WATER POLLUTION ABATEMENT PLAN MODIFICATION FOR WORTHAM OAKS ELEMENTARY AND MIDDLE SCHOOL

PREPARED FOR:





DATE: NOVEMBER 2024

PREPARED BY:



12770 Cimarron Path, Ste 100 San Antonio, TX 78249 TBPE Firm #5297 Phone 210-698-5051 Fax 210-698-5085

JISD WORTHAM OAKS ELEMENTARY AND MIDDLE SCHOOL WATER POLLUTION ABATEMENT PLAN MODIFICATION

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Our Review of Your Application

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

Administrative Review

1. <u>Edwards Aquifer applications</u> 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: <u>http://www.tceq.texas.gov/field/eapp</u>.

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

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

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

Technical Review

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

- 2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.
- 3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or if not withdrawn the application will be denied and 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 to you:

- You can withdraw your application, and your fees will be refunded or credited for a resubmittal.
- 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 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 effected jurisdictions.

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

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

1. Regulated Entity Name: JISD Wortham Oaks Elementary and Middle School				2. Regulated Entity No.: 109793950					
3. Customer Name: Judson Independent Schoo District			ool	4. Customer No.: 601037567					
5. Project Type: (Please circle/check one)	New		Modification Ext		Extension		Exception		
6. Plan Type: (Please circle/check one)	<u>WPAP</u>	CZP	SCS	UST	AST	EXP	EXI	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Resider	ntial	Non-residential			8. S	ite (acres):	54.50	
9. Application Fee:	\$8,00.0	00	10. Permanent B		SMP(s	;):]	Existing Sand Filter	Basins	
11. SCS (Linear Ft.):	N/A		12. AST/UST (No			o. Tan	. Tanks): N/A		
13. County:	Bexar		14. Watershed:					Salado Creek	

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

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

Kolando Kamirez

Print Name of Customer/Authorized Agent

Signature of Customer/Authorized Agent

<u>11 | 21 | 24</u> Date

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

General Information Form

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Rolando Ramirez, P.E.

Date: 11/21/24

Signature of Customer/Agent:

Project Information

- 1. Regulated Entity Name: JISD Wortham Oaks Elementary and Middle School
- 2. County: <u>Bexar</u>
- 3. Stream Basin: San Antonio River Basin
- 4. Groundwater Conservation District (If applicable): <u>Edwards Aquifer Authority</u>
- 5. Edwards Aquifer Zone:



6. Plan Type:

Х	WPAP
	SCS
\times	Modification

AST
UST
Exception Request

TCEQ-0587 (Rev. 02-11-15)

7. Customer (Applicant):

Contact Person: <u>Ruben Moreno</u> Entity: <u>Judson Independent School District</u> Mailing Address: <u>8012 Shin Oak Drive</u> City, State: <u>Live Oak, TX</u> Telephone: <u>210-945-5100</u> Email Address: <u>rmoreno@judsonisd.org</u>

Zip: <u>78233</u> FAX: _____

8. Agent/Representative (If any):

Contact Person: <u>Rolando Ramirez</u> Entity: <u>Moy Tarin Ramirez Engineers, LLC</u> Mailing Address: <u>12770 Cimarron Path, Suite 100</u> City, State: <u>San Antonio, TX</u> Zip: <u>78249</u> Telephone: <u>210-698-5051</u> FAX: _____ Email Address: <u>Primary:rramirez@mtrengineers.com; Secondary:ssmith@mtrengineers.com</u>

9. Project Location:

The project site is located inside the city limits of _____.

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

The project site is not located within any city's limits or ETJ.

10. The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

5710 Carriage Cape, San Antonio, TX 78261

- 11. Attachment A Road Map. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.
- 12. Attachment B USGS / Edwards Recharge Zone Map. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:
 - Project site boundaries.

USGS Quadrangle Name(s).

- Boundaries of the Recharge Zone (and Transition Zone, if applicable).
- Drainage path from the project site to the boundary of the Recharge Zone.
- 13. The TCEQ must be able to inspect the project site or the application will be returned. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

- \boxtimes Survey staking will be completed by this date: <u>03/24/2022</u>
- 14. Attachment C Project Description. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:
 - Area of the site
 Offsite areas
 Impervious cover
 Permanent BMP(s)
 Proposed site use
 Site history
 Previous development
 Area(s) to be demolished

15. Existing project site conditions are noted below:

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

Prohibited Activities

- 16. I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:
 - (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
 - (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
 - (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
 - (4) The use of sewage holding tanks as parts of organized collection systems; and
 - (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
 - (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.
- 17. I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:
 - (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

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

- For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.

For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.

A request for an exception to any substantive portion of the regulations related to the protection of water quality.

- A request for an extension to a previously approved plan.
- 19. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

🔀 TCEQ cashier

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

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

PROJECT DESCRIPTION

This project will include the construction of a new right turn lane at the existing Elementary School along with a new expansion to the roundabout at the intersection of Carriage Cape and Wortham Oaks Blvd, to the northwest of the JISD property. This application also accounts for a proposed widening of Waldon Walk with demolition and reconstruction of adjacent flatwork for the relocation of an entry gate to the nearby residential district. Construction activities will include the construction of new asphalt pavement, new concrete pavement, and new concrete flatwork.

The 54.50 acre site is located on the northeast corner of Wortham Oaks Boulevard and Waldon Walk intersection in northeast Bexar County.

There is currently an elementary school on the northern portion of the site and a middle school on the southern portion of the site. The middle school is currently still in construction. The existing condition for this application has been calculated as if the middle school construction has been completed.

The total on-site impervious cover has been recalculated due to modifications to the middle school design since the date of the last WPAP Modification approval. These design changes resulted in a net decrease in impervious cover, with no modifications to the approved permanent BMPs. The current elementary school and proposed middle school impervious cover (combined and taken as the existing condition for this application) currently totals 21.98 acres. Of the 21.98 acres, 1.99 acres are comprised of synthetic turf areas which provide equivalent water protection through the use of an underdrain and liner. Accordingly, TSS removal is only required for runoff generated from 19.99 acres of impervious cover.

The majority of the new impervious cover associated with the right turn lane, roundabout expansion, and Waldon Walk expansion is located off-site. Overtreatment in the existing elementary school sand filter basin (Sand Filter 1) will be utilized to offset the increase in off-site impervious cover. Both existing sand filter basins will be utilized to offset 1.11 acres of uncaptured on-site impervious cover. No new permanent BMPs are proposed with this application.



NPAP Ň



NOVEMBER 2024

1:200





PROJECT No.:	
24209	

scale: 1:200









GEOLOGIC ASSESSMENT (MPAP)

<u>WORTHAM OAKS ELEMENTARY SCHOOL TRACT</u> +/- 50 ACRES SAN ANTONIO, TEXAS

FROST GEOSCIENCES, INC. PROJECT NO.: FGS-E17141 APRIL 24, 2017

Prepared exclusively for

Stantec Architecture 1344 South Flores Street, Suite 201 San Antonio, Texas 78204





Frost Geosciences, Inc. 13402 Western Oak Helotes, Texas 78023 Office (210)-372-1315 Fax (210)-372-1318 www.frostgeosciences.com TBPE Firm Registration # F-9227 TBPG Firm Registration # 50040

April 24, 2017

Stantec Architecture 1344 South Flores Street, Suite 201 San Antonio, Texas 78204

Attn: Mr. Daniel Perez, Principal

SUBJECT:

Geologic Assessment (WPAP) for the Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone Wortham Oaks Elementary School Tract +/- 50 Acres San Antonio, Texas FGS Project Nº FGS-E17141

Dear Mr. Perez:

Frost GeoSciences, Inc., (FGS) is pleased to submit the enclosed Geologic Assessment completed for the above referenced project site as it relates to 30 TAC §213.5(b)(3), effective June 1, 1999. Our investigation was conducted, and this report was prepared in general accordance with the "Instructions to Geologists", TCEQ-0585-Instructions (Rev. 10-1-04).

If you have any questions regarding this report, or if Frost GeoSciences, Inc. may be of additional assistance to you on this project, please feel free to call our office. It has been a pleasure to work with you and we wish to thank you for the opportunity to be of service to you on this project. We look forward to being of continued service.

We appreciate the opportunity to perform these services for Stantec Architecture. Please contact the undersigned if you have questions regarding this report.



Respectfully submitted, Frost GeoSciences, Inc.

Chris Wickman, P.G. Senior Geologist

Copies Submitted:

- Mr. Daniel Perez, Principal; Stantec Architecture
 Mr. Ron Ramirez, MTR Engineers
 -) MI. KOH KAHIICZ, MIK ENgineer
- (1) Electronic (pdf) Copy

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Geologic Assessment

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Geologist: Chris Wickman

Telephone: (210) 372-1315

Fax: (210) 372-1318

AST UST

Date: April 24, 2017

Representing: <u>Frost Geosciences, Acc, IBPG Firm Registration Number 50040</u> (Name of Company and TBPG of TBPE registration number)

Signature of Geol

Regulated Entity Name, Wortham Daks Elementary School Tract

Geology 10403

Project Information

- 1. Date(s) Geologic Assessment was performed: April 4 and 5, 2017
- 2. Type of Project:

\boxtimes	WPAP
Π	SCS

3. Location of Project:

Х	Rec	harge	Zone
		00	

- Transition Zone
 - Contributing Zone within the Transition Zone

1 of 3

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Frost GeoSciences

- 4. X Attachment A Geologic Assessment Table. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.
- 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.

Soil Name	Group*	Thickness(feet)
Crawford clay	D	0 -2
Crawford and Bexar stony soils	D	0-1

Table 1 - Soil Units, InfiltrationCharacteristics and Thickness

* 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. X 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. X 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: $1'' = \underline{100}'$ Site Geologic Map Scale: $1'' = \underline{100}'$ Site Soils Map Scale (if more than 1 soil type): $1'' = \underline{500}'$

9. Method of collecting positional data:

Global Positioning System (GPS) technology. Content of the system of the

- 10. 🔀 The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
- 11. \bigotimes Surface geologic units are shown and labeled on the Site Geologic Map.

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Frost GeoSciences

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. \square The Recharge Zone boundary is shown and labeled, if appropriate.
- 14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

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

The wells are not in use and have been properly abandoned.

The wells are not in use and will be properly abandoned.

The wells are in use and comply with 16 TAC Chapter 76.

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

Administrative Information

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

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STRATIGRAPHIC COLUMN

[Hydrogeologic subdivisions modified from Maclay and Small (1976); groups, formations, and members modified from Rose (1972); lithology modified from Dunham (1962); and porosity type modified from Choquette and Pray (1970). CU, confining unit; AQ, aquifer]

Hy	Hydrogeologic subdivision			fo	Group, ormation, member	Hydro- logic (feet) function		Lithology	Field identification	Cavern development	Porosity/ permeability type			
sno	Upper confining		Eagle Ford Group			CU	30 - 50	Brown, flaggy shale and argillaceous limestone	Thin flagstones; petroliferous	None	Primary porosity lost/ low permeability			
er Cretaceo	un	units		la Li	mestone	CU	40 - 50	Buff, light gray, dense mudstone	Porcelaneous limestone with calcite-filled veins	Minor surface karst	Low porosity/low permeability			
Upp					Del Rio Clay		40-50	Blue-green to yellow-brown clay	Fossiliferous; Ilymatogyra arietina	None	None/primary upper confining unit			
	1		Geo Fo	orget	own tion	Karst AQ; not karst CU	2 - 20	Reddish-brown, gray to light tan marly limestone	Marker fossil; Waconella wacoensis	None	Low porosity/low permeability			
	11			u	Cyclic and marine members, undivided	AQ	80 90	Mudstone to packstone: <i>miliolid</i> grainstone; chert	Thin graded cycles; massive beds to relatively thin beds; crossbeds	Many subsurface; might be associated with carlier karst development	Laterally extensive; both fabric and not fabric/water-yielding Majority not fabric/one of the most permeable			
	111	Edwards aquifer		Person Formatic	Leached and collapsed members, undivided	AQ	70 – 90	Crystalline limestone; mudstone to grainstone; chert; collapsed breccia	Bioturbated iron- stained beds separated by massive limestone beds; stromatolitic limestone	Extensive lateral development; large rooms				
SUO	IV		Group		Regional CU dense member		20 - 24	Dense, argillaceous mudstone	Wispy iron-oxide stains	Very few; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier			
er Cretace	v		Edwards		Grainstone AQ member		50 - 60	Miliolid grainstone; mudstone to wackestone; chert	White crossbedded grainstone	Few	Not fabric/ recrystallization reduces permeability			
Low	VI			ation	Kirschberg evaporite member	AQ	50 - 60	Highly altered crystalline limestone; chalky mudstone; chert	Boxwork voids, with neospar and travertine frame	Probably extensive cave development	Majority fabric/one of the most permeable			
	VII			ainer Form	Dolomitic member	AQ	110 130	Mudstone to grainstone; crystalline limestone; chert	Massively bedded light gray, <i>Toucasia</i> abundant	Caves related to structure or bedding planes	Mostly not fabric; some bedding plane- fabric/water-yielding			
	VIII			K	Basal nodular Karst member AQ; not kars CU		50-60	Shaly, nodular limestone; mudstone and <i>miliolid</i> grainstone	Massive, nodular and mottled, <i>Exogyra</i> texana	Large lateral caves at surface; a few caves near Cibolo Creek	Fabric; stratigraphically controlled/large conduit flow at surface; no permeability in subsurface			
	Lov confir un	Lower confining unit			Lower onfining unit		er m en R mest	nember of the tose tone	CU; evaporite beds AQ	350 - 500	Yellowish tan, thinly bedded limestone and marl	Stair-step topography; alternating limestone and marl	Some surface cave development	Some water production at evaporite beds/relatively impermeable

GEOLOGIC ASSESSMENT TABLE

PROJECT N	PROJECT NAME: Wortham Oaks Elementary School Tract PROJECT NUMBER: FGS-E17141																			
			FE	EATUR	RE CHARAC	TERISTI	cs				EVA	LUATIO	ОN	F	PHYSIC	AL SETTING				
1A	1B *	1C*	2A	2B	3		4		5	5A	6	7	8A	8B	9	10		1	1	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATIO N	DI	MENSIC (FEET)	NS	TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVIT				TOPOGRAPHY
						Х	Y	Ζ		10						<40	<u>>40</u>	<1.6	<u>>1.6</u>	
S-1	29° 38'47.29"	-98° 22' 21.76"	MB	30	Кр	25	50	3	-	-	-	-	NF	5	35	35		YES		HILLSIDE
S-2	29° 38' 46.75"	-98° 22' 23.27"	CD	5	Кр	20	25	3	-	-	-	-	FC	10	15	15		YES		HILLSIDE
S-3	29° 38' 47.15"	-98° 22' 23.12"	MB	30	Кр	1	1	?	-	-	-	-	Х	5	35	35		YES		HILLSIDE
S-4	29° 38' 48.23"	-98° 22' 23.77"	MB	30	Кр	30	120	5	-	-	-	-	NFC	5	35	35		YES		HILLSIDE
S-5	29° 38' 48.26"	-98° 22' 25.25"	MB	30	Кр	0.5	0.5	?	-	-	-	-	Х	5	35	35		YES		HILLSIDE
S-6	29° 38' 47.18"	-98° 22' 25.72"	MB	30	Кр	0.5	0.5	?	-	-	÷	-	Х	5	35	35		YES		HILLSIDE
S-7	29° 38' 47.62"	-98° 22' 28.06"	MB	30	Кр	10	15	2	-	-	-	-	OFC	5	35	35		YES		HILLSIDE
S-8	29° 38' 46.9"	-98° 22' 28.06"	MB	30	Кр	0.5	05	?	-		-	-	Х	5	35	35		YES		HILLSIDE
S-9	29° 38' 45.78"	-98° 22' 29.35"	MB	30	Кр	0.5	0.5	?	-	-	-	-	NX	5	35	35		YES		HILLSIDE
S-10	29° 38' 47.65"	-98° 22' 29.93"	CD	5	Кр	15	25	3	-	-	-	-	FC	7	12	12		YES		HILLSIDE
S-11	29° 38' 44.38"	-98° 22' 32.16"	MB	30	Кр	1	1	?	-		-	-	Х	5	35	35		YES		HILLSIDE
S-12	29° 38' 45.31"	-98° 22' 32.09"	MB	30	Кр	0.75	0.75	?	-	-	-	-	Х	5	35	35		YES		HILLSIDE
S-13	29° 38' 43.66"	-98° 22' 29.78"	MB	30	Кр	0.5	0.5	?	-	-	-	-	Х	5	35	35		YES		HILLSIDE
S-14	29° 38' 45.2"	-98° 22' 27.84"	MB	30	Кр	0.5	0.5	?	-	-	-	-	X	5	35	35		YES		HILLSIDE
Datum: NAD 8	33																			
2A TYPETYPE2B POINTS8A INFILLINGCCave30NNone, exposed bedrockSCSolution cavity20CCoarse - cobbles, breakdown, sand, gravelSFSolution-enlarged fracture(s)20OLoose or soft mud or soil, organics, leaves, sticks, dark colorsFFault20FFines, compacted clay-rich sediment, soil profile, gray or red colorsOOther natural bedrock features5VVegetation. Give details in narrative descriptionMBManmade feature in bedrock30FSFlowstone, cements, cave depositsSWSwallow hole30XOther materials																				
CD	Non-kars Zono ch	t closed depression	on foaturos		5				Cliff I	12 Iillian III	TOPOGR	APHY								
Z Course or augped relatives 30 Cliff, Hillstop, Hillside, Floodplain, Streambed Image: Course or augped relatives 30 Cliff, Hillstop, Hillside, Floodplain, Streambed Image: Christopher Wickman the information presented here complies with that document and is a true representation of the conditions observed in the field. Image: Christopher Wickman the information presented here complies with that document and is a true representation of the conditions observed in the field. Image: Christopher Wickman the information presented here complies with that document and is a true representation of the conditions observed in the field. Image: Christopher Wickman the information presented here complies with that document and is a true representation of the conditions observed in the field. Image: Christopher Wickman the information presented here complies with that document and is a true representation of the conditions observed in the field. Image: Christopher Wickman the information presented here complies with that document and is a true representation of the conditions observed in the field. Image: Christopher Wickman, P.G. Image: Christopher Wickman, P.G. Image: Christopher Wickman, P.G. Image: Christopher Wickman, P.G. Image: Christopher Wickman, P.G. Sheet 1 of 2																				
Geote	chnical • Constru	ction Materials • (Geologic	• Envir	ronmental										FG	S Pro	oject	t Nº F	GS-E	17141 5

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Wortham Oaks Elementary School Tract PROJECT NUMBER: FGS-E17141																				
							FE	EATUR	RE CHARAC	TERISTI	cs				EVA	LUATI	ION		PHYSIC	AL SETTING
1A	1B *	1C*	2A	2B	3		4		5	5A	6	7	8A	8B	9	1	0	1	1	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATIO N	DIMENSIONS (FEET)		TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		, CATCHMENT AREA (ACRES)		TOPOGRAPHY	
						Х	Y	Z		10						<40	<u>>40</u>	<1.6	<u>>1.6</u>	RAME IN THE REPORT OF THE REPORT OF
S-15	29° 38' 44.23"	-98° 22' 22.78"	MB	30	Кр	25	60	5	-	-	-	-	N/F	5	35	35		YES		HILLSIDE
S-17	29° 38' 34.22"	-98° 22' 29.46"	CD	5	Кр	25	50	4	-	-	-	-	OFC	12	17	17		YES		HILLSIDE
S-18	29° 38' 38.54"	-98° 22' 29.53"	CD	5	Кр	4	4	2	-	-	-	-	FC	12	17	17		YES		HILLSIDE
S-19	29° 38' 41.75"	-98° 22' 27.05"	CD	20	Кр	30	30	2	-	-	-	-	OFC	12	17	17		YES		HILLSIDE
S-20	29° 38' 43.55"	-98° 22' 25.1"	CD	5	Кр	25	25	5	-	-	-	-	OFC	10	15	15		YES		HILLSIDE
							<u> </u>													
																		ļ		5.5
															-					
		1																		
Datum: NAD 8	33																			
2A TYPE TYPE 2B POINTS 8A INFILLING C Cave 30 N None, exposed bedrock SC Solution cavity 20 C Coarse - cobbles, breakdown, sand, gravel SF Solution-enlarged fracture(s) 20 O Loose or soft mud or soil, organics, leaves, sticks, dark colors F Fault 20 F Fines, compacted clay-rich sediment, soil profile, gray or red colors O Other natural bedrock features 5 V Vegetation. Give details in narrative description MB Manmade feature in bedrock 30 FS Flowstone, cements, cave deposits SW Swellow hole 30 X Other materials																				
SH	Sinkhole	t alagad dapragai	~~		20					10	TODOOD					1				
z	Zone, clu	istered or aligned	features		э 30				Cliff F	illton Hil	Iside Floo	APHY dolain Str	eambe	he						
The more read, 1 understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The more mation presented here complies with that document and is a true representation of the conditions observed in the field. Christopher Wickmany Sphature certifies that I am qualified as a geologist as defined by 30 TAC 213. Geology 10403 Date: April 24, 2017 TCEQ-0585-Table (Rev. 10-01-04)																				
FGS Project Nº FGS-E17141 Geotechnical • Construction Materials • Geologic • Environmental													17141 6							
0000			23010910		onnondi									Contribution of the contribution of the		ومسالا بالاربي ورد سايري				

LOCATION

The project site is located immediately southeast of the intersection of Wortham Oaks Boulevard and Carriage Cape in San Antonio, Texas. An overall view of the area is shown on copies of the site plan, a street map, the U.S.G.S. Topographic Map, the Bexar County Watersheds Map, the Edwards Underground Water District Map, the FIRM Map, the U.S. Geological Survey Water Resources Investigations 95-4030 Map, the Bureau of Economic Geology: Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle, a 2015 aerial photograph at a scale of 1"=200', and a 1962 aerial photograph at a scale of 1"=500' and are included on Figures 1 through 10 in Appendix A.

METHODOLOGY

The Geologic Assessment was performed by Mr. Chris Wickman, P.G., Senior Geologist with Frost GeoSciences, Inc. Mr. Wickman is a Licensed Professional Geoscientist in the State of Texas (License # 10403).

Frost GeoSciences, Inc. researched the geology of the area southeast of the intersection of Wortham Oaks Boulevard and Carriage Cap in northern Bexar County. The research included, but was not limited to, the Geologic Atlas of Texas, San Antonio Sheet, FEMA maps, Edwards Aquifer Recharge Zone Maps, U.S.G.S. 7.5 Minute Quadrangle Maps, the Bureau of Economic Geology-Geologic Atlas of Texas, the Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle, the U.S.G.S. Water-Resources Investigations Report 95-4030, and the U.S.D.A. Soil Survey of Bexar County, Texas.

After reviewing the available information, a field investigation was performed to identify any geologic or man-made Potential Recharge Features (PRFs). A transect spacing of approximately 50 feet, or less depending on vegetation thickness, was used to inspect the project area. A 2015 aerial photograph, in conjunction with a hand held Garmin GPS 72H Global Positioning System with an Estimated Potential Error ranging from 10 to 14 feet, was used to navigate around the property and identify the locations of PRFs, as recommended in the "Instructions to Geologists", TCEQ-0585-Instructions (Rev. 10-1-04). The locations of any PRFs noted in the field were marked with blue and white flagging. The flagging is numbered with the same potential recharge feature I.D. # that is used on the Site Geologic Map. The Site Geologic Map, indicating the limits of the project site, and the locations of PRFs and rock outcrops noted on the project site, is included in Appendix C. A copy of a 2015 Aerial Photograph at an approximate scale of 1"=200' indicating the limits of the project site, and the locations of PRFs and rock outcrops noted on the project site, is included on Figure 10 in Appendix A. The Geologic Assessment Form TCEQ-0585, (Rev. 2-11-15), Stratigraphic Column, and the Geologic Assessment Table have been filled with the appropriate information for this project site and are included on pages 1-5 of this report.

RESEARCH & OBSERVATIONS

7.5 Minute Quadrangle Map Review

According to the U.S.G.S. 7.5 Minute Quadrangle Map, Bulverde and Bat Cave, Texas Sheets (1988), the elevation across the project site ranges from 1000 to 1060 feet above mean sea level. The project site has a total relief of approximately 60 feet. Runoff from the project site flows to the northwest into unnamed tributaries of Elm Waterhole Creek. The topographic map depicted the project site as undeveloped wooded land. An unimproved road was depicted crossing the northwestern portion of the project site that leads southeast to East Evans Road evident south of the project site. Additional, unimproved roads were depicted south and southeast of the project site. A copy of the U.S.G.S. 7.5 Minute Quadrangle Map indicating the location of the project site is included on Figure 3 in Appendix A. According to the Bexar County Watersheds Map (2003), the project site is located within the Upper Salado Creek Watershed Area. A copy of the Bexar County Watersheds Map indicating the location of the project site is included on Figure 4 in Appendix A.

Recharge/Transition Zone

According to the E.A.A. Edwards Aquifer Recharge Zone and Contributing Zone Maps, Bulverde and Bat Cave, Texas (2014) and Edwards Underground Water District Reference Map, (March 1988), the project site is located within the Recharge Zone of the Edwards Aquifer. A copy of the Edwards Underground Water District Reference Map indicating the location of the project site is included on Figure 5 in Appendix A.

100-Year Floodplain

The Federal Emergency Management Agency (FEMA), Flood Insurance Rate Maps, Community Panel Numbers 48029C0145G and 48029C0165F, dated September 29, 2010 were reviewed to determine if the project site was located in areas prone to flooding. A review of the above mentioned Panel Numbers indicate that the project site is located within "Zone X". According to the Panel Legend, Zone X represents areas determined to be outside the 0.2% annual chance floodplain. A copy of the above referenced FIRM panel indicating the location of the project site is included on Figure 6 in Appendix A.

Soils

According to the United States Department of Agriculture, Soil Conservation Service, Soil Survey of Bexar County, Texas, issued (1966), the project site is located on the Crawford clay (0 to 1 percent slopes) (Ca) and the Crawford and Bexar stony soils (Cb). A copy of the 1962 aerial photo (approximate scale: 1"=500') from the U.S.D.A. Soil Survey of Bexar County, Texas indicating the location of the project site and the soil types is included on Figure 7 in Appendix A.

The Crawford clay (0 to 1 percent slopes) (Ca) is typically found in uplands areas, with a few rare occurrences of this soil in valley areas. The surface layer is dark brown or dark reddish brown, non-calcareous, and 8-10" thick. Wide cracks form in this soil when it dries. The subsurface layers are also clay and non-calcareous. The subsurface soils are more red than the surface soils. During dry times, cracks from the surface layer me extend downward into the subsurface layer. Limestone

commonly occurs at a depth of approximately 24-36". However, a few areas may have a few inches of limey clay on top of the limestone. Water intake in this soil is slow and water erosion is a hazard. Plowpans are likely to form. This soil has a USDA Texture Classification of clay. The Unified Classification is MH-CH. The AASHO Classification is A-7. This soil has an average permeability from 0.2 to 0.5 inches/hour.

The Crawford and Bexar Stony Soils (Cb) are very dark grayish brown to reddish brown clay. They are stony clay in texture and are shallow to moderately deep over hard limestone. These soils are extensive in the northern part of the county. The surface layer is noncalcareous, about 8 inches thick, and very dark grayish brown or very dark brown. It has fine, subangular blocky and granular structure. When moist, this layer is very firm but breaks easily to a mass of fine clods. When dry, is very hard and contains many large cracks. Angular fragments of chert and limestone are common. These fragments may range in size from a quarter of an inch to 24 inches in diameter. The subsurface layer is dense, angular blocky clay. This layer is neutral or slightly acidic, but it may be limy in the lower parts. It is about 26 inches thick and either overlies a thin layer of yellowish red to pale brown, limy clay or, if the limy layer is lacking, rests on hard, fractured limestone. Crawford soils are naturally well drained. Internal drainage and permeability vary according to moisture content. Water moves rapidly when the soil is dry and cracked, but very slowly when the soil is wet. This soil has a USDA Texture Classification of Cherty Clay Loam to Loam. The Unified Classification is CG or CL. The AASHO Classification is A-2, A-4, or A-6. This soil has an average permeability from 1.0 to 1.5 inches/hour.

Narrative Description of the Site Geology

Based on a visual inspection of the ground surface, the overall potential for fluid flow from the project site into the Edwards Aquifer appears to be low. The locations of the PRFs are identified on the 2015 aerial photograph on Figure 10 in Appendix A, and on the Site Geologic Map provided in Appendix C. Color photos of the project site and some of the PRFs are included in Appendix B.

Potential Recharge Features # S-1, S-4, S-7, S-15 and S-20 appear to be excavated areas that were to be used for sand traps within the proposed golf course. These excavated areas ranged in size and are visible in the historic aerial photography from 2003. These features for the most part had floors that were covered with fine soils and were overgrown with grasses and weeds. Frost GeoSciences, Inc., rates the relative infiltration of these features as low on figure 1 of the TCEQ-0585-Instructions (Rev. 10-01-04). These features score a 35 on the sensitivity scale, column 10 in the Geologic Assessment Table on pages 5 and 6 of this report in this report. Frost GeoSciences, Inc. does not consider these to be sensitive features.

Potential Recharge Features # S-2, S-10, S-16, S-17 and S-18 appear to be irregular circular areas resulting from limestone gravel and boulders surrounding these areas. The gravel and boulders appeared to be on the ground surface forming a perimeter. The floors of the "depressions" was largely covered in fine soils and overgrown with grass and weeds. These features for the most part

had floors that were covered with fine soils and were overgrown with grasses and weeds. Frost GeoSciences, Inc., rates the relative infiltration of these features as low on figure 1 of the TCEQ-0585-Instructions (Rev. 10-01-04). These features scored 12 to 17 on the sensitivity scale, column 10 in the Geologic Assessment Table on pages 5 and 6 of this report in this report. Frost GeoSciences, Inc. does not consider these to be sensitive features.

Potential Recharge Features # S-3, S-5, S-6, S-8, S-9, S-12, S-13 and S-14 appear to be former geotechnical soil borings. With the exception of PRF #s S-9 and S-13, the borings were backfilled to the ground surface with what appeared to be soil cuttings and bentonite pellets. The other two were backfilled to several feet below the ground surface. Frost GeoSciences, Inc., rates the relative infiltration of these features as low on figure 1 of the TCEQ-0585-Instructions (Rev. 10-01-04). These features score 35 on the sensitivity scale, column 10 in the Geologic Assessment Table on pages 5 and 6 of this report in this report. Frost GeoSciences, Inc. does not consider these to be sensitive features.

Potential Recharge Feature # S-11 consists of a water-well. The metal water-well casing observed extending approximately 3 feet above the surface of concrete pad. The well casing is approximately 1 foot in diameter and appears to be a commercial quality well. The well casing was covered by a welded piece of plate steel. Based on the height of the casing opening and the plate steel welded over the opening, it is unlikely that surface runoff would enter the casing. Frost GeoSciences, Inc., rates the relative infiltration of this feature low on figure 1 of the TCEQ-0585-Instructions (Rev. 10-01-04). This feature scores a 35 on the sensitivity scale, column 10 in the Geologic Assessment Table on page 5 of this report in this report. Frost GeoSciences, Inc. does consider this to be a sensitive feature.

Potential Recharge Feature # S-19 was low-lying depressed area covered in fine soils and appeared to have been a dry pond. This area was apparently planned to be used for a water feature within a proposed golf course. Frost GeoSciences, Inc., rates the relative infiltration of the feature as low on figure 1 of the TCEQ-0585-Instructions (Rev. 10-01-04). This feature scored a 15 on the sensitivity scale, column 10 in the Geologic Assessment Table on page 6 of this report. Frost GeoSciences, Inc., does not consider these to be sensitive features.

The project site is covered by a well-developed soil layer over the majority of the property. In addition, numerous areas covered with gravel fill material and limestone boulders were observed across the project site. These areas formed low hills and closed depressed areas. The project site supports a moderate stand of vegetative cover with a dense stand of native grasses and weeds. The overall vegetative cover on the project site consists of immature Ashe juniper (*Juniperus ashei*), various Oak species (*Quercus spp.*) Cedar Elm (*Ulmus Crassifolia*), and mesquite, with Texas Persimmon (*Diospyros texana*), Hackberry (*Celtis sp.*), Spanish Dagger (*Yucca faxoniana*), (*Berberis trifoliolata*), Prickly Pear cactus (*Opuntia lindheimeri*) and a dense stand of native grasses and weeds. The variations in the vegetative cover across the project site are visible in the 2015 aerial photographs on figures 9 and 10 in Appendix A and in the site visit photographs included in Appendix B.

According to the Bureau of Economic Geology, Geologic Map of the New Braunfels, Texas 30 x 60 Minute Quadrangle (2000), the project site is located on the Cretaceous Edwards Person Limestone. Based on our understanding of the geology of the area, FGS believes the site is located on the Leached and Collapsed Member and the Regional Dense Member of the Edwards Person Limestone.

According to the site plan provided by MTR Engineers, the surveyed elevations on the project site range from 997 to 1075 feet. According to this survey, the total relief on the project site is approximately 78 feet. A copy of the site plan indicating the boundary of the project site and the elevations is included on the Site Plan on Figure 1 in Appendix A and the Site Geologic Map in Appendix C of this report.

The Leached and Collapsed Member of the Edwards Person Limestone consists of crystalline limestone, mudstone to grainstone with chert, and collapsed breccia. This member is stromatolitic limestone. The Leached and Collapsed Member is characterized by bioturbated iron stained beds separated by massive limestone beds. This member is typically one of the most permeable and has extensive lateral development with large rooms. Overall thickness ranges from 70 to 90 feet thick.

The Regional Dense Member of the Edwards Person Limestone consists of dense argillaceous mudstone with wispy iron oxide stains. This member has minimal cavern development and usually occurs as vertical fracture enlargement. Overall thickness ranges from 20 to 24 feet thick.

BEST MANAGEMENT PRACTICES

Based on a visual inspection of the ground surface, the overall potential for fluid flow from the project site into the Edwards Aquifer appears to range from low to moderate. The potential always exists to encounter solution cavities within the subsurface during excavating activities. Frost GeoSciences, Inc. is of the opinion that it is very important for construction personnel to be informed of the potential to encounter cavities in the subsurface that lack a surface expression. Construction personnel should also be informed of the proper protocol to follow in the event a karst feature is encountered during the development of the project site.

DISCLAIMER

This report has been prepared in general accordance with the "Instructions to Geologists", TCEQ-0585-Instructions (Rev. 10-1-04) by a Licensed Texas Professional Geoscientist. All areas of the project site were carefully inspected for features that could contribute to the recharge of the Edwards Aquifer; however, this survey cannot preclude the presence of subsurface karst features that lack surface expression. This report is not intended to be a definitive investigation of all possible geologic or karst features at this site. All conclusions, opinions, and recommendations for Best Management Practices (BMP's) in this report are based on information obtained while researching the project and on the site conditions at the time of our field investigation.

This report has been prepared for the exclusive use of Stantec Architecture. This report is based on available known records, a visual inspection of the project site, and the work generally accepted for a Geologic Assessment for Regulated Activities / Developments on the Edwards Aquifer Recharge / Transition Zone, relating to 30 TAC §213.5(b)(3), effective June 1, 1999.

REFERENCES

- 1. USGS 7.5 Minute Topographic Quadrangle of Bulverde and Bat Cave, Texas, 1988
- 2. E.A.A. Edwards Aquifer Recharge Zone and Contributing Zone Map, Bulverde and Bat Cave, Texas (2014).
- 3. Official Edwards Aquifer Recharge Zone Map, Bulverde and Bat Cave, Texas, 1998
- 4. Edwards Underground Water District Reference Map, March 1988
- 5. 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 95-4030.
- 6. Barnes, V.L., 1983, Geologic Atlas of Texas Sheet, Bureau of Economic Geology and University of Texas at Austin, Geologic Atlas of Texas.
- 7. Federal Emergency Management Agency, Federal Insurance Administration, National Flood Insurance Program, Flood Insurance Map, Community Panel Number 48029C0145G and 48029C0165F, dated September 29, 2010.
- 8. United States Department of Agriculture Soil Conservation Service Soil Survey of Bexar County 1966.
- 9. TCEQ-0585-Instructions (Rev. 10-1-04), "Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zone".
- 10. Collins, Edward, W., 2000, Geologic Map of the New Braunfels 30 X 60 Minute Quadrangle, Bureau of Economic Geology, The University of Texas at Austin, Texas.
- 11. San Antonio Water Systems, Bexar County Watersheds Map, 2004.

APPENDIX A

SITE LOCATION FIGURES

FGS Project Nº FGS-E17141

Geotechnical • Construction Materials • Geologic • Environmental





Geotechnical • Construction Materials • Geologic • Environmental


Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone Wortham Oaks Elementary School Tract San Antonio, Texas U.S.G.S. 7.5 Minute Quadrangle Map Bulverde and Bat Cave, Texas Sheets (1988)

DATE:

PROJECT NO.: FGS-E17141

April 24, 2017





Geotechnical • Construction Materials • Geologic • Environmental



Geotechnical • Construction Materials • Geologic • Environmental

FIGURE 6



PROJECT NAME:

Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone Wortham Oaks Elementary School Tract San Antonio, Texas

1962 Aerial Photograph U.S.D.A. Soil Survey of Bexar County, Texas

PROJECT NO.: FGS-E17141 **DATE:** April 25, 2014



PROJECT NAME:

Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone Wortham Oaks Elementary School Tract San Antonio, Texas

Bureau of Economic Geology			
Geologic Map of the New Braunfels, Texas			
30 X 60 Minute Quadrangle (2000)			

PROJECT NO.: FGS-E17141 DATE: April 24, 2017

Geotechnical • Construction Materials • Geologic • Environmental



PROJECT NAME:

Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone Wortham Oaks Elementary School Tract San Antonio, Texas

2015 Aerial Photograph National Agricultural Imagery Program

DATE:

PROJECT NO.: FGS-E17141

April 24, 2017



Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone Wortham Oaks Elementary School Tract San Antonio, Texas

2015 Aerial Photograph with PRFs National Agricultural Imagery Program

DATE:

PROJECT NO.: FGS-E17141

April 24, 2017

APPENDIX B

SITE PHOTOGRAPHS

FGS Project Nº FGS-E17141

Geotechnical • Construction Materials • Geologic • Environmental



Photo #1 - Typical view of the vegetative cover Photo #2 - An additional view of the typical observed in the northeastern portion of the project vegetative cover observed in the northeastern site.



portion of the project site.



Photo #3 – View of PRF # S-1.



Photo #4 – Additional view of PRF # S-1.



Photo #5 – View of PRF # S-2.



Photo #6 – Additional view of PRF # S-2.



Photo #7 – View of PRF # S-3.



Photo #8 – Typical view of the vegetative cover observed in the vicinity of PRF # S-3.



Photo #9 – View of PRF # S-4.



Photo #10 – Additional view of PRF # S-4.



Photo #11 – View of PRF # S-5.



Photo #12 – View of PRF # S-6.



Photo #13 - Typical view of the vegetative cover Photo #14 - An additional view of the typical observed in the northern portion of the project site.



vegetative cover observed in the northern portion of the project site.



Photo #15 – View of PRF # 7.



Photo #16 – View of PRF # 8.



Photo #17 – View of PRF # 9.



Photo #18 - View of PRF # 10.



Photo #19 - Typical view of the vegetative cover Photo #20 - An additional view of the typical site.

observed in the northwestern portion of the project vegetative cover observed in the northwestern portion of the project site.



Photo #21 – View of PRF # S-11.



Photo #22 – View of PRF # S-12.



Photo #23 – View of PRF # S-13.



Photo #24 – View of PRF # S-14.



Photo #25 – View of PRF # S-15.



Photo #26 – Additional view of PRF # S-15.



observed in the eastern portion of the project site.

Photo #27 - Typical view of the vegetative cover Photo #28 - An additional view of the typical vegetative cover observed in the eastern portion of the project site.



Photo #29 – View of PRF # S-16.



Photo #30 – Additional view of PRF # S-16.



site.

Photo #31 - Typical view of the vegetative cover Photo #32 - An additional view of the typical observed in the southern portion of the project vegetative cover observed in the southern portion of the project site.



Photo #33 – View of PRF # S-17.



Photo #34 – Additional view of PRF # S-17.



Photo #35 – View of PRF # S-18.



Photo #36 – Typical view of the vegetative cover observed in the vicinity of PRF # S-18.



Photo #37 - Typical view of the vegetative cover Photo #38 - An additional view of the typical observed in the central portion of the project site.



vegetative cover observed in the central portion of the project site.



Photo #39 – View of PRF # S-19.



Photo #40 - View of PRF # S-20.

APPENDIX C

SITE GEOLOGIC MAP

FGS Project Nº FGS-E17141

Geotechnical • Construction Materials • Geologic • Environmental





Site Geologic Map

Geologic Site Assessment (SCS) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone for the

Wortham Oaks **Elementary School** San Antonio, Texas

Frost GeoSciences, Inc. Control # FGS-E17141

Legend

	Fill	-	Fill Material
	Qal	-	Alluvium
	Kau	-	Austin Chalk
	Kef	-	Eagle Ford Shale
	Kbu	-	Buda Limestone
	Kdr	-	Del Rio Clay
	Kgt	-	Georgetown Limestone
	Кр	-	Edwards Person Limestone
	Kk	-	Edwards Kainer Limestone
	Kgr	-	Glen Rose Formation
	S-#	-	Potential Recharge Feature (PRF)
		-	Formation Contact
•••••	• • • •	-	100-Year Floodplain - Zone A
		-	100-Year Floodplain - Zone AE
••=••=		-	Other Flood Hazard Area - Zone X (shaded
		_	Fault

Floodplain Information Obtained From FIRM: Flood Insurance Rate Map, Bexar County, Texas Panel #s 48029C0145G and 48029C0165F Revised 9/29/2010

Fault Information Obtained From:

Bureau of Economic Geology, Geologic Atlas of Texas, San Antonio Sheet (1983) U.S. Geological Survey, Water Resources Investigations Report 95-4030 (1995) Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle (2000)



Contour Interval - 1 foot

Signature of Texas Licensed Geoscientist Chris Wickman License No. 10403

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: Rolando "Ron" Ramirez, P.E.

Date: <u>11/2</u>1/24

Signature of Customer/Agent:

Project Information

1. Current Regulated Entity Name: <u>JISD Wortham Oaks Elementary And Middle School</u> Original Regulated Entity Name: <u>JISD Wortham Oaks Elementary School</u> Regulated Entity Number(s) (RN): <u>109793950</u>

Edwards Aquifer Protection Program ID Number(s):

The applicant has not changed and the Customer Number (CN) is: 601037567

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

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

3. A modification of a previously approved plan is requested for (check all that apply):

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

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

Development of land previously identified as undeveloped in the original water pollution abatement plan;

Physical modification of the approved organized sewage collection system;

] Physical modification of the approved underground storage tank system;

Physical modification of the approved aboveground storage tank system.

4. Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

WPAP Modification	Approved Project	Proposed Modification	
Summary			
Acres	<u>54.50</u>	<u>54.50</u>	
Type of Development	Elementary School	Elementary/Middle School	
Number of Residential	<u>N/A</u>	<u>N/A</u>	
Lots			
Impervious Cover (acres)	22.03	<u>21.98</u>	
Impervious Cover (%	<u>40.42</u>	<u>40.33</u>	
Permanent BMPs	Sand Filter Basins	Sand Filter Basins	
Other	<u>N/A</u>	<u>N/A</u>	
SCS Modification	Approved Project	Proposed Modification	
	Αρριονεά Ρισμετί	Proposed widdijication	
Summary			
Linear Feet			
Pipe Diameter			
Other			

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

- 5. Attachment B: Narrative of Proposed Modification. A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved, including any previous modifications, and how this proposed modification will change the approved plan.
- 6. Attachment C: Current Site Plan of the Approved Project. A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
 - The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
 - The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
 - The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.

The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.

- The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.
- 7. The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.
 - Acreage has not been added to or removed from the approved plan.
- 8. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

SUMMARY OF PREVIOUS & PROPOSED MODIFICATIONS

WPAP Modification Summary	Pre-June 1, 1999	Original WPAP	Previous Modification 1	Proposed Modification 2
Acres	54.50	54.50	54.50	54.50
Type of Development	Undeveloped	Elementary School	Elementary/Middle School	Elementary/Middle School
Number of Residential Lots	N/A	N/A	N/A	N/A
Total Impervious Cover (acres)	N/A	7.13	22.03	21.98
Impervious Cover (%)	N/A	13.08%	40.42%	40.33%
Permanent BMPs	N/A	Sand Filter Basin	Sand Filter Basins	Sand Filter Basins
Other	N/A	N/A	N/A	N/A
Approval Letter Date	N/A	May 31, 2017	July 22, 2022	TBD

ATTACHMENT A

ORIGINAL AND MODIFICATION APPROVAL LETTERS

Bryan W. Shaw, Ph.D., P.E., *Chairman* Toby Baker, *Commissioner* Jon Niermann, *Commissioner* Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 8, 2017

Mr. Victor Valdez Judson Independent School District 8012 Shin Oak Drive Live Oak, Texas 78233

Re: Edwards Aquifer, Bexar County

NAME OF PROJECT: JISD Wortham Oaks Elementary; Located on the southwest corner of Wortham Oaks Boulevard and Carriage Cape intersection; ETJ of 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

Regulated Entity No. RN109793950; Additional ID. No. 13000429

Dear Mr. Valdez:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Application for the above-referenced project submitted to the San Antonio Regional Office by Moy Tarin Ramirez Engineers, LLC on behalf of the Judson Independent School District on May 31, 2017. Final review of the WPAP was completed after additional material was received on July 28, 2017. As presented to the TCEO, the Temporary and Permanent Best Management Practices (BMPs) were selected 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.

PROJECT DESCRIPTION

The proposed project will have an area of approximately 54.50 acres with approximately 7.13 acres (13.08 percent) of impervious cover. This project proposes construction of an elementary school, sport fields, playgrounds and associated sidewalks and parking. Project wastewater will be disposed of by conveyance to the existing Dos Rios Water Recycling Center owned by the San Antonio Water System.

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Austin Headquarters: 512-239-1000 • tceq.texas.gov • How is our customer service? tceq.texas.gov/customersurvey printed on recycled paper

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or up-gradient of the site and potentially flowing across and off the site after construction, a single-chamber sedimentation/filtration basin, designed using the TCEQ technical guidance document, <u>Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005)</u>, will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 5,818 pounds of TSS generated from the 7.13 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The total capture volume of the single-chamber sedimentation/filtration basin is 85,316 cubic feet (83,129 cubic feet required). The filtration system for the basin will consist of 8,361 square feet of sand (8,312 square feet required) meeting ASTM C-33, which is 18 inches thick and an underdrain piping system covered with a minimum two inch gravel layer. The basin will provide 6,160 pounds of TSS removal (5,818 pounds required).

GEOLOGY

According to the geologic assessment included with the application, the site is located on the leached and collapsed members and the regional dense member of the Person Formation. Six non-karst closed depressions and 13 non-sensitive manmade features in bedrock were noted by the project geologist. The San Antonio Regional Office site assessment conducted on June 22, 2017 revealed that the site was generally as described in the application.

SPECIAL CONDITIONS

- I. The permanent pollution abatement measure shall be operational prior to first occupancy of the facility.
- II. All sediment / media from the water quality basin shall be disposed of properly according to 30 TAC 330 or 30 TAC 335, as applicable

STANDARD CONDITIONS

- 1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
- 2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
- 3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed

Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

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

During Construction:

- 10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
- 11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
- 12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

- 13. One well exists 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.
- 14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
- 15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
- 16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

- 18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.
- 19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
- 20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
- 21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Dianne Pavlicek-Mesa, P.G., of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210-403-4074.

Sincerely,

Lynn Bumguardner, Water Section Manager San Antonio Region Texas Commission on Environmental Quality

LB/DPM/eg

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

cc: Mr. Rolando Ramirez, P.E., Moy Tarin Ramirez Engineers, LLC Mr. Scott Halty, San Antonio Water System Ms. Renee Green, P.E., Bexar County Public Works Mr. Roland Ruiz, Edwards Aquifer Authority

Mr. George Wissmann, Trinity Glen Rose Groundwater Conservation District

Jon Niermann, *Chairman* Emily Lindley, *Commissioner* Bobby Janecka, *Commissioner* Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 22, 2022

Ms. Helen Keaton Judson Independent School District 8205 Palisades Drive Live Oak, Texas 78233

Re: Edwards Aquifer, Bexar County

NAME OF PROJECT: JISD Wortham Oaks Elementary and Middle School; Located at the southeast corner of Wortham Oaks Boulevard and Carriage Cape; San Antonio, Texas

TYPE OF PLAN: Request for a Modification of an Approved Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Regulated Entity No. RN109793950; Additional ID No. 13001525

Dear Ms. Keaton:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Modification application for the above-referenced project submitted to the San Antonio Regional Office by Moy Tarin Ramirez Engineers, LLC on behalf of Judson Independent School District on April 21, 2022. Final review of the WPAP Modification was completed after additional material was received on July 6, 2022, and July 15, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected 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 Aguifer 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 JISD Wortham Oaks Elementary WPAP was approved by letter dated August 8, 2017, for an area of approximately 54.50 acres with approximately 7.13 acres (13.08 percent) of impervious cover. The project proposed construction of an elementary school, sport fields, playgrounds and associated sidewalks and parking. A single-chamber sedimentation/filtration basin was approved to treat stormwater runoff.

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Ms. Helen Keaton Page 2 July 22, 2022

PROJECT DESCRIPTION

The proposed school project will have an area of approximately 54.50 acres. It will include the installation of two modular buildings and a concrete walkway at the existing Elementary school, clearing and grading, installation of utilities, the construction of a new Middle School, sports fields, driveways, and parking areas on the southern portion of the site. The new impervious cover will be 14.90 acres with an overall impervious cover for the site of 22.03 acres (40.42-percent). Project wastewater will be disposed of by conveyance to the existing Steven M. Clouse Water Recycling Center owned by the San Antonio Water Systems (SAWS) and the City of San Antonio.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, one existing single-chamber sedimentation/filtration basin (13000429) and one sedimentation filtration basin, designed using the TCEQ technical guidance document, <u>Complying with the Edwards Aquifer Rules:</u> <u>Technical Guidance on Best Management Practices (2005)</u>, will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 12,158 pounds of TSS generated from the 14.90- acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

GEOLOGY

According to the geologic assessment included with the application, the site is located on the leached and collapsed members and the regional dense member of the Person Formation. Six non-karst closed depressions and 13 non-sensitive manmade features in bedrock were noted by the project geologist. The San Antonio Regional Office site assessment conducted on June 23, 2022, revealed the site was as described by the project geologist.

SPECIAL CONDITIONS

- I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated August 8, 2017.
- II. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.
- III. All sediment and/or media removed from the water quality basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

- 1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
- 2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
- 3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Ms. Helen Keaton Page 3 July 22, 2022

Prior to Commencement of Construction:

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

During Construction:

- 10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
- 11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
- 12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature

Ms. Helen Keaton Page 4 July 22, 2022

and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

- 13. One well exists on-site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
- 14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
- 15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
- 16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

- 18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.
- 19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
- 20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
- 21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

Ms. Helen Keaton Page 5 July 22, 2022

22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Neri b. Valdez of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210-403-4087.

Sincerely, lian Butter

Lillian Butler, Section Manager Edwards Aquifer Protection Program Texas Commission on Environmental Quality

LIB/nbv

- Enclosures: Deed Recordation Affidavit, Form TCEQ-0625 Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263
- cc: Mr. Rolando Ramirez, Moy Tarin Ramirez Engineers, LLC
Deed Recordation Affidavit Edwards Aquifer Protection Plan

THE STATE OF TEXAS §

County of Bexar §

BEFORE ME, the undersigned authority, on this day personally appeared <u>Helen Keaton</u> who, being duly sworn by me, deposes and says:

- (2) That said real property is subject to an EDWARDS AQUIFER PROTECTION PLAN which was required under the 30 Texas Administrative Code (TAC) Chapter 213.
- (3) That the EDWARDS AQUIFER PROTECTION PLAN for said real property was approved by the Texas Commission on Environmental Quality (TCEQ) on July 22, 2022

A copy of the letter of approval from the TCEQ is attached to this affidavit as Exhibit A and is incorporated herein by reference.

(4) The said real property is located in <u>Bexar</u> County, Texas, and the legal description of the property is as follows: BEING A TOTAL OF 54.50 ACRES IN BEXAR COUNTY, TEXAS, OUT OF THE E.F. MOORE SURVEY NUMBER 429, ABSTRACT NUMBER 512, COUNTY BLOCK 4914, AND OUT OF THE S.A. & M.G. RAILROAD SURVEY NUMBER 97, ABSTRACT NUMBER 720, COUNTY BLOCK 4917, AND OUT OF THE R. VALDEZ SURVEY NUMBER 478, ABSTRACT NUMBER 768, COUNTY BLOCK 4913, AS CONVEYED TO JUDSON INDEPENDENT SCHOOL DISTRICT

Hunkiaton - Judson ISD I ANDOWNER-AFFIANT

BY SPECIAL WARRANTY DEED AS RECORDED IN VOLUME 15218, PAGES 546 OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.

SWORN AND SUBSCRIBED TO before me, on this 2/ day of 9/21/, 22

Marcant V. Burgar

THE STATE OF 144 County of

SCHARY PUG	MARGARET V. BURGAN
A	Expires May 21, 2025
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BEFORE ME, the undersigned authority, on this day personally appeared <u>Helen Keaton</u> 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 21 day of Seatember 2022

Marcant Buen

Margaret V. Burgan Typed or Printed Name of Notary MY COMMISSION EXPIRES: 5/21/2025

ATTACHMENT B

NARRATIVE OF PROPOSED MODIFICATION

A Water Pollution Abatement Plan (WPAP) was first approved by the Texas Commission on Environmental Quality on August 8, 2017. The WPAP was modified on July 22, 2022 for the installation of two modular buildings, a concrete walkway, and the construction of a middle school. This modification recalculates the on-site imperious cover due to changes in the middle school design and provides treatment for new impervious cover associated with a new right turn lane for the elementary school, the widening of an existing roundabout at the intersection of Carriage Cape and Wortham Oaks Blvd, and the widening of Waldon Walk to account for an entry gate relocation. Both on-site and off-site drainage patterns will remain unchanged. The proposed impervious cover for the site will be 21.98 acres. 1.99 acres of the proposed impervious cover is comprised is synthetic turf that provides equivalent water protection through the use of an underdrain and liner system. Accordingly, only 19.99 acres of on-site impervious cover requires treatment. In constructing the proposed improvements, off-site impervious cover will increase by 0.05 acres. The runoff generated by this increase in impervious cover will be offset by overtreatment in the existing elementary school sand filter basin.

Existing Sand Filter Basin 1 (elementary school) was designed to provide more storage volume and filter area than required. The existing Sand Filter Basin 1 provides a storage volume of 85,316 cubic feet and a sand filter area of 8,361 square feet. The required storage volume is 48,407 cubic feet, the required filter area is 4,034 square feet.

Existing Sand Filter Basin 2 (middle school) was designed to provide more storage volume and filter area than required. The existing Sand Filter Basin 2 provides a storage volume of 162,340 cubic feet, sand filter area of 13,026 square feet, and a TSS load removal of 13,150 pounds. The required storage volume is 84,992 cubic feet and the required filter area is 7,083 square feet.

ATTACHMENT C

CURRENT SITE PLAN OF THE APPROVED PROJECT









SECTION B-B NOT TO SCALE

9 SCHOOL NUMBER NEW MIDDLE

8261

EXAS

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I ANTOI SAN BLVD.

PROJECT NO.

DATE REVISIONS:

21-032 9.2.2021







8012 SHIN OAK TY 78233 (210)-945-5101

> 21-032 9.2.2021

EXAS 78261

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9

SCHOOL NUMBER

NEW MIDDLE



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C7.3
 STORM WATER
 CONTROL OF CON

PROJECT NO DATE REVISIONS:

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

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

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

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

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Rolando "Ron" Ramirez, P.E.

Date: _11 /21/24

Signature of Customer/Agent:

Regulated Entity Name: JISD Wortham Oaks Elementary and Middle School

Regulated Entity Information

- 1. The type of project is:
 - Residential: Number of Lots:____

Residential: Number of Living Unit Equivalents:_____

- Commercial
- ___ Industrial
- Other:<u>Elementary and Middle School</u>
- 2. Total site acreage (size of property): <u>54.40</u>
- 3. Estimated projected population: <u>+/- 1,800</u>
- 4. The amount and type of impervious cover expected after construction are shown below:

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres		
Structures/Rooftops	224,820	÷ 43,560 =	5.16		
Parking	69,536	÷ 43,560 =	1.60		
Other paved surfaces	662,970	÷ 43,560 =	15.22		
Total Impervious Cover	957,326	÷ 43,560 =	21.98		

Table 1 - Impervious Cover Table

Total Impervious Cover 21.98 ÷ Total Acreage 54.50 X 100 = 40.33% Impervious Cover

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

For Road Projects Only

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

7. Type of project:

TXDOT road project.

County road or roads built to county specifications.

City thoroughfare or roads to be dedicated to a municipality.

Street or road providing access to private driveways.

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

Concrete
Asphaltic concrete pavement
Other:

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

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

10. Length of pavement area: _____ feet.

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

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

A rest stop will not be included in this project.

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

<u>100</u> % Domestic	Gallons/day
% Industrial	Gallons/day
% Commingled	Gallons/day
TOTAL gallons/day <u>9,600</u>	

15. Wastewater will be disposed of by:

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

У
;
35

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

Sewage Collection System (Sewer Lines):

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

The SCS was previously submitted on_____.

-] The SCS was submitted with this application.
-] The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

The sewage collection system will convey the wastewater to the <u>Salado Creek</u> <u>Wastewater</u> (name) Treatment Plant. The treatment facility is:

\times	Existing.
	Proposed

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

Site Plan Requirements

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

17. \square 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.	

 \boxtimes 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 o	f
material) sources(s):	

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

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

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

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

] The wells are not in use and have been properly abandoned.

] The wells are not in use and will be properly abandoned.

] The wells are in use and comply with 16 TAC §76.

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

- 21. Geologic or manmade features which are on the site:
 - All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.

No sensitive geologic or manmade features were identified in the Geologic Assessment.

Attachment D - Exception to the Required Geologic Assessment. A request and justification for an exception to a portion of the Geologic Assessment is attached.

- 22. The drainage patterns and approximate slopes anticipated after major grading activities.
- 23. 🖂 Areas of soil disturbance and areas which will not be disturbed.
- 24. 🔀 Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 25. 🛛 Locations where soil stabilization practices are expected to occur.
- 26. Surface waters (including wetlands).

🛛 N/A

- 27. Locations where stormwater discharges to surface water or sensitive features are to occur.
 - There will be no discharges to surface water or sensitive features.
- 28. 🛛 Legal boundaries of the site are shown.

Administrative Information

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

ATTACHMENT A FACTORS AFFECTING WATER QUALITY

Landscaping, vehicular traffic, and various construction activities may affect the quality of stormwater originating on the proposed site. These factors may cause small amounts of oil, grease, suspended solids, fertilizers, and pesticides to enter into the stormwater runoff. However, temporary BMPs have been designed on the basis of the Technical Guidance Manual to treat the required amount of stormwater runoff as to not adversely affect water quality entering into any surface water or groundwater.

ATTACHMENT B VOLUME AND CHARACTER OF STORMWATER

<u>Volume</u>

The rational method (Q=CIA) was used to calculate the 25 year storm event. The following areas and volumes were calculated:

On-Site Drainage Area

Existing Conditions Area = 54.50 acres Impervious Cover = 22.03 acres Runoff Coefficient = 0.67 Percent Impervious = 40.42% Q₂₅ = 278.58 cfs

Proposed Conditions

Area = 54.50 acres Impervious Cover = 21.98 acres Runoff Coefficient = 0.67 Percent Impervious = 40.33% Q₂₅ = 278.39 cfs

Character of Storm Water

Stormwater runoff generated from the site during construction will be typical of elementary school and middle school educational facilities with buildings, parking lots, and basin maintenance projects. The runoff should consist of small amounts of suspended solids created by sediments from disturbed soils, construction dust, sawdust and hydrocarbons from construction equipment. Temporary BMP's have been selected from the TCEQ Publication, "Complying with the Edwards Aquifer Rules: Technical Guidance for Best Management Practices," to treat the required volume and character of storm water runoff to remove the increased total suspended solids (TSS) due to the proposed maintenance activities. Permanent stabilization of areas where soil is disturbed by construction activities will be accomplished by solid sodding in those areas.

Stormwater runoff generated after construction is complete will also be typical of elementary school and middle school facilities. The runoff will contain sediments from rooftops, driveways, parking lots, sidewalks, landscape areas, and other miscellaneous impervious areas from the site. The runoff may contain small amounts of oil, grease, suspended solids, fertilizers, and pesticides. The post construction runoff will be treated with the existing on-site sand filter basins.

ATTACHMENT C WPAP SITE PLAN

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

- 1. WRITTEN CONSTRUCTION NOTIFICATION MUST BE GIVEN TO THE APPROPRIATE TCEQ REGIONAL OFFICE NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF THE REGULATED ACTIVITY. INFORMATION MUST INCLUDE THE DATE ON WHICH THE REGULATED ACTIVITY WILL COMMENCE, THE NAME OF THE APPROVED PLAN FOR THE REGULATED ACTIVITY, AND THE NAME OF THE PRIME CONTRACTOR AND THE NAME AND TELEPHONE NUMBER OF THE CONTACT PERSON.
- 2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF 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 IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
- 4. NO TEMPORARY ABOVEGROUND HYDROCARBON AND HAZARDOUS SUBSTANCE STORAGE TANK SYSTEM IS INSTALLED WITHIN 150 FEET OF A DOMESTIC, INDUSTRIAL, IRRIGATION, OR PUBLIC WATER SUPPLY WELL, OR OTHER SENSITIVE FEATURE.
- 5. PRIOR TO COMMENCEMENT OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. CONTROLS SPECIFIED IN THE TEMPORARY STORM WATER SECTION OF THE APPROVED EDWARDS AQUIFER PROTECTION PLAN ARE REQUIRED DURING CONSTRUCTION. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THE CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED.
- 6. 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).
- 7. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS NOT LATER THAN WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%. A PERMANENT STAKE MUST BE PROVIDED THAT CAN INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME.
- 8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES (E.G., SCREENING OUTFALLS, PICKED UP DAILY).
- 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. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF TEMPORARILY OR PERMANENTLY CEASED. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARY OR PERMANENTLY CEASE IS PRECLUDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE. IN AREAS EXPERIENCING DROUGHTS WHERE THE INITIATION OF MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS STABILIZATION TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SEASONAL ARID CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
- 11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
- 12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
- A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
- B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
- C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

AUSTIN REGIONAL OFFICE 2800 S. IH 35, SUITE 100 AUSTIN, TEXAS 78704-5712 PHONE (512) 339-2929 FAX (512) 339-3795

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

9699K 4

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



GENERAL NOTES:

- 1. PROVIDE BAGGED GRAVEL INLET FILTERS AT ALL EXPOSED DRAINAGE STRUCTURES.
- 2. SOIL DISTURBANCES WILL OCCUR OVER PARTS OF SITE AS INDICATED ON PLAN.
- 3. LOCATIONS OF MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS ARE LABELED.
- 4. THESE ARE THE TEMPORARY AND PERMANENT BEST MANAGEMENT PRACTICES.
- 5. SOIL STABILIZATION PRACTICES SHALL OCCUR OVER THE ENTIRE SITE WITH THE USE OF PAVEMENT, BUILDINGS, SIDEWALKS, GRASS SOD,
- GRASS SEEDING AND MULCH. 6. THERE ARE NO LOCATIONS WHERE STORM WATER DISCHARGES TO
- SURFACE WATER. 7. CONTRACTOR SHALL MODIFY PLAN AS NECESSARY TO PROVIDE FOR PROPER STORM WATER POLLUTION PREVENTION THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES. ALL MODIFICATIONS ARE TO BE NOTED ON CONTRACTOR'S COPY OF THE WPAP SITE PLAN DRAWING AND REPORT ON THE PROJECT SITE.

SITE INFORMATION:



PROPERTY DATA:

1) SIZE ~ 54.50 ACRES 2) LOTS ~ 1 LOT 3) OWNER ~ JUDSON INDEPENDENT







GENERAL NOTES:

- 1. PROVIDE BAGGED GRAVEL INLET FILTERS AT ALL EXPOSED DRAINAGE STRUCTURES.
- 2. SOIL DISTURBANCES WILL OCCUR OVER PARTS OF SITE AS INDICATED ON PLAN.
- LOCATIONS OF MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS ARE LABELED.
- THESE ARE THE TEMPORARY AND PERMANENT BEST MANAGEMENT PRACTICES.
- 5. SOIL STABILIZATION PRACTICES SHALL OCCUR OVER THE ENTIRE SITE WITH THE USE OF PAVEMENT, BUILDINGS, SIDEWALKS, GRASS SOD, GRASS SEEDING AND MULCH.
- 6. THERE ARE NO LOCATIONS WHERE STORM WATER DISCHARGES TO SURFACE WATER. 7. CONTRACTOR SHALL MODIFY PLAN AS NECESSARY TO PROVIDE FOR PROPER STORM WATER POLLUTION PREVENTION THROUGHOUT THE
- DURATION OF CONSTRUCTION ACTIVITIES. ALL MODIFICATIONS ARE TO BE NOTED ON CONTRACTOR'S COPY OF THE WPAP SITE PLAN DRAWING AND REPORT ON THE PROJECT SITE. 8. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROPER POLLUTION CONTROLS OF THE PROJECT SITE THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.

SITE INFORMATION:



PROPERTY DATA:

- 1) SIZE ~ 54.50 ACRES
- 2) LOTS ~ 1 LOT
- 3) OWNER ~ JUDSON INDEPENDENT SCHOOL DISTRICT









GENERAL NOTES:

- 1. PROVIDE BAGGED GRAVEL INLET FILTERS AT ALL EXPOSED DRAINAGE STRUCTURES.
- SOIL DISTURBANCES WILL OCCUR OVER PARTS OF SITE AS INDICATED ON PLAN.
- 3. LOCATIONS OF MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS ARE LABELED.
- THESE ARE THE TEMPORARY AND PERMANENT BEST MANAGEMENT PRACTICES.
- SOIL STABILIZATION PRACTICES SHALL OCCUR OVER THE ENTIRE SITE WITH THE USE OF PAVEMENT, BUILDINGS, SIDEWALKS, GRASS SOD, GRASS SEEDING AND MULCH.
- 6. THERE ARE NO LOCATIONS WHERE STORM WATER DISCHARGES TO SURFACE WATER.
- 7. CONTRACTOR SHALL MODIFY PLAN AS NECESSARY TO PROVIDE FOR PROPER STORM WATER POLLUTION PREVENTION THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES. ALL MODIFICATIONS ARE TO BE NOTED ON CONTRACTOR'S COPY OF THE WPAP SITE PLAN DRAWING AND REPORT ON THE PROJECT SITE. 8. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROPER POLLUTION CONTROLS OF THE PROJECT SITE THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
- SITE INFORMATION:



PROPERTY DATA:

- 1) SIZE ~ 54.50 ACRES
- 2) LOTS ~ 1 LOT
- 3) OWNER ~ JUDSON INDEPENDENT SCHOOL DISTRICT



	DISTURBED AREA
Carlos A	ROCK BERM
	CONCRETE WASHO
	NEW ASPHALT PA
	NEW CONCRETE SI
	NEW CONCRETE P

 \rightarrow

FLOW ARROW



RETE WASHOUT AREA ASPHALT PAVEMENT CONCRETE SIDEWALK/FLATWORK CONCRETE PAVEMENT





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: Rolando Ramirez, P.E.

Date: 11/21/24

Signature of Customer/Agent:

Regulated Entity Name: JISD Wortham Oaks Elementary and Middle School

Project Information

Potential Sources of Contamination

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

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

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

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

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

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

- Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
- Fuels and hazardous substances will not be stored on the site.
- 2. Attachment A Spill Response Actions. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. Attachment B Potential Sources of Contamination. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

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

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

- For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
- 6. Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: <u>Upper Cibolo Creek</u>

Temporary Best Management Practices (TBMPs)

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

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

 A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site. A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer. A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
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.
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.
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 used in combination with other erosion and sediment controls within each disturbed

There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.

- 11. Attachment H Temporary Sediment Pond(s) Plans and Calculations. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
 - 🛛 N/A
- 12. Attachment I Inspection and Maintenance for BMPs. A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
- 13. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
- 14. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
- 15. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
- 16. 🖂 Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

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

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

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

Administrative Information

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

ATTACHMENT A SPILL RESPONSE ACTIONS

- 1. Housekeeping
 - A. Minimize materials: An effort will be made to store only enough materials required to do the job.
 - B. Storage: All materials stored on site will be stored in a neat, orderly manner in their appropriate containers in a covered area. If storage in a covered area is not feasible, then the materials will be covered with polyethylene or polypropylene sheeting to protect them from the elements.
 - C. Labeling: Products will be kept in their original containers with the original manufacturer's label affixed to each container.
 - D. Mixing: Substances will not be mixed with one another unless this is recommended by the manufacturer.
 - E. Disposal: Whenever possible, all of a product will be used prior to disposal of the container. Manufacturer's recommendations will be followed for proper use and disposal of materials on site.
 - F. Inspections: The site superintendent will inspect the site daily to ensure proper use and disposal of materials on site.
 - G. Spoil Materials: Any excavated earth that will not be used for fill material and all demolished pavement will be hauled off site immediately and will be disposed of properly, in accordance with all applicable state/local regulations.
- 2. Product Specific Practices
 - A. Petroleum Products: All on site vehicles will be monitored for leaks and will receive regular preventive maintenance to reduce the chance of leakage. If petroleum products will be present at the site, then they will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used on site will be applied according to the manufacturer's recommendations.
 - B. Concrete Trucks: Ready/Transit Mix Trucks will not be allowed to wash out or discharge surplus concrete or drum wash water except in the designated location on site as shown on the SWPPP site plan.
 - C. Paints: All containers will be tightly sealed and stored when not required for use. Excess paint will not be poured into storm sewer system or drainage channels, but will be properly disposed of according to manufacturers' instructions or state/local regulations.

- D. Fertilizers: Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. The fertilizer will be stored in a covered area, and any partially used bags will be transferred to a sealable plastic bin to avoid spills.
- 3. Spill Control and Response Measures

A spill prevention and response team will be designated by the site superintendent. In addition, the following practices will be followed for spill cleanup:

- A. Information: Manufacturers' recommended methods for spill cleanup will be clearly posted, and site personnel will be made aware of the procedures and location of the information and cleanup supplies.
- B. Equipment: Materials and equipment necessary for spill cleanup will be present on the site at all times. Equipment and materials will include, but not be limited to brooms, shovels, rags, gloves, goggles, absorbent materials (sand,sawdust,etc.) and plastic or metal trash containers specifically designed for this purpose. The materials and equipment necessary for spill cleanup will be dependent upon the nature and quantity of the material stored on site.
- C. Response: All spills will be cleaned up immediately upon discovery. <u>Cleanup</u>

(1) Clean up leaks and spills immediately

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

(3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in TCEQ Technical Guidance Manual RG-348 for specific information.

Minor Spills

(1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

(2) Use absorbent materials on small spills rather than hosing down or burying the spill

(3) Absorbent materials should be promptly removed and disposed of properly.

- (4) Follow the practice below for a minor spill:
- (5) Contain the spread of the spill.
- (6) Recover spilled materials.

(7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

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

Spills should be cleaned up immediately:

(1) Contain spread of the spill.

(2) Notify the project foreman immediately.

(3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.

(4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

(5) If the spill occurs during rain, cover the spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities: (1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

(2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

(3) Notification should first be made by telephone and followed up with a written report.

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

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

D. Vehicle and Equipment Maintenance

(1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.

(2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately.

(3) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.

(4) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.

(5) Place drip pans or absorbent materials under paving equipment when not in use.

(6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.

(7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.

(8) Oil filters disposed of in trash cans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can be recycled. Ask the oil supplier or recycler about recycling oil filters.

(9) Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

E. Vehicle and Equipment Fueling

(1) If fueling must occur onsite, use designated areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.

(2) Discourage "topping off" of fuel tanks.

(3) Always use secondary containment, such as a drain pan, when fueling to catch spills/leaks.

- F. Safety: The spill area will be kept well ventilated, and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substances.
- G. Reporting: Spills of toxic or hazardous material (if present on site) will be reported to the appropriate state or local government agency, regardless of the spill's size.
- H. Record Keeping: The spill prevention plan will be modified to include measures to prevent this type of spill from recurring as well as improved methods for cleaning up any future spills. A description of each spill, what caused it, and the cleanup measures used will be kept with this plan.

ATTACHMENT B POTENTIAL SOURCES OF CONTAMINATION

- **Potential Source** Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle dripping.
- Preventive Measure Vehicle maintenance when possible will be performed within a construction staging area specified by the General Contractor.
- Potential SourceMiscellaneous trash and litter from construction workers and material
wrappings.

Preventive Measure Trash containers will be placed throughout the site to encourage proper trash disposal.

- Potential Source Construction debris.
- Preventive Measure Construction debris will be monitored daily by contractor. Debris will be collected weekly and placed in disposal bins. Situations requiring immediate attention will be addressed on a case by case basis.
- **Potential Source** Stormwater contamination from excess application of fertilizers, herbicides and pesticides.
- Preventive Measure Fertilizers, herbicides and pesticides will be applied only when necessary and in accordance with manufacturers directions.
- **Potential Source** Soil and mud from construction vehicle tires as they leave the site.
- Preventive Measure A stabilized construction exit shall be utilized as vehicles leave the site. Any soil, mud, etc. carried from the project onto public roads shall be cleaned up within 24 hours.
- **Potential Source** Sediment from soil, sand, gravel and excavated materials stockpiled on site.

Preventive Measure Silt fence shall be installed on the downgradient side of all stockpiled materials. Reinforced rock berms shall be installed at all downstream discharge locations.

ATTACHMENT C SEQUENCE OF MAJOR ACTIVITIES

Construction Sequencing

- A. Installation of Temporary BMPs as shown on the WPAP Site Plan. Silt fence will be placed along the down gradient boundary. (0.50 acres disturbed)
- B. Clearing and grading. (1.00 acre disturbed)
- C. Construction of new right turn lane and widening of existing drive. (1.62 acres disturbed)
- D. Seeding and soil stabilization. (1.00 acre disturbed)

ATTACHMENT D TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

Description of Temporary Best Management Practices:

- Temporary Construction Entrance/Exit A stabilized pad of crushed stone located at any point where traffic will be entering or leaving the construction site from a public R.O.W., street, alley, sidewalk or parking area. It shall be a minimum of 50 feet long, 12 feet wide and 8 inches thick. The rock shall be 4" to 8" in size.
- 2. Silt Fence A barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site. Silt fences shall be installed on the downgradient side of the proposed areas to be disturbed that have a drainage area of 2 or less acres.
- Temporary Seeding Temporary seeding of disturbed areas shall be performed if disturbed areas are expected to have no construction activity for a period of at least 21 days.
- 4. Rock Berm A sediment trap consisting of 3" to 5" diameter rock wrapped in woven wire sheathing. The berm shall have a minimum height of 18" and a minimum top width of 2 feet. A rock berm shall be placed at locations of concentrated flows where the drainage area is between 2 and 5 acres.
- 5. Concrete Washout Area An area used to prevent or reduce the discharge of pollutants to stormwater from concrete waste by performing on-site washout in a designated area and training employees and subcontractors. Washout area should be located at least 50 feet from sensitive features, storm drains, open ditches, or water bodies. Below grade concrete washout facilities are typical.

Sequence of installation during construction process for each phase of construction:

1. Silt Fence shall be installed along the downgradient sides of the site as indicated on the WPAP Site Plan prior to any disturbance of the site.

Up gradient storm water flowing across the site:

There is minimum upgradient flow entering the construction area. All upgradient flow will be treated along with the stormwater generated onsite.

Onsite storm water flowing across and off the site:

The storm water originating onsite and flowing off the site will be treated through temporary BMPs. Silt fences will be installed at all locations where non-concentrated storm water exits the site. Silt fence will also be installed down gradient of the building addition to prevent sediment buildup.

Prevention of pollutants from entering surface streams, sensitive features and the aquifer:

The storm water originating onsite and flowing off the site will be treated using temporary BMPs prior to it entering surface streams, sensitive features and the aquifer. Silt fences will be installed at all locations where non-concentrated storm water may leave the site. These silt fences should filter the storm water prior to it leaving the site.

Maintaining flow to naturally-occurring sensitive features:

The storm water originating onsite and flowing off the site will continue to flow into the down gradient receiving waters. Any sensitive features downstream will continue to receive flow originating on the site. Prior to the flow leaving the site, it will be treated through temporary BMPs. These temporary BMPs should remove sediment, pollutants and debris if installed and maintained properly.

ATTACHMENT F STRUCTURAL PRACTICES

Runoff discharge of pollutants from exposed areas of the site will be limited through the utilization of temporary BMPs. Prior to leaving the site, flows containing pollutant discharges will be treated by a combination of silt fence and rock berms which will limit the amount of pollutants leaving the site.

The silt fence and bagged gravel inlet filters shall be installed prior to the initiation of site preparation and earth moving activities. All temporary BMPs shall be installed and maintained in accordance with TCEQ RG-348 July 2005.

Location of the temporary BMPs are shown on the WPAP Site Plan.





JISD WORTHAM OAKS ELEMENTARY AND MIDDLE SCHOOL												
STORM WATER CALCULATIONS												
PROP	OSED/ULTIMATE	CONDITIONS IMPERVIOUS	COVER									
DRAINAGE AREA A		TOTAL AREA (AC.) =	9.78									
C-VALUE	AREA	% OF DRAINAGE AREA	WEIGHTED C-VALUE									
0.47	2.83	28.94%	0.14									
0.97	6.95	71.06%	0.69									
TOTAL =	9.78	100.00%	0.83									
DRAINAGE AREA B		TOTAL AREA (AC.) = 16.04										
C-VALUE	AREA	% OF DRAINAGE AREA	WEIGHTED C-VALUE									
0.47	4.13	25.75%	0.12									
0.97	11.91	74.25%	0.72									
TOTAL =	16.04	100.00%	0.84									
OVERALL SITE		TOTAL AREA (AC.) =	54.50									
C-VALUE	AREA	% OF DRAINAGE AREA	WEIGHTED C-VALUE									
0.47	32.52	59.67%	0.28									
0.97	21.98	40.33%	0.39									
TOTAL	54 50	100.00%	0.67									
TUTAL =												

Proposed/Ultimate Time of Cor

Pro																									
Sheet Flow Tc Computions										Shallow Conc. Tc Computions						Concentrated Tc Computations						5	Overall		
Point	Length	Manning's Roughness Coeff.	Upstream Elev.	Downstream Elev	Slope	Velocity (fps)	Time of Concentration (Calc. Min.)	Time of Concentration (Used Min.)	Length	Paved (Y or N)	Upstream Elev.	Downstream Elev	Slope	Velocity (fps)	Time of Concentration (Calc. Min.)	Time of Concentration (Used Min.)	Length	Upstream Elev.	Downstream Elev	Slope	Velocity (fps)	Time of Concentration (Calc. Min.)	Time of Concentration (Used Min.)	Calculated Time of Concentration (min)	Time of Concentration Used (min)
1	100	0.24	1019	1014	5.12%	0.19	8.72	8.5	16	Ν	1014	1013	7.74%	4.41	0.06	0	818	1013	998	1.79%	6	2.27	2.25	11.05	10.75
2	100	0.24	1045	1042	3.50%	0.16	10.15	10	79	Y	1042	1040	1.91%	2.80	0.47	0.25	1285	1042	1014	2.14%	6	3.57	3.5	14.19	13.75
3	100	0.24	1036	1032	4.00%	0.17	9.63	9.5	334	N	1032	1022	2.99%	2.78	2.00	2	1064	1022	996	2.44%	6	2.96	2.75	14.58	14.25
		PROPOSED/ULTIMATE CONDITIONS Q CALCULATION																							

	PROPOSED/ULTIMATE CONDITIONS Q CALCULATION														
PT. NO.	AREA OF ACCUMULATION	TOTAL ACRES	C-VALUE Tc (min)		15 (in/hr)	15 125 (in/hr) (in/hr)		Q5 (cfs)	Q25 (cfs)	Q100 (cfs)					
1	A	9.78	0.83	10.75	6.19	8.64	10.92	49.96	69.71	88.12					
2	В	16.04	0.84	13.75	5.56	7.74	9.73	75.05	104.50	131.32					
3	OVERALL SITE	54.50	0.67	14.25	5.46	7.61	9.54	200.02	278.39	349.37					

- DRAINAGE AREA BOUNDARY

PROPOSED DRAINAGE CALCULATIONS

Project Name: JISD WORTHAM OAKS ELEMENTARY AND MIDDLE SCHOOL

oncentration for	or Overall Area Hy	drology (TR-55	Method)	

ATTACHMENT I INSPECTION AND MAINTENANCE FOR BMPS

Silt Fence

- 1. Inspect all fencing <u>weekly</u>, and after any rainfall.
- 2. Remove sediment when buildup reaches 6 inches, or install a second line of fencing parallel to the old fence.
- 3. Replace any torn fabric or install a second line of fencing parallel to the torn section.
- 4. Replace or repair any sections crushed or collapsed in the course of construction activity.

Rock Berm

- 1. Inspections should be made weekly and after each rainfall by the responsible party.
- 2. Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner.
- 3. Repair any loose wire sheathing.
- 4. The berm should be reshaped as needed during inspection.
- 5. The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
- 6. The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

Concrete Washout Areas

- 1. Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies.
- 2. Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.

JISD WORTHAM OAKS ELEMENTARY AND MIDDLE SCHOOL

Responsible Party Form

Pollution		q	Corrective Action		
Prevention Measure		Inspecte	Description	Date Completed	
Silt Fence	Inspections				
	Fencing				
	Sediment Removal				
	Torn Fabric				
	Crushed/Collapsed Fencing				
Rock Berm	Inspections				
	Remove sediment and Debris				
	Repair any loose wire sheathing				
	Reshaping				
	Replaced				

Inspector's Name

Inspector's Signature

Date

Note: Inspector is to attach a brief statement of his qualifications to this report.
ATTACHMENT J SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

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

Temporary stabilization shall consist of temporary seeding of disturbed areas that are denuded beyond 14 days without construction restart within 21 days.

As pad sites (buildings, sidewalks and pavement) are completed, permanent landscaping and sod shall be planted and irrigated. Curb and gutter will direct runoff into the permanent water quality basin.

Temporary vegetation stabilization techniques shall be in accordance with the TCEQ Technical Guidance Manual RG-248 (*Complying with the Edwards Aquifer Rules – Technical Guidance on Best Management Practices*), Chapter 1 Temporary Best Management Practices, Section 1.3.8 Temporary Vegetation, as follows:

Temporary Vegetation

Vegetation is used as a temporary or permanent stabilization technique for areas disturbed by construction, but not covered by pavement, buildings, or other structures. As a temporary control, vegetation can be used to stabilize stockpiles and barren areas that are inactive for long periods of time.

Vegetative techniques can and should apply to every construction project with few exceptions. Vegetation effectively reduces erosion in swales, stockpiles, berms, mild to medium slopes, and along roadways.

Other techniques may be required to assist in the establishment of vegetation. These other techniques include erosion control matting, mulches, surface roughening, swales and dikes to direct runoff around newly seeded areas, and proper grading to limit runoff velocities during construction. (NCTCOG, 1993b)

Materials:

The type of temporary vegetation used on a site is a function of the season and the availability of water for irrigation. For areas that are not irrigated, the year can be divided into two temporary planting seasons and one season for planting of permanent warm weather groundcovers. These periods are shown in Figure 1-19 for Bexar, Comal, Kinney, Medina, and Uvalde Counties. Appropriate temporary vegetation for these areas are shown in Table 1-4.

Other vegetation may perform as well as the recommended varieties, especially where irrigation is available. County agricultural extension agents are a good source for suggestions for other types of temporary vegetation. All seed should be high quality, U.S. Dept. of Agriculture certified seed.

Installation:

(1) Interim or final grading must be completed prior to seeding, minimizing all steep slopes. In addition, all necessary erosion structures such as dikes, swales, and diversions, should also be installed.

(2) Seedbed should be well pulverized, loose, and uniform.

(3) Fertilizer should be applied at the rate of 40 pounds of nitrogen and 40 pounds of phosphorus per acre, which is equivalent to about 1.0 pounds of nitrogen and phosphorus per 1000 square feet. Compost can be used instead of fertilizer and applied at the same time as the seed.



Figure 1-19 Planting Dates for Bexar, Comal, Kinney, Medina, and Uvalde Counties (Northcutt, 1993)

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

Dates	Climate	Species (lb/ac)	
Sept 1 to Nov 30	Temporary Cool Season	Tall Fescue	4.0
		Oats	21.0
		Wheat (Red,	20.0
		Winter)	50.0
		Total	55.0
Sept 1 to Nov 30	Cool Season Legume	Hairy Vetch	8.0
May 1 to Aug 31	Temporary Warm Season	Foxtail Millet	30.0

(4) Seeding rates should be as shown in Table 1-4 or as recommended by the county agricultural extension agent.

(5) The seed should be applied uniformly with a cyclone seeder, drill, cultipacker seeder or hydroseeder (slurry includes seed, fertilizer and binder).

(6) Slopes that are steeper than 3:1 should be covered with appropriate soil stabilization matting as described in the following section to prevent loss of soil and seed. <u>Irrigation</u>

Temporary irrigation should be provided according to the schedule described below, or to

replace moisture loss to evapotranspiration (ET), whichever is greater. Significant rainfall (on-site rainfall of $\frac{1}{2}$ " or greater) may allow watering to be postponed until the next scheduled irrigation.

Time Period	Irrigation Amount and Frequency
Within 2 hours of installation	Irrigate entire root depth, or to germinate seed
During the next 10 business days	Irrigate entire root depth every Monday, Wednesday, and Friday
During the next 30 business days or until Substantial Completion	Irrigate entire root depth a minimum of once per week, or as necessary to ensure vigorous growth
During the next 4 months or	Irrigate entire root depth once every two weeks,
until Final Acceptance of the Project	or as necessary to ensure vigorous growth

If cool weather induces plant dormancy, water only as necessary to maintain plant health.

Irrigate in a manner that will not erode the topsoil but will sufficiently soak the entire depth of roots.

Inspection and Maintenance Guidelines:

(1) Temporary vegetation should be inspected weekly and after each rain event to locate and repair any erosion.

(2) Erosion from storms or other damage should be repaired as soon as practical by regrading the area and applying new seed.

(3) If the vegetated cover is less than 80%, the area should be reseeded.

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: Rolando Ramirez, P.E.

Date: 11/21/24

Signature of Customer/Agent

Regulated Entity Name: JISD Wortham Oaks Elementary and Middle School

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.



2. X These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

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

N/A

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

____ N/A

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

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

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

creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.

N/A

Responsibility for Maintenance of Permanent BMP(s)

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

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

N/A

15. \square 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 BMP'S FOR UPGRADIENT STORM WATER

The storm water runoff from the adjacent upgradient properties in Wortham Oaks, Unit 2 on the south side of the site will continue to flow onto the site. The upgradient flow enters the site from the subdivision through an existing curb inlet near the southwest corner of the site. Consistent with the previously approved WPAP modification, this runoff will not enter the permanent BMPs on-site.

ATTACHMENT C BMPs FOR ON-SITE STORMWATER

The majority of the runoff from the impervious cover on-site is conveyed to the existing elementary and middle school sand filter basins. Runoff from approximately 1.11 acres of impervious cover bypasses the sand filter basins and is accounted for with overtreatment in the existing sand filter basins. The entirety of this removal requirement will be accounted for in the elementary school sand filter basin via overtreatment. An upstream overflow bypass structure has been included at each water quality pond to bypass additional flow contributing to the basin allowing the first flush to remain in the basin. The stormwater that leaves the water quality ponds is directed towards an existing 3-6'x3' multiple box culvert (MBC) at which point the stormwater travels under Carriage Cape.

The previously approved WPAP modification called for treatment of the runoff from 22.03 acres of impervious cover. The on-site impervious cover calculations have been revised for this application due to changes to the site plan during construction of the new middle school. These changes have resulted in a net decrease to impervious cover on-site. The updated total impervious cover on-site is 21.98 acres. Additionally, 1.99 acres of impervious cover previously contributing to the treatment requirement on-site is comprised of synthetic turf that provides equivalent water protection through the use of an underdrain and liner. Accordingly, the total on-site impervious cover contributing to the TSS removal requirement has been revised to 19.99 acres. This corresponds to a removal requirement of 16,312 lbs. of TSS. The proposed right turn lane, roundabout, and drive improvements will result in an increase of 0.05 acres in off-site impervious cover. This 0.05-acre increase corresponds to a removal requirement of 40 lbs. of TSS. Ultimately, the total removal requirement is 16,353 lbs. of TSS. Please note that inputting 20.04 acres of impervious cover (19.99 on-site + 0.05 off-site) into the TCEQ TSS calculations spreadsheet results in an overall removal requirement of 16,353 lbs. instead of the expected total of 16,352 lbs. obtained from adding the on-site and off-site treatment requirements separately. 41 lbs. of overtreatment will be provided in the elementary school sand filter basin to account for this rounding discrepancy.

The sand filter basin (Sand Filter 1) for the Elementary School includes treatment for 5,671 pounds of TSS generated from 6.95 acres of impervious cover located within its contributing drainage area. The basin will also provide 359 pounds of TSS removal as overtreatment for both the 0.05-acre increase in off-site impervious cover and 0.39 acres of uncaptured on-site impervious cover. Ultimately, Sand Filter 1 will remove 6,030 pounds of TSS. The following table compares the sizing requirements to the designed sand filter basin.

Sand Filter 1 (6,030 pounds of TSS removed)			
Required Capture Volume (CF)	Design Capture Volume (CF)	Required Sand Filter Area (SF)	Design Sand Filter Area (SF)
48,407	85,316	4,034	8,361

The sand filter basin (Sand Filter 2) for the Middle School includes treatment for 9,735 pounds of TSS generated from 11.93 acres of impervious cover located within its contributing drainage area. The basin will also provide 588 pounds of TSS removal as overtreatment 0.72 acres of uncaptured on-site impervious cover. Ultimately, Sand Filter 2 will remove 10,323 pounds of TSS. The following table compares the sizing requirements to the designed sand filter basin.

Sand Filter 2 (10,323 pounds of TSS removed)			
Required Capture Volume (CF)	Design Capture Volume (CF)	Required Sand Filter Area (SF)	Design Sand Filter Area (SF)
84,992	162,340	7,083	13,026

ATTACHMENT D

FACTORS AFFECTING SURFACE WATER QUALITY

The proposed ultimate land use for the proposed project is an Elementary and Middle School.

Factors impacting surface water quality include: fertilizers, pesticides from landscaping, sediment from soil disturbances, leaf litter from tree removal, small amounts of oil grease from vehicular traffic, and suspended solids from the proposed impervious cover areas. These factors may cause suspended solids to enter into the storm water runoff and subsequently affect the surface water. However, temporary and permanent BMP's consisting of silt fences, bagged gravel inlet filters, stabilized construction entrance/exit, and sand filtration ponds have been designed on the basis of the Technical Guidance Manual to treat the required amount of storm water runoff as to not adversely affect water quality entering into any surface water or groundwater.

ATTACHMENT F CONSTRUCTION PLANS

GENERAL NOTES:

- .. THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OR HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF EXISTING UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO EVEN IF THEY ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR WILL COORDINATE ANY NECESSARY RELOCATIONS.
- 2. THE CONTRACTOR WILL REGRADE AND SOD AREAS OF PROPOSED ASPHALT REMOVAL.
- 3. ALL COURSES OF ASPHALTIC CONCRETE PAVEMENT (REGARDLESS OF TYPE OR LAYER) WILL BE PLACED WITH AN ASPHALT PAVER. ALL EQUIPMENT USED IN THE PLACEMENT OF THIS MATERIAL WILL MEET THE REQUIREMENTS OF ITEM 320, "EQUIPMENT FOR ASPHALT CONCRETE PAVEMENT". THE MAXIMUM LIFT THICKNESS FOR TYPE A ASPHALTIC CONCRETE PAVEMENT IS 3.5 INCHES.
- 4. ALL SURFACE AGGREGATES WILL MEET THE REQUIREMENTS OF TXDOT FRICTION CLASSIFICATION "B".
- 5. ALL TEMPORARY EROSION SEDIMENT AND ENVIRONMENTAL CONTROLS SHALL BE DONE IN ACCORDANCE WITH ITEM 506 OF THE LATEST TXDOT STANDARD SPECIFICATIONS.

GAS NOTE:

REQUIREMENTS FOR CONSTRUCTION NEAR GAS: ALL UTILITIES THAT CROSS GAS LINES MUST CROSS AT RIGHT ANGLES TO THE GAS MAIN. SEPARATION DISTANCE BETWEEN UTILITIES AND THE GAS MAIN SHALL BE 4'-0" BETWEEN OUTSIDE DIAMETER TO OUTSIDE DIAMETER. THE CONTRACTOR MUST PROTECT THE GAS LINE AT ALL TIMES DURING CONSTRUCTION.

GENERAL NOTES:

- 1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO BEGINNING WORK.
- ALL WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE SITE TO WASTE MATERIAL
- CONTRACTOR IS REQUIRED TO SET AND VERIFY ALL PROJECT ELEVATIONS PRIOR TO THE START OF CONSTRUCTION. "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY THE SAME MATERIALS AS WELL AS VERTICAL AND HORIZONTAL ALIGNMENT.
- ENGINEER BEFORE PROCEEDING WITH ANY PHASE OF THE WORK AS HE WILL BE RESPONSIBLE FOR ALL WORK AS INTENDED BY THE DRAWINGS AND SPECIFICATIONS.
- 5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY.
- 6. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND GENERALLY BE LOCATED TO AFFORD MAXIMUM
- 7. ANY EXISTING OFF-SITE IMPROVEMENTS AND/OR UTILITIES REMOVED, DAMAGED OR UNDERCUT BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE PROJECT ARCHITECT AT THE CONTRACTOR'S EXPENSE.
- PRIOR TO DEMOLITION.
- 9. CONTRACTOR SHALL MAINTAIN CONTINUAL ALL UTILITY SERVICES (GAS, TELE, CATV, ELEC., WATER, SEWER, STORM SEWER, ETC.) TO EXISTING FACILITIES AND BUILDINGS. WHERE CONSTRUCTION IS IN THE PROXIMITY OF A UTILITY, THE CONTRACTOR WILL TAKE PRECAUTION TO PROTECT AND/OR SUPPORT THE UTILITY.
- 10. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES (ACROSS ALL DISCIPLINES) PRIOR TO CONSTRUCTION.
- 11. NOTIFY OWNER 72 HOURS IN ADVANCE OF UTILITY SHUTDOWN.
- 12. ADJUST ALL EXISTING VALVES & UTILITIES TO REMAIN TO FINISH GRADE. REFERENCE GRADING & UTILITY PLAN.
- 13. CONTRACTOR SHALL COORDINATE ALL DEMOLITION CONSTRUCTION ACTIVITIES WITH OTHER DISCIPLINES AS REQUIRED.
- 14. CONTRACTOR SHALL COORDINATE UTILITY DEMOLITION WITH UTILITY PLANS.
- ALIGNMENT ON EACH SIDE.







A STATE LICENSED LANDFILL, CONTRACTOR WILL BE REQUIRED TO PROVIDE DOCUMENTATION WHERE DISPOSED MATERIAL IS TAKEN TO. THE OWNER WILL NOT BE HELD LIABLE FOR

4. GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSION & GRADE CONDITIONS (BOTH NEW AND EXISTING). HE SHALL REPORT ANY DISCREPANCIES TO THE PROJECT

PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT AND TO ASSURE AN EXPEDITIOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING FENCES, CURBS, CONCRETE DRIVEWAYS, SIDEWALK STRUCTURES AND PAVEMENT, THAT ARE NOT INDICATED TO BE REMOVED. AN INVENTORY OF EXISTING CONDITIONS SHALL BE CONDUCTED WITH THE CONTRACTOR AND OWNER

15. CONTRACTOR IS RESPONSIBLE FOR CLEARING THE ALIGNMENT FOR ALL NEW FENCING. CLEARING TO INCLUDE ALL VEGETATION, TREE LIMBS, AND SHRUBS WITHIN 5' OF NEW FENCE





Know what's **below. Call** before you dig.

NOTE

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITY LINES THAT MAY BE AFFECTED BY THE WORK. THESE EFFORTS SHALL INCLUDE BUT NOT LIMITED TO; GROUND PENETRATING RADAR (GPR), REVIEW OF EXISTING PLANS, CONTACTING TEXAS 811 AND ANY OTHER CITY, STATE, MUNICIPAL OR UTILITY COMPANY REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL UTILITY LINES (UNDERGROUND AND ABOVE GROUND) WHILE PERFORMING WORK. ANY DAMAGED UTILITY LINES WILL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER



DEMOLITION KEYNOTES:

- (1) REMOVE APPROXIMATELY 182 L.F. OF EXISTING CONCRETE STREET CURB ON WORTHAM OAKS BLVD, IN ITS ENTIRETY.
- $\langle 2 \rangle$ REMOVE EXISTING CONCRETE SIDEWALK, AS SHOWN ON PLAN.
- **3** REMOVE EXISTING RIVER ROCK PARKWAY BETWEEN CURB AND SIDEWALK.
- A REMOVE EXISTING ASPHALT PAVEMENT A MINIMUM OF 18 INCHES WIDE TO ALLOW FOR NEW PAVEMENT TRANSITION.
- **5** REMOVE AND RELOCATE EXISTING STREET TRAFFIC SIGN. NEW LOCATION TO BE DETERMINED BY BEXAR COUNTY FIELD INSPECTOR.
- \langle 6 angle remove existing pavement markings from existing asphalt surface.
- $\langle 7 \rangle$ EXISTING ROCK ISLAND AND PERIMETER CONCRETE CURB TO REMAIN UNDISTURBED. $\langle \, {f 8} \,
 angle$ begin sidewalk demolition at nearest existing control joint.
- $\langle \, {f g} \,
 angle$ EXISTING CONCRETE SIDEWALK TO REMAIN IN PLACE.
- $\langle 10 \rangle$ EXISTING ROUNDABOUT ISLAND TO REMAIN UNDISTURBED.
- 1) EXISTING WATER VALVE LIDS TO REMAIN IN PLACE. ADJUST TOP OF LID, IF NECESSARY, TO BE FLUSH WITH NEW FINISH GRADE.
- $\langle 12
 angle$ existing CPS power pole to remain in place. GC to use extreme caution when WORKING AROUND ALL EXISTING OVERHEAD AND UNDERGROUND POWER LINES
- (13) EXISTING PARKWAY GRASS AND DRAINAGE AREA. SCARIFY AND REGRADE AS NECESSARY TO MAINTAIN 4:1 FRONT SLOPE FROM BEHINE THE NEW CONCRETE SIDEWALK. RECONSTRUCT ALL DISTURBED AREAS WITH NEW 4 INCH TOPSOIL AND HYDROMULCH SEED. REFER TO GENERAL NOTES ON THE SWPPP PLANS.
- (14) REMOVE APPROXIMATELY 172 L.F. OF EXISTING CONCRETE STREET CURB ON CARRIAGE CAPE, IN ITS ENTIRETY.
- $\langle 15 \rangle$ REMOVE EXISTING FLUSH AND RAISED CONCRETE CURB ALONG THE EXISTING ENTRANCE APRON, TO ALLOW FOR NEW CONSTRUCTION.
- (16) ADJUST TOP OF EXISTING SANITARY SEWER MANHOLE LID TO BE FLUSH WITH NEW FINISH GRADE. DO NOT CONSTRUCT NEW CONCRETE CURB ON TOP OF LID.
- (17) EXISTING 24" WIDE THERMOPLASTIC CROSSWALK PAVEMENT MARKING TO REMAIN IN PLACE, 10 FACH
- (18) SAWCUT AND REMOVE PORTION OF EXISTING CONCRETE APRON TO ALLOW FOR NEW CONSTRUCTION.
- (19) SAWCUT AND REMOVE PORTION OF EXITING ASPHALT PAVEMENT TO ALLOW FOR NEW CONSTRUCTION
- $\langle 20 \rangle$ REMOVE EXISTING TRUNCATED DOME PAVERS.
- (21) REMOVE AND ADJUST WATER GATE VALVE LIDS, TO BE FLUSH WITH NEW ASPHALT PAVEMENT.

PROPERTY DATA:

- 1) SIZE ~ 54.50 ACRES
- 2) LOTS ~ 1 LOT
- 3) OWNER ~ JUDSON INDEPENDENT SCHOOL DISTRICT

	// /	KEYD.
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GENERAL NOTES:

- 1. REFER TO THE LATEST VERSION ON THE TXDOT "DELINEATOR AND PAVEMENT MARKER" STANDARDS FOR MORE DETAILS.
- 2. ALL SIGN RELOCATIONS WILL BE IN ACCORDANCE WITH THE LATEST VERSION OF TMUTCD AND APPLICABLE TXDOT STANDARDS.
- 3. RAISED PAVEMENT MARKERS WILL BE INSTALLED IN ACCORDANCE WITH THE LATEST TXDOT "DELINEATOR AND PAVEMENT MARKER" STANDARDS.
- 4. CENTER TO CENTER SPACING OF ALL RAISED PAVEMENT MARKERS WILL BE IN ACCORDANCE TO TXDOT STANDARDS PM (2)-22 & PM (3)-22.
- 5. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS WILL BE LIGHTLY GROUND IN A MANNER THAT DOES NOT DAMAGE THE PAVEMENT SURFACE, TO REMOVE ANY PAVEMENT MARKING ACCUMULATION, AND WILL BE COVERED WITH A STRIP OF SEAL OF 18" MINIMUM WIDTH, CONSISTING OF PRECOATED GRADE 5, FRICTION CLASS B AGGREGATE.
- 6. REFER TO THE LATEST VERSION OF THE TXDOT "TYPICAL STANDARD PAVEMENT MARKINGS" STANDARDS FOR MORE DETAILS.
- 7. CONTRACTOR SHALL INSTALL BERMUDA GRASS SOD AT ALL DISTURBED AREAS.
- 8. STREET NAME SIGNS SHALL MEET BEXAR COUNTY'S STANDARD SPECIFICATIONS AND SIGN PATTERNS.
- 9. "ALL PAVEMENT MARKINGS WILL BE TYPE I THERMOPLASTIC WITH AN UNDERSEAL MEETING TXDOT SPECIFICATIONS. UNDERSEAL FOR LONGITUDINAL STRIPING MAY BE TYPE II PAVEMENT MARKINGS MEETING TXDOT SPECIFICATIONS" FOR ITEM 666.
- 10. "THE FINAL PLACEMENT OF PERMANENT SIGNS WILL BE COORDINATED PRIOR TO PLACEMENT WITH THE LOCAL TXDOT MAINTENANCE SUPERVISOR."



C1.7

TRENCH EXCAVATION SAFETY PROTECTION

consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

SUBMITTAL SET







LEGEND:

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GENERAL NOTES:

- 1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO BEGINNING WORK.
- 2. ALL WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE SITE TO A STATE LICENSED LANDFILL. CONTRACTOR WILL BE REQUIRED TO PROVIDE DOCUMENTATION WHERE DISPOSED MATERIAL IS TAKEN TO. THE OWNER WILL NOT BE HELD LIABLE FOR WASTE MATERIAL.
- 3. CONTRACTOR IS REQUIRED TO SET AND VERIFY ALL PROJECT ELEVATIONS PRIOR TO THE START OF CONSTRUCTION. "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY THE SAME MATERIALS AS WELL AS VERTICAL AND HORIZONTAL ALIGNMENT.
- 4. GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSION & GRADE CONDITIONS (BOTH NEW AND EXISTING). HE SHALL REPORT ANY DISCREPANCIES TO THE PROJECT ENGINEER BÉFORE PROCEEDING WITH ANY PHASE OF THE WORK AS HE WILL BE RESPONSIBLE FOR ALL WORK AS INTENDED BY THE DRAWINGS AND SPECIFICATIONS.
- 5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY.
- 6. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND GENERALLY BE LOCATED TO AFFORD MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT AND TO ASSURE AN EXPEDITIOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION.
- 7. ANY EXISTING OFF-SITE IMPROVEMENTS AND/OR UTILITIES REMOVED, DAMAGED OR UNDERCUT BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE PROJECT ARCHITECT AT THE CONTRACTOR'S EXPENSE.
- 8. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING FENCES, CURBS, CONCRETE DRIVEWAYS, SIDEWALK STRUCTURES AND PAVEMENT, THAT ARE NOT INDICATED TO BE REMOVED. AN INVENTORY OF EXISTING CONDITIONS SHALL BE CONDUCTED WITH THE CONTRACTOR AND OWNER PRIOR TO DEMOLITION.
- 9. CONTRACTOR SHALL MAINTAIN CONTINUAL ALL UTILITY SERVICES (GAS, TELE, CATV, ELEC., WATER, SEWER, STORM SEWER, ETC.) TO EXISTING FACILITIES AND BUILDINGS. WHERE CONSTRUCTION IS IN THE PROXIMITY OF A UTILITY, THE CONTRACTOR WILL TAKE PRECAUTION TO PROTECT AND/OR SUPPORT THE UTILITY.
- 10. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES (ACROSS ALL DISCIPLINES) PRIOR TO CONSTRUCTION.
- 11. NOTIFY OWNER 72 HOURS IN ADVANCE OF UTILITY SHUTDOWN.
- 12. ADJUST ALL EXISTING VALVES & UTILITIES TO REMAIN TO FINISH GRADE. REFERENCE GRADING & UTILITY PLAN.
- 13. CONTRACTOR SHALL COORDINATE ALL DEMOLITION CONSTRUCTION ACTIVITIES WITH OTHER DISCIPLINES AS REQUIRED.
- 14. CONTRACTOR SHALL COORDINATE UTILITY DEMOLITION WITH UTILITY PLANS. 15. CONTRACTOR IS RESPONSIBLE FOR CLEARING THE ALIGNMENT FOR ALL NEW FENCING. CLEARING TO INCLUDE ALL VEGETATION, TREE LIMBS, AND
- SHRUBS WITHIN 5' OF NEW FENCE ALIGNMENT ON EACH SIDE. 16. CONTRACTOR TO REFERENCE LANDSCAPE PLANS FOR THE REMOVAL OF
- EXISTING TREES. 17. CONTRACTOR TO FLUSH ALL UNDERGROUND STORM DRAINS AND
- CHANNELS PRIOR TO FINAL ACCEPTANCE BY THE OWNER. 18. CONTRACTOR TO TELEVISE ALL HDPE PIPE INSTALLATION PRIOR TO FINAL

ACCEPTANCE.

GAS NOTE:

GADDE OF AN ACHE SHAREY EDELEPHON, LLC VEL 17213 40 1476 GARAGEL

REQUIREMENTS FOR CONSTRUCTION NEAR GAS: ALL UTILITIES THAT CROSS GAS LINES MUST CROSS AT RIGHT ANGLES TO THE GAS MAIN. SEPARATION DISTANCE BETWEEN UTILITIES AND THE GAS MAIN SHALL BE 4'-0" BETWEEN OUTSIDE DIAMETER TO OUTSIDE DIAMETER. THE CONTRACTOR MUST PROTECT THE GAS LINE AT ALL TIMES DURING CONSTRUCTION.



Know what's **below. Call** before you dig.

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITY LINES THAT MAY BE AFFECTED BY THE WORK. THESE EFFORTS SHALL INCLUDE BUT NOT LIMITED TO; GROUND PENETRATING RADAR (GPR), REVIEW OF EXISTING PLANS, CONTACTING TEXAS 811 AND ANY OTHER CITY, STATE, MUNICIPAL OR UTILITY COMPANY REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL UTILITY LINES (UNDERGROUND AND ABOVE GROUND) WHILE PERFORMING WORK. ANY DAMAGED UTILITY LINES WILL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER







	PROPERTY LINE
\longrightarrow	CHAINLINK FENCE
FH DOM	FIRE HYDRANT
ICV •	IRRIGATION CONTROL V
LP柒	LIGHT POLE
-OHU-	OVERHEAD UTILITIES
PP Ø	POWER POLE
S	SANITARY SEWER MANH
SIGN	SIGN
WM •	WATER METER
$\mathbb{WV}\otimes$	WATER VALVE
X	WIRE FENCE
[* <u>*</u> *************	











ATTACHMENT G

INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

SAND FILTER SYSTEM

The biggest threat to the filtering system is exposure to heavy sediment loads that clog the filter media. The sand filter BMP shall be inspected on a quarterly basis and after large storms for the first year of operation. Subsequent inspections shall be semi-annually or more often if deemed necessary.

During Construction - Construction within the area draining to the system shall be complete prior to exposing the filter to stormwater runoff. All exposed areas shall be stabilized to minimize sediment loads.

Inspections - Inspect the sand filter BMP at least twice a year (once during or immediately following wet weather) to evaluate facility operation. During each inspection, erosion areas inside and downstream of the BMP must be identified and repaired or revegetated immediately. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) must be identified and repaired immediately. Cracks, voids and undermining should be patched/filled to prevent additional structurally damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage.

Sediment Removal - Remove sediment from the inlet structure and filtration chamber when sediment buildup reaches a depth of 6 inches or when the proper functioning of inlet and outlet structures is impaired. Sediment should be cleared from the inlet structure at least every year and from the filtration basin at least every 5 years.

Media Replacement – Maintenance of the filter media is necessary when the drawdown time exceeds 48 hours. When this occurs, the upper layer of sand should be removed and replaced with new material meeting the original specifications. Any discolored sand should also be removed and replaced. In filters that have been regularly maintained, this should be limited to the top 2 to 3 inches.

Debris and Litter Removal – Debris and litter that accumulates within the basin should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.

Filter Underdrain – Clean underdrain piping network to remove any sediment buildup as needed to maintain design drawdown time.

Mowing – Grass areas in and around sand filters must be mowed at least twice annually to limit vegetation height to 18 inches.

ENGINEERED VEGETATIVE FILTER STRIPS

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 including:

• Pest Management. 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.

• Seasonal Mowing and Lawn Care. If the filter strip is made up of turf grass, it should be mowed as needed to limit vegetation height to 18 inches, using a mulching mower (or removal of clippings). If native grasses are used, the filter may require less frequent mowing, but a minimum of twice annually. Grass clippings and brush debris should not be deposited on vegetated filter strip areas. Regular mowing should also include weed control practices, however herbicide use should be kept to a minimum (Urbonas et al., 1992). Healthy grass can be maintained without using fertilizers because runoff usually contains sufficient nutrients. Irrigation of the site can help assure a dense and healthy vegetative cover.

• Inspection. Inspect filter strips at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is most desirable. The strip should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. More frequent inspections of the grass cover during the first few years after establishment will help to determine if any problems are developing, and to plan for long-term restorative maintenance needs. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Construction of a level spreader device may be necessary to reestablish shallow overland flow.

• Debris and Litter Removal. Trash tends to accumulate in vegetated areas, particularly along highways. Any filter strip structures (i.e. level spreaders) should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection, but should be performed no less than 4 times per year.

• Sediment Removal. 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.

• Grass Reseeding and Mulching. A healthy dense grass should be maintained on the filter strip. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level. Grass damaged during the sediment removal process should be promptly replaced using the same seed mix used during filter strip establishment. If possible, flow should be diverted from the damaged areas until the grass is firmly established. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. 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

RECORD KEEPING

Maintenance and inspection records should be kept on file by the Owner of the permanent BMPs for a period of at least three (3) years. Repair and retrofit records should be kept on file by the Owner of the permanent BMPs for a period of at least five (5) years.

Hunkeaton

Helen Keaton Executive Director of Facilities Planning Judson Independent School District

10.20.21

Date

ATTACHMENT I

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Both permanent and temporary BMP's, as shown on the WPAP Site Plan, shall be used to minimize contamination to surface streams, both during and after construction. During construction, temporary BMPs will consist of silt fence, bagged gravel inlet filters, and rock berms. After construction, the permanent BMPs for the overall site will consist of two (2) Sand Filters.

The proposed BMPs and other storm drainage systems are designed to avoid or minimize surface stream contamination and changes in the way in which water enters a stream. The proposed Sand Filters remove contaminations from on-site runoff.

Agent Authorization Form For Required Signature Edwards Aquifer Protection Program Relating to 30 TAC Chapter 213 Effective June 1, 1999
I <u>Buben MORENO</u> Print Name
DIEECTOR OF FACILITIES FILMING, Title - Owner/President/Other
of, Judson Independent School District, Corporation/Partnership/Entity Name
have authorized <u>Moy Tarin Ramirez Engineers, LLC</u> Print Name of Agent/Engineer
of Moy Tarin Ramirez Engineers, LLC Print Name of Firm

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

I also understand that:

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

SIGNATURE PAGE:

Applicant's Signature

1/22/2024 Date/

THE STATE OF <u>TEXAS</u> § County of <u>BEXAR</u> §

BEFORE ME, the undersigned authority, on this day personally appeared <u>Rubent Manenno</u> 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 22 day of NOUENBER 2024.

NOTARY PUBLIC



BRAULIO RAMIREZ My Notary ID # 129882652 Expires July 14, 2026

BRAILLO RAMINEZ Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 7-14-26

Application Fee Form

	Texas Commission on Environmental Quality			
Name of Proposed Regulated Entity: JISD Wortham Oaks Elementary and Middle School				
Regulated Entity Location: 8205 Palisades Drive, Live Oak, TX 78233				
Name of Customer: <u>Jusdon ISD</u>				
Contact Person: <u>Ruben Moreno</u>	Phon	e: <u>210-954-5100</u>		
Customer Reference Number (if is	sued):CN <u>601037567</u>			
Regulated Entity Reference Numb	er (if issued):RN <u>10979</u>	<u>3950</u>		
Austin Regional Office (3373)				
Hays	Travis	□ w	'illiamson	
San Antonio Regional Office (3362	2)			
🔀 Bexar	Medina		valde	
Comal	Kinney			
Application fees must be paid by c	heck, certified check, o	r money order, payab	ole to the Texas	
Commission on Environmental Qu	uality. Your canceled c	heck will serve as you	r receipt. This	
form must be submitted with you	ir fee payment . This pa	ayment is being subm	itted to:	
Austin Regional Office	🖂 Sa	an Antonio Regional C	Office	
Mailed to: TCEQ - Cashier	o	vernight Delivery to: 1	TCEQ - Cashier	
Revenues Section	1	2100 Park 35 Circle		
Mail Code 214	В	uilding A, 3rd Floor		
P.O. Box 13088	A	ustin, TX 78753		
Austin, TX 78711-3088	(5	512)239-0357		
Site Location (Check All That Apply):				
Site Location (Check All That Appl	ly):			
Site Location (Check All That Appl	y): Contributing Zone	Transi	ition Zone	
Site Location (Check All That Appl	y):	Transi	ition Zone Fee Due	
Site Location (Check All That Appl Recharge Zone <i>Type of Plar</i> Water Pollution Abatement Plan, G	y): Contributing Zone	Transi Size	ition Zone Fee Due	
Site Location (Check All That Appl Recharge Zone Type of Plar Water Pollution Abatement Plan, C Plan: One Single Family Residentia	y): Contributing Zone n Contributing Zone I Dwelling	Transi Size Acres	ition Zone Fee Due \$	
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Signature:

_____ Date: <u>11/2</u>1/24

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



TCEQ Core Data Form

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

1. Reason f	or Submissio	n (If other is c	hecked please	describe	in space p	rovideo	1.)				
X New P	ermit, Registr	ation or Author	ization (Core Da	ata Form	should be	submit	ted with	the program applica	tion.)		
Renew	al (Core Da	ta Form should	be submitted w	ith the re	enewal forr	n)	Ot	ther			
2. Customer Reference Number (if issued)		Follow	Follow this link to search for CN or RN numbers in		3. Re	egulated Entity Refer	ence Number	(if issued)			
CN 601037567					for CN	RN 109793950					
SECTION	II: Custom	ner Informati	ion	<u></u>	<u>iui itogic</u>	<u>, , , , , , , , , , , , , , , , , , , </u>					
4. General C	Customer Info	ormation	5. Effective D	ate for C	Customer Ir	formati	on Upd	ates (mm/dd/yyyy)			
New Cu	stomer n Legal Nam	e (Verifiable wil	U th the Texas Se	pdate to	Customer	Informa Texas (ation Comptro	Change	in Regulated	Entity Ownership	
The Custo Texas Sec	omer Name cretary of a	e submitted State (SOS)	here may be or Texas Co	e updat mptrol	ted autoi ller of Pu	matica Iblic A	ally ba \ccoui	nsed on what is o nts (CPA).	current and	l active with the	
6. Customer	· Legal Name	(If an individual,	print last name fi	rst: e.g.: I	Doe, John)		<u>lf ne</u>	ew Customer, enter pr	evious Custon	ner below:	
							a janj				
7. TX SOS/CPA Filing Number 8. TX State			8. TX State T	「ax ID (11 digits)			9. F	ederal Tax ID (9 digits)	10. DUN	IS Number (if applicable)	
11. Type of	Customer:	Corporati	on		Individual			Partnership: 🖸 General 🔄 Limited			
Government	:: 🖸 City 🔄 C	ounty 🗌 Federal [State Other		Sole Pi	roprieta	prietorship Other:				
12. Number	of Employee 21-100	s 101-250	251-500	501	and highe	r	13.	Independently Owne	d and Operat o	ed?	
14. Custome	er Role (Propo	osed or Actual) -	as it relates to th	e Regulat	ted Entity lis	ted on th	nis form.	Please check one of th	e following:		
Owner Occupati	onal License	Opera	ator Insible Party] Owner &] Voluntary	Opera / Clean	tor up Appl	icant Other			
15. Mailing Address:											
	City			State)	14997	ZIP		ZIP + 4		
16. Country	Mailing Inform	nation (if outside	USA)	L		17. E-	Mail Ad	dress (if applicable)			
	HOURNON				1993						
18. Telephor	ne Number			19. Exter	nsion or Co	ode		20. Fax Numb	er (if applical	ole)	
(188)) 883- 88			V.	ABSASSING			(883) 87	-344		
SECTION	III: Regula	ted Entity Ir	formation								
21. General I	Regulated En	tity Information	(If `New Regulated E	ated Enti ntity Nan	ity" is selec	ted bel Jpdate	ow this to Reau	form should be accould be accould be accould be accould be accounted by a second by a s	mpanied by a ion	permit application)	
The Reg	ulated Ent	ity Name su	bmitted may	v be up	dated in	order	to me	eet TCEQ Agenc	y Data Sta	ndards (removal	

of organizational endings such as Inc, LP, or LLC).

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

JISD Wortham Oaks Elementary and Middle School

23. Street Address of the						
Regulated Entity:						
(No PO Boxes)	City		State	ZIP	ZIP + 4	
24. County	Bex	ar				

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	At the	southeast interse	ction of Wortham O	aks Boulevard	and Carria	ge Cape.				
26. Nearest City						State			Nea	rest ZIP Code
San Antonio						TX			78	261
27. Latitude (N) In Decim	al:	29.64612	26	28. Lor	gitude (W)	In Dec	cimal:	98.375	541	
Degrees	Minutes		Seconds	Degrees		M	inutes	Sec	conds	
29	38		46	98 22			2	31		
29. Primary SIC Code (4 digits) 30. Secondary SIC C			C Code (4 digits)	31. Primary NAICS Code 32. Sec (5 or 6 digits) (5 or 6 d			Secondary N or 6 digits)	ndary NAICS Code gits)		
8211				611110						
33. What is the Primary Bu	siness o	f this entity? (Do	not repeat the SIC or NA	AICS description.)						
Elementary and Mid	dle Sc	hool								
	820	5 Palisades D	rive							
34. Mailing										
Addross.	City	Live Oak	State	TX	ZIP	7823	33	ZIP	+ 4	2413
35. E-Mail Address:										
36. Telephone Number		37. Exten	37. Extension or Code			38. Fax Number (if applicable)				
(210) 9	945 - 5	100) -			
39. TCEQ Programs and ID Nun	bers Che	ck all Programs and wr	ite in the permits/registra	ation numbers that	will be affecte	ed by the u	odates su	bmitted on this	form.	See the Core Data

Form instructions for additional guidance.

Dam Safety	Districts	Edwards Aquifer	Industrial Hazardous Waste				
Municipal Solid Waste	New Source Review Air	OSSF	Petroleum Storage Tank				
Sludge	Storm Water	🔲 Title V Air	Tires	Used Oil			
Uoluntary Cleanup	U Waste Water	Wastewater Agriculture	Water Rights	Other:			

SECTION IV: Preparer Information

40. Name:			41. Title:			
42. Telepho	one Number	43. Ext./Code	44. Fax Number	45. E-Mail Address		
()	-		() -			

SECTION V: Authorized Signature

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

Company:	Moy Tarin Ramirez Engineers, LLC	Job Title:	Principal
Name(In Print):	Rolando Ramirez, P.E.	Phone:	(210)698-5051
Signature:	Ollubo the	Date:	11/21/24