Water Pollution Abatement Plan Modification



Water Pollution Abatement Plan Modification





April 17, 2025

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

Re:

Fellowship of San Antonio

Water Pollution Abatement Plan Modification

Dear Ms. Butler:

Please find attached the Fellowship of San Antonio Water Pollution Abatement Plan Modification (WPAP MOD). This Water Pollution Abatement Plan 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 39.55-acre site (48.81 ac legal limit) as identified by the project limits. 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 (\$6,500) and application fee 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

Andrew Belton, P.E.

Vice President

Attachments

P:\60\75\02\Word\Reports\WPAP\250205_WPAP Mod Cover Letter.docx

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

- 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

- 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 N	ame:					2. Re	2. Regulated Entity No.:				
3. Customer Name:						4. Customer No.:					
5. Project Type: (Please circle/check one)			Modif	ication	D	Exter	nsion	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)	Resider	ntial	Non-r	residen	tial		8. Sit	e (acres):			
9. Application Fee:			10. P	10. Permanent			s):				
11. SCS (Linear Ft.):			12. A	ST/US	ST (No	o. Tar	ıks):				
13. County:			14. W	aters	hed:						

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 1	Region	
County:	Hays	Travis	Williamson
Original (1 req.)			
Region (1 req.)		_	_
County(ies)			
Groundwater Conservation District(s)	Edwards Aquifer AuthorityBarton Springs/ Edwards AquiferHays Trinity Plum Creek	Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	AustinBudaDripping SpringsKyleMountain CitySan MarcosWimberleyWoodcreek	AustinBee CavePflugervilleRollingwoodRound RockSunset ValleyWest Lake Hills	AustinCedar ParkFlorenceGeorgetownJerrellLeanderLiberty HillPflugervilleRound Rock

	San Antonio Region										
County:	Bexar	Comal	Kinney	Medina	Uvalde						
Original (1 req.)											
Region (1 req.)											
County(ies)											
Groundwater Conservation District(s)	Edwards Aquifer Authority Trinity-Glen Rose	Edwards Aquifer Authority	Kinney	EAA Medina	EAA Uvalde						
City(ies) Jurisdiction	Castle HillsFair Oaks RanchHelotesHill Country VillageHollywood ParkSan Antonio (SAWS)Shavano Park	Bulverde Fair Oaks Ranch Garden Ridge New Braunfels Schertz	NA	San Antonio ETJ (SAWS)	NA						

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.
Andrew Belton, P.E.
Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent Date

FOR TCEQ INTERNAL USE ONLY							
Date(s)Reviewed:	(g)	Date Administratively Complete:					
Received From:		Correct Number of Copies:					
Received By:		Distribut	ion Date:				
EAPP File Number:		Complex:					
Admin. Review(s) (No.):		No. AR Rounds:					
Delinquent Fees (Y/N):		Review Time Spent:					
Lat./Long. Verified:		SOS Cust	comer Verification:				
Agent Authorization Complete/Notarized (Y/N):		Fee	Payable to TCEQ (Y/N):				
Core Data Form Complete (Y/N):		Check:	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

Print Name of Customer/Agent: Andrew Belton, P.E.

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:

Da	te: <u>(4,2</u> 6/95
Sig	nature of Customer/Agent:
1	Juny D
P	roject Information
1.	Regulated Entity Name: The Fellowship of San Antonio
2.	County: Bexar
3.	Stream Basin: <u>Salado</u>
4.	Groundwater Conservation District (If applicable): Trinity-Glen Rose
5.	Edwards Aquifer Zone:
	Recharge Zone Transition Zone
6.	Plan Type:
	WPAPSCS✓ UST✓ Modification✓ Exception Request

7.	Customer (Applicant):	
	Contact Person: <u>Doug Hess</u> Entity: <u>Fellowship of San Antonio</u> Mailing Address: <u>23755 Canyon Golf Rd</u> City, State: <u>San Antonio, Texas</u> Telephone: <u>210-402-3672</u> Email Address: <u>doug.hess@thefellowshipofsa.org</u>	Zip: <u>78258</u> FAX:
8.	Agent/Representative (If any):	
	Contact Person: Andrew Belton, P.E. Entity: Pape-Dawson Consulting Engineers, LLC Mailing Address: 2000 NW Loop 410 City, State: San Antonio, Texas Telephone: (210) 375-9000 Email Address: abelton@pape-dawson.com	Zip: <u>78213</u> FAX: <u>(210) 375-9010</u>
9.	Project Location:	
	 ☐ The project site is located inside the city limits of the project site is located outside the city limits jurisdiction) of ☐ The project site is not located within any city's 	s but inside the ETJ (extra-territorial
10.	The location of the project site is described belongeral and clarity so that the TCEQ's Regional st boundaries for a field investigation.	
	From TCEQ regional office proceed approximated Loop 1604 and turn left to travel west. Proceed Loop W to Hardy Oak Blvd to turn right. Proceed Eross Drive and turn right. Travel approximately 1.76 miles on Case Springs. The site is on the left, southwest of Road intersection.	ceed approximately 5.5 miles on TX-1604 oceed approximately 2.0 miles to Knights ately 0.44 miles to Evans Road and turn and Gold Road and Turn left on Mission
11.	Attachment A – Road Map. A road map showi project site is attached. The project location and the map.	
12.	Attachment B - USGS / Edwards Recharge Zon USGS Quadrangle Map (Scale: 1" = 2000') of the The map(s) clearly show:	
	 Project site boundaries. USGS Quadrangle Name(s). Boundaries of the Recharge Zone (and Tran Drainage path from the project site to the boundaries. 	

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.
\boxtimes	Survey staking will be completed by this date: when advised by TCEQ of site inspection
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. Ex	isting 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:
Prol	hibited 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):

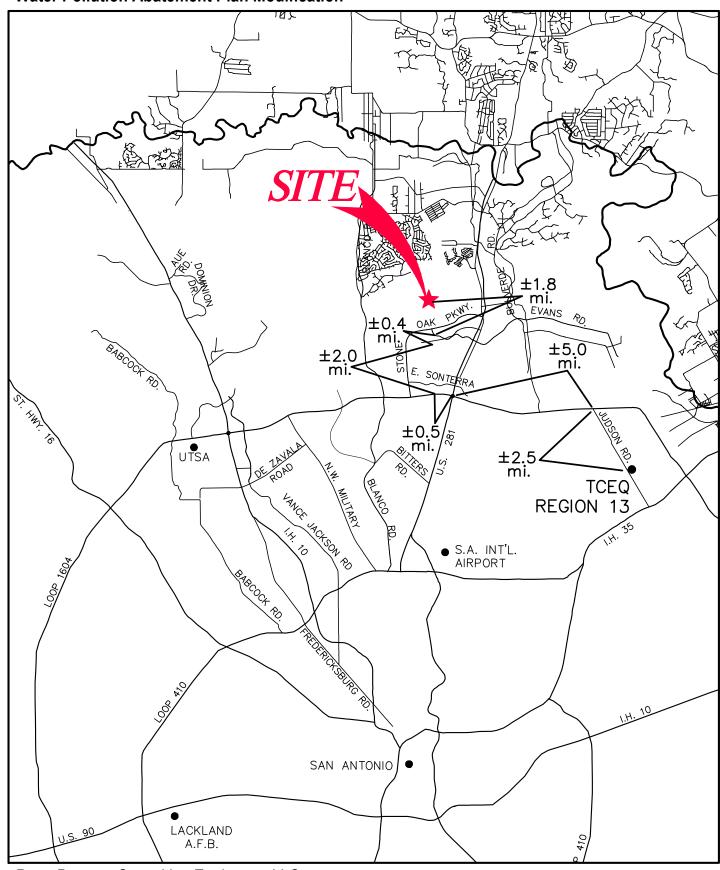
- (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
- (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
- (4) The use of sewage holding tanks as parts of organized collection systems; and
- (5) New municipal solid waste landfill facilities required to 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: X 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

THE FELLOWSHIP OF SAN ANTONIO Water Pollution Abatement Plan Modification



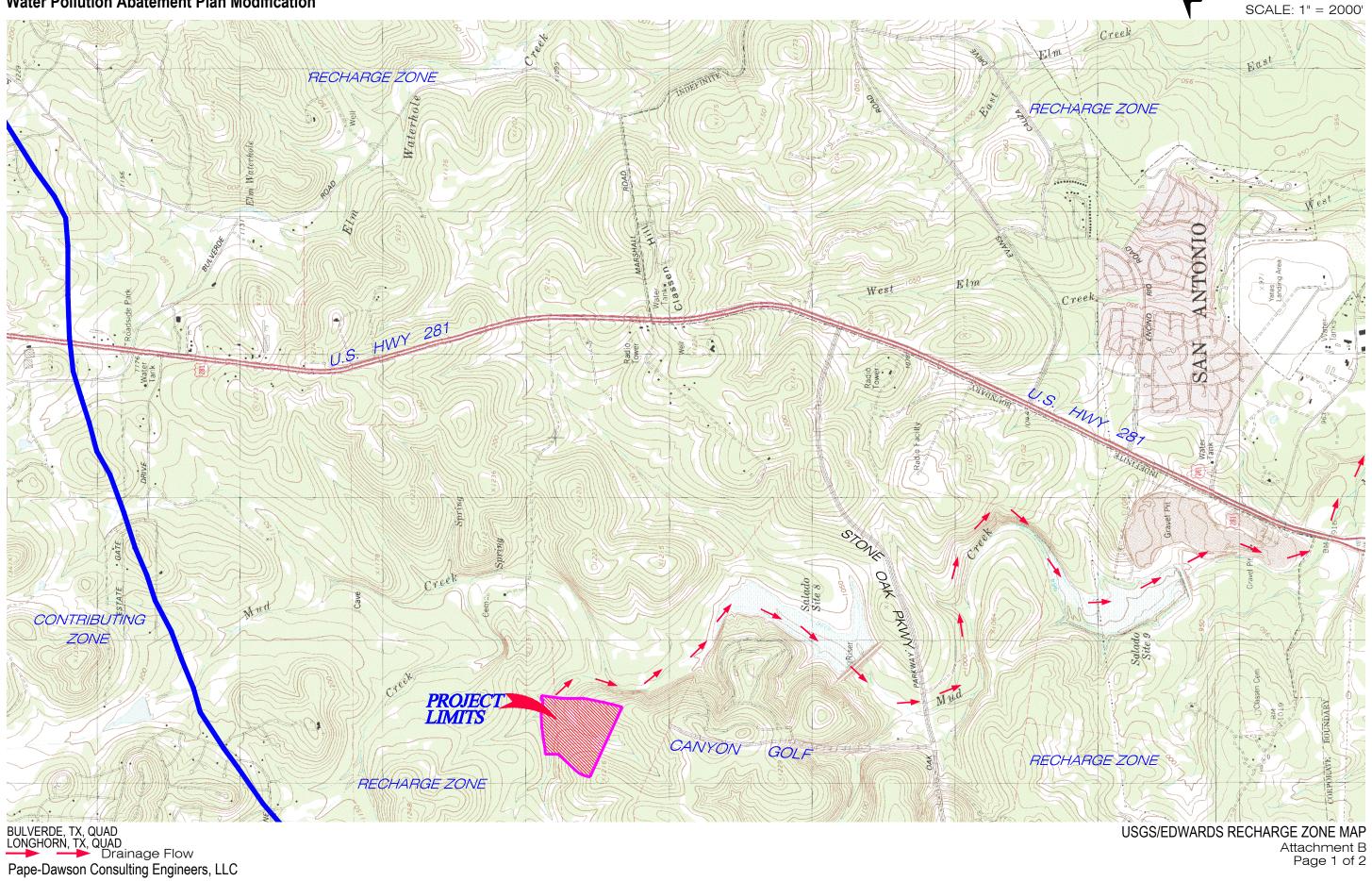


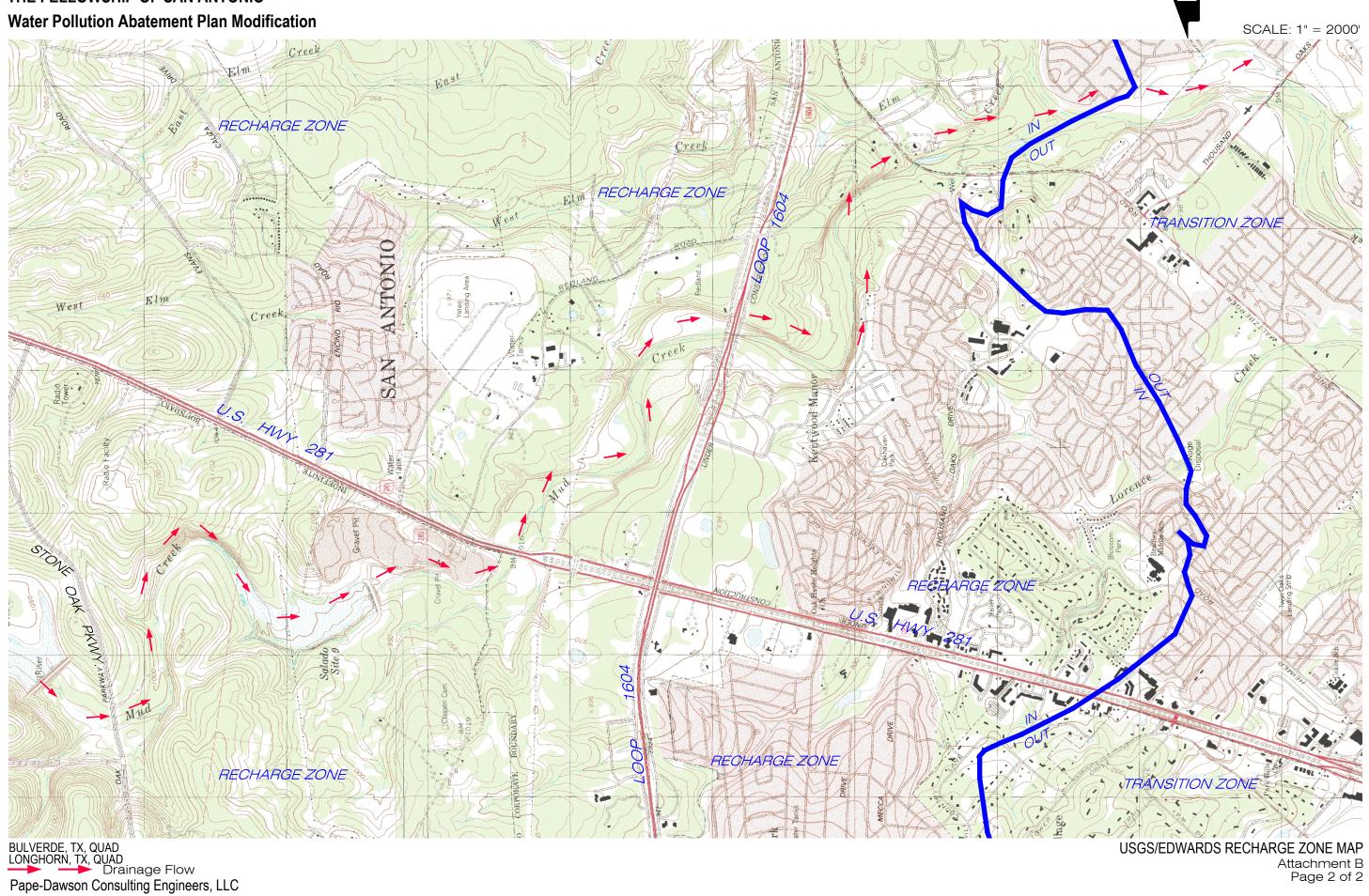
Pape-Dawson Consulting Engineers, LLC Date: Feb 06, 2025, 4:21pm User ID: vbotello File: P:\60\75\02\Design\Environmental\WPAP\250206_Road Map.dwg

ATTACHMENT A Road Map

ATTACHMENT B

Water Pollution Abatement Plan Modification





ATTACHMENT C

The Fellowship of San Antonio Water Pollution Abatement Plan Modification

<u>Attachment C – Project Description</u>

The Fellowship of San Antonio Water Pollution Abatement Plan Modification (WPAP MOD) proposes the construction of additional Permanent Best Management Practices (PBMPs) within the 39.55-acre commercial site to treat the impervious cover constructed without a plan (in compliance with NOV# 1982867). This Fellowship of San Antonio site was originally approved on January 9, 1998 (Mission Springs, Project Number 733). Several modifications have been approved, including the most recent WPAP Exception (EAPP ID 13-05020201), approved May 23, 2005. This plan proposed the construction of a commercial development on 39.55-acre project limits within the overall 48.81-acre mixed use development. The Fellowship of San Antonio is located southwest of Wilderness Oaks and Canyon Golf Road intersection within the City of San Antonio, in Bexar County, Texas. The site is a developed church and associated parking and lies within the Salado watershed and does not contain 100-year floodplain. There were naturally occurring sensitive geological features identified in the Geologic Assessment and the proposed site is located within the Edwards Aquifer Recharge Zone.

No portion of the adjacent pervious area will flow across the project limits. The existing PBMPs have been sized to account for the flows within the project limits.

This WPAP Modification proposes additional clearing, grading, and drainage improvements. The proposed Permanent Best Management Practice (PBMP) for stormwater treatment are twenty-four (24) existing, approved fifteen-foot (15') engineered vegetative filter strips (EAPP ID 13-05020201), one (1) existing, approved sand filter basin (EAPP ID 13-05020201), one (1) proposed fifteen-foot (15') vegetative filter strip, and one (1) proposed Jellyfish® Filter. The onsite PBMPs are designed in accordance with the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in Total Suspended Solids (TSS) from the site. Please see treatment summary table included with the exhibits of this application for additional details.

Potable water service is to be provided by the San Antonio Water System (SAWS). The proposed development will generate approximately 3,715 gallons per day (average flow) of domestic wastewater based on the assumption of 743 seats x 5 gal/seat = 3,715 gpd. The approved impervious cover (via 2005 MOD) was 7.740 ac (15.86%). The fully constructed site resulted in an impervious cover value of 8.16 ac (16.72%). Since 0.42 acres was constructed post-approval, the one (1) proposed fifteen-foot (15') vegetative filter strip, and one (1) proposed Jellyfish® Filter will treat the remaining portion to provide water protection. Refer to included application and EDR for details.

GEOLOGIC ASSESSMENT FORM (TCEQ-0585)

Geologic Assessment

Texas Commission on Environmental Quality

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

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.

Telephone: 210-375-9000

0	_ : ::-I:::::::	
Date: October 29, 2024	Fax:	210-375-9090
Representing: Pape-Dawson Engineers, Inc.	., TBPG registration nu	mber 50351
Signature of Geologist:		TE OF TELL
Regulated Entity Name: The Fellowship of	San Antonio	HENRY STULTZ III GEOLOGY 12121 CENSE ONAL X GEO
Project Information		
1. Date(s) Geologic Assessment was perform	ned: October 8, 2024	
2. Type of Project:		
WPAP☐ SCS3. Location of Project:	☐ AST ☐ UST	
Recharge Zone Transition Zone Contributing Zone within the Transitio	n 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

Characteristics and Thickness										
Soil Name	Group*	Thickness(feet)								
Eckrant cobbly clay, 1-8% slopes (TaB)	D	1-2								
Eckrant-Rock outcrop assoc., 8-30% slopes (TaD)	D	1-2								

- * Soil Group Definitions (Abbreviated)
 - A. Soils having a high infiltration rate when thoroughly wetted.
 - B. Soils having a moderate infiltration rate when thoroughly wetted.
 - C. Soils having a slow infiltration rate when thoroughly wetted.
 - D. Soils having a very slow infiltration rate when thoroughly wetted.
- 6. Attachment B Stratigraphic Column. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.
- 7. Attachment C Site Geology. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
- 8. Attachment D Site Geologic Map(s). The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

Applicant's Site Plan Scale: 1" = <u>100'</u> Site Geologic Map Scale: 1" = **100**'

Site Soils Map Scale (if more than 1 soil type): 400'

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.): applicable, the information must agree with Item No. 20 of the WPAP Application Section.
 ☐ There is (#) wells present on the project site and the location is 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 a

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

GEOLO	GIC ASSES	SMENT T	ABLE				PROJECT NAME: The Fellowship of San Antonio													
	LOCATION					1 3	FEATURE CHARACTERISTICS EVALUATION PHYSICAL SE							SETTING						
1A	1B *	1C*	2A	2B	3		4	4 5		5A	6	7	8A	8B	9		10	- 1	1	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMEN	DIMENSIONS (FEET		TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
100						X	Υ	Z	34 - 18	10	The state of				2011	<40	≥40	<1.6	≥1.6	
F-1	29.66339	-98.48019	MB	30	Kek								F,C	20	50		50	X		Hillside
F-2	29.66316	-98.48033	CD	5	Kek	70	90	8					F	5	10	10			X	Hillside
S-3	29.66467	-98.48018	SF	20	Kgr	30	120		N40°E	10	1/1	0.01	FS	5	35	35			X	Streambed
S-4	29.66292	-98.48069	SF	20	Kek	45	60		N60°W		1/1	0.01	F	10	30	30			X	Streambed
S-5	29.66318	-98.48060	CD	5	Kek	19	67	4					O,C	5	10	10			Х	Streambed
S-6	29.66352	-98.48054	CD	5	Kek	41	64	6					O,C	5	10	10			X	Streambed
S-7	29.66388	-98.48046	CD	5	Kek	64	102	5.7					O,C	5	10	10			X	Streambed
S-8	29.66497	-98.47999	MB	30	Kek/Kgr								F,C	20	50		50		Х	Streambed

^{**} DATUM: NAD 83



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

	8A INFILLING
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
c 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
V FS	Flowstone, cements, cave deposits
X	Other materials

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

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

13

Date 10/29/2024

ATTACHMENT B Stratigraphic Column

THE FELLOWSHIP OF SAN ANTONIO Geologic Assessment (TCEQ-0585)

<u>Attachment B – Stratigraphic Column</u>

Period	Epoch	Group	Formation	Member	Thickness	Lithology	Hydro- logic Unit	- Hydro- stratigraphic Unit		Hydrologic Function	Porosity	Cavern Development							
		Edwards	Kainer	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	quifer 		I	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 miliolid grainstone that also contains dolomite; contains dark, spherical textural features known as black rotund bodies; <i>Ceratostreon texana</i> , <i>Caprina</i> sp., miliolids, and gastropods	Edv	VIII		Aquifer, confining unit in areas without caves	IP, MO, BU, BP, FR, CV	Large lateral caves at surface							
			Glen Rose Limestone	Upper Glen Rose	0–120 (absent in northern Comal Co.)			Cavernous		Aquifer	MO, BR, BP, FR, CV	Some surface cave development							
					120–230 (thicker in northern Comal Co.)	Alternating resistant and nonresistant beds of blue shale, nodular marl, and impure, fossiliferous limestone; gray to yellowish gray; stair-step topography; contains two distinct evaporite zones; distinct <i>Corbula</i> sp. bed marks the contact with the underlying lower member of the	Upper Trinity Lower confining unit to the Edwards aquifer	Camp Bullis		Confining	BU, BP, FR, occasional CV								
					0–10			Upper evaporite		Aquifer	IP, MO, BU, BR								
					0–40	Glen Rose Limestone; Orbitulina texana	J confining	Fossil- iferous	Upper	Aquifer	MO, BU, FR, CV								
					80–150		Lower	lierous	Lower	Confining	MO, BU, FR								
Cretaceous Early Cretaceous	snoa				8–10			Lower ev	aporite	Aquifer	IP, MO, BU, BR								
	Early Cretace							30–40 (typ. 30)			Bulverde		Semi- confining	MO, BR BP, FR					
		Trinity			30–40 (typ. 30)	Massive, fossiliferous limestone grading upward into thin beds of limestone, dolomite, marl, and shale; numerous caves and reefs occur in the lower portion of the member; Orbitulina texana, Caprina sp., Toucasia sp., Trigonia sp., Turritella sp., miliolids, and various corals		Little Blanco		Aquifer	MO, BU, BP, FR								
		Tr		Lower Glen Rose	10-66 (typ. 30)			Twin Sisters		Semi- confining, confining shale beds	IP								
												40-80 (typ. 40)	common; contains trace fossil burrows, oysters, pectens, and shell fragments	Middle Trinity	Doep schm		Aquifer	IP, MO, BU, BP, FR, CV	
					40-70 (typ. 40)		Middl	Rust		Semi- confining	IP, FR, CV								
					45–60 (typ. 55)			Honey Creek		Aquifer	IP, MO, BU, BP, FR, CH, CV								
				Pearsall	Pearsall	Pearsall	Hensell Sand	0–61	Claystone, siltstone, terrigenous sand, red sandstone conglomerate/breccia at base of unit; oysters, quartz geodes; grades into the lower member of the Glen Rose Limestone to the south becoming dolomitic		Hens	sell	Aquifer	IP, MO, SH, CV					
							Pearsall	Pearsall	Cow Creek Limestone	40–72	Brown to white, very fine to fine-grained carbonate sand (grainstone) with localized crossbedding; areas of patch reefs with talus slopes, corals and rudists; lower 14 ft is composed of dolomitic mudstone, wackstone, and packstone (coarsening upwards) with oysters throughout		Cow C	reek	Aquifer	IP, MO, BU, FE, VUG, BP, FR, CH, CV			

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

Geologic Assessment

Attachment C - Site Geology

SUMMARY

The Fellowship of San Antonio site is located southwest of the intersection of Wilderness Oak and Canyon

Golf Road in San Antonio, Bexar County, Texas.

Pape-Dawson has conducted previous mapping of portions of the project site in the past. These Geologic

Assessment reports were reviewed during preparation of this report, and previously identified features

were re-evaluated during the site visit. This report presents only those features that are still present and

in accordance with Instructions for Geologists for Geologic Assessments in the Edwards Aquifer

Recharge/Transition Zones (TCEQ-0585 Instructions).

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 review of published sources and through field evidence, the geologic formations

which outcrop at the surface within the subject site are the basal nodular (Kekbn) and dolomitic (Kekd)

members of the Kainer formation, and the Glen Rose Limestone (Kgr). These units are described in further

detail below:

The Kgr is characterized as yellowish-tan thinly bedded limestone and marl. Karst development in the

Kgr is generally characterized by few, small sinkholes and lateral cave development, as phreatic

passages and springs.

The (Kekd) is characterized as massively bedded, mudstone to grainstone, crystalline limestone. Karst

development in the Kekd is characterized by few small sinkholes and caves developed as vertical

shafts.

PAPE-DAWSON ENGINEERS

ATTACHMENT C
Geologic Assessment (TCEQ-0585)

Geologic Assessment

• The Kekbn is characterized as massive, shaly, mudstone to grainstone, nodular limestone. Karst

development in the Kekbn is characterized by vertical shafts as well as large lateral caves.

The predominant trend of faults in the vicinity of the site is approximately N45°E, based on faults identified

during the previous mapping of the area.

FEATURE DESCRIPTIONS:

Descriptions of the features observed onsite are provided below:

Feature F-1

Feature F-1 is an existing storm drain line that is not located beneath pavement. The storm drain line has

been trenched through bedrock and backfilled with a mix of fine and course fill material that may be more

permeable than surrounding undisturbed areas. Therefore, the probability of rapid infiltration is

intermediate.

Feature F-2

Feature F-2 is a man-made feature in bedrock. The feature is an engineered water quality basin. Due to

the non-karst nature, the probability of rapid infiltration is low.

Feature S-3

Feature S-3 is fractured rock outcrop that was rated as sensitive in a previous geologic assessment. The

feature was reevaluated. Reevaluation of the feature indicates that the aperture size is small and appears

to be cemented. No areas of enhanced permeability along the joints were observed in any area of this

outcrop. Therefore, due to the small aperture and cemented infilling, the probability of rapid infiltration

is low.

Feature S-4

Feature S-4 is fractured rock outcrop that was rated as sensitive in a previous geologic assessment. The

feature was reevaluated. Reevaluation of the feature indicates that the aperture size is small and appears

to be filled with clay fines. No areas of enhanced permeability along the joints were observed in any area

of this outcrop. Although the joints roughly follow the same direction as the regional trend of faults in the

PAPE-DAWSON ENGINEERS

Geologic Assessment

area, the joints appear to be caused by weathering of bedding planes of alternating strength rather than by regional structure. Therefore, due to the small aperture and fine clay infilling, the probability of rapid infiltration is low.

Features S-5, S-6 and S-7

Features S-5, S-6 and S-7 are closed depressions within the streambed. The closed depressions are a result of man-made berms extending across the streambed. No evidence of karst involvement was observed; therefore, probability of rapid infiltration is low.

Feature S-8

Feature S-8 is an existing sewer line. The sewer line excavation was backfilled with coarse permeable fill material and has a large catchment area because it crosses a drainageway. Therefore, the probability for rapid infiltration is intermediate.

REFERENCES

Clark, A.K., Golab, J.A., Morris, R.R., and Pedraza, D.E., 2023, Geologic framework and hydrostratigraphy of the Edwards and Trinity aquifers within northern Bexar and Comal Counties, Texas: U.S. Geological Survey Scientific Investigations Map 3510, 1 sheet, scale 1:24,000, 24-p. pamphlet,

Nationwide Environmental Title Research, LLC. Historical Aerials, HistoricAerials.com. https://www.historicaerials.com/viewer, October 3, 2024.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. http://websoilsurvey.sc.egov.usda.gov/, October 3, 2024.

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, October 3, 2024.

U.S. Geological Survey, National Water Information System: Mapper, https://maps.waterdata.usgs.gov/mapper/index.html, October 3, 2024.



ATTACHMENT D Site Geologic Map(s)





PAPE-DAWS

FILL ENGINEERS

SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH

10/29/2024

OWSHIP OF SAN ANTONI

PLAT NO. _____

JOB NO. _____

6075-02

DATE _____

DESIGNER___ HS

CHECKED HDJ DRAWN HS

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: Andrew Belton, P.E.

Date: 6/20/05

Signature of Customer/Agent:

Project Information

1.	Current Regulated Entity Name: The Fellowship of San Antonio
	Original Regulated Entity Name: The Fellowship of San Antonio
	Regulated Entity Number(s) (RN): 104522529
	Edwards Aquifer Protection Program ID Number(s): 13-05020201
	The applicant has not changed and the Customer Number (CN) is: 602781791
	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.

 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. 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. 							
necessary, and complete t	ne information for each additional	modification.					
WPAP Modification	Approved Project	Proposed Modification					
Summary							
Acres	<u>48.81</u>	<u>39.55</u>					
Type of Development	Commercial	Commercial					
Number of Residential	<u>N/A</u>	<u>N/A</u>					
Lots							
Impervious Cover (acres)	<u>7.74</u>	<u>7.15</u>					
Impervious Cover (%	<u>15.86</u>	<u>18.08</u>					
Permanent BMPs	Sand Filter Basins	<u>Jellyfish</u>					
Other	<u>VFS</u>	<u>VFS</u>					
SCS Modification	Approved Project	Proposed Modification					
Summary							
Linear Feet							
Pipe Diameter							

Other

AST Mo	odification	Approved Project	Proposed Modification
Summa	ıry		
Numbe	r of ASTs		
Volume	e of ASTs		
Other			
UST M	odification	Approved Project	Proposed Modification
Summa	ıry		
Numbe	r of USTs		
Volume	e of USTs		
Other			
	the nature of the proposed	of Proposed Modification. A detadd modification is attached. It discudifications, and how this proposed	isses what was approved,
	the existing site developm modification is attached. In modification is required el any subsequent modification that the approved construction illustrates that the site illus	ction has not commenced. The original transfer include its are included in the control of the co	e time this application for roposed in the submitted ginal approval letter and ed as Attachment A to n completed. Attachment Concepted. Attachment Concepted as approved. Eructed as approved.
	provided for the new acre	ed plan has increased. A Geologic age. ed to or removed from the approv	
	needed for each affected i county in which the projec	d one (1) copy of the application, p ncorporated city, groundwater con ct will be located. The TCEQ will di ns. The copies must be submitted	nservation district, and stribute the additional

ATTACHMENT A

Kathleen Hartnett White, Chairman R. B. "Ralph" Marquez, Commissioner Larry R. Soward, Commissioner Glenn Shankle, Executive Director



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 23, 2005 Revised

Mr. Jim Ford The Fellowship of San Antonio 105000 Heritage, Suite 285 San Antonio, TX 78218

Re: Edwards Aquifer, Bexar County

NAME OF PROJECT: The Fellowship of San Antonio; Located on the southwest corner of Canyon Golf Road and Wilderness Oak: San Antonio, Torong

Golf Road and Wilderness Oak; 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. 2293.00; Investigation No. 374924

Regulated Entity RN104522529

Dear Mr. Ford:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the referenced project submitted to the San Antonio Regional Office by Cara Tackett, P.E. with Pape-Dawson Engineers, on behalf of The Fellowship of San Antonio on February 2, 2005. Final review of the WPAP submittal was completed after additional material was received on May, 11, 2005. 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 48.81-acre project limits includes approximately 39 acres that was previously included in the Mission Springs WPAP which was a 62.76 acre project approved in 1997. This plan includes a revised site plan and treatment methods for the 39 acres previously included in the Missions Springs WPAP. A portion of the 48.81 acre site is developed as an existing Christian school facility that was built under the approved Mission Springs WPAP. The Fellowship has purchased the 39 acres from the school. The school is now leasing back the facilities from the Fellowship. It has been discovered that the existing school facility was not built in accordance with the approved WPAP. This WPAP will bring the entire 48.81 acres project under one approved plan and in compliance with current regulations for development over the Edwards Aquifer Recharge Zone. The balance of the 62.76 acres (13.95 acres) is owed by a separate party and is not covered in this WPAP.

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

PO Row 12027 • Austin Texas 78711-3087 • 512/239-1000 • Internet address: www.tceq.state.tx.us

Mr. Jim Ford Page 2 May 23, 2005

PROJECT DESCRIPTION

The proposed commercial project is to be built in phases as described in the application with interim and permanent BMPs. The initial phase of construction will include a church building, driveway, and related parking and sidewalks. Additional development will include another driveway for future expansion of the parking area. The impervious cover will be 7.74 acres (15.86 percent). Project wastewater will be disposed of by conveyance to the existing Salado Creek Sewage Treatment Plant owned by the San Antonio Water Systems.

PERMANENT POLLUTION ABATEMENT MEASURES

Permanent BMPs for treatment of stormwater runoff include sedimentation/filtration Basin A and Basin B and vegetated filter strips (VFS). An area of interim VFS will be utilized for treatment in the initial phase of construction. Basin A has been oversized to provide compensatory treatment for a portion of the school site. Basin B has been sized to treat runoff from the development treated by the interim filter strip and the additional impervious cover from the future parking area expansion.

Two sedimentation/filtration basins and eleven vegetated filter strips designed using the TNRCC technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (June 1999) will be constructed to treat storm water runoff. The pollution abatement measures are sized based on the information in the following tables. The approved measures meet the required 80 percent removal of the increased load in total suspended solids caused by the project.

Vegetative Filter Strips							
Drainage Area	Drainage Area (acres)	Impervious Cover (acres)	Area to be Treated (acres)	Filter Strip Area Required (acres)	Filter Strip Area Provided (acres)	Required TSS Removal (lbs)	
В	0.88	0.75	0.70	0.378	0.415	566.18	
С	0.65	0.65	0.60	0.328	0.336	534.76	
D.	0.58	0.58	0.53	0.290	0.294	472.92	
E	0.19	0.19	0.18	0.096	0.099	156.78	
F	0.53	0.40	0.37	0.202	0.228	285.46	
Ġ	0.05	0.05	0.05	0.025	0.072	40.73	
H	0.14	0.14	0.13	0.071	0.087	114.97	
I	0.11	0.11	0.10	0.056	0.065	90.50	
J	0.14	0.14	0.13	0.072	0.072	116.53	
K	2.30	1.52	1.39	0.756	0.710*	999.99	
L	0.65	0.52	0.47	0.258	0.296	372.25	

^{*}Compensating Treatment Provided in Basin "A" for the 60.37 lbs of TSS.

Mr. Jim Ford Page 3 May 23, 2005

The vegetated filter strips will:

- 1. be contiguous with developed area,
- 2. be at the same elevation as the developed area,
- 3. be sized to filter stormwater run-off from impervious cover as described in the table above,
- 4. in no case should the length of the strip be less than 12 feet

Sedimentation / Filtration Basins						
Sedimentation/Filtration Basins A B						
Dramage Area (acres)	1.87	2.71				
Impervious Cover (acres)	1.55	1.89				
Impervious Cover (percent)	82.58	69.7				
Runoff Depth (inches)	1.36	0.75				
Required Sand Filter Surface Area (ft²)	1,187	944				
Design Sand Area (ft²)	1,317	1,011				
Required Capture Volume (cubic feet)	11,075	8,806				
Design Capture Volume (cubic feet)	12,936*	10,176				
Required TSS Removal (lbs)	1,137.74	1,272.83				
Actual TSS Removal (lbs)	1,198.11*	1,272.83				

^{*}Capture Volume Provides Compensating Treatment for Drainage Area K for the 60.37 lbs of TSS.

The existing and proposed improvements associated with this submittal are less than 20 percent impervious cover (for the entire project limits); however, future expansion is anticipated that will exceed 20 percent for the total site and as described in the WPAP application, future development will be addressed in separate WPAPs. Based upon the TCEQ's review of the proposed activities, the geologic assessment, and the site conditions, the TCEQ will defer granting approval of this request at this time and instead address this concern when future WPAPs are submitted.

GEOLOGY

According to the geologic assessment included with the application, a total of eight (8) features were identified within the limits of this project. These features include four (4) closed depressions, two (2) fractured rock outcrops, one (1) solution cavity and one (1) manmade feature. The two fractured rock outcrops, solution cavity and manmade features were all assessed as sensitive. All features will be preserved in their natural state. The San Antonio Regional Office did not conduct a site inspection.

SPECIAL CONDITIONS

I. The sedimentation/filtration basins and vegetated filter strips shall be operational prior to occupancy of any of the facilities on the site.

Mr. Jim Ford Page 5 May 23, 2005

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:

- 8. 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.
- 9. 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.
- 10. No wells exist on the 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.
- 11. 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.
- 12. 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.
- 13. 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:

- 14. 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.
- 15. 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

Fax: 2105454329

Mr. Jim Ford Page 6 May 23, 2005

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. 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 the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TNRCC-10263) is enclosed.

- 16. 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.
- 17. 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.
- 18. 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 Jeff Dominski of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4025.

Sincerely,

Glenn Shankle

Executive Director

Texas Commission on Environmental Quality

GS/JWD/

Enclosures: Deed

Deed Recordation Affidavit, TNRCC-0625

Caldwell

Change in Responsibility for Maintenance on Permanent BMPs, TNRCC-10263

fc: Ms. Cara C. Tackett, P.E., Pape-Dawson Engineers, Inc.

cc: Mr. Scott Halty, San Antonio Water System

Ms. Rence Green, Bexar County Public Works

Mr. Robert J. Potts, Edwards Aquifer Authority

Mr. Larry & Charlotte Franklin, P.O. Box 269, San Antonio, Texas 78291-0269

TCEQ Central Records, MC 212

Kathleen Hartnett White, Chairman R. B. "Ralph" Marquez, Commissioner Larry R. Soward, Commissioner Glenn Shankle, Executive Director



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 18, 2005

Mr. Jim Ford The Fellowship of San Antonio 105000 Heritage, Suite 285 San Antonio, TX 78218

Edwards Aquifer, Bexar County Re:

NAME OF PROJECT: The Fellowship of San Antonio; Located on the southwest corner of Canyon Golf Road and Wilderness Oak; 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. 2293.00; Investigation No. 374924 Regulated Entity RN104522529

Dear Mr. Ford:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the referenced project submitted to the San Antonio Regional Office by Cara Tackett, P.E. with Pape-Dawson Engineers, on behalf of The Fellowship of San Antonio on February 2, 2005. Final review of the WPAP submittal was completed after additional material was received on May, 11, 2005. 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

Background

The 48.81-acre project limits includes approximately 39 acres that was previously included in the Mission Springs WPAP which was a 62.76 acre project approved in 1997. This plan includes a revised site plan and treatment methods for the 39 acres previously included in the Missions Springs WPAP. A portion of the 48.81 acre site is developed as an existing Christian school facility that was built under the approved Mission Springs WPAP. The Fellowship has purchased the 39 acres from the school. The school is now leasing back

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

Mr. Jim Ford Page 2 May 18, 2005

the facilities from the Fellowship. It has been discovered that the existing school facility was not built in accordance with the approved WPAP. This WPAP will bring the entire 48.81 acres project under one approved plan and in compliance with current regulations for development over the Edwards Aquifer Recharge Zone. The balance of the 62.76 acres (13.95 acres) is owed by a separate party and is not covered in this WPAP.

PROJECT DESCRIPTION

The proposed commercial project is to be built in phases as described in the application with interim and permanent BMPs. The initial phase of construction will include a church building, driveway, and related parking and sidewalks. Additional development will include another driveway for future expansion of the parking area. The impervious cover will be 7.74 acres (15.86 percent). Project wastewater will be disposed of by conveyance to the existing Salado Creek Sewage Treatment Plant owned by the San Antonio Water Systems.

PERMANENT POLLUTION ABATEMENT MEASURES

Permanent BMPs for treatment of stormwater runoff include sedimentation/filtration Basin A and Basin B and vegetated filter strips (VFS). An area of interim VFS will be utilized for treatment in the initial phase of construction. Basin A has been oversized to provide compensatory treatment for a portion of the school site. Basin B has been sized to treat runoff from the development treated by the interim filter strip and the additional impervious cover from the future parking area expansion.

Two sedimentation/filtration basins and eleven vegetated filter strips designed using the TNRCC technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (June 1999) will be constructed to treat storm water runoff. The pollution abatement measures are sized based on the information in the following tables. The approved measures meet the required 80 percent removal of the increased load in total suspended solids caused by the project.

Vegetative Filter Strips									
Drainage Area	Dramage Area (acres)	Impervious Cover (acres)	Area to be Treated (acres)	Filter Strip Area Required (acres)	Filter Strip Area Provided (acres)	Required TSS Removal (lbs)			
В	0.88	0.75	0.70	0.378	0.415	566.18			
Ç	0.65	0.65	0.60	0.328	0.336	534.76			
D	0.58	0.58	0.53	0.290	0.294	472.92			
E	0.19	0.19	0.18	0.096	0.099	156.78			
F	0.53	0.40	0.37	0.202	0.228	285.46			
G	0.05	0.05	0.05	0.025	0.072	40.73			

ΤΥ			T		•	
H	0.14	0.14	0.13	0.071	0.087	7.4.4.
İ	0.11	0.11	0.45	† .	0.087	114.97
_		0.11	0.10	0.056	0.065	90.50
J	0.14	0.14	0.13	0.072		
K	0.20			0.072	0.072	116.53
	2.30	1.52	1.39	0.756	0.710*	000.00
L .	0.65	0.52	0.45		0.710	999.99
*Corme	Isating Treatmen		0.47	0.258	0.296	372.25

Compensating Treatment Provided in Basin "A" for the 60.37 lbs of TSS.

The vegetated filter strips will:

- 1. be contiguous with developed area,
- 2. be at the same elevation as the developed area,
- 3. be sized to filter stormwater run-off from impervious cover as described in the table above,
- 4. in no case should the length of the strip be less than 12 feet

Sedimentation	/ Filtration Basins	
Sedimentation/Filtration Basins	A	В
Drainage Area (acres)	1.87	2.71
Impervious Cover (acres)	1.55	1.89
Impervious Cover (percent)	82.58	69.7
Runoff Depth (inches)	1.36	0.75
Required Sand Filter Surface Area (ft²)	1,187	944
Design Sand Area (ft²)	1,317	1,011
Required Capture Volume (cubic feet)	11,075	8,806
Design Capture Volume (cubic feet)	12,936*	10,176
Required TSS Removal (lbs)	1,137.74	1,272.83
Actual TSS Removal (lbs) Capture Volume Provides Compensating Treatme	1,198.11*	1.272.83

*Capture Volume Provides Compensating Treatment for Drainage Area K for the 60.37 lbs of TSS.

The applicant requested a waiver of the requirement for future permanent BMPs. The existing and proposed improvements associated with this submittal are less than 20 percent impervious cover (for the entire project limits); however, future expansion is anticipated that will exceed 20 percent for the total site and as described in the WPAP application, future development will be addressed in separate WPAPs. Based upon the TCEQ's review of the proposed activities, the geologic assessment, and the site conditions, the TCEQ will defer granting approval of this request at this time and instead address this concern when future WPAPs are submitted.

Mr. Jim Ford Page 4 May 18, 2005

GEOLOGY

According to the geologic assessment included with the application, a total of eight (8) features were identified within the limits of this project. These features include four (4) closed depressions, two (2) fractured rock outcrops, one (1) solution cavity and one (1) manmade feature. The two fractured rock outcrops, solution cavity and manmade features were all assessed as sensitive. All features will be preserved in their natural state. The San Antonio Regional Office did not conduct a site inspection.

SPECIAL CONDITIONS

- I. The sedimentation/filtration basins and vegetated filter strips shall be operational prior to occupancy of any of the facilities on the site.
- II. All sediment and or media removed from the sedimentation/filtration basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335 as applicable.
- III. Intentional discharges of sediment laden stormwater are not allowed. If dewatering excavated areas becomes necessary, a plan for removing at least 80% of the sediment load from the discharge must be designed by a Texas Licensed Professional Engineer and submitted to the San Antonio Regional Office prior to initiating any discharges. The plan must propose how the discharge will be filtered through appropriately selected temporary best management practices. These include vegetative filter strips, sediment traps, rock berms, silt fence rings, etc.

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.

Prior to Commencement of Construction:

- 2. Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the applicant must submit to the 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, TNRCC-0625) that you may use to deed record the approved WPAP is enclosed.
- 3. 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.

Mr. Jim Ford Page 5 May 18, 2005

- 4. 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.
- 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.
- 6. 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.
- 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:

- 8. 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.
- 9. 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.

Mr. Jim Ford Page 6 May 18, 2005

- 10. No wells exist on the 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.
- 11. 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.
- 12. 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.
- 13. 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 practicable.

After Completion of Construction:

- 14. 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.
- 15. 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 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 the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TNRCC-10263) is enclosed.
- 16. 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

Mr. Jim Ford Page 7 May 18, 2005

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.

- 17. 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.
- 18. 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 Jeff Dominski of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4025.

Sincerely,

Glenn Shankle

Executive Director

Texas Commission on Environmental Quality

GS/JWD/eg

Enclosures: De

Deed Recordation Affidavit, TNRCC-0625

Change in Responsibility for Maintenance on Permanent BMPs, TNRCC-10263

fc:

Ms. Cara C. Tackett, P.E., Pape-Dawson Engineers, Inc.

GC:

Mr. Scott Halty, San Antonio Water System Ms. Renee Green, Bexar County Public Works

Mr. Robert J. Potts, Edwards Aquifer Authority

Mr. Larry & Charlotte Franklin
TCEQ Central Records, MC 212

Barry R. McBee, Chairman R. B. "Ralph" Marquez, Commissioner John M. Baker, Commissioner Dan Pearson, Executive Director



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

January 9, 1998

PAPE-DAWSON ENGINEERS, INC. RECEIVED

David myBeth

Mr. Stephen Fanning
Buckner Fanning Evangelistic Foundation
10500 U.S. 281 North, Ste. 285
San Antonio, TX 78216-3629

Re:

EDWARDS AQUIFER, Bexar County

PROJECT: Mission Springs, Project number 733, Located approximately 1.1 miles north

of the intersection of Stoneoak Parkway and Evans road, San Antonio, Texas

TYPE:

Request for Approval of Water Pollution Abatement Plan (WPAP); 30 Texas

Administrative Code (TAC) §213.5(b); Edwards Aquifer Protection Program

Dear Mr. Fanning:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project that was submitted by David McBeth of Pape-Dawson Engineers on behalf of Buckner Fanning Evangelistic Foundation to the San Antonio Regional Office on October 20, 1997. The WPAP proposed in the application is in general compliance with 30 TAC § 213.5(b); therefore, approval of the plan is hereby granted subject to applicable state rules and the conditions in this approval letter. This approval expires two (2) years from the date of this approval unless, prior to the expiration date, construction has commenced on the project or an extension of time has been requested.

PROJECT DESCRIPTION

The proposed commercial project will have an area of 62.67 acres and will be a multi-phase development that will consist of a Retreat Center, Hospice Center, School, Chapel, Wellness/Aerobics Center, and an Assisted Living Center. Construction of the various portions of the development will be phased over a 3 to 5 year period. According to the applicant, each of the buildings combined will total approximately 196,850 square feet. Additionally, approximately 328,100 square feet of parking shall be constructed to accommodate patrons and visitors. Project wastewater will be disposed of by conveyance to the existing Salado Creek Sewage Treatment Plant owned by the San Antonio Water System. The proposed impervious cover for the development is approximately 15.05 acres (24%). The site is not located within the City of San Antonio but is located within the City's extraterritorial jurisdiction, and must conform with applicable codes and requirements of the City of San Antonio.

REPLY TO: REGION 13 • 140 HEIMER RD., SUITE 360 • SAN ANTONIO, TEXAS 78232-5042 • AREA CODE 210/490-3096

GEOLOGY ON SITE

According to the geologic assessment included with the submittal, there were a total of ten (10) potentially sensitive features located on the proposed project site. These features consisted of one (1) water well, (1) closed depression zone, two (2) solution cavities, one (1) vuggy-rock zone, and five (5) fractured rock zones. The well was assessed as having a high relative infiltration rate and was assessed as sensitive. All other on-site features were assessed as having a moderate infiltration rate and possibly sensitive.

The San Antonio Regional Office site inspection of November 12, 1997, revealed no additional geologically sensitive features on the proposed development site.

GEOLOGY DOWNGRADIENT OF SITE

According to the geologic assessment included with the submittal, there were a total of three (3) features identified downgradient from the proposed project site. These features were each assessed as "possibly" sensitive with respect to their geologic significance.

PERMANENT POLLUTION ABATEMENT MEASURES

The following measures will be taken to prevent pollution of stormwater originating on-site or upgradient from the project site and potentially flowing across and off the site after construction:

SEDIMENTATION/FILTRATION

- A. The partial sedimentation/filtration basin is designed in accordance with the City of Austin Environmental Design Criteria Manual Environmental Design Criteria Manual and is sized to capture the first ½ inch of stormwater run-off from 1.01 acres, providing a total capture volume of 1,840 cubic feet. The filtration system will consist of:
 - 1. 1,008 square feet of sand, which is 18 inches thick,
 - 2. an underdrain piping wrapped with geotextile membrane, and
 - 3. an impervious liner.

VEGETATIVE FILTER AREAS

- B. Filter strip #1. The 1.0 acre vegetative filter strip is designed in accordance with the LCRA Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual. The filter strip will:
 - 1. be contiguous with developed area,
 - 2. be at the same elevation as the developed area,

3. have a level spreading device, and

4. be sized to filter stormwater run-off from 0.75 acres of impervious cover (Watershed #1).

Filter strip #2. The 2.3 acre vegetative filter strip is designed in accordance with the LCRA Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual. The filter strip will:

- 1. be contiguous with developed area,
- 2. be at the same elevation as the developed area,
- 3. have a level spreading device, and
- 4. be sized to filter stormwater run-off from 1.53 acres of impervious cover (Watershed #2).

Filter strip #3. The 1.5 acre vegetative filter strip is designed in accordance with the LCRA Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual. The filter strip will:

- 1. be contiguous with developed area,
- 2. be at the same elevation as the developed area,
- 3. have a level spreading device, and
- 4. be sized to filter stormwater run-off from 1.0 acres of impervious cover (Watershed #3).

Filter strip #4. The 1.15 acre vegetative filter strip is designed in accordance with the LCRA Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual. The filter strip will:

- 1. be contiguous with developed area,
- 2. be at the same elevation as the developed area,
- 3. have a level spreading device, and
- 4. be sized to filter stormwater run-off from 0.79 acres of impervious cover (Watershed #4).

Filter strip #5. The 1.95 acre vegetative filter strip is designed in accordance with the LCRA Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual. The filter strip will:

- 1. be contiguous with developed area,
- 2. be at the same elevation as the developed area,
- 3. have a level spreading device, and
- 4. be sized to filter stormwater run-off from 1.30 acres of impervious cover (Watershed #5).

Filter strip #6. The 0.6 acre vegetative filter strip is designed in accordance with the LCRA Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual. The filter strip will:

- 1. be contiguous with developed area,
- 2. be at the same elevation as the developed area,
- 3. have a level spreading device, and
- 4. be sized to filter stormwater run-off from 0.4 acres of impervious cover (Watershed #6).

Filter strip #7. The 2.1 acre vegetative filter strip is designed in accordance with the LCRA Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual. The filter strip will:

- 1. be contiguous with developed area,
- 2. be at the same elevation as the developed area,
- 3. have a level spreading device, and
- 4. be sized to filter stormwater run-off from 1.29 acres of impervious cover (Watershed #7).
- C. The 7.06 acres of paved surface will be swept in accordance with the following LCRA Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual criteria:
 - 1. the sweeping must be done with vacuum-type sweepers,
 - 2. the sweeping must be done a minimum of once per week,
 - 3. at least two (2) passes at 6 mph or less should be made, and
 - 4. sweepings shall be disposed of in an approved manner and documentation of compliance shall be kept on site.
- D. Ten (10) geologic or manmade features on the project site were assessed as being sensitive or possibly sensitive. The permanent pollution abatement measures that will be provided to protect these features are:
 - 1. Feature S-1 (well) shall remain operational.
 - Features S-2 through S-8 shall be permanently sealed by the placement of onsite fill material
 - 3. Features S-9 and S-10 are located within the 100 year flood plain and shall be left in their natural state. Additionally, these features shall be permanently protected by the proposed filter strip (Filter strip #5) which will treat stormwater generated by this watershed.

SPECIAL CONDITIONS

- 1. Completed construction plans shall be submitted to the TNRCC San Antonio Regional office, prior to construction, for review and possible modification to the above referenced WPAP. Each of the detail sheets shall bear the engineers signature and seal as well as construction notes indicating that each of the plan sheets are to be utilized for construction purposes.
- 2. If any potential sensitive features are encountered during construction, a geologist shall evaluate the significance of the features. The evaluation shall include representative photographs and a description of the feature forwarded to the San Antonio office. Construction in the vicinity of the features may only continue with written approval from the TNRCC.
- 3. Placement of hydrocarbon or hazardous substance storage facilities regulated pursuant to 213.5(d) and 213.5(e), requires submittal of all appropriate applications with appropriate fees and must receive prior approval from the TNRCC.
- 4. The sedimentation/filtration basins are designed in accordance with the City of Austin Environmental Design Criteria Manual. The basins will incorporate sedimentation and filtration as described above.
- 5. All permanent pollution abatement measures shall be operational prior to completion of construction.
- 6. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of permanent erosion and sedimentation (E&S) control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

STANDARD CONDITIONS

- 1. During the course of regulated activities related to this project, the applicant or his 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, upon which that person or entity shall assume responsibility for all provisions and conditions of this approval.
- 2. Any modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a WPAP to amend this approval, including the payment of appropriate fees and all information necessary for its review and approval.

- 3. Prior to commencing any regulated activity, the applicant or his agent must notify the San Antonio Regional Office in writing of the date on which the regulated activity will begin.
- 4. The applicant or his agent shall record this WPAP approval in the county deed records within 30 days of receiving this notice of approval. Proof of deed recordation shall be submitted to the San Antonio Regional Office prior to commencing construction. A suggested format that you may use to deed record the approved WPAP is enclosed.
- 5. All contractors conducting regulated activities at the 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. 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 TNRCC 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.
- 7. If any significant recharge feature [sensitive feature] 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 potential adverse impacts to water quality.
- 8. 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.
- Approval of the design of the sewage collection system for this proposed project shall be obtained from the TNRCC prior to commencement of construction of any sewage collection system.
- 10. One (1) well exists on the site. Any abandoned wells shall be plugged in accordance with 30 TAC § 338 or an equivalent method, as approved by the Executive Director.

Any drill holes resulting from core sampling on-site or down-gradient of the site shall be plugged with native soil, from the bottom of the hole to the top of the hole, so as to not allow water or contaminants to enter the subsurface environment.

11. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC §213 may result in administrative penalties.

If you have any questions or require additional information, please contact Tom Gutierrez of the Edwards Aquifer Protection Program at 210/490-3096. Please reference project number 733.

Sincerely,

Dan Pearson

Executive Director

DP/TG/eg

Enclosure:

Deed Recordation Affidavit

cc:

David McBeth, Pape-Dawson Engineers Rebecca Cedillo, San Antonio Water System Renee Green, Bexar County Public Works Tom Hornseth, Comal County Greg Ellis, Edwards Aquifer Authority TNRCC Field Operations, Austin

ATTACHMENT B

The Fellowship of San Antonio Water Pollution Abatement Plan Modification

Attachment B - Narrative of Proposed Modification

The Fellowship of San Antonio Water Pollution Abatement Plan Modification (WPAP MOD) proposes the construction of additional Permanent Best Management Practices (PBMPs) within the 39.55-acre commercial site to treat the impervious cover constructed without a plan (in compliance with NOV# 1982867). This Fellowship of San Antonio site was originally approved on January 9, 1998 (Mission Springs, Project Number 733). Several modifications have been approved, including the most recent WPAP Exception (EAPP ID 13-05020201), approved May 23, 2005. This plan proposed the construction of a commercial development on 39.55-acre project limits within the overall 48.81-acre mixed use development. The Fellowship of San Antonio is located southwest of Wilderness Oaks and Canyon Golf Road intersection within the City of San Antonio, in Bexar County, Texas. The site is a developed church and associated parking and lies within the Salado watershed and does not contain 100-year floodplain. There were naturally occurring sensitive geological features identified in the Geologic Assessment and the proposed site is located within the Edwards Aquifer Recharge Zone.

No portion of the adjacent pervious area will flow across the project limits. The existing PBMPs have been sized to account for the flows within the project limits.

This WPAP Modification proposes additional clearing, grading, and drainage improvements. The proposed Permanent Best Management Practice (PBMP) for stormwater treatment are twenty-four (24) existing, approved fifteen-foot (15') engineered vegetative filter strips (EAPP ID 13-05020201), one (1) existing, approved sand filter basin (EAPP ID 13-05020201), one (1) proposed fifteen-foot (15') vegetative filter strip, and one (1) proposed Jellyfish® Filter. The onsite PBMPs are designed in accordance with the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in Total Suspended Solids (TSS) from the site. Please see treatment summary table included with the exhibits of this application for additional details.

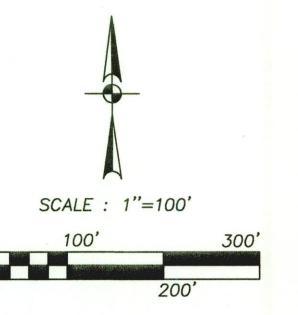
Potable water service is to be provided by the San Antonio Water System (SAWS). The proposed development will generate approximately 3,715 gallons per day (average flow) of domestic wastewater based on the assumption of 743 seats x 5 gal/seat = 3,715 gpd. The approved impervious cover (via 2005 MOD) was 7.740 ac (15.86%). The fully constructed site resulted in an impervious cover value of 8.16 ac (16.72%). Since 0.42 acres was constructed post-approval, the one (1) proposed fifteen-foot (15') vegetative filter strip, and one (1) proposed Jellyfish® Filter will treat the remaining portion to provide water protection. Refer to included application and EDR for details.

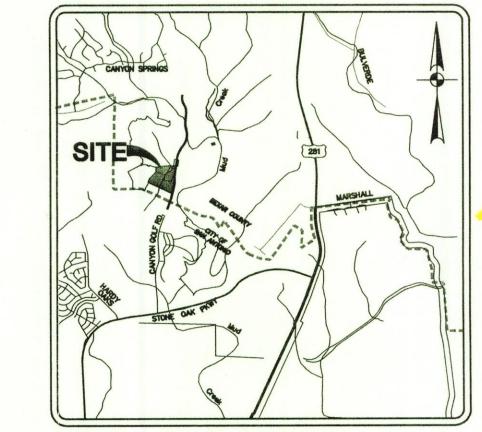


ATTACHMENT C



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.





LOCATION MAP NOT TO SCALE

PROJECT LIMITS

DRAINAGE AREAS

1000——— PROPOSED CONTOURS

LEGEND

PROPERTY LIMITS

PROPOSED SITE IMPROVEMENTS

VEGETATIVE FILTER STRIP

VEGETATIVE FILTER STRIPS

DRAINAGE FLOW (PROPOSED)

GLEN ROSE FORMATION (UPPER) POTENTIAL RECHARGE FEATURE CONTACT, LOCATED APPROXIMATELY

STRIKE OF VERTICAL JOINTS

NON-KARST CLOSED DEPRESSION

DRAINAGE AREAS

SPREADER BERM

KAINER FORMATION

SOLUTION CAVITY

SUMMARY OF PERMANENT POLLUTION MEASURES:

1.) STORM WATER RUNOFF WITHIN THE CHURCH DEVELOPMENT WILL BE DISCHARGED TO 2 SEDIMENT/FILTRATION BASINS AND SEVERAL VEGETATIVE FILTER STRIPS. THE SEDIMENTATION/FILTRATION BASINS AND VEGETATIVE FILTER STRIPS HAVE BEEN SIZED TO REMOVE 80% OF THE INCREASED TOTAL SUSPENDED SOLIDS (TSS) FROM THE DEVELOPMENT IN ACCORDANCE WITH TCEQ'S TECHNICAL GUIDANCE MANUAL RG-348 (1999).

2.) TEMPORARY BMP'S WILL BE MAINTAINED UNTIL THE SITE IMPROVEMENTS ARE COMPLETED AND THE SITE HAS BEEN STABILIZED, INCLUDING SUFFICIENT VEGETATION BEING ESTABLISHED IN DISTURBED AREAS.

3.) AREAS OF DISTURBED SOIL SHALL BE REVEGETATED TO STABILIZE SOIL USING BLOCK SOD IN A CHECKERBOARD PATTERN. THE CONTRACTOR MAY SUBSTITUTE SEED-IMPREGNATED EROSION CONTROL MATS OR PLACEMENT OF TOP SOIL, HYDRAULIC MULCHING, AND WATERING UNTIL VEGETATION IS ESTABLISHED. SEED MIXTURE AND/OR GRASS TYPE TO BE DETERMINED BY OWNER. IRRIGATION MAY BE REQUIRED IN ORDER TO ESTABLISH SUFFICIENT

4.) AFTER COMPLETION OF CONSTRUCTION ACTIVITY, THE CONTRACTOR WILL RÉMOVE TRASH, DEBRIS, AND ACCUMULATED SILT FROM THE SEDIMENTATION/FILTRATION BASINS AND RE-ESTABLISH THEM TO PROPER OPERATING CONDITION.

CONSTANT ELEVATION SPREADER BERM TOPSOIL & GRASS PER LANDSCAPE SPECIFICATIONS MAINTAIN CONSTANT ELEV. @ TOP OF BERM

TYPICAL SPREADER BERM SECTION

N.T.S.

	VEGETATIVE FILTER STRIP								
DRAINAGE AREA	DRAINAGE AREA (AC.)	IMPERVIOUS COVER (AC.)	AREA TO BE TREATED(AC.)	FILTER STRIP AREA REQUIRED (AC.)	FILTER STRIP AREA PROVIDED (AC.)				
С	0.65	0.65	0.60	0.328	0.336				
D	0.58	0.58	0.53	0.290	0.294				
Ε	0.19	0.19	0.18	0.096	0.099				
F	0.53	0.40	0.37	0.202	0.228				
G	0.05	0.05	0.05	0.025	0.072				
Н	0.14	0.14	0.13	0.071	0.087				
I	0.11	0.11	0.10	0.056	0.065				
J	0.14	0.14	0.13	0.072	0.072				
K	2.30	1.52	1.39	0.756	0.710*				
L	0.65	0.52	0.47	0.258	0.296				

*COMPENSATING TREATMENT PROVIDED IN BASIN "A".

SEDIMENTATION/FILTRATION BASIN

	OLDINETTI ATTOMY TO A TOTAL								
DRAINAGE AREA	DRAINAGE AREA (AC.)	IMPERVIOUS COVER (AC)		RUNOFF DEPTH (IN)	REQ'D CAPTURE VOLUME (CF)	REQ'D SAND AREA (SF)	DESIGN SAND AREA (SF)	DESIGN CAPTURE VOL. (CF)	
А	1.87	1.55	82.58	1.36	11,075	1,187	1,317	12,936*	
В	2.71	1.89	69.7	0.75	8,806	944	1,011	10,176	

*CAPTURE VOLUME PROVIDES COMPENSATING TREATMENT FOR DRAINAGE AREA K.

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.

EXHIBIT 3





3

JOB NO. 6075-01 DATE FEBRUARY 2005 DESIGNER <u>LE/TM</u>

CHECKED CCT DRAWN IEB

WATER POLLUTION ABATEMENT PLAN APPLICATION FORM (TCEQ0584)

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 r TCEQ

Aquifer. This Water Pollution Abatement Plan Application Form is hereby submitted for review and Executive Director approval. The form was prepared by:
Print Name of Customer/Agent: <u>Andrew Belton, P.E.</u> Date: <u>\(\lambda\) \(\lambda\) \(\lambda\)</u>
Signature of Customer/Agent: Regulated Entity Name: The Fellowship of San Antonio
Regulated Entity Information
1. The type of project is:
Residential: Number of Lots: Residential: Number of Living Unit Equivalents: Commercial Industrial Other:

- 2. Total site acreage (size of property):39.55
- 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	88,427	÷ 43,560 =	2.03
Parking	203,861	÷ 43,560 =	4.68
Other paved surfaces	19,166	÷ 43,560 =	0.44
Total Impervious Cover	311,454	÷ 43,560 =	7.15

Total Impervious Cover $7.15 \div$ Total Acreage $39.55 \times 100 = 18.08\%$ 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. $L \times W = Ft^2 \div 43,560 Ft^2/Acre = acres.$
10.	Length of pavement area: feet.
	Width of pavement area: feet. L x W = $Ft^2 \div 43,560 Ft^2/Acre = acres$. Pavement area acres \div R.O.W. area acres x $100 = \%$ impervious cover.
11.	A rest stop will be included in this project.
	A rest stop will not be included in this project.

TCEQ Executive Director. Modifica	g roadways that do not require approval from the ations to existing roadways such as widening nore than one-half (1/2) the width of one (1) existing the TCEQ.		
Stormwater to be general	ted by the Proposed Project		
volume (quantity) and character (occur from the proposed project i quality and quantity are based on	acter of Stormwater. A detailed description of the quality) of the stormwater runoff which is expected to s attached. The estimates of stormwater runoff the area and type of impervious cover. Include the oth pre-construction and post-construction conditions		
Wastewater to be genera	ted by the Proposed Project		
14. The character and volume of wastewa	ater is shown below:		
100% Domestic% Industrial% Commingled TOTAL gallons/day 3,713	3,713 Gallons/dayGallons/dayGallons/day		
15. Wastewater will be disposed of by:			
On-Site Sewage Facility (OSSF/Sep	otic Tank):		
Attachment C - Suitability Letter from Authorized Agent. An on-site sewage f 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 the land is suitable for the use of private sewage facilities and will meet or except the requirements for on-site sewage facilities as specified under 30 TAC Chapter relating to On-site Sewage Facilities. Each lot in this project/development is at least one (1) acre (43,560 square feesize. The system will be designed by a licensed professional engineer or regist sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.			
Sewage Collection System (Sewer	Lines):		
to an existing SCS.	ne wastewater generating facilities will be connected ne wastewater generating facilities will be connected		
The SCS was previously submitThe SCS was submitted with theThe SCS will be submitted at a be installed prior to Executive	nis application. later date. The owner is aware that the SCS may not		

	The sewage collection system will convey the wastewater to the <u>Dos Rios</u> (name) Treatment Plant. The treatment facility is:
	Existing. Proposed.
16	. All private service laterals will be inspected as required in 30 TAC §213.5.
Si	ite Plan Requirements
Ite	ms 17 – 28 must be included on the Site Plan.
17.	. \boxtimes The Site Plan must have a minimum scale of 1" = 400'.
	Site Plan Scale: 1" = <u>100</u> '.
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) Pnael No. 48029C0140G, Dated 9/29/2010
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 justification for an exception to a portion of the Geo	•
22. $igotimes$ The drainage patterns and approximate slopes anticipate	ed after major grading activities
23. \square Areas of soil disturbance and areas which will not be dis	turbed.
24. \(\sime\) Locations of major structural and nonstructural controls permanent best management practices.	. These are the temporary and
25. $igotimes$ Locations where soil stabilization practices are expected	to occur.
26. Surface waters (including wetlands).	
⊠ N/A	
27. Locations where stormwater discharges to surface wate occur.	r or sensitive features are to
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 needed for each affected incorporated city, groundwate county in which the project will be located. The TCEQ we copies to these jurisdictions. The copies must be submit office.	r conservation district, and ill distribute the additional
30. Any modification of this WPAP will require Executive Dir construction, and may require submission of a revised a fees.	• • • • •

ATTACHMENT A

THE FELLOWSHIP OF SAN ANTONIO 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

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 137 cfs. The runoff coefficient for the site changes from the originally assumed c-value of approximately 0.69 to the actual c-value that is approximately 0.70. Values are based on the Rational Method using runoff coefficient 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: Andrew Belton, P.E.

Date: 4 20 25

Signature of Customer/Agent:

Regulated Entity Name: The Fellowship of San Antonio

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:

 \square The following fuels and/or hazardous substances will be stored on the site: <u>construction</u> 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.
Se	equence 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.
ŝ.	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:
Te	emporary Best Management Practices (TBMPs)
sta coi ba:	osion control examples: tree protection, interceptor swales, level spreaders, outlet abilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized instruction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment sins. Please refer to the Technical Guidance Manual for guidelines and specifications. All suctural 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
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

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.



- 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

<u>Attachment B – Potential Sources of Contamination</u>

Other potential sources of contamination during construction include:

Potential Source	Preventative Measure
Asphalt products used on this project.	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.
Oil, grease, fuel, and hydraulic fluid contamination	 Vehicle maintenance when possible, will be
from construction equipment and vehicle dripping.	 performed within the construction staging area. Construction vehicles and equipment shall be checked regularly for leaks and repaired immediately.
Accidental leaks or spills of oil, petroleum products,	Contractor to incorporate into regular safety
and substances listed under 40 CFR parts 110, 117,	meetings, a discussion of spill prevention and
and 302 used or stored temporarily on site.	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.
Miscellaneous trash and litter from construction workers and material wrappings.	 Trash containers will be placed throughout the site to encourage proper trash disposal.
Construction debris.	 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.
Spills/Overflow of waste from portable toilets	 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

<u>Attachment C – Sequence of Major Activities</u>

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 0.13 acres. The second is construction that will include excavation, installation of Jellyfish® filter and site cleanup. This will disturb approximately 0.13 acres.



ATTACHMENT D

Attachment D – Temporary Best Management Practices and Measures

a. 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 offsite 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; no naturally occurring sensitive features were identified within the Geologic Assessment.



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; no naturally occurring sensitive features were identified within the Geologic Assessment.



ATTACHMENT F

<u>Attachment F – Structural Practices</u>

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 activities and rock berms with silt fence for secondary protection, 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.



ATTACHMENT G

<u>Attachment G – Drainage Area Map</u>

No more than ten (10) acres will be disturbed within a common drainage area with these proposed improvements. All TBMPs utilized are adequate for the drainage areas served.



ATTACHMENT I

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) structural controls (rock berm outlets, silt fences, drainage swales, etc.) for evidence of failure or excess siltation (over 6 inches deep), (3) vehicle exit point for evidence of off-site sediment tracking, (4) vehicle storage areas for signs of leaking equipment or spills, (5) embankment, spillways, and outlet of sediment basin (where applicable) for erosion damage, and (6) 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.

Pollution	ے.	Corrective Action Required	
Prevention	ted		
Measure	Inspected Compliance	Description	Date
	S I	(use additional sheet if necessary)	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			
"I certify under penalty of law that this document ar system designed to assure that qualified personnel p or persons who manage the system, or those persons of my knowledge and belief, true, accurate, and com	nd all attach roperly gath directly resp plete. I am	er and evaluate the information submitted. Based opensible for gathering the information, the information	rision in accordance with a n my inquiry of the person on submitted is, to the best
the possibility of fine and imprisonment for knowing "I further certify I am an authorized signatory in acco	rdance with		
Inspector's Name	Inspector	's Signature Date	

PROJECT MILESTONE DATES

Date when major site grading activities begin:

Construction Activity		<u>Date</u>
Installation of BMPs		
	_	
	_	
	_ _	
Dates when construction activities temporarily or perm	anently o	cease on all or a portion of the projec
Construction Activity		Date
	_	
	- -	
Dates when stabilization measures are initiated:		
Stabilization Activity		<u>Date</u>
	- -	
	_	
Removal of BMPs	_	

ATTACHMENT J

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

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

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

Signature

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

Print Name of Customer/Agent: Andrew Belton, P.E.

Date: Lalk blas

Signature of Customer/Agent

Regulated Entity Name: The Fellowship of San Antonio

Permanent Best Management Practices (BMPs)

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

1. Permanent BMPs and measures must be implemented to control the discharge of

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

	A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is:
	□ N/A
3.	Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.
	□ N/A
4.	Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.
	 The site will be used for low density single-family residential development and has 20% or less impervious cover. The site will be used for low density single-family residential development but has
	more than 20% impervious cover. \square 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 multifamily 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.	

	 A description of the BMPs and measures that will be used to prevent pollutic surface water, groundwater, or stormwater that originates upgradient from and flows across the site is attached. No surface water, groundwater or stormwater originates upgradient from the 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 flows across the site, and an explanation is attached. 	the site e site ce
7.	Attachment C - BMPs for On-site Stormwater.	
	A description of the BMPs and measures that will be used to prevent pollution 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 or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.	cluding ed. ce water
8.	Attachment D - BMPs for Surface Streams. A description of the BMPs and meas that prevent pollutants from entering surface streams, sensitive features, or the is attached. Each feature identified in the Geologic Assessment as sensitive has addressed.	aquifer
	□ N/A	
9.	The applicant understands that to the extent practicable, BMPs and measures m maintain flow to naturally occurring sensitive features identified in either the ge assessment, executive director review, or during excavation, blasting, or constru	ologic
	 The permanent sealing of or diversion of flow from a naturally-occurring sen feature that accepts recharge to the Edwards Aquifer as a permanent polluti abatement measure has not been proposed. Attachment E - Request to Seal Features. A request to seal a naturally-occu sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached. 	on
10.	Attachment F - Construction Plans. All construction plans and design calculation the proposed permanent BMP(s) and measures have been prepared by or under direct supervision of a Texas Licensed Professional Engineer, and are signed, sea dated. The plans are attached and, if applicable include:	the
	 ☑ 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 measuresSigned by the owner or responsible party
✓ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit✓ A discussion of record keeping procedures
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

Attachment B - BMPs for Upgradient Stormwater

Upgradient water from undeveloped areas to the southwest will be routed around the site to Panther Springs Creek. When these upgradient area are developed, they will require their own approved water quality treatment plans prior to discharging toward the onsite bypass drainage infrastructure.

The proposed Permanent Best Management Practices (PBMPs) for stormwater treatment are twenty-four (24) existing, approved fifteen-foot (15') engineered vegetative filter strips (EAPP ID 13-05020201), one (1) existing, approved sand filter basin (EAPP ID 13-05020201), one (1) proposed fifteen-foot (15') vegetative filter strip, and one (1) proposed Jellyfish® Filter, which are designed in accordance with the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in Total Suspended Solids (TSS) from the site.



ATTACHMENT C

Attachment C – BMPs for On-Site Stormwater

The proposed Permanent Best Management Practices (PBMPs) for stormwater treatment are twenty-four (24) existing, approved fifteen-foot (15') engineered vegetative filter strips (EAPP ID 13-05020201), one (1) existing, approved sand filter basin (EAPP ID 13-05020201), one (1) proposed fifteen-foot (15') vegetative filter strip, and one (1) proposed Jellyfish® Filter, which are designed in accordance with the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in Total Suspended Solids (TSS) from the site.



ATTACHMENT D

THE FELLOWSHIP OF SAN ANTONIO Water Pollution Abatement Plan Modification

<u>Attachment D – BMPs for Surface Streams</u>

The proposed Permanent Best Management Practices (PBMPs) for stormwater treatment are twenty-four (24) existing, approved fifteen-foot (15') engineered vegetative filter strips (EAPP ID 13-05020201), one (1) existing, approved sand filter basin (EAPP ID 13-05020201), one (1) proposed fifteen-foot (15') vegetative filter strip, and one (1) proposed Jellyfish® Filter, which are designed in accordance with the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) to remove 80% of the increase in Total Suspended Solids (TSS) from the site.



ATTACHMENT F

THE FELLOWSHIP OF SAN ANTONIO Water Pollution Abatement Plan Modification

<u>Attachment F – Construction Plans</u>

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



ATTACHMENT G

THE FELLOWSHIP OF SAN ANTONIO Water Pollution Abatement Plan

PERMANENT POLLUTION ABATEMENT MEASURES MAINTENANCE SCHEDULE AND MAINTENANCE PROCEDURES

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 dependent on what permanent pollution abatement measures are incorporated into the project. The project specific water pollution abatement plan should be reviewed to determine what permanent pollution abatement measures are incorporated into a project.

It should also be noted that the timing and procedures presented herein are general guidelines, adjustment to the timing and procedures may have to be made depending on project specific characteristics as well as 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 either through a lease agreement, property owners association covenants, or other binding document.

I understand that I am responsible for maintenance of 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.

Doug Hess, Business Manager

The Fellowship of San Antonio

THE FELLOWSHIP OF SAN ANTONIO Water Pollution Abatement Plan

INSPECTION AND MAINTENANCE SCHEDULE

FOR PERMANENT POLLUTION ABATEMENT MEASURES

Recommended Frequency	Task to be Performed				
	1	2	3		
Annually*	1	1	1		

^{*}Inspections to occur quarterly during the first year of operation.

See description of maintenance task to be performed on the following pages. Frequency of maintenance tasks may vary depending on amount of rainfall and other weather-related conditions but may not be altered without TCEQ approval. Inspection frequency in subsequent years is based on the maintenance plan developed in the first year but must occur annually at a minimum.

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

Tas	k No. & Description	Included in this project	
1.	Cleaning	Yes	No
2.	Manual Backflush / Flow Rate Test	Yes	No
3.	External Rinsing	Yes	Ne

 $[\]sqrt{Indicates}$ maintenance procedure that applies to this specific site.

THE FELLOWSHIP OF SAN ANTONIO Water Pollution Abatement Plan

MAINTENANCE PROCEDURES FOR PERMANENT POLLUTION ABATEMENT MEASURES (Jellyfish)

Note: Additional guidance can be obtained from the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) Addendum, Section 3.2.22, as well as the Jellyfish® Filter Owner's Manual provided by Imbrium® Systems.

- 1. Cleaning. Removal and appropriate disposal of all water, sediment, oil and grease, and debris that has accumulated within the unit will be performed. The Jellyfish® Filter will be inspected and maintained by professional vacuum cleaning service providers with experience in the maintenance of underground tanks, sewers and catch basins. Since some of the maintenance procedures require manned entry into the Jellyfish structure, only professional maintenance service providers trained in confined space entry procedures should enter the vessel. A written record will be kept of inspection results and maintenance performed.
- 2. Manual Backflush / Flow Rate Test. A manual backflush must be performed on a single draindown cartridge using a Jellyfish Cartridge Backflush Pipe (described in the Jellyfish® Filter Owner's Manual). If the time required to drain 14 gallons of backflush water from the Backflush Pipe (from top of pipe to the top of the open flapper valve) exceeds 15 seconds, it is recommended to perform a manual backflush on each of the cartridges. After the manual backflush, the draindown test should be repeated on a single cartridge to determine if the cartridge can drain 14 gallons of water in 15 seconds. If the cartridge still does not achieve the design flow rate, it must be replaced. Filter cartridges should be tested for adequate flow rate, every 12 months and cleaned and recommissioned, or replaced if necessary. Written record will be kept of inspection results and maintenance performed.
- 3. External Rinsing. If external rinsing is performed within the structure, the cartridge or individual filtration tentacles should be rinsed while safely suspended over the maintenance access wall opening in the cartridge deck, such that rinsate flows into the lower chamber of the Jellyfish® Filter. If the rinsing procedure is performed outside the structure, the cartridge or individual filtration tentacles should be rinsed in a suitable basin such as a plastic barrel or tub, and rinsate subsequently poured into the maintenance access wall opening in the cartridge deck. Sediment is subsequently removed from the lower chamber by standard vacuum service. Written record will be kept of inspection results and maintenance performed.
- 4. Hazardous Material Spill. Maintenance requirements and frequency are dependent on the pollutant load characteristics of each site and may be required in the event of a chemical spill or due to excessive sediment loading. In the case of a spill, the worker should abort inspection activities until the proper guidance is obtained. Notify the local hazard control agency and appropriate regulatory agencies immediately. Maintenance should be performed by a licensed liquid waste hauler. Cartridge replacement may also be required in the event of an accidental significant or hazardous spill. Industrial and hazardous waste materials will be disposed of in accordance with TCEQ rules in 30 Texas Administration Code (TAC) Sections (§§)335.501-.521 (subchapter R). If class I or II non-hazardous or hazardous wastes are generated, a third-party disposal contractor will manage the wastes. Written record will be kept of inspection results and maintenance performed.



THE FELLOWSHIP OF SAN ANTONIO Water Pollution Abatement Plan

INSPECTION AND MAINTENANCE SCHEDULE FOR PERMANENT POLLUTION ABATEMENT MEASURES

Recommended Frequency	Task to be Performed				
	1	2			
After Rainfall	٧	1			
Biannually*	√	1			
Annually [†]	√	V			

^{*}At least one biannual inspection must occur during or immediately after a rainfall event.

See description of maintenance task to be performed on the following pages. Frequency of maintenance tasks may vary depending on amount of rainfall and other weather-related conditions. A written record will be kept of inspection results and maintenance performed.

Task N	No. & Description	Included i	Included in this project		
1.	Vegetated Filter Strips	Yes	Ne		



[†]Inspections to occur quarterly during the first year of operation.

 $[\]sqrt{Indicates}$ a maintenance procedure that applies to this specific site.

THE FELLOWSHIP OF SAN ANTONIO Water Pollution Abatement Plan

MAINTENANCE PROCEDURES FOR PERMANENT POLLUTION ABATEMENT MEASURES

Note: Additional guidance can be obtained from TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) Section 3.5.

1. <u>Vegetated Filter Strips:</u> Once a vegetated area is well established, little additional maintenance is generally necessary. The key to establishing a viable vegetated feature is the care and maintenance it receives in the first few months after it is planted. Once established, all vegetated BMPs require some basic maintenance to insure the health of the plants. An Integrated Pest Management (IPM) Plan should be developed for vegetated areas. This plan should specify how problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.

Vegetation height for native grasses shall be limited to no more than 18-inches. When vegetation exceeds that height, the filter strip shall be cut to a height of approximately 4 inches. Turf grass shall be limited to a height of 4-inches with regular maintenance that utilizes a mulching mower. Trash and debris shall be removed from filter strip prior to cutting. Sediment removal is not normally required in filter strips since the vegetation normally grows through it and binds it to the soil. However, sediment may accumulate along the upstream boundary of the strip preventing uniform overland flow. Excess sediment should be removed by hand or with flat-bottomed shovels.

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, re-grading and placement of solid block sod over the affected area. Construction of a level spreader device may be necessary to reestablish shallow overland flow. Corrective maintenance, such as weeding, or replanting should be done more frequently in the first two to three years after installation to ensure stabilization. Dense vegetation may require irrigation immediately after planting, and during particularly dry periods, particularly as the vegetation is initially established. A written record will be kept of inspection results and corrective measures taken.

Recordkeeping Procedures for Inspections, Maintenance, Repairs, and Retrofits:

- Written records shall be kept by the party responsible for maintenance or a designated representative.
- Written records shall be retained for a minimum of five years.



ATTACHMENT I

THE FELLOWSHIP OF SAN ANTONIO Water Pollution Abatement Plan Modification

<u>Attachment I – Measures for Minimizing Surface Stream Contamination</u>

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

1	Doug Hess	
	Print Name	
	Business Manager	
	Title - Owner/President/Other	
	Title - Owner/i resident other	
of	The Fellowship of San Antonio	
	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.

Applicant's Signature THE STATE OF S County of S BEFORE ME, the undersigned authority, on this day personally appeared 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 day of Notary Public, State of Teleas Typed or Printed Name of Notary Notary Public, State of Teleas Comm. Expires 09-18-2026 Notary ID 125365282

MY COMMISSION EXPIRES:

APPLICATION FEE FORM (TCEQ-0574)

Application Fee Form

Texas Commission on Environment Name of Proposed Regulated Entity Regulated Entity Location: <u>23755 C</u> Name of Customer: <u>The Fellowship</u> Contact Person: <u>Doug Hess</u> Customer Reference Number (if iss Regulated Entity Reference Number Austin Regional Office (3373)	y: <u>The Fellowship of Sa</u> anyon Golf Rd, San An <u>of San Antonio</u> Phon ued):CN <u>602781791</u>	tonio, TX 78258 e: <u>210-402-3672</u>	
Hays	Travis	Wi	lliamson
San Antonio Regional Office (3362	, _	_	
⊠ Bexar	Medina	Uv	alde
Comal	Kinney		
Application fees must be paid by ch Commission on Environmental Qu form must be submitted with your	ality . Your canceled c	heck will serve as your	receipt. This
Austin Regional Office	Sa	an Antonio Regional O	ffice
Mailed to: TCEQ - Cashier	⊠o	vernight Delivery to: T	CEQ - Cashier
Revenues Section	_ 1	2100 Park 35 Circle	
Mail Code 214	В	uilding A, 3rd Floor	
P.O. Box 13088		ustin, TX 78753	
Austin, TX 78711-3088	e e	512)239-0357	
Site Location (Check All That Apply	v):		
Recharge Zone	Contributing Zone	Transi	tion Zone
Type of Plan		Size	Fee Due
Water Pollution Abatement Plan, C			4
Plan: One Single Family Residential	Dwelling	Acres	\$
Water Pollution Abatement Plan, C	-		
Plan: Multiple Single Family Reside	ntial and Parks	Acres	\$
Water Pollution Abatement Plan, C	Contributing Zone		
Plan: Non-residential		39.55 Acres	\$ 6,500
Sewage Collection System		L.F.	\$
Lift Stations without sewer lines		Acres	\$
Underground or Aboveground Stor	age Tank Facility	Tanks	\$
Piping System(s)(only)		Each	\$
Exception		Each	\$
Extension of Time		Each	\$
Signature:	Date	6/20/25	

Application Fee Schedule

Texas Commission on Environmental Quality

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	Fee
Exception Request	\$500

Extension of Time Requests

Project	Fee
Extension of Time Request	\$150

CORE DATA FORM (TCEQ-10400)



TCEQ Core Data Form

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

SECTION I: General Information

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

New Perr	nit, Registration or a	Authorization	(Core Data Fo	orm should be su	bmitted w	vith the prog	ram application.)			
Renewal	(Core Data Form sh	ould be submi	tted with the	renewal form)			ther			
					k to searc	-	Regulated Entity Reference Number (if issued)			
CN 6027817	91			Central Reg	gistry**	RN 1	104522529			
<u>SECTIOI</u>	N II: Cus	<u>tomer</u>	Infor	<u>mation</u>						
4. General Cu	istomer Informat	tion	5. Effectiv	e Date for Cus	tomer In	formation	Updates (mm/dd/	′уууу)		
☐ New Custon	mer egal Name (Verifiab		-	tomer Information		_	nge in Regulated En	tity Own	ership	
	r Name submitte s Comptroller of	_	-	automatically	based o	n what is c	urrent and active	with th	ne Texas Sec	retary of State
6. Customer	Legal Name (If an	individual, pri	int last name	first: eg: Doe, Jol	hn)		If new Customer,	enter pre	evious Custom	ner below:
The Fellowship	of San Antonio									
7. TX SOS/CPA Filing Number 8. TX Sta			8. TX Stat	e Tax ID (11 dig	its)		9. Federal Tax ID (9 digits)		10. DUNS Number (if applicable)	
11. Type of C	ustomer:		tion			☐ Individ] Individual Partnershi		ership: 🔲 Ger	neral 🔲 Limited
Government: [City County County	Federal	Local 🗌 Sta	te 🗌 Other		☐ Sole P	roprietorship	Ot	her:	
12. Number	of Employees						13. Independer	ntly Ow	ned and Op	erated?
0-20	21-100 🔲 101-2	250 🗌 251-	-500 🗌 50	1 and higher			Yes	☐ No		
14. Customer	Role (Proposed o	r Actual) – as i	it relates to th	ne Regulated Ent	ity listed o	on this form.	Please check one of	the follo	owing	
Owner Occupation	:	erator Responsible Pa		Owner & Operato			☐ Other:			
15. Mailing										
Address:	1			1			Ţ		T	
	City			State		ZIP			ZIP + 4	
16. Country I	Mailing Informati	on (if outside	USA)		17	7. E-Mail A	ddress (if applicabl	le)		

TCEQ-10400 (11/22) Page 1 of 3

() -							()	-		
SECTION III: F	Regula	ited Ent	ity Inforr	matio	<u>n</u>					
21. General Regulated Ent	tity Informa	tion (If 'New Reg	gulated Entity" is sele	ected, a new	permit a	applicat	ion is also	required.)		
☐ New Regulated Entity [Update to	Regulated Entity	Name Update	to Regulate	ed Entity I	Informa	ation			
The Regulated Entity Namas Inc, LP, or LLC).	ne submitted	d may be upda	ted, in order to me	eet TCEQ C	ore Date	a Stan	dards (re	emoval of o	rganization	al endings such
22. Regulated Entity Name	e (Enter name	e of the site wher	re the regulated actio	on is taking	olace.)					
The Fellowship of San Antonio	0									
23. Street Address of	23755 Canyo	on Golf Road								
the Regulated Entity:										
(No PO Boxes)	City	San Antonio	State	TX	ZIP		78258		ZIP + 4	
24. County	Bexar									
		If no Stree	et Address is provi	ided, field	s 25-28 a	are red	quired.			
25. Description to										
Physical Location:										
26. Nearest City							State		Nea	rest ZIP Code
Latitude/Longitude are re used to supply coordinate	-	-	-			tanda	rds. (Geo	coding of th	he Physical	Address may be
27. Latitude (N) In Decima	al:	29.663666 N		28	. Longitu	ude (W	/) In Deci	mal:	-98.47946	57 W
Degrees	Minutes		Seconds	De	grees		N	/linutes		Seconds
29	:	39	49.1976		9	98		28		46.0812
29. Primary SIC Code	30.	Secondary SIC	Code	31. Prim	nary NAI	ICS Co	de	32. Seco	ondary NAIC	CS Code
(4 digits)	(4 di	gits)		(5 or 6 d	igits)			(5 or 6 di	gits)	
8661				813110						
33. What is the Primary B	usiness of t	his entity? (De	o not repeat the SIC o	or NAICS de	scription.)				
Church										
	23755 Can	yon Golf Road								
34. Mailing										
Address:	City	San Antonio	State	тх	Z	ZIP	78258		ZIP + 4	
35. E-Mail Address:	dou	g.hess@thefellov	wshipofsa.org							
36. Telephone Number			37. Extension or	r Code		38. Fa	ax Numb	er (if applical	ble)	
(210) 402-3672						()	-			

19. Extension or Code

18. Telephone Number

20. Fax Number (if applicable)

TCEQ-10400 (11/22) Page 2 of 3

-		nbers Check all Progra uctions for additional រូ		/registration (umbe	rs that will be affected	d by the updates submitted on this
☐ Dam Safety	1	Districts	⊠ Edwards Aquifer] Emis	ssions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal :	Solid Waste	New Source	OSSF	[] Petr	oleum Storage Tank	□ PWS
Sludge		Storm Water	☐ Title V Air]] Tire:	S	Used Oil
☐ Voluntary	Cleanup	☐ Wastewater	☐ Wastewater Agricult	ture [] Wat	er Rights	Other:
40. Name:	N IV: Pr	<u>eparer Inf</u>	<u>formation</u>	41. Title:	En	gineer I	
42. Telephone		43. Ext./Code	44. Fax Number	45. E-Ma			
(210)375-9000)		(210)375-9010	vbotello@	pape-d	awson.com	
6. By my signatu	re below, I certify						ete, and that I have signature authority dentified in field 39.
Company:	Pape-Dav	vson Consulting Engine	eers, LLC	Job Title:	V	ice President	
Name (In Print): Andrew B	Jelton, P.E.	15			Phone:	(210)375-9000
Signature:		\ \	mu K			Date:	6/20/25

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POLLUTANT LOAD AND REMOVAL CALCULATIONS

Contech Engineered Solutions Calculations for Texas Commission on Environmental Quality **TSS Removal Calculations**

Project Name: Fellowship Church

Date Prepared: 6/25/2025

1. The Required Load Reduction for the total project:

Calculations from RG-348

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

Pages 3-27 to 3-30

 $L_{MTOTAL PROJECT} = Required TSS removal resulting from the proposed development = 80\% of increased load$

A_N = Net increase in impervious area for the project

P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County = Bexar Total project area included in plan *= 39.55 acres Predevelopment impervious area within the limits of the plan * = $\,$ 0.00 acres Total post-development impervious area within the limits of the plan* = 8.15 acres Total post-development impervious cover fraction * = 0.21 inches 30 6650 lbs. LM TOTAL PROJECT = Number of drainage basins / outfalls areas leaving the plan area =

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

Drainage Basin/Outfall Area No. =

Total drainage basin/outfall area = 2.43 acres Predevelopment impervious area within drainage basin/outfall area = 0.00 acres Post-development impervious area within drainage basin/outfall area = 1.97 acres Post-development impervious fraction within drainage basin/outfall area = 0.81 1608 lbs. $L_{M THIS BASIN} =$

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = JF abbreviation Removal efficiency = 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: $LR = (BMP \text{ efficiency}) \times P \times (A_1 \times 34.6 + A_P \times 0.54)$

 A_C = Total On-Site drainage area in the BMP catchment area $A_{I} =$ Impervious area proposed in the BMP catchment area

A_P = Pervious area remaining in the BMP catchment area L_R = TSS Load removed from this catchment area by the proposed BMP

> 2.43 acres $A_I =$ 1.97 acres 0.46 $A_p =$ acres lbs. 1765

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

Desired L_{M THIS BASIN} = 1608 lbs. F =0.91

6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.

Offsite area draining to BMP = 0.00 acres Offsite impervious cover draining to BMP = 0.00 acres Rainfall Intensity = 1.15 inches per hour Effective Area = 1.79 acres inches

Cartridge Length = 54

Peak Treatment Flow Required = 2.07 cubic feet per second

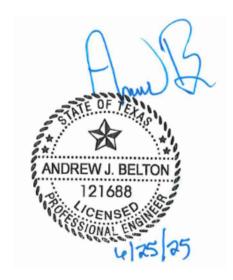
7. Jellyfish Designed as Required in RG-348 Section 3.2.22

Calculations from RG-348

Pages Section 3.2.22

Flow Through Jellyfish Size Vault

> JFPD0808-11-3 Jellyfish Size for Flow-Based Configuration = Jellyfish Treatment Flow Rate = 2.23



Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Additional information is provided for cells with a red triangle in the upper right co Text shown in blue indicate location of instructions in the Technical Guidance Manual - R Characters shown in red are data entry fields.

Characters shown in black (Bold) are calculated fields. Changes to these fields wi

1. The Required Load Reduction for the total project:

where:

Calculations from RG-348

Page 3-29 Equation 3.3: $L_{M} = 27.2(A_{N} \times P)$

A_N = Net increase in impervious a

 $L_{M TOTAL PROJECT}$ = Required TSS removal result

P = Average annual precipitation

Site Data: Determine Required Load Removal Based on the Entire Project

	Bexar	County =
acres	39.55	Total project area included in plan *=
acres	0.00	Predevelopment impervious area within the limits of the plan * =
acres	8.15	Total post-development impervious area within the limits of the plan* =
1	0.21	Total post-development impervious cover fraction * =
inches	30	P =
		•

 $L_{M TOTAL PROJECT} = 6650$ lbs.

Number of drainage basins / outfalls areas leaving the plan area = 20

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

Drainage Basin/Outfall Area No. =	В	
Total drainage basin/outfall area =	0.77	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.65	acres
Post-development impervious fraction within drainage basin/outfall area =	0.84	

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

 $L_{M \text{ THIS BASIN}} = 530 \text{ lbs.}$

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: $L_R = (BMP \text{ efficiency}) \times P \times (AI \times 34.6 + AP \times 0.54)$

where: A_C =Total On-Site drainage area in the BMP catchment area

A_I = Impervious area proposed in the BMP catchment area

A_P = Pervious area remaining in the BMP catchment area

L_R = TSS Load removed from this catchment area by the proposed BMP

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

Desired $L_{M THIS BASIN} = 530$ lbs.

F = 0.92

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

Rainfall Depth = 2.00 inches

Post Development Runoff Coefficient = 0.69

On-site Water Quality Volume = 3852 cubic feet

Calculations from RG-348

Off-site area draining to BMP = 0.00 acres

Off-site Impervious cover draining to BMP = 0.00 acres

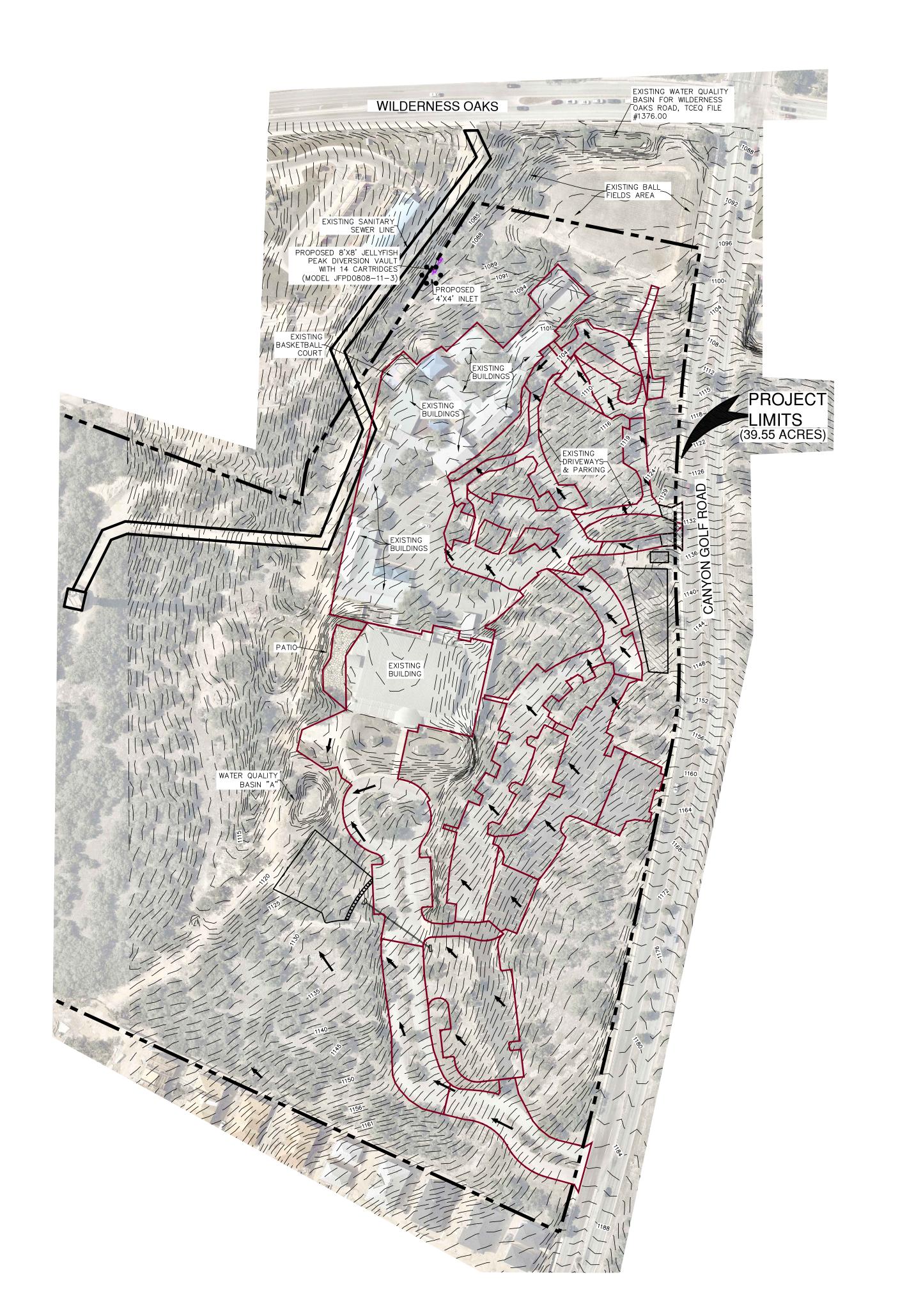
Impervious fraction of off-site area = **0**

Off-site Runoff Coefficient = 0.00

Off-site Water Quality Volume = 0 cubic feet

Storage for Sediment = 770

EXHIBITS



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,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.

TCEQ WATER POLLUTION **ABATEMENT PLAN GENERAL**

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE: - THE NAME OF THE APPROVED PROJECT;

- THE ACTIVITY START DATE; AND - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.

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

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

GENERAL NOTES

1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD. 3. 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

4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF

5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT

6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN. 7. STORM WATER POLLUTION PREVENTION STRUCTURES

SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES.

SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE

SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY. 8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT

9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS.

10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES

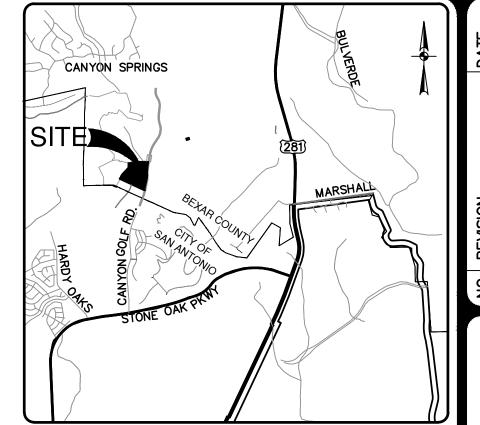
11. UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.

12. 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.

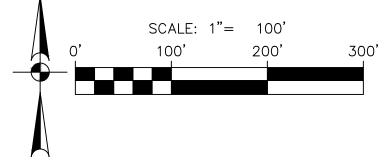
13. SHADED AREA DENOTES LIMITS OF DISTURBED AREAS. OTHER AREAS WITHIN THE PROJECT LIMITS, WITH THE EXCEPTION OF A CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD, ARE NOT A PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTÍVITIES. HOUSE CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN.

14. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TXDOT RIGHT-OF-WAY WITH

15. CPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.



LOCATION MAP NOT-TO-SCALE



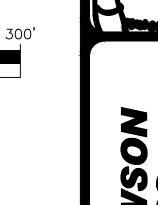
EXISTING GRADE PROPOSED GRADE FLOW ARROW (EXISTING) SILT FENCE/SEDIMENT CONTROL ROLLS ROCK BERM

PROJECT LIMITS

GRAVEL FILTER BAGS

(FIELD LOCATE)

CONSTRUCTION EQUIPMENT, VEHICLE &



ANDREW J. BELTOI

GRATE INLET PROTECTION

STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)

MATERIALS STORAGE AREA (FIELD LOCATE) CONCRETE TRUCK WASH-OUT PIT

NO

6075-01 TE FEBRUARY 2025 ESIGNER HECKED EK DRAWN TB

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.

DATE

SIGNATURE

HIS 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.

TEMPORARY BMP MODIFICATIONS

DESCRIPTION

SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT

MATERIALS

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

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 OF

INSTALLATION

DRAINAGE.

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 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

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 STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE

APPEARANCE OF GOOD SOD

SOON AS THE SOD IS LAID.

THE MOWER HIGH (2"-3").

1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE

3. MOW WHEN THE SOD IS ESTABLISHED - IN 2-3 WEEKS. SET

2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS

IN CRITICAL AREAS, SECURE SOD

WITH NETTING. USE STAPLES.

<u>SHOOTS</u> OR GRASS BLADES. GRASS SHOULD BE GREEN AND

CUTTING HEIGHT.

HEALTHY; MOWED AT A 2"-3"

-THATCH- GRASS CLIPPINGS AND

ROOT ZONE- SOIL AND ROOTS.

DEAD LEAVES, UP TO 1/2" THICK.

SHOULD BE 1/2"-3/4" THICK, WITH

DENSE ROOT MAT FOR STRENGTH.

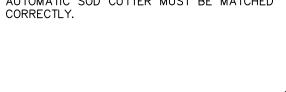
LAY SOD IN A STAGGERED PATTERN. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER.

SOIL.

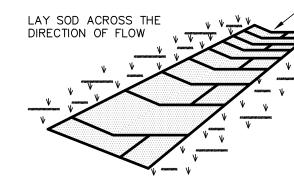
DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE

 ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED

ENDS AND TRIMMING PIECES.



SURFACE SMOOTH AND SLOPE FOR DRAINAGE.



MATERIALS

1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH (± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE SHOOT GROWTH AND THATCH.

2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND

LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%.

TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE. 3. STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION.

4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

SITE PREPARATION PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT

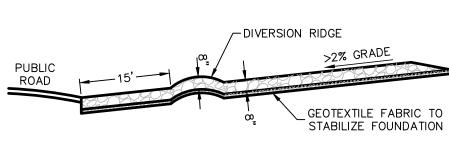
TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN. THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD ROLLED OR TAMPED TO PROVIDE FIRM CONTACT BETWEEN ROOTS AND SOIL. INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.

FERTIRLIZE ACCORDING TO SOIL TESTS. FERTILIZER NEEDS CAN BE DETERMINED BY A SOIL TESTING LABORATORY OR REGIONAL RECOMMENDATIONS CAN BE MADE BY COUNTY AGRICULTURAL EXTENSION AGENTS. FERTILIZER SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 3 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

INSTALLATION IN CHANNELS

SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS TIGHTLY (SEE FIGURE ABOVE).

. AFTER ROLLING OR TAMPING, SOD SHOULD BE PEGGED OR STAPLED TO RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL



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

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. 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

5. UNSTABLE FOUNDATION - USE GEOTEXTILE FABRIC UNDER PAD AND/OR IMPROVE FOUNDATION DRAINAGE.

TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.

INSPECTION AND MAINTENANCE GUIDELINES THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY.

THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT 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

SEDIMENT BASIN. 5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

CORRECT

INCORRECT

SOD INSTALLATION

USE PEGS OR STAPLES TO FASTEN SOD

FIRMLY - AT THE ENDS OF STRIPS AND

IN THE CENTER, OR EVERY 3-4 FEET IF

THE STRIPS ARE LONG. WHEN READY TO

MOW, DRIVE PEGS OR STAPLES FLUSH

WITH THE GROUND.

SOD SHOULD NOT BE CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER.

2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHOULD BE LIGHTLY

IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND

SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH

GROWTH AND STRENGTH. CARE SHOULD BE EXCERCISED TO ENSURE THAT SOD

IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS

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 OF

5. AS SODDING OF CLEARLY DEFINED AREAS IS COMPLETED, SOD SHOULD B

AFTER ROLLING, SOD SHOULD BE IRRIGATED TO A DEPTH SUFFICIENT THAT

UNTIL SUCH TIME A GOOD ROOT SYSTEM BECOMES DEVELOPED, IN THE

THE UNDERSIDE OF THE SOD PAD AND THE SOIL 4 INCHES BELOW THE SOD IS

ABSENCE OF ADEQUATE RAINFALL, WATERING SHOULD BE PERFORMED AS

OFTEN AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF AT LEAST 4

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

SOD SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT

. DAMAGE FROM STORMS OR NORMAL CONSTRUCTION ACTIVITIES SUCH AS TIRE RUTS OR DISTURBANCE OF SWALE STABILIZATION SHOULD BE REPAIRED AS

NSPECTION AND MAINTENANCE GUIDELINES

OTHER APPROVED METHODS. SOD SHOULD BE INSTALLED WITH THE LENGTH

IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT

OTHER. LATERAL JOINTS SHOULD BE STAGGERED TO PROMOTE MORE UNIFORM

FIRST ROW OF SOD SHOULD BE LAID IN A STRAIGHT LINE WITH

SOD ALSO SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN.

GENERAL INSTALLATION (VA. DEPT. OF

REDUCE ROOT BURNING AND DIEBACK.

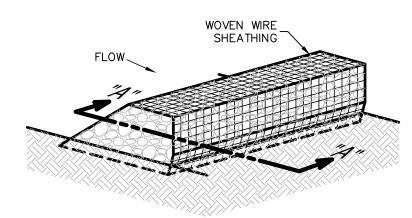
PERPENDICULAR TO THE SLOPE (ON CONTOUR).

LEAF SHOULD BE REMOVED AT ANY ONE CUTTING.

LOCATE AND REPAIR ANY DAMAGE.

(SEE FIGURE ABOVE).

WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR



ISOMETRIC PLAN VIEW

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 BED LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

INSPECTION AND MAINTENANCE GUIDELINES

. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS. ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.

. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.

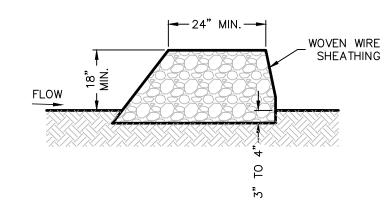
3. REPAIR ANY LOOSE WIRE SHEATHING.

WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION 5. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO

FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS,

6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.



SECTION "A-A"

MATERIALS

THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT

2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE

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

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 TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES,

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

AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.

INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

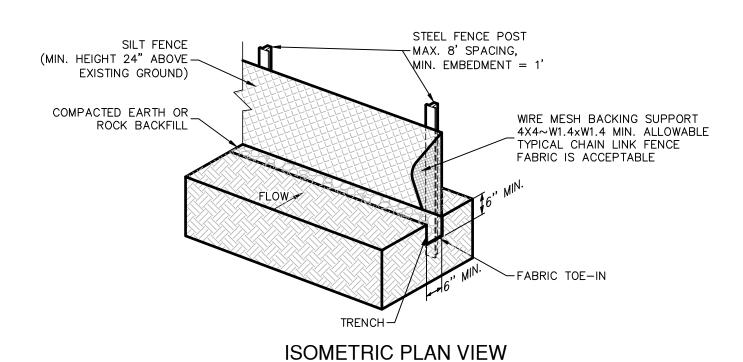
COMMON TROUBLE POINTS

. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).

2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).

ROCK BERM DETAIL

NOT-TO-SCALE



SILT FENCE

A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE. WHEN PROPERLY USED, SILT FENCES CAN BE HIGHLY EFFECTIVE AT CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO POND, ALLOWING HEAVIER SOLIDS TO SETTLE OUT. IF NOT PROPERLY INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER-BORN SEDIMENT FROM UNPROTECTED AREAS OF A LIMITED EXTENT. SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY. IF CONCENTRATED FLOW OCCURS AFTER INSTALLATION. CORRECTIVE ACTION MUST BE TAKEN SUCH AS PLACING A ROCK BERM IN THE AREAS OF CONCENTRATED FLOW.

SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY ANCHORED TO THE GROUND AT THE END OF THE DAY. SILT FENCES ON THE PERIMETER OF THE SITE OR AROUND DRAINAGE WAYS SHOULD NOT BE MOVED AT ANY TIME.

SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.

FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS

3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.

. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.

3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

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

4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE

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.

COMMON TROUBLE POINTS FENCE NOT INSTALLED ALONG THE CONTOUR CAUSING WATER TO CONCENTRATE AND FLOW OVER THE FENCE.

2. FABRIC NOT SEATED SECURELY TO GROUND (RUNOFF PASSING UNDER FENCE). 3. FENCE NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING

4. FENCE TREATING TOO LARGE AN AREA, OR EXCESSIVE CHANNEL FLOW (RUNOFF OVERTOPS OR COLLAPSES FENCE).

INSPECTION AND MAINTENANCE GUIDELINES 1. INSPECT ALL FENCING WEEKLY, AND AFTER RAINFALL

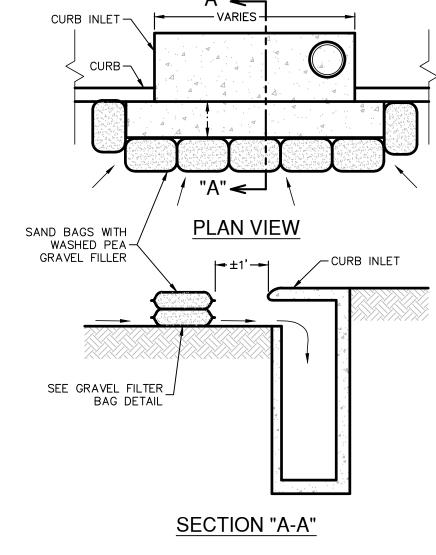
2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES. 3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL

TO THE TORN SECTION.

VEHICLE ACCESS POINTS.

4. REPLACE OR REPAIR SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON

WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.



GENERAL NOTES

RUNOFF FROM FLOWING BETWEENT HE BAGS.

1. THE SANDBAGS SHOULD BE FILLED WITH WASH PEA GRAVEL AND STACKED TO FORM A CONTINUOUS BARRIER ABOUT 1-FOOT HIGH AROUND INLETS. 2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT

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

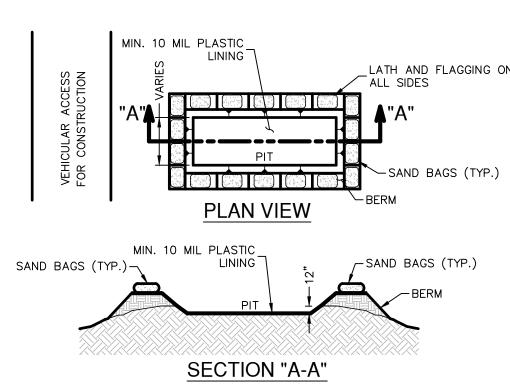
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.

5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL CURB INLET

NOT-TO-SCALE

PROTECTION DETAIL



GENERAL NOTES

DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.

FROM STORM WATER RUNOFF. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION

MATERIALS

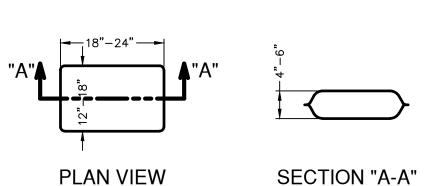
PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED 2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES

SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

CONCRETE TRUCK WASHOUT PIT DETAIL

NOT-TO-SCALE



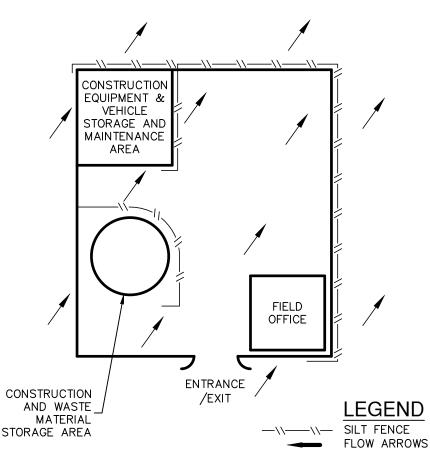
THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN. UNIT WEIGHT OF 4 OUNCES/SY, HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.

THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).

SAND SHALL NOT BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



CONSTRUCTION STAGING AREA

NOT-TO-SCALE

JUNE 2025 ESIGNER

SILT FENCE DETAIL

NOT-TO-SCALE

SOD INSTALLATION DETAIL

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.

HIS 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.

EXHIBIT

6075-02 OB NO. IECKED EK DRAWN TE

LAT NO. ____

SOON AS PRACTICAL.

C8.01

6/26/202

ANDREW J. BELTO

WILDERNESS OAKS

PROPOSED 8'X8' JELLYFIS PEAK DIVERSION VAUL WITH 14 CARTRIDGE

(MODEL JFPD0808-1

WATER QUALITY

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,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.

Watershed	Total Watershed Area (ac.)	Impervious Cover (ac.)	РВМР	Total TSS Generated Annually (lbs)	Total TSS Removed Annually (lbs)
Α	1.81	1.48	Sand Filter Basin	1,208	1,372
В	0.77	0.65	15' VFS	530	575
С	0.68	0.65	15' VFS	530	574
D	0.56	0.56	15' VFS	457	494
E	0.21	0.21	15' VFS	171	185
F	0.46	0.43	15' VFS	351	380
G	0.16	0.16	15' VFS	131	141
Н	0.10	0.10	15' VFS	82	88
I	0.11	0.11	15' VFS	90	97
J	0.26	0.26	15' VFS	212	229
K	2.43	1.97	Jellyfish System	1,608	2,169
L**	0.65	0.52	15' VFS	424	461
М	0.02	0.02	15' VFS	16	18
N	0.07	0.07	Untreated	57	0
0	0.08	0.08	Untreated	65	0
Р	0.07	0.07	Untreated	57	0
Q	0.19	0.19	Untreated	155	0
R	0.15	0.15	Untreated	122	0
S	0.37	0.37	Untreated	302	0
Т	0.10	0.10	Untreated	82	0

TOTAL 9.25 8.15 6,650 6,783 *Watershed A utilized the below equation to calculate the Total TSS Removed Annually

 $L_R = (BMP \text{ efficiency}) \times P \times (A_i \times 34.6 + A_P \times 0.54)$

Watershed A Sand Filter Efficiency = 0.89

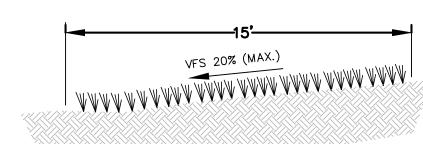
Vegetated Filter Strip Efficiency = 0.85 **Watershed L is a legacy BMP that was unaltered from the previous plan

CONSTANT ELEVATION SPREADER BERM -TOPSOIL & GRASS PER LANDSCAPE SPECIFICATIONS MAINTAIN CONSTANT ELEV. @ TOP OF BERM

- COMPACTED CLAY

TYPICAL SPREADER BERM SECTION

NOT-TO-SCALE

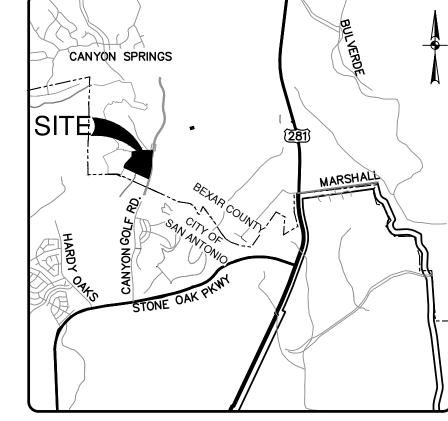


ENGINEERED VEGETATIVE FILTER STRIP DETAIL

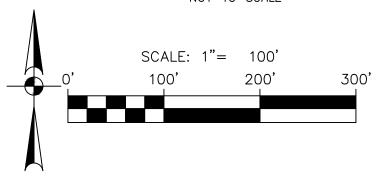
NOT-TO-SCALE

IMPERVIOUS COVER SUMMARY

Type of Impervious Cover	Area (ac.)
Pavement	4.68
Buildings	2.03
Sidewalk	0.31
Hardscape	0.13
Total IC	7.15
Total Area Treated	8.22







LEGEND

PROJECT LIMITS EXISTING CONTOURS (2' INTERVAL) DRAINAGE AREAS

FLOW ARROW (EXISTING)

WATERSHED DESIGNATION

VEGETATIVE FILTER STRIPS

VEGETATIVE FILTER STRIP



PERMANENT POLLUTION ABATEMENT

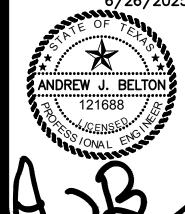
- 1. SILT FENCING AND ROCK BERMS, WHERE APPROPRIATE, WILL BE MAINTAINED UNTIL THE ROADWAY, UTILITY, DRAINAGE IMPROVEMENTS, AND BUILDING CONSTRUCTION ARE COMPLETED.
- 2. ENERGY DISSIPATORS (TO HELP REDUCE EROSION) WILL BE PROVIDED AT POINTS OF CONCENTRATED DISCHARGE WHERE EXCESSIVE VELOCITIES MAY

3. THIS PROJECT DOES NOT INCLUDE THE INSTALLATION OF ABOVE GROUND

- STORAGE TANKS (AST) WITH VOLUME(S) GREATER THAN OR EQUAL TO 500
- 4. DRAINAGE PATTERNS ARE ILLUSTRATED BY FLOW ARROWS. SLOPES VARY THROUGHOUT THE SITE; TYPICAL SLOPES IN THIS PROJECT WILL RANGE FROM 1.5% TO 15% WITH 3:1 SLOPES (MAX.) IN LANDSCAPED AREAS.

SUMMARY OF PERMANENT POLLUTION **ABATEMENT MEASURES**

- 1. TEMPORARY BMP'S WILL BE MAINTAINED UNTIL THE SITE IMPROVEMENTS ARE COMPLETED AND THE SITE HAS BEEN STABILIZED, INCLUDING SUFFICIENT VEGETATION BEING ESTABLISHED.
- 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 PLACEMENT OF TOP SOIL AND A FRIABLE SEED BED WITH A 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 THE TGM RG-348 (2005). SEED MIXTURE AND/OR GRASS TYPE TO BE DETERMINED BY OWNER AND SHOULD BE 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 BMP'S FOR THIS SITE INCLUDE ONE (1) PROPOSED CONTECH JELLYFISH SYSTEM, ONE (1) PROPOSED ENGINEERED 15' VEGETATIVE FILTER STRIP (VFS) AND TWENTY FOUR (24) EXISTING VEGETATIVE FILTER STRIP (VFS.). ALL PROPOSED PERMANENT BMPs HAVE BEEN DESIGNED TO REMOVÈ AT LEAST 80% OF THE INCREASED TOTAL SUSPENDED SOLIDS (TSS) FOR THE 39.55 ACRE SITE IN ACCORDANCE WITH THE TCEQ'S TECHNICAL GUIDANCE MANUAL (TGM) RG-348 (2005). ALL EXISTING PERMANENT BMPs HAVE BEEN DESIGNED TO REMOVE AT LEAST 80% OF THE INCREASED TOTAL SUSPENDED SOLIDS (TSS) FOR THE 39.55 ACRE SITE IN ACCORDANCE WITH THE TCEQ'S TECHNICAL GUIDANCE MANUAL (TGM) RG-348 (JUNE 1999). SEE NOTE 6 BELOW.
- 5. TYPICAL PROPOSED SLOPES ON THIS PROJECT RANGE FROM APPROXIMATELY 1.5% TO 15%.
- 6. THIS EXHIBIT REPRESENTS SITE IMPROVEMENTS AND BMPs AS GRANDFATHERED OR APPROVED UNDER THE EXISTING CONTRIBUTING ZONE PLAN AND MODIFICATIONS.
- 7. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT SUFFICIENT VEGETATION EXISTS IN AREAS LABELED AS VEGETATIVE BUFFER. IF NOT, THESE AREAS MUST BE RE-VEGETATED TO STABILIZE THE SOIL USING BLOCK SOD IN A CHECKBOARD PATTERN AND PLACED AT AN ELEVATION THAT ALLOWS ADJACENT IMPERVIOUS COVER TO DRAIN ACROSS THE VEGETATIVE BUFFER. THE CONTRACTOR MAY SUBSTITUTE SEED—IMPREGNATED EROSION CONTROL MATS OR HYDROMULCH FOR SOD. CONTRACTOR MUST WATER UNTIL VEGETATION IS ESTABLISHED. SEED MIXTURE AND/OR GRASS TYPE TO BE DETERMINED BY OWNER.



Z

6075-01 DEC 2024

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.

OPENING

PLAN VIEW (TOP SLAB NOT SHOWN FOR CLARITY)

FLOATABLES

BAFFLE

BYPASS WEIR

TOP OF

BYPASS WEIR

Ø24" OPENING FOR Ø18" HDPE -

Ø24" OPENING FOR Ø18" HDPE -

OUTLET PIPE

BOTTOM OF FLOATABLES -

BAFFLE

TRANSFER _

OPENING

CARTRIDGE

- (LOCATION

DRAINDOWN

FRAME AND COVERS - (TRENCH COVERS FLUSH WITH TOP OF

- CARTRIDGE

ELEV. = 1089.64'
TOP OF STRUCTURE

WEIR ELEV. = 1087.05'

INLET INV. ELEV. = 1085.65'

OUTLET INV. ELEV. = 1085.55'

ELEV. =1089.64'

STRUCTURE INV. ELEV. = 1079.05'

ELEV. = 1078.38'

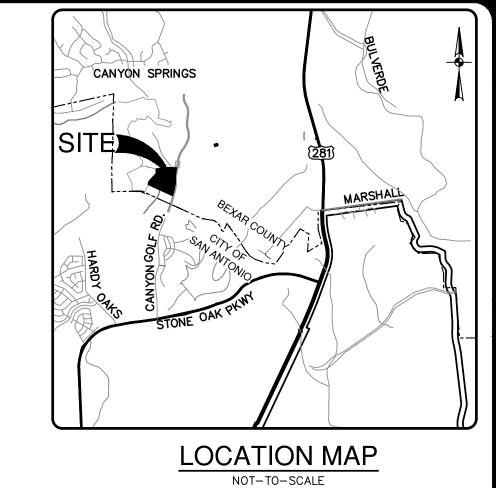
BOTTOM OF STRUCTURE

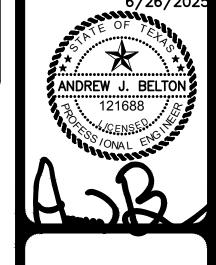
STRUCTURE)

TRANSFER OPENING

ELEVATION VIEW

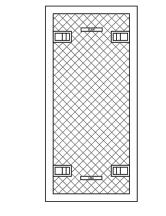
— BLANK CARTRIDGE





JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD CARTRIDGE SELECTION CARTRIDGE LENGTH OUTLET INVERT TO STRUCTURE INVERT (A) FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CAR MAX. TREATMENT (CFS) DECK TO INSIDE TOP (MIN) (B)



N.T.S.

		TE SPE REQUI		NTS		
STRUCTURE	ID				JI	FPD080
WATER QUA	LITY FLO	W RATE (cfs)			2.06
PEAK FLOW	RATE (cfs	i)				22.78
RETURN PER	RIOD OF F	PEAK FLO	W (yrs)			100
# OF CARTR	IDGES RE	QUIRED ((HF / DD))		11/3
CARTRIDGE	LENGTH					54
PIPE DATA:	I.E.	MAT'L	DIA	SLOPE	0/.	HGL
INLET #1	1085.65	HDPE	18	*	- /0	*
INLET #2	*	*	*	*		*
OUTLET	1805.55	HDPE	18	*		*
SEE GENER HYDRAULIC					TLE	ĒΤ
RIM ELEVAT	ION				Τ	1089.64
4 N.T. E. O.T.	TION DALL	407	L MUD		٠	FIGUE
ANTI-FLOTA	I ION BALI	LAST	WID.	IH	Н	EIGHT *
			*			*

NOTES/SPECIAL REQUIREMENTS: * PER ENGINEER OF RECORD

GENERAL NOTES:

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.

2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com

3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.

CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT. 4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH

COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.

5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.

6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.

7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR

GREATER SLOPE.

8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.

B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.

C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT). D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF

> JELLYFISH JFPD0808 - 825898 - 010 PROJECT NAME: FELLOWSHIP CHURCH LOCATION: SAN ANTONIO, TX SITE DESIGNATION: JFPD0808

DEBRIS. CONTACT CONTECH TO COORDINATE C	ARTRIDGE INSTALLATION WITH SITE STABILIZATION.
C NTECH®	JELLYFISH JFPD080
ENGINEERED SOLUTIONS LLC	PROJECT NAME: FELL
www.ContechES.com	LOCATION: SAN A
00 Centre Pointe Dr., Suite 400, West Chester, OH 45069	SITE DESIGNATION

				HEADWALL —INV=1085.50
				(REF. DETAIL SHEET C1.10)
		/ 5 LF 18" SD @ 0.5%—		
		/ J LF 10 SD @ U.3%—\ / /	1089.64	
		/ / /	1089.50	1089
			1069.50	
			20000000 4044 00000	
			PROPOSED 4'X4' INLET —TOP=1089.00 INV=1085.68	
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SANITARY SEWER EASEMENT-

/ 10 LF 18" SD @ 0.5%-x PROPOSED 8'X8' JELLYFISH PEAK DIVERSION VAULT WITH 14 CARTRIDGES (MODEL JFPD0808-11-3) INV(IN)=1085.65INV(OUT)=1085.55

HIS 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,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.

6075-01 DESIGNER CHECKED<u>AB</u> DRAWN<u>EK</u>

GRADING NOTES

- 1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK WHERE NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY AND TXDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).
- 2. SITE PREPARATION, GRADING, EXCAVATION AND FILL SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT
- 3. ALL SELECT FILL MATERIAL PROVIDED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING AND COMPACTING.
- 4. ALL ELEVATIONS AND PROPOSED CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVING, BASE, GRASS, TOPSOIL, AND MULCH MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
- 5. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
- 6. THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
- 8. THE CONTRACTOR SHALL REMOVE TOP SOIL, GRASS, ROOTS, DEBRIS, ETC. AND DISPOSE OFF SITE THOSE MATERIALS NOT SUITABLE FOR EMBANKMENT AND TOPSOIL. CLEAN STRIPPINGS AND TOPSOIL MAY BE STOCKPILED ON SITE FOR REUSE IN A LOCATION SPECIFIED BY THE
- 9. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE STABILIZATION. ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TPDES/SWPPP REQUIREMENTS. REFERENCE THE LANDSCAPE ARCHITECT'S PLAN, IF APPLICABLE.
- 10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS (USE OF SILT FENCES, ETC.) TO KEEP DRAINAGE AND SILT FROM WASHING ONTO ADJACENT PROPERTY, STREETS, OR DRAINAGE WAYS. CONTRACTOR SHALL IMMEDIATELY REMOVE SILT/DEBRIS WHICHWASHES OFFSITE OR INTO EXISTING STORM DRAIN SYSTEMS. (SEE SWPPP PLANS & TPDES
- 11. THE CONTRACTOR SHALL OBTAIN GRADES SHOWN HEREON WITHIN +/-ONE-TENTH (0.10) FOOT.
- 12. IN PROPOSED PAVING AREAS, IT IS INTENDED THAT THE MINIMUM GRADE IS 1%. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 1.0% UNLESS OTHERWISE SHOWN.
- 13. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING SITE AND PROPOSED IMPROVEMENTS.
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL, OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEMS).
- 15. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN WORKING NEAR UTILITIES, GAS LINES, SEWER, OR EXISTING APPURTENANCES. PRIOR TO PERFORMING ANY EXCAVATION, CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND ENSURE UTILITIES HAVE BEEN ADEQUATELY LOCATED AND IDENTIFIED. THE ENGINEER SHALL BE NOTIFIED IF ANY UTILITY CONFLICTS ARE DISCOVERED.
- 16. POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE SCOPE OF THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
- 17. FOR FILL PLACEMENT ON HILL SIDES OR STEEP SLOPE AREAS, THE CONTRACTOR SHALL REFERENCE THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR SPECIAL INSTRUCTIONS REGARDING
- 18. NO WORK SHALL BE PERFORMED IN A PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.

TRENCH EXCAVATION SAFETY PROTECTION

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

DRAINAGE NOTES

- 1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK SHALL COMPLY WITH THE PROJECT GEOTECH REPORT, THE PROJECT SPECIFICATIONS, AND THE CURRENT CITY, COUNTY OR TXDOT "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
- 2. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES. THE CONTRACTOR SHOULD EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITIES AND SHOULD THEY BE DAMAGED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR WILL BE REQUIRED TO REPAIR OR REPLACE THE DAMAGED FACILITIES AT CONTRACTOR'S
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL OR BETTER CONDITION DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.
- 4. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION.
- 5. WATER JETTING THE BACKFILL OF STORM DRAIN TRENCHES WILL NOT
- 6. NORTHINGS AND EASTINGS LISTED ON THESE PLANS ARE TO CENTER OF BOX FOR JUNCTION BOXES AND GRATE INLETS AND TO OUTSIDE CORNER FACE OF CURB FOR ALL CURB AND COMBINATION INLETS. ALL LENGTHS OF PIPE ARE TO INSIDE FACE OF STRUCTURES.
- CONTRACTOR SHALL ENSURE PROPER SIZE OF JUNCTION BOXES NEEDED WHERE INDICATED ON PLAN. CONTRACTOR SHALL CONNECT STORM DRAIN PIPE TO JUNCTION BOXES PER MANUFACTURES
- 8. ALL STORM DRAIN TO JUNCTION BOX CONNECTIONS SHALL HAVE CONCRETE COLLARS.
- 9. ALL GRATE INLETS MUST BE H20 RATED GRATES.
- 10. TOPS OF MANHOLES, JUNCTION BOXES AND GRATES SHALL BE SET FLUSH TO FINISHED SURFACE BASED UPON GRADING PLAN.

SITE UTILITY NOTES

- 1. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
- 2. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD WHETHER SHOWN ON THIS PLAN OR NOT PRIOR TO INSTALLATION OF ANY NEW LINES.
- 3. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES
- 4. CONTRACTOR SHALL CALL FOR THE LOCAL JURISDICTIONAL INSPECTIONS AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION.
- 5. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL JURISDICTION WITH REGARDS TO MATERIALS AND INSTALLATION OF THE UTILITIES AND STORM DRAINS.
- 6. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
- 7. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF
- THIS PROJECT SHALL COMPLY WITH THE FOLLOWING AS APPLICABLE: A. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATION
- FOR CONSTRUCTION" B. CURRENT "SAN ANTONIO WATER SYSTEM UTILITY SERVICE **REGULATIONS**"
- C. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION" D. CURRENT TxDOT "STANDARD SPECIFICATION FOR CONSTRUCTION OF
- HIGHWAYS, STREETS, AND DRAINAGE" E. CURRENT CITY OF SAN ANTONIO "RIGHT-OF-WAY ORDINANCE AND CRITERIA MANUAL"
- 8. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
- 9. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
- 10. CONTRACTOR SHALL PROTECT ALL EXISTING TREES, FENCES, PAVING, UTILITIES, AND OTHER STRUCTURES SCHEDULED TO REMAIN. ANY STRUCTURE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
- 11. THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL FINAL UTILITY AS-BUILT MEASUREMENTS, TOPS AND LENGTH OF SERVICE CONNECTIONS OF
- 12. ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT HIS SOLE EXPENSE.
- 13. GAS AND ELECTRIC ALIGNMENTS SHOWN ON THIS DRAWING ARE CONCEPTUAL. THE ACTUAL DESIGN AND LOCATIONS SHALL BE DETERMINED BY THE LOCAL SERVICE PROVIDER OR MEP ENGINEER.
- 14. CONTRACTOR SHALL COORDINATE ELECTRIC AND GAS LINE INSTALLATION WITH LOCAL SERVICE PROVIDER. THE SERVICE PROVIDER WILL BE RESPONSIBLE FOR INSTALLATION OF GAS LINE TO WITHIN 5' OF BUILDING.
- 15. REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
- 16. SEE IRRIGATION AND ARCHITECTURAL PLANS FOR ADDITIONAL CONDUIT LOCATIONS. VERIFY ALL CONDUIT AND SLEEVE LOCATIONS PRIOR TO PLACING
- 17. CONTRACTOR SHALL INSTALL ALL CONDUITS WITH A MINIMUM 4-FOOT SWEEP RADIUS. ALL CONDUITS SHALL HAVE A PULL STRING TO BE INSTALLED BY THE CONTRACTOR.
- 18. NO WORK SHALL BE ALLOWED WITHIN THE PUBLIC RIGHT-OF-WAY WITHOUT AN APPROVED PERMIT.
- 19. THE CONSTRUCTION OF UNDERGROUND PRIMARY ELECTRIC AND GAS DISTRIBUTION SYSTEMS SHALL BE GOVERNED BY THE ENGINEERING CONSTRUCTION PLANS PREPARED BY THE LOCAL SERVICE PROVIDER. THIS DRAWING SHALL SERVE ONLY AS REFERENCE DOCUMENT TO COORDINATE LOCATION OF THE PROPOSED PRIMARY ELECTRIC AND GAS DISTRIBUTION SYSTEM. THE LOCAL SERVICE PROVIDER'S CONSTRUCTION DRAWINGS AND
- 20. CONTRACTOR SHALL INCLUDE IN HIS BID A 4" PVC CONDUIT FOR TELEPHONE AND A 2" PVC CONDUIT FOR CABLE TV TO BE IN THE SAME TRENCH AS UNDERGROUND ELECTRIC LINES. CONTRACTOR SHALL VERIFY WITH APPROPRIATE UTILITY COMPANY PRIOR TO CONSTRUCTION ON NUMBER AND SIZE OF CONDUITS NEEDED FOR UTILITY SERVICE TO ALL BUILDINGS.
- 21. BEDDING FOR ALL UTILITIES SHALL BE PER THE PROJECT SPECIFICATIONS. NO WATER JETTING OF BACKFILL MATERIAL WILL BE ALLOWED.

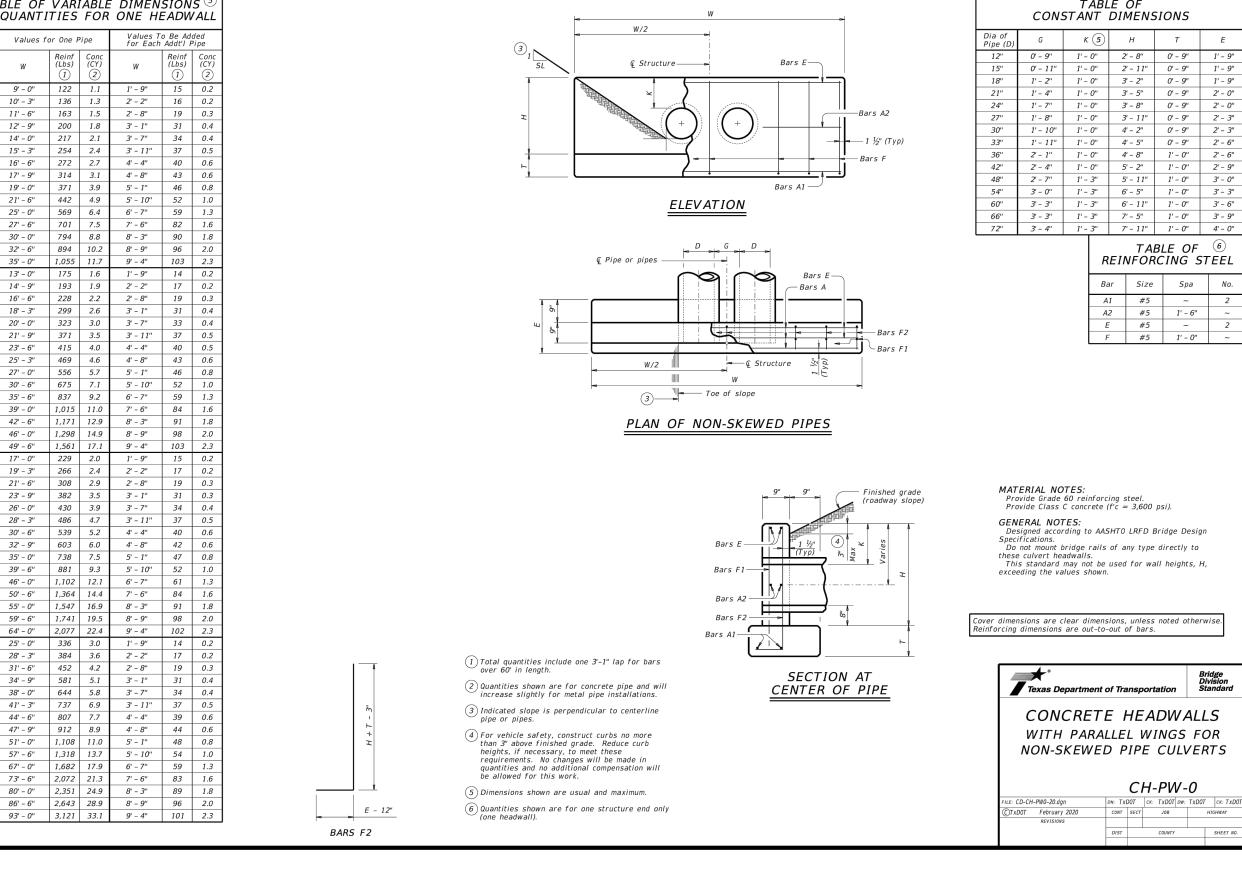
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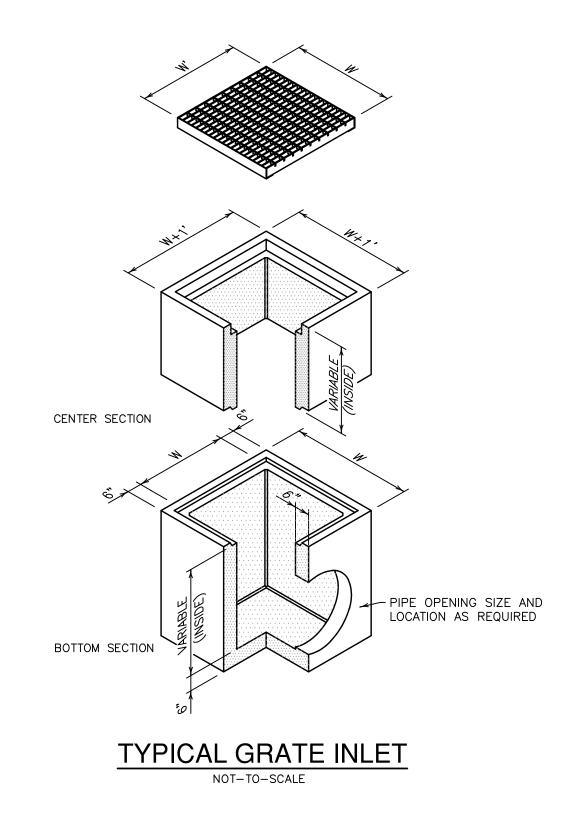
CONSTRUCTION DETAILS SHALL GOVERN.

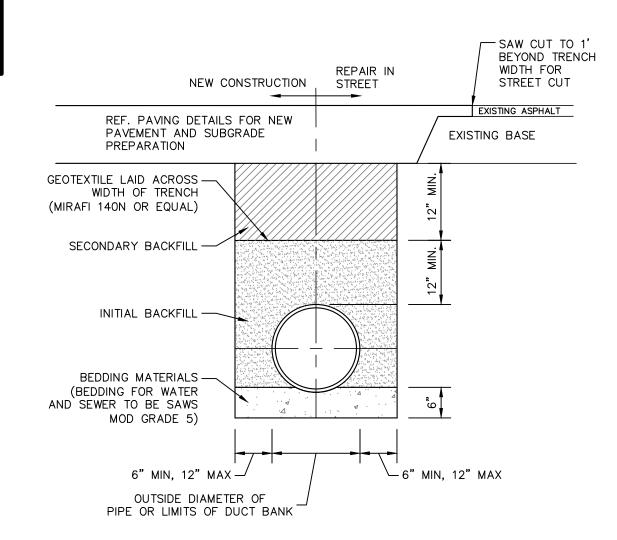
EXISTING UTILITIES ARE LOCATED WITHIN THE LIMITS OF THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH FOR PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING, VERIFYING THE EXACT LOCATION AND IDENTIFYING ANY AREAS OF CONFLICTS WITH EXISTING UTILITIES AND WILL NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS ARE FOUND.

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 GOOGL® UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.

,	Pipe	Values for One Pipe			Values To Be Added for Each Addt'l Pipe				
Slope	Dia of (D)	W	Reinf (Lbs)	Conc (CY)	W	Reinf (Lbs)	Conc (CY)		
	12"	9' - 0"	122	1.1	1' - 9"	15	0.2		
	15"	10' - 3"	136	1.3	2' - 2"	16	0.2		
	18" 21"	11' - 6" 12' - 9"	163 200	1.5 1.8	2' - 8" 3' - 1"	19 31	0.3		
	24"	14' - 0"	217	2.1	3' - 7"	34	0.4		
	27"	15' - 3"	254	2.4	3' - 11"	37	0.5		
	30"	16' - 6"	272	2.7	4' - 4''	40	0.6		
2:1	33"	17' - 9"	314	3.1	4' - 8"	43	0.6		
	36"	19' - 0"	371	3.9	5' - 1"	46	0.8		
	42"	21' - 6"	442	4.9	5' - 10"	52	1.0		
	48"	25' - 0"	569	6.4	6' - 7"	59	1.3		
	54" 60"	27' - 6" 30' - 0"	701 794	7.5 8.8	7' - 6" 8' - 3"	82 90	1.6 1.8		
	66"	32' - 6"	894	10.2	8' - 9"	96	2.0		
	72"	35' - 0"	1,055	11.7	9' - 4"	103	2.3		
	12"	13' - 0"	175	1.6	1' - 9"	14	0.2		
	15"	14' - 9"	193	1.9	2' - 2"	17	0.2		
	18"	16' - 6"	228	2.2	2' - 8"	19	0.3		
	21"	18' - 3"	299	2.6	3' - 1"	31	0.4		
	24"	20' - 0"	323	3.0	3' - 7"	33	0.4		
	27" 30"	21' - 9"	371 415	3.5	3' - 11" 4' - 4"	37 40	0.5		
3:1	33"	23' - 6" 25' - 3"	469	4.0 4.6	4' - 4"	43	0.5		
m	36"	27' - 0"	556	5.7	5' - 1"	46	0.8		
	42"	30' - 6"	675	7.1	5' - 10''	52	1.0		
	48"	35' - 6"	837	9.2	6' - 7"	59	1.3		
	54"	39' - 0"	1,015	11.0	7' - 6"	84	1.6		
	60"	42' - 6"	1,171	12.9	8' - 3"	91	1.8		
	66"	46' - 0"	1,298	14.9	8' - 9"	98	2.0		
	72" 12"	49' - 6"	1,561	17.1	9' - 4"	103	2.3		
	15"	17' - 0" 19' - 3"	229 266	2.0	1' - 9" 2' - 2"	15 17	0.2		
	18"	21' - 6"	308	2.9	2' - 8"	19	0.3		
	21"	23' - 9"	382	3.5	3' - 1"	31	0.3		
	24"	26' - 0"	430	3.9	3' - 7"	34	0.4		
	27"	28' - 3"	486	4.7	3' - 11"	37	0.5		
1	30"	30' - 6"	539	5.2	4' - 4''	40	0.6		
4:1	33"	32' - 9"	603	6.0	4' - 8"	42	0.6		
	36"	35' - 0"	738 881	7.5	5' - 1"	47	0.8		
	42" 48"	39' - 6" 46' - 0"	1,102	9.3 12.1	5' - 10'' 6' - 7''	52 61	1.0		
	54"	50' - 6"	1,364	14.4	7' - 6"	84	1.6		
	60"	55' - 0"	1,547	16.9	8' - 3"	91	1.8		
	66"	59' - 6"	1,741	19.5	8' - 9"	98	2.0		
	72"	64' - 0"	2,077	22.4	9' - 4"	102	2.3		
	12"	25' - 0"	336	3.0	1' - 9"	14	0.2		
	15" 18"	28' - 3" 31' - 6"	384 452	3.6 4.2	2' - 2" 2' - 8"	17 19	0.2		
	21"	34' - 9"	581	5.1	3' - 1"	31	0.3		
	24"	38' - 0"	644	5.8	3' - 7"	34	0.4		
	27"	41' - 3"	737	6.9	3' - 11"	37	0.5		
	30"	44' - 6"	807	7.7	4' - 4"	39	0.6		
6:1	33"	47' - 9"	912	8.9	4' - 8"	44	0.6		
	36"	51' - 0"	1,108	11.0	5' - 1"	48	0.8		
	42"	57' - 6"	1,318	13.7	5' - 10"	54	1.0		
	48" 5 <i>1</i> "	67' - 0"	1,682	17.9	6' - 7"	59	1.3		
	54" 60"	73' - 6" 80' - 0"	2,072 2,351	21.3 24.9	7' - 6" 8' - 3"	83 89	1.6 1.8		
	66"	86' - 6"	2,351	28.9	8' - 3" 8' - 9"	96	2.0		
	72"	93' - 0"	3,121	33.1	9' - 4"	101	2.3		







UTILITY & STORM DRAINAGE TRENCH NOT-TO-SCALE

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6/26/202

ANDREW J. BELTON

PLAT NO. 6075-01 JOB NO. DEC 2024 DESIGNER CHECKED AB DRAWN EK