Date:	08/23/2023

POLLUTANT LOAD AND REMOVAL CALCULATIONS

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor
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 equation

1. The Required Load Reduction for the total project: Calculations from RG-348

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where: $L_{M \text{ TOTAL PROJECT}}$ = Required TSS removal resulting from the proposed
 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 = **Bexar**
Total project area included in plan * = **4.46** acres
Predevelopment impervious area within the limits of the plan * = **0.586** acres
Total post-development impervious area within the limits of the plan * = **0.841** acres
Total post-development impervious cover fraction * = **0.19**
 P = **30** inches

$L_{M \text{ TOTAL PROJECT}}$ = **208** lbs.

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

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

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

Drainage Basin/Outfall Area No. = **Trails**
Total drainage basin/outfall area = **100.00** acres
Predevelopment impervious area within drainage basin/outfall area = **0.00** acres
Post-development impervious area within drainage basin/outfall area = **1.80** acres
Post-development impervious fraction within drainage basin/outfall area = **0.02**
 $L_{M \text{ THIS BASIN}}$ = **1469** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Vegetated Filter Strips**
Removal efficiency = **85** percent

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

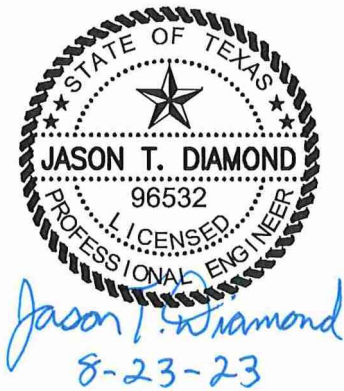
RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

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

A_C = **100.00** acres
 A_i = **1.80** acres
 A_p = **98.20** acres
 L_R = **2940** lbs

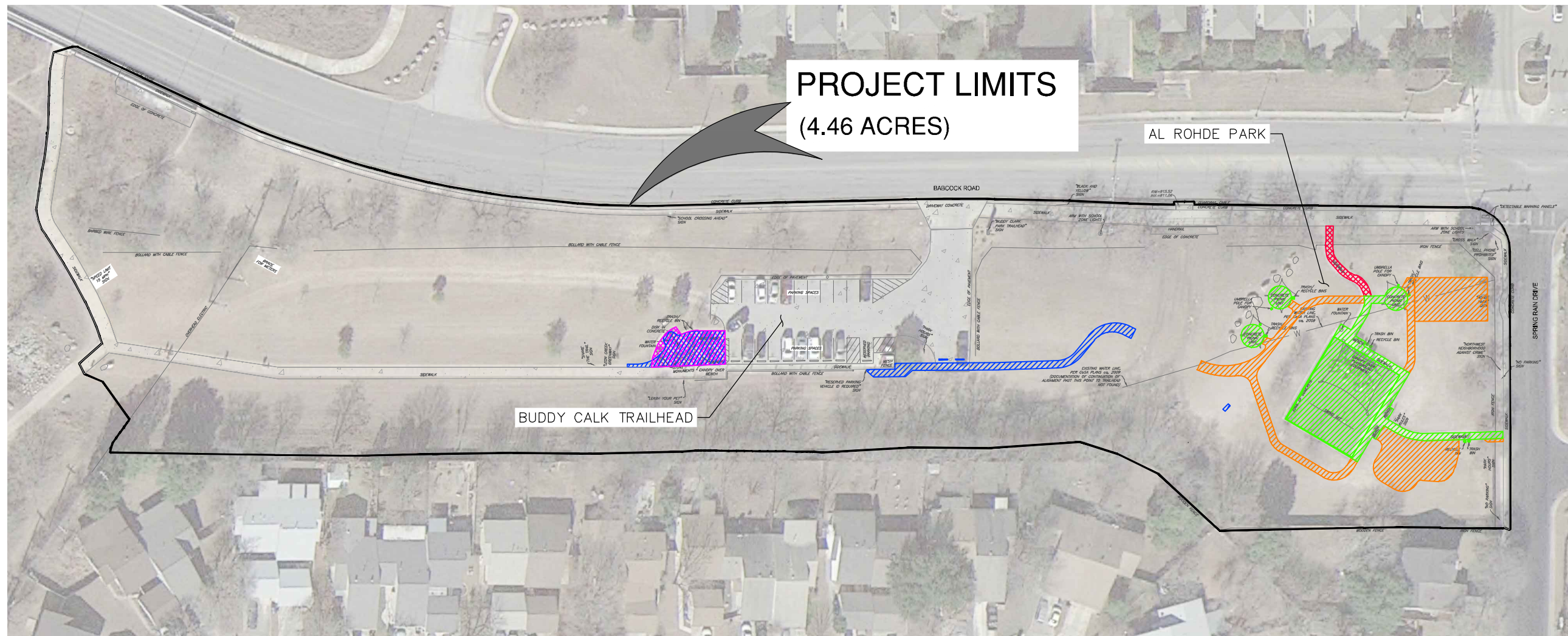
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M \text{ THIS BASIN}}$ = **2940** lbs.
 F = **1.00**

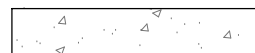


EXHIBITS

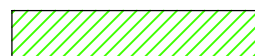
AL ROHDE PARK & BUDDY CALK TRAIL
CITY OF SAN ANTONIO, TEXAS
IMPERVIOUS COVER EXHIBIT



LEGEND



EXISTING IMPERVIOUS COVER TO REMAIN (25,512 SF = 0.586 AC)



EXISTING AL ROHDE PARK IMPERVIOUS COVER TO REMAIN (5,342 SF = 0.123 AC)



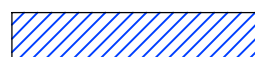
EXISTING IMPERVIOUS COVER TO BE REMOVED (1,103 SF = 0.025 AC)



EXISTING AL ROHDE PARK IMPERVIOUS COVER TO BE REMOVED (289 SF = 0.007 AC)



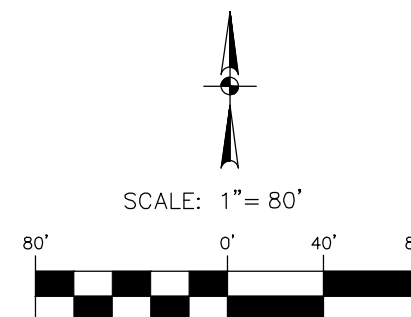
PROPOSED AL ROHDE PARK IMPERVIOUS COVER (5,053 SF = 0.116 AC)

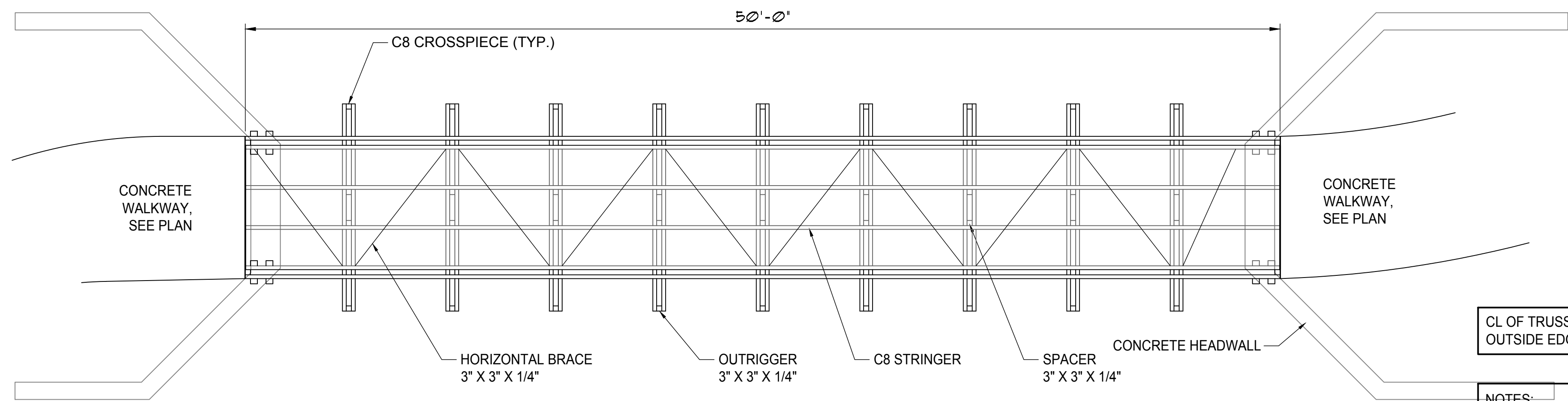


PROPOSED IMPERVIOUS COVER (2,103 SF = 0.048 AC)

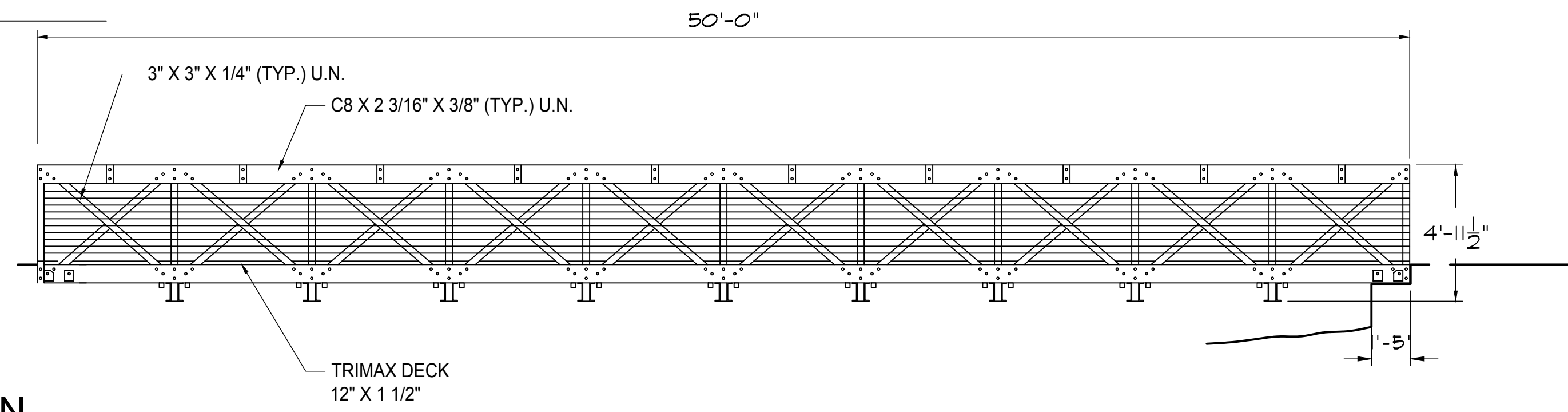
AL ROHDE PARK	
EXISTING IC TO REMAIN	0.123 AC
EXISTING IC TO BE REMOVED	- 0.007 AC
PROPOSED IC	+ 0.116 AC
NET IC	0.232 AC

OVERALL	
EXISTING IC TO REMAIN	0.123 AC
	0.586 AC
EXISTING IC TO BE REMOVED	- 0.007 AC
	- 0.025 AC
PROPOSED IC	+ 0.116 AC
	+ 0.048 AC
NET IC	0.841 AC

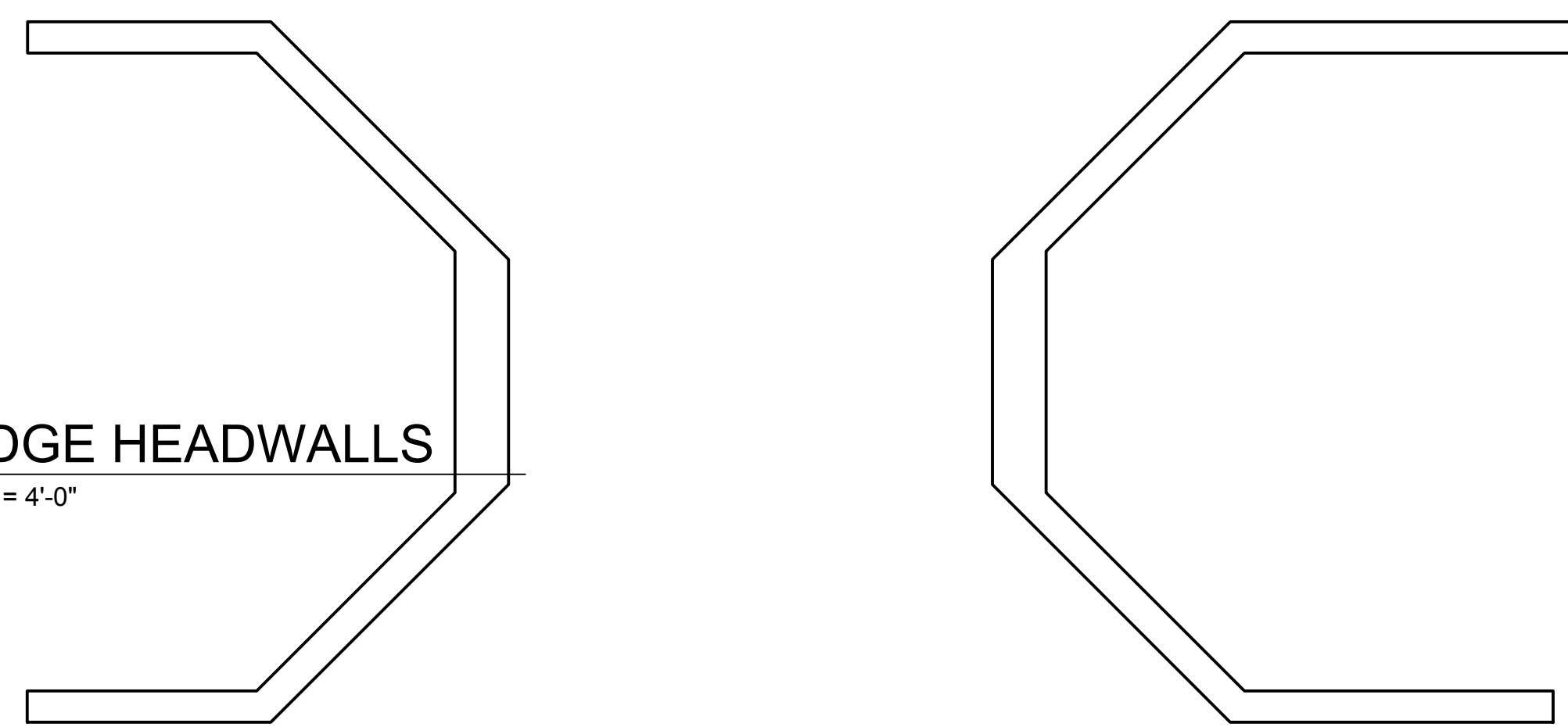




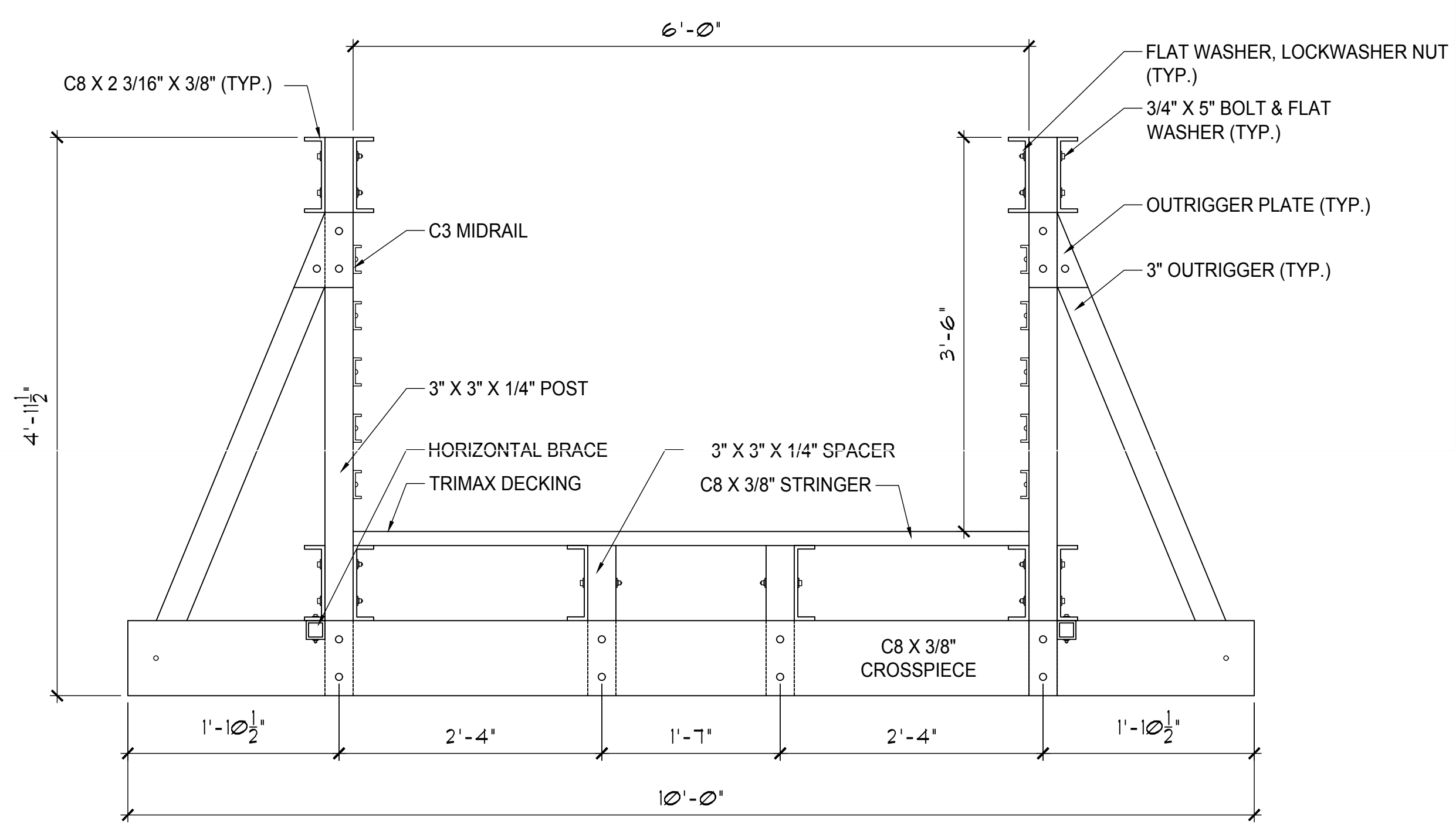
1 BRIDGE PLAN
Scale 1" = 4'-0"



2 BRIDGE ELEVATION
Scale 1" = 4'-0"



3 BRIDGE HEADWALLS
Scale 1" = 4'-0"



4 BRIDGE SECTION

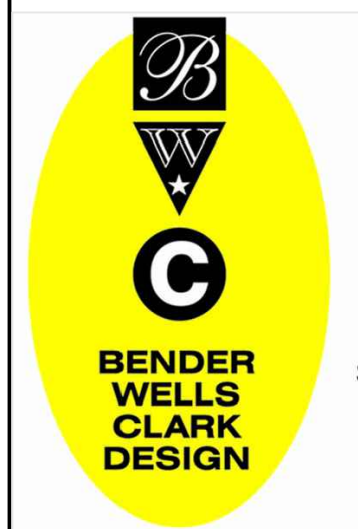
CL OF TRUSS TO CL OF TRUSS IS 6'-3"
OUTSIDE EDGE (FOOTPRINT) OF BRIDGE IS 6'-10 3/8"

- NOTES:
- DECK - 50'-0" SPAN X 6'-0" WIDE, SHALL BE MANUFACTURED BY ET TECHTONICS (610) 825-6963 OR APPROVED SUBSTITUTION.
 - SUBMIT SHOP DRAWINGS OF ALL ELEMENTS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

ISSUED SETS	
Date	Description

REVISIONS		
No.	Date	Description

LANDSCAPE ARCHITECT
BENDER WELLS CLARK DESIGN
830 N. ALAMO ST.
SAN ANTONIO, TEXAS 78215



Landscape Architecture
Urban Design
Planning
830 North Alamo Street
San Antonio, Texas 78215
210-692-9221
www.bwcdesign.com

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Al Rohde Park & Buddy Calk Trailhead Site Improvements
Site Development
11777 Spring Rain San Antonio Tx 78249 (Park 206)
This drawing and the design was prepared specifically for this site and the use of this drawing for other projects is prohibited. Use of this set of drawings requires appropriate authorization from Bender Wells Clark Design.

LANDSCAPE ARCHITECT'S LICENSURE

Drawn By : LCC

SHEET TITLE & NUMBER:
Site Development Details

SD-2.5

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

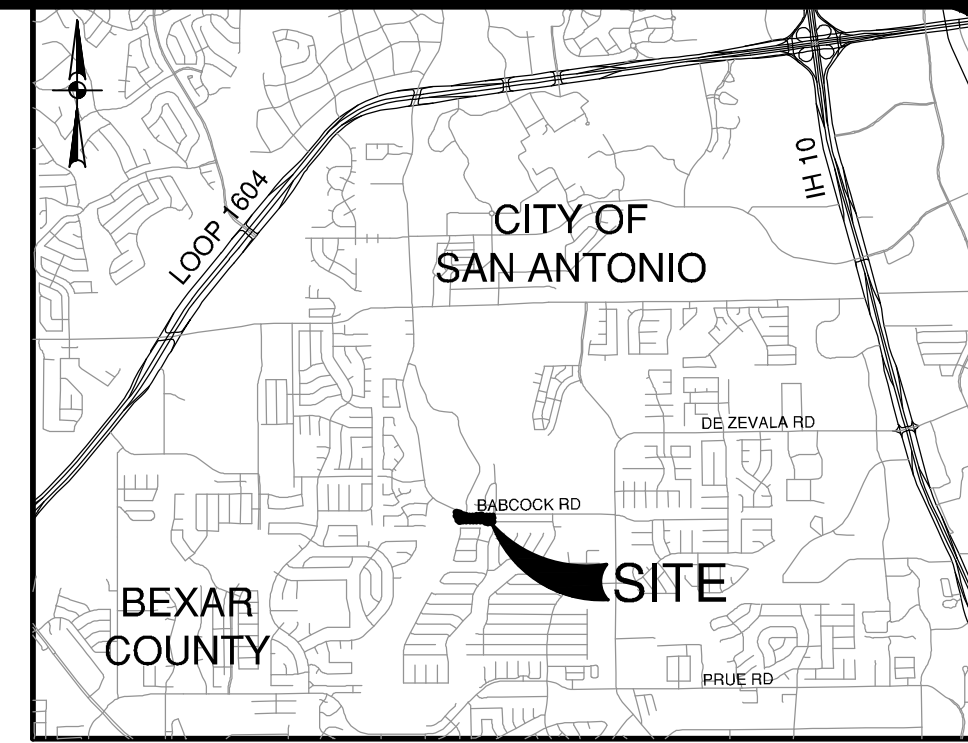
- A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
 - THE NAME OF THE APPROVED PROJECT;
 - THE ACTIVITY START DATE; AND
 - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
- ALL CONTRACTORS 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.
- 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.

- 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.
- 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.
- 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.
- SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
- 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.
- 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.
- THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
 - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
 - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
 - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

- THE HOLDER OF ANY APPROVED EDWARDS AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
 - ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
 - ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
 - ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

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



LOCATION MAP
NOT-TO-SCALE



LEGEND

- PROJECT LIMITS
- - - 976 EXISTING CONTOUR
- - - 970 PROPOSED CONTOUR
- FLOW ARROW (EXISTING)
- FLOW ARROW (PROPOSED)
- - - - - SILT FENCE OR SEDIMENT CONTROL ROLLS
- ROCK BERM
- ▨ GRAVEL FILTER BAGS
- ▨ STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)
- ▨ CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)
- ▨ CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE)
- ▨ EXISTING IMPERVIOUS COVER TO BE REMOVED
- TREE TO REMAIN
- - - - - 100 YEAR FLOODPLAIN
- █ Kgt GEORGETOWN
- █ Kdr DEL RIO
- █ S-1 POTENTIAL RECHARGE FEATURE CONTACT, LOCATED APPROXIMATELY
- █ u FAULT, LOCATED APPROXIMATELY (D, DOWNTHROWN SIDE; U, UPTHROWN SIDE)

GENERAL NOTES

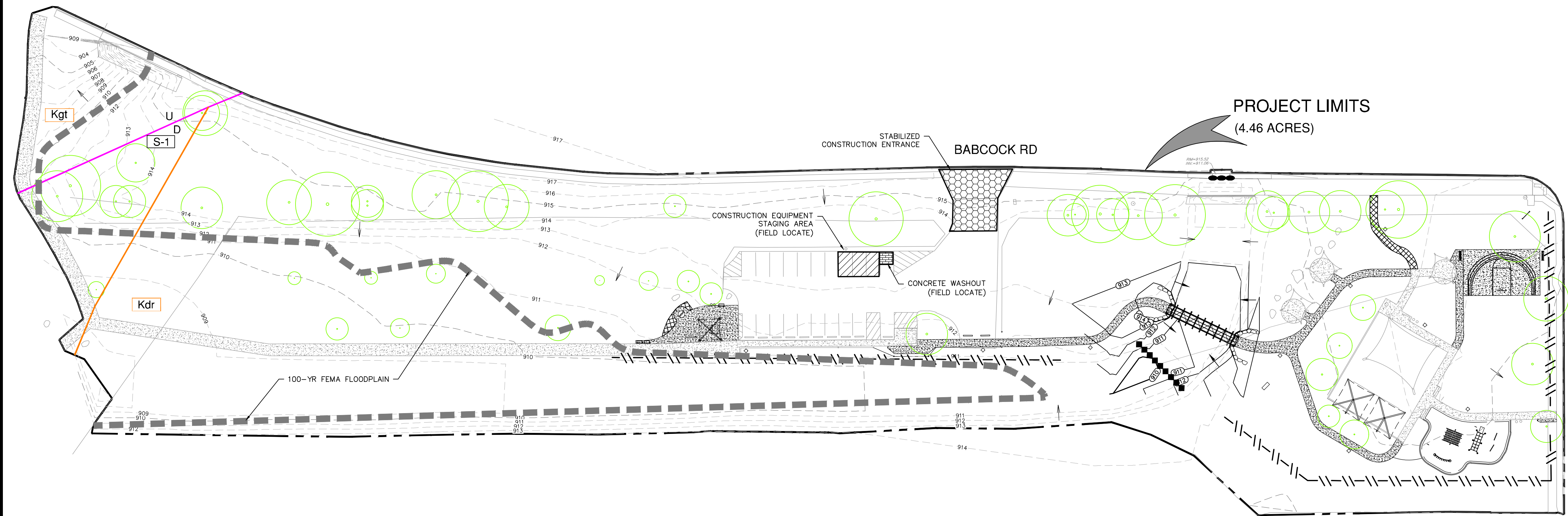
- DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
- CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
- STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
- RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
- ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
- FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.
- STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
- AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
- BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS.
- BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.
- UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.
- WHERE VEGETATED FILTER STRIPS ARE INDICATED, CONTRACTOR SHALL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE CONTRACTOR SHALL PLACE SILT FENCING IN LIEU OF VEGETATED FILTER STRIP.
- SHADED AREA DENOTES LIMITS OF DISTURBED AREAS. OTHER AREAS WITHIN THE PROJECT LIMITS, WITH THE EXCEPTION OF A CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD, ARE NOT A PART OF THIS POLLUTION PREVENTION PLAN AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES.

REFER TO LANDSCAPE ARCHITECT PLANS FOR FULL DETAILS.

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE WATER POLLUTION ABATEMENT PLAN (WPAP).

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE WPAP ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT 1



TEMPORARY BMP MODIFICATIONS		
DATE	SIGNATURE	DESCRIPTION

DATE: _____

NO. REVISION: _____

PAPE-DAWSON ENGINEERS

2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

LEON CREEK GREENWAY
AL ROHDE PARK & BUDDY CALK TRAILHEAD
CITY OF SAN ANTONIO, TEXAS
WATER POLLUTION ABATEMENT PLAN
TEMPORARY WATER POLLUTION ABATEMENT PLAN

PLAT NO. _____

JOB NO. 8494-04

DATE JULY 2023

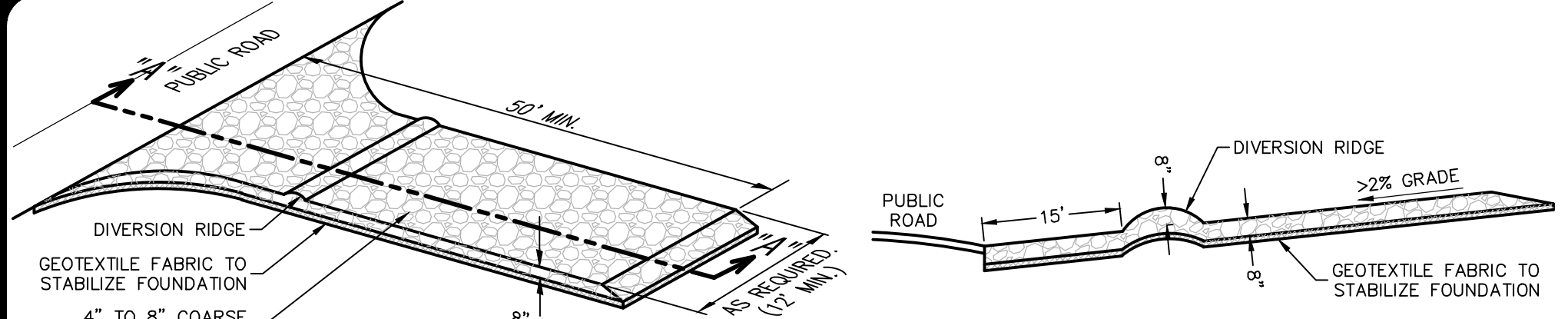
DESIGNER JA

CHECKED JA DRAWN MG

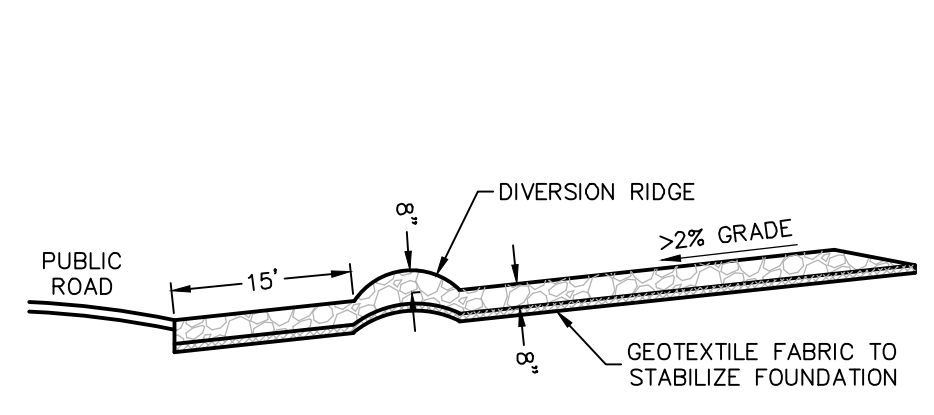
SHEET 1 OF 1

Date: June 27, 2023, 1:23 PM - User ID: epossey
File: P:\84\84\04\Design\TM 849404.dwg

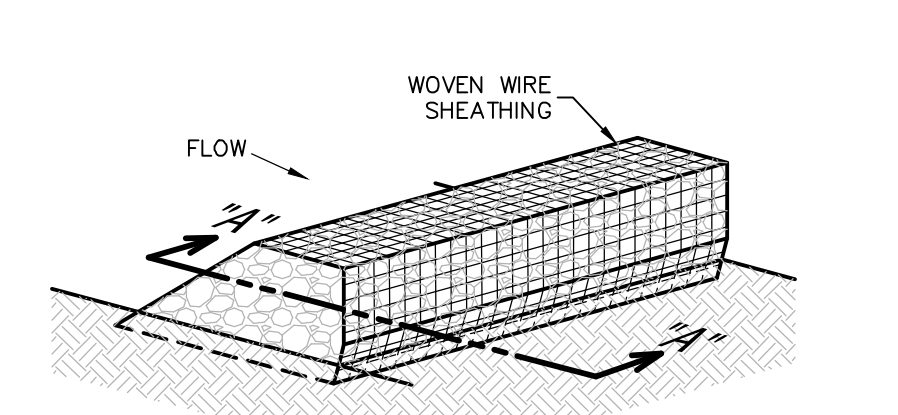
THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE/US UNLESS OTHERWISE NOTED. Imagery © 2016, CAPOCO, Digital Globe, Texas Orthology Program, USDA Farm Service Agency.



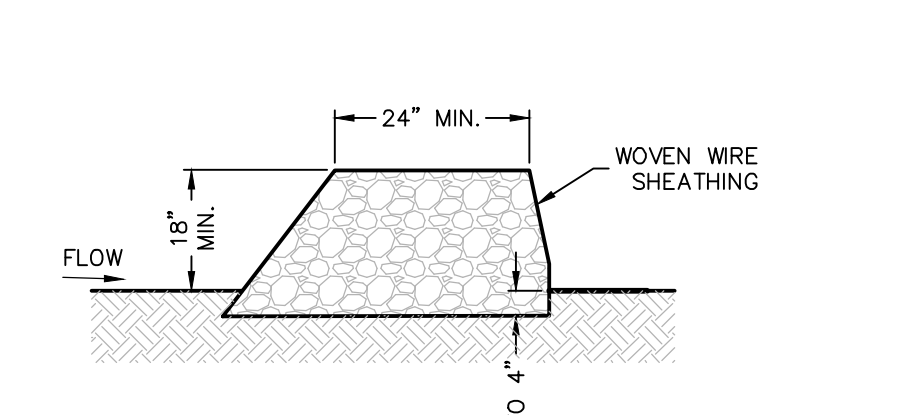
SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT



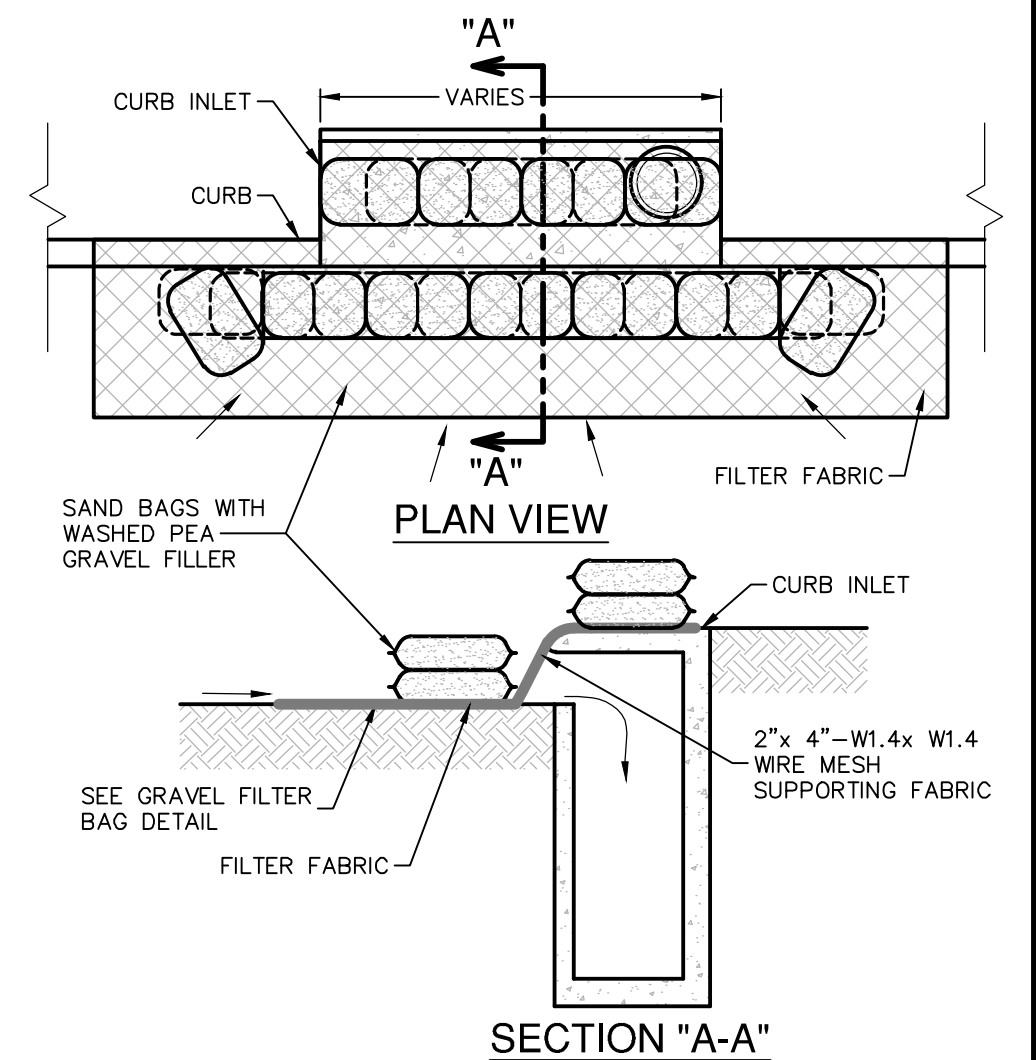
SECTION "A-A" OF A CONSTRUCTION ENTRANCE/EXIT



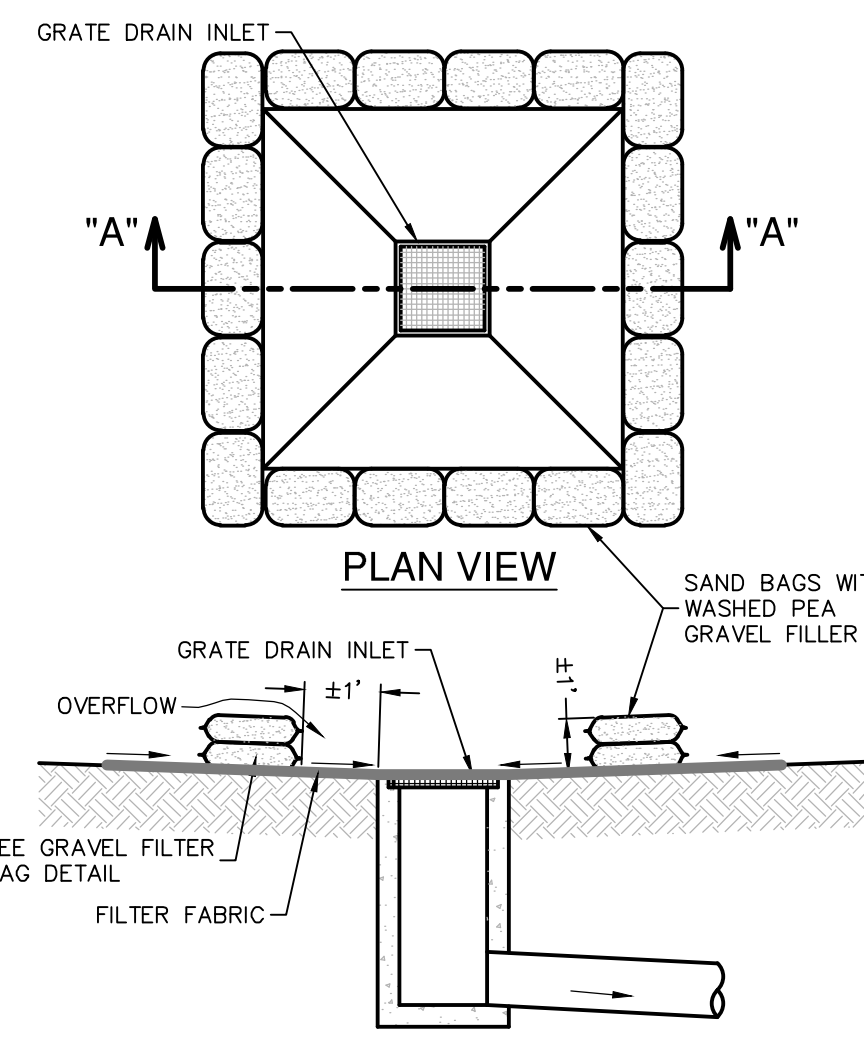
ISOMETRIC PLAN VIEW



SECTION "A-A"



BAGGED GRAVEL CURB INLET PROTECTION DETAIL



BAGGED GRAVEL GRATE INLET PROTECTION DETAIL

- MATERIALS**
1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
 2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
 3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD², A MULLEN BURST RATING OF 140 LB/IN², AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
 4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4-INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.
- INSTALLATION**
1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
 2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
 3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
 4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6-INCHES TO 8-INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
 5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
 6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
 7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
 8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

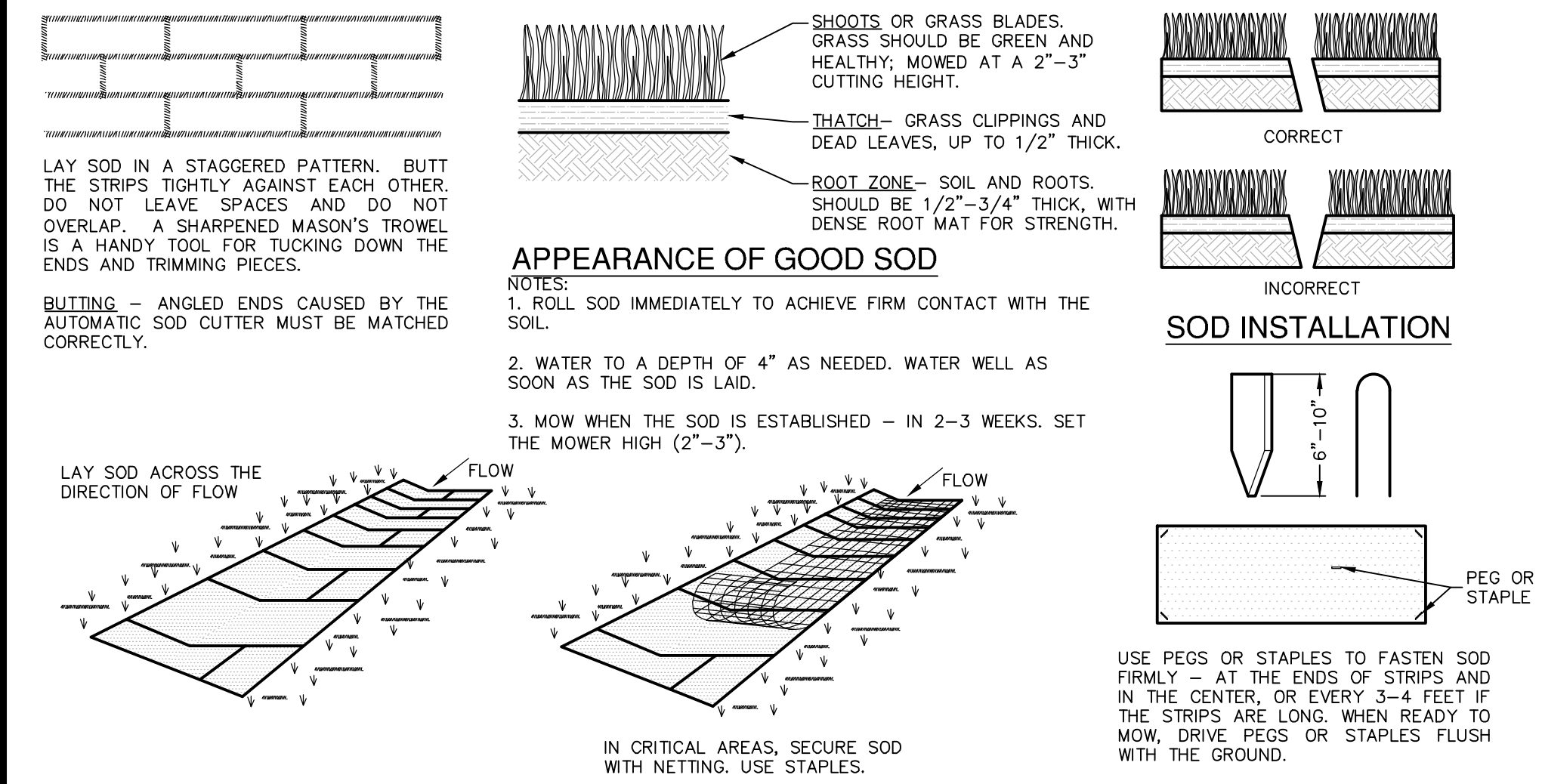
STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE

- COMMON TROUBLE POINTS**
1. INADEQUATE RUNOFF CONTROL—SEDIMENT WASHES ONTO PUBLIC ROAD.
 2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.
 3. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC—EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.
 4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.
 5. UNSTABLE FOUNDATION—USE GEOTEXTILE FABRIC UNDER PAD AND/OR IMPROVE FOUNDATION DRAINAGE.
- INSPECTION AND MAINTENANCE GUIDELINES**
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 REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO PAD SEDIMENT.
 2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
 3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.
- ROCK BERMS**
- THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE. AS SUCH, ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS (DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING BERM LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FURTHER UP THE WATERSHED.
- INSTALLATION**
1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
 2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
 3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A HEIGHT NOT LESS THAN 18".
 4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH THE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS 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 UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
- COMMON TROUBLE POINTS**
1. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF ESCAPING UNDER ONE SIDE).
 2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).
 3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
 4. THE TRENCH SHOULD BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
 5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
 6. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

ROCK BERM DETAIL

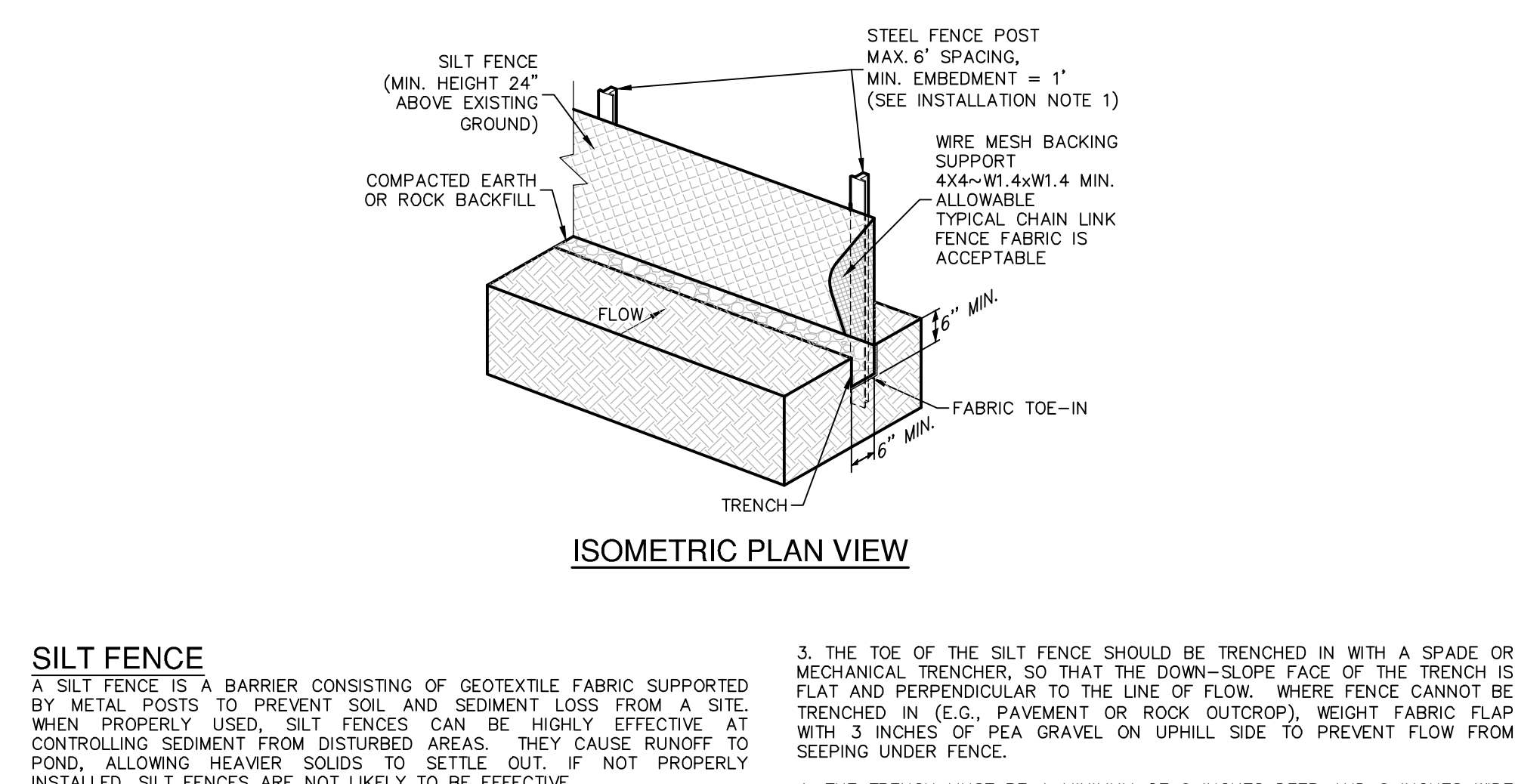
NOT-TO-SCALE



APPEARANCE OF GOOD SOD

NOTES

1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.
 2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.
 3. MOW WHEN THE SOD IS ESTABLISHED - IN 2-3 WEEKS. SET THE MOWER HIGH (2"-3").
- GENERAL INSTALLATION (VA. DEPT. OF CONSERVATION, 1992)**
1. SOD SHOULD NOT BE CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER. SOD ALSO SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN.
 2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHOULD BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND REDUCE ROOT BURNING AND DIEBACK.
 3. THE FIRST ROW OF SOD SHOULD BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH OTHER. LATERAL JOINTS SHOULD BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHOULD BE EXERCISED TO ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS (SEE FIGURE ABOVE).
 4. ON SLOPES 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM, SOD SHOULD BE LAID WITH STAGGERED JOINTS AND SECURED BY STAPLING OR OTHER APPROVED METHODS. SOD SHOULD BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON CONTOUR).
 5. AS SODDING OF CLEARLY DEFINED AREAS IS COMPLETED, SOD SHOULD BE ROLLED OR TAMPED TO PROVIDE FIRM CONTACT BETWEEN ROOTS AND SOIL.
 6. AFTER ROLLING, SOD SHOULD BE IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE SOD PAD AND THE SOIL 4 INCHES BELOW THE SOD IS THOROUGHLY WET.
 7. UNTIL SUCH TIME A GOOD ROOT SYSTEM BECOMES DEVELOPED, IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHOULD BE PERFORMED AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF AT LEAST 4 INCHES.
 8. THE FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FIRMLY ROOTED, USUALLY 2-3 WEEKS. NOT MORE THAN ONE THIRD OF THE GRASS LEAF SHOULD BE REMOVED AT ANY ONE CUTTING.
- INSPECTION AND MAINTENANCE GUIDELINES**
1. SOD SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.
 2. DAMAGE FROM STORMS OR NORMAL CONSTRUCTION ACTIVITIES SUCH AS TIRE RUTS OR DISTURBANCE OF SWALE STABILIZATION SHOULD BE REPAIRED AS SOON AS PRACTICAL.
- SOD INSTALLATION DETAIL**
- NOT-TO-SCALE



ISOMETRIC PLAN VIEW

SILT FENCE DETAIL

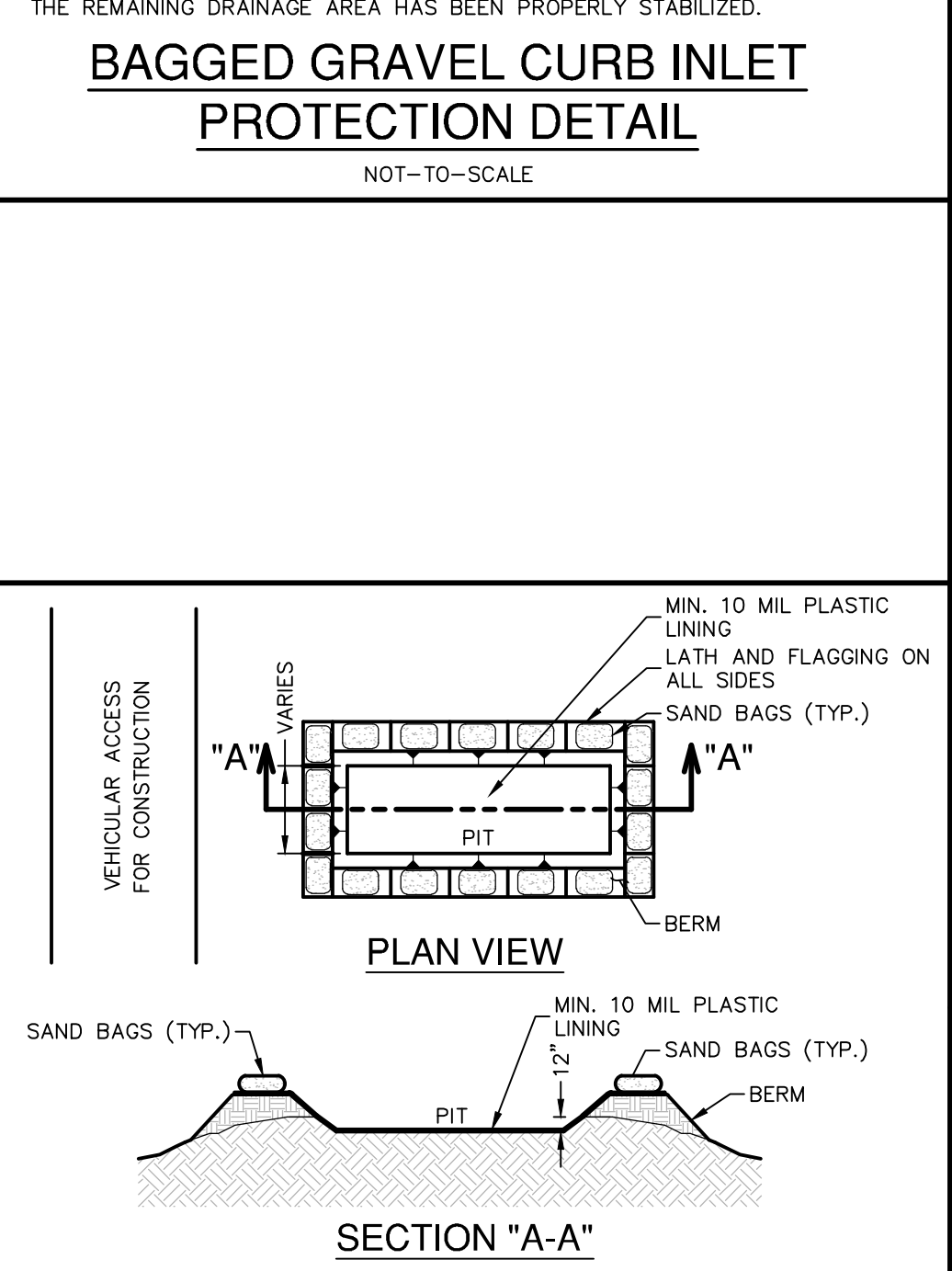
NOT-TO-SCALE

- GENERAL NOTES**
1. CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE CUTTER AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.
 2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
 3. CHECK PLACEMENT OF DEVICE 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.
- INSPECTION AND MAINTENANCE GUIDELINES**
1. INSPECTION 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 DEVICE 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.



GRAVEL FILTER BAG DETAIL

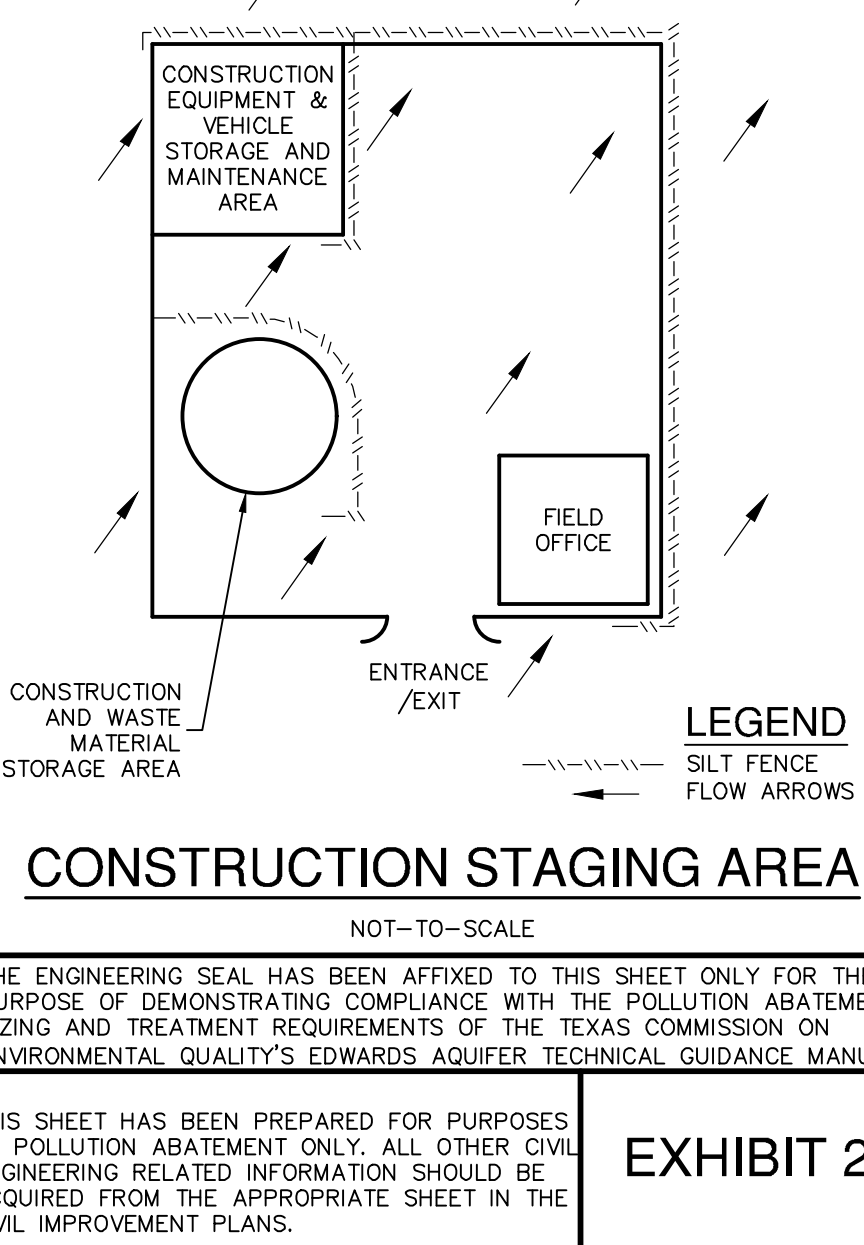
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CONCRETE TRUCK WASHOUT PIT DETAIL

NOT-TO-SCALE

- GENERAL NOTES**
1. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
 2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
 3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
 4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.
 5. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
- MATERIALS**
- 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.
- MAINTENANCE**
1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.
 2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.
 3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.



CONSTRUCTION STAGING AREA

NOT-TO-SCALE

- THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE POLLUTION ABATEMENT SIZING AND TREATMENT REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL.
- THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF POLLUTION ABATEMENT ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

DATE	
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REVISION	

PAPE-DAWSON ENGINEERS

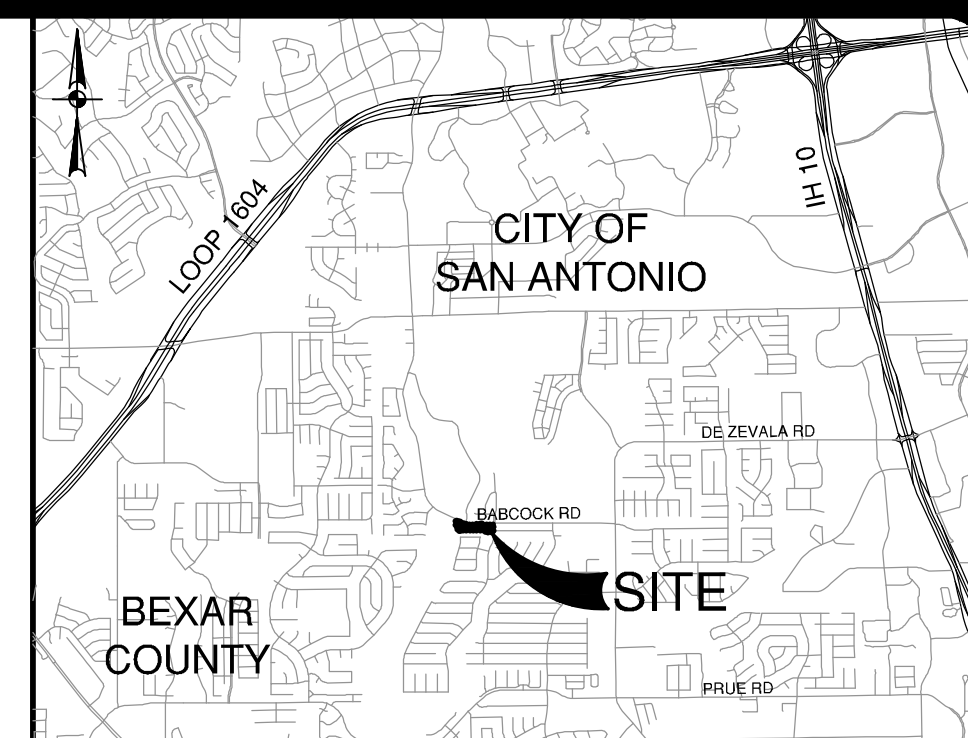
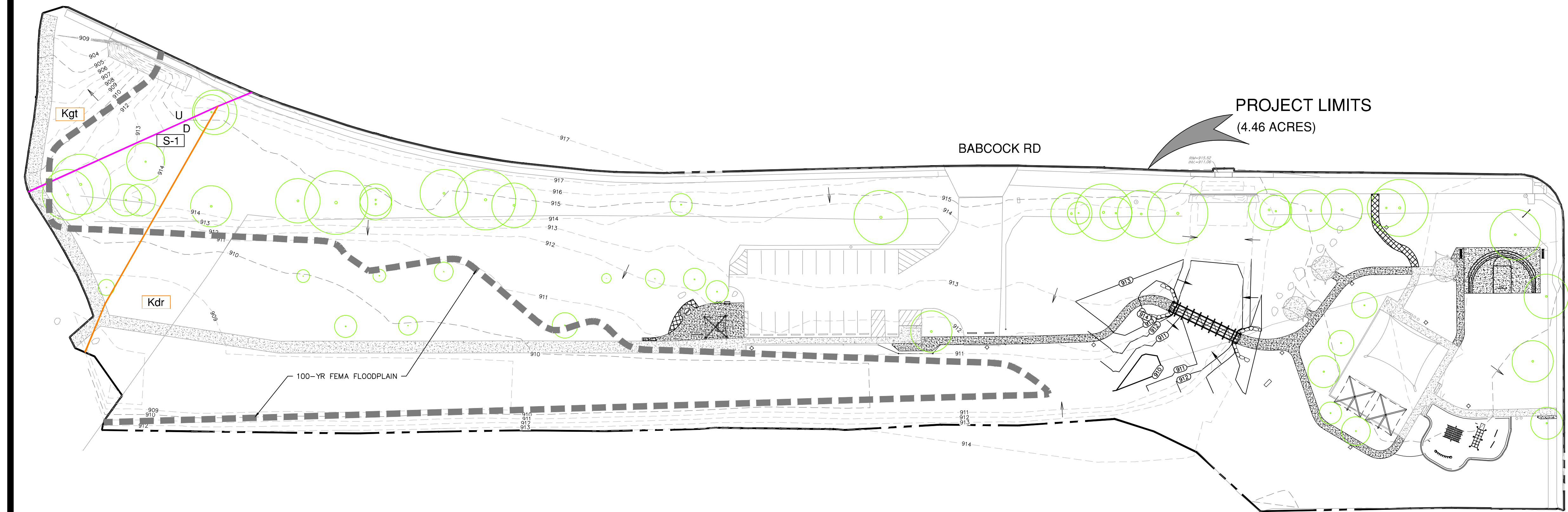
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1002880

LEON CREEK GREENWAY
AL RHODE PARK & BUDDY CALK TRAILHEAD
CITY OF SAN ANTONIO, TEXAS
WATER POLLUTION ABATEMENT PLAN
TEMPORARY POLLUTION ABATEMENT PLAN DETAILS

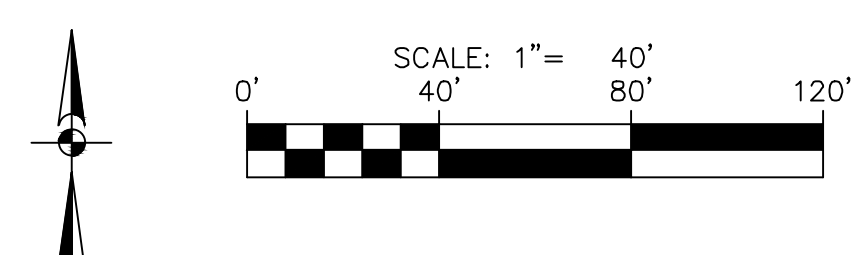
PLAT NO.	8494-04
JOB NO.	8494-04
DATE	AUG 2023
DESIGNER	JA
CHECKED	JA DRAWN MG
SHEET	1 OF 1

EXHIBIT 2

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LOCATION MAP
NOT-TO-SCALE



LEGEND

- PROJECT LIMITS
- - - 976 EXISTING CONTOUR
- - - 970 PROPOSED CONTOUR
- FLOW ARROW (EXISTING)
- FLOW ARROW (PROPOSED)
- [Hatched Box] EXISTING IMPERVIOUS COVER TO BE REMOVED
- TREE TO REMAIN
- - - 100 YEAR FLOODPLAIN
- [Kgt Box] GEORGETOWN
- [Kdr Box] DEL RIO
- [S-1 Box] POTENTIAL RECHARGE FEATURE CONTACT, LOCATED APPROXIMATELY
- [u, d] FAULT, LOCATED APPROXIMATELY (D, DOWNTHROW SIDE; U, UPTHROW SIDE)

SUMMARY OF PERMANENT POLLUTION ABATEMENT MEASURES:

1. TEMPORARY BMPs WILL BE MAINTAINED UNTIL THE SITE IMPROVEMENTS ARE COMPLETED AND THE SITE HAS BEEN STABILIZED, INCLUDING SUFFICIENT VEGETATION BEING STABILIZED.
2. DURING CONSTRUCTION, TO THE EXTENT PRACTICAL, CONTRACTOR SHALL MINIMIZE THE AREA OF SOIL DISTURBANCE. AREAS OF DISTURBED SOIL SHALL BE REVEGETATED TO STABILIZE SOIL USING SOLID SOD IN A STAGGERED PATTERN. SEE DETAIL ON TEMPORARY POLLUTION ABATEMENT DETAIL SHEET AND REFER TO SECTION 1.3.11 IN TCEQ'S TECHNICAL GUIDANCE MANUAL RG-348 (2005). SOD SHOULD BE USED IN CHANNELS AND ON SLOPES > 15%. THE CONTRACTOR MAY SUBSTITUTE THE USE OF SOD WITH THE PROTECTIVE MATTING OR HYDRAULIC MULCH ALONG WITH WATERING UNTIL VEGETATION IS ESTABLISHED. APPLICATIONS AND PRODUCTS SHALL BE THOSE APPROVED BY TxDOT AS OF FEBRUARY 2001 AND IN COMPLIANCE WITH TGM RG-348 (2005) GUIDELINES. IRRIGATION MAY BE REQUIRED IN ORDER TO ESTABLISH SUFFICIENT VEGETATION.
3. FOR DISTURBED AREAS WHERE INSUFFICIENT SOIL EXISTS TO ESTABLISH VEGETATION, CONTRACTOR SHALL PLACE A MINIMUM OF 6" OF TOPSOIL PRIOR TO REVEGETATION.
4. PERMANENT BMPs FOR THIS SITE INCLUDE 50-FOOT NATURAL VEGETATIVE FILTER STRIP. THIS PERMANENT BMP HAS BEEN DESIGNED TO REMOVE AT LEAST 80% OF THE INCREASED TOTAL SUSPENDED SOLIDS (TSS) FOR THE 4.46 ACRES IN ACCORDANCE WITH THE TCEQ'S TECHNICAL GUIDANCE MANUAL (TGM) RG-348 (2005).

PERMANENT POLLUTION ABATEMENT MEASURES:

1. SILT FENCING AND ROCK BERMS, WHERE APPROPRIATE, WILL BE MAINTAINED UNTIL THE ROADWAY, UTILITY, DRAINAGE IMPROVEMENTS, AND CONSTRUCTION ARE COMPLETED.
2. A 50' NATURAL VFS WILL SERVE AS THE PERMANENT BEST MANAGEMENT PRACTICE.
3. ENERGY DISSIPATORS (TO HELP REDUCE EROSION) WILL BE PROVIDED AT POINTS OF CONCENTRATED DISCHARGE WHERE EXCESSIVE VELOCITIES MAY BE ENCOUNTERED.

NOTES:

1. CONTRACTOR SHALL INSTALL AND ESTABLISH VEGETATION FOR SOIL STABILIZATION PRIOR TO CLOSEOUT.
 2. ALL PERMANENT BMPs MUST BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER.
- REFER TO LANDSCAPE ARCHITECT PLANS FOR FULL DETAILS.

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE WATER POLLUTION ABATEMENT PLAN (WPAP).

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE WPAP ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT 3

NO.	REVISION	DATE



PAPE-DAWSON ENGINEERS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #479 | TEXAS SURVEYING FIRM #10008800

LEON CREEK GREENWAY
 AL ROHDE PARK & BUDDY CALK TRAILHEAD
 CITY OF SAN ANTONIO, TEXAS
 WATER POLLUTION ABATEMENT PLAN
 PERMANENT WATER POLLUTION ABATEMENT PLAN

PLAT NO.	
JOB NO.	8494-04
DATE	JULY 2023
DESIGNER	JA
CHECKED	JA DRAWN MG
SHEET	1 OF 1